AIR FORCE Magazine

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"Strategic Forces"

James R. Schlesinger Defense Department Annual Report Washington, D.C. March 4, 1974

The Strategic Nuclear Balance, p. 3-6

There have been two aspects in the development of Soviet strategic forces, one long-term and the other more recent, that affect our present strategic forces planning and the deterrent value of our strategic systems.

The long-term and quite well-known factor is that, over many years, the Soviets have been steadily closing the gap in nuclear capabilities between them and us. For a period of time prior to 1960, the United States had a virtual nuclear monopoly. By 1960, it was perceived that our monopoly advantage would ebb; and, in fact, it not only began to ebb, but, by 1966-67, the soviet Union had a very substantial intercontinental counter-deterrent. During the early 1960s, it was stated quite clearly by President Kennedy—and also by a large majority of Americans in both parties—that the United States needed alternatives other than suicide or surrender, that it needed options which did not imply immediate escalation to major nuclear war.

If anything, the need for options other than suicide or surrender, and other than escalation to allout nuclear war, is more important for us today than it was in 1960, because of the growth of the capabilities possessed by other powers. These additional options do not include the option of a disarming first strike. Neither the USSR nor the United States has, or can hope to have, a capability to launch a disarming first strike against the other, since each of us possesses, and will possess for the foreseeable future, a devastating second-strike capability against the other. This almost certainly will deter the deliberate initiation of a nuclear attack against cities, for it would bring inevitable retaliatory destruction to the initiator. Thus, this basic deterrent remains intact.

A development of more recent years is the accelerated improvement in Soviet missile technology. The Soviet Union now has the capability in its missile forces to undertake selective attacks against targets other than cities. This poses for us an obligation, if we are to ensure the credibility of our strategic deterrent, to be certain that we have a comparable capability in our strategic systems and in our targeting doctrine, and to be certain that the USSR has no misunderstanding on this point. It is true that, in addition to retaliatory targeting against urban and industrial centers, our war plans have always included military targets. The purpose of having war plans whose dimensions are generally understood by potential foes is, first, to deter rash actions. But, secondly, if deterrence fails, the war plans provide the National Command Authorities—the President and his advisers—with well-thought out, detailed sets of options.

In the past, most of those options—whether the principal targets were cities, industrial facilities, or military installations—have involved relatively massive responses. Rather than massive options, we now want to provide the President with a wider set of much more selective targeting options. Through possession of such a visible capability, we hope to reinforce deterrence by

removing the temptation for an adversary to consider any kind of nuclear attack. Therefore, the changes we are making in our strategic planning this year are specifically intended to shore up deterrence across the entire spectrum of risk. We believe that, by improving deterrence across the broad spectrum, we will reduce to an even lower point the probability of a nuclear clash between ourselves and other major powers.

But if, for whatever reason, deterrence should fail, we want to have the planning flexibility to be able to respond selectively to the attack in such a way as to (1) limit the chances of uncontrolled escalation, and (2) hit meaningful targets with a sufficient accuracy-yield combination to destroy only the intended target and to avoid widespread collateral damage. If a nuclear clash should occur—and we fervently believe that it will not—in order to protect American cities and the cities of our allies, we shall rely into the wartime period upon reserving our "assured destruction" force and persuading, through intrawar deterrence, any potential foe not to attack cities. It is through these means that we hope to prevent massive destruction even in the cataclysmic circumstances of nuclear war.

This adjustment in strategic policy does not imply major new strategic weapon systems and expenditures. We are simply ensuring that, in our doctrine, our plans, and our command and control, we have—and are seen to have—the selectivity and flexibility to respond to aggression in an appropriate manner. We do not intend that the Soviet Union should have a wider range of options than we do.

Even after these adjustments to our present policy, there remains a serious potential problem for the future of our strategic policy and forces. In recent years, the USSR has been pursuing a vigorous strategic R&D program. This we had expected. But its breadth, depth, and momentum as now revealed comes as something of a surprise to us.

During the past year alone, the Soviets have tested four new ICBMs (the SS-X-16, SS-X-17, SS-X-18, and SS-X-19), and have developed their first MRV submarine-launched missile. The new ICBMs are of especial interest. Three of the four have been flown with MIRVs, and all of them are being designed for increased accuracy. The very large SS-X-18 will have about three percent more throw-weight than the currently deployed SS-9. The SS-X-17 and SS-X-19 are considered as successors to the relatively light SS-11. They will have from three to five times the throw-weight of the earlier model SS-11s, which now constitute the bulk of the Soviet ICBM force.

If all three new and heavier missiles are deployed, Soviet throw-weight in their ICBM force will increase from the current 6-7 million pounds to an impressive 10-12 million pounds.

This throw-weight, combined with increased accuracy and MIRVs, could give the Soviets on the order of 7,000 one-to-two-megaton warheads in their ICBM force alone. They would then possess a major one-sided counterforce capability against the United States ICBM force. This is impermissible from our point of view. There must be essential equivalence between the strategic forces of the United States and the USSR—an equivalence perceived no only by ourselves, but by the Soviet Union and third audiences as well. This was the essence of the SALT I agreements.

With these things in mind, we are seeking in SALT II to ensure that the principle of essential equivalence is upheld. We are also proposing in the FY 1975 budget several strategic R&D programs conducted within the SALT I agreements as hedges against the unknown outcome of SALT II and the uncertain actions of the Soviet Union. If the Soviet Union insists on moving

ahead with a new set of strategic capabilities, we will be forced to match them. We would prefer, however, to reduce the present balance in such a way that strategic equivalence can be achieved at the lowest cost and least destabilizing level of forces....

Deterrence and Assured Destruction, p. 32-35

I frankly doubt that our thinking about deterrence and its requirements has kept pace with the evolution of [Soviet and Chinese] threats. Much of what passes as current theory wears a somewhat dated air—with its origins in the strategic bombing campaigns of World War II and the nuclear weapons technology of an earlier era when warheads were bigger and dirtier, delivery systems considerably less accurate, and forces much more vulnerable to surprise attack.

The theory postulates that deterrence of a hostile act by another party results from a threat of retaliation. This retaliatory threat, explicitly or implicit, must be of sufficient magnitude to make the goal of the hostile act appear unattainable, or excessively costly, or both. Moreover, in order to work, the retaliatory threat must be credible: that is, believable to the party being threatened. And it must be supported by visible, employable military capabilities.

The theory also recognizes that the effectiveness of a deterrent depends on a good deal more than peacetime declaratory statements about retaliation and the existence of a capability to do great damage. In addition, the deterrent must appear credible under conditions of crisis, stress, and even desperation or irrationality on the part of an opponent. And since, under a variety of conditions, the deterrent forces themselves could become the target of an attack, they must be capable of riding out such an attack in sufficient quantity and power to deliver the threatened retaliation in a second strike.

The principle that nuclear deterrence (or any form of deterrence, for that matter) must be based on a high-confidence capability for second-strike retaliation—even in the aftermath of a well-executed surprise attack—is now well-established. A number of other issues remain outstanding, however. A massive bolt-out-of-the-blue attack on our strategic forces may well be the worse possible case that could occur, and therefore extremely useful as part of the force-sizing process. But it may not be the only, or even the most likely, contingency against which we should design our deterrent. Furthermore, depending upon the contingency, there has been a long-standing debate about the appropriate set of targets for a second strike, which, in turn, can have implications both for the types of war plans we adopt and the composition of our forces.

This is not the place to explore the full history and details of that long-standing strategic debate. However, there is one point to note about its results. Although several targeting options, including military-only and military-plus-urban/industrial variations, have been a part of US strategic doctrine for quite some time, the concept that has dominated our rhetoric for most of the era since World War II has been massive retaliation against cities, or what is called assured destruction. As I hardly need emphasize, there is a certain terrifying elegance in the simplicity of the concept, for all that it postulates, in effect, is that deterrence will be adequately (indeed amply) served if, at all times, we possess the second-strike capability to destroy some percentage of the population and industry of a potential enemy. To be able to assure that destruction, even under the most unfavorable circumstances—so the argument goes—is to assure deterrence, since no possible gain could compensate an aggressor for this kind and magnitude of loss.

The concept of assured destruction has many attractive features from the standpoint of sizing the strategic offensive forces. Because nuclear weapons produce such awesome effects, they

are ideally suited to the destruction of large, soft targets such as cities. Furthermore, since cities contain such easily measurable contents as people and industry, it is possible to establish convenient quantitative criteria and levels of desired effectiveness with which to measure the potential performance of the strategic offensive forces. And once these specific objectives are set, it becomes a relatively straightforward matter—given an authoritative estimate about the nature and weight of the enemy's surprise attack—to work back to the forces required for second-strike assured destruction.

The basic simplicity of the assured destruction calculation does not mean that the force planner is at a loss for issues. On the contrary, important questions continue to arise about the assumptions from which the calculations proceed. Where, for the sake of deterrence, should we set the level of destruction that we want to assure? Is it enough to guarantee the ruin of several major cities and their contents, or should we—to assure deterrence—move much further and upward on the curve of destruction? Since our planning must necessarily focus on the forces we will have five or even ten years hence, what should we assume about the threat—that is, the nature and weight of the enemy attack that our forces must be prepared to absorb? How pessimistic should we be about the performance of these forces in surviving the attack, penetrating enemy defenses (if they exist), and destroying their designated targets? How conservative should we be in buying insurance against possible failures in performance?

Generally speaking, national policy makers for more than a decade have chosen to answer these questions in a conservative fashion. Against the USSR, for example, we tended in the 1960s to talk in terms of levels of assured destruction at between a fifth and a third of the population and between half and three-quarters of the industrial capacity. We did so for two reasons:

- Beyond these, levels, very rapidly diminishing increments of damage would be achieved for each additional dollar invested:
- It was thought that amounts of damage substantially below those levels might not suffice to deter irrational or desperate leaders.

We tended to look at a wide range of threats and possible attacks on our strategic forces, and we tried to make these forces effective even after their having been attacked by high but realistically constrained threats. That is to say, we did not assume unlimited budgets or an untrammelled technology on the part of prospective opponents, but we were prudent about what they might accomplish within reasonable budgetary and technological constraints. Our choice of assumptions about these factors was governed not by a desire to exaggerate our own requirements but by the judgment that, with so much at stake, we should not make national survival a hostage to optimistic estimates of our opponents' capabilities.

In order to ensure the necessary survival and retaliatory effectiveness of our strategic offense, we have maintained a triad of forces, each of which presents a different problem for an attacker, each of which causes a specialized and costly problem for his defense, and all of which together currently give us high confidence that the force as a whole can achieve the desired deterrent objective.

That, however, is only part of the explanation for the present force structure. We have arrived at the current size and mix of our strategic offensive forces not only because we want the ultimate threat of massive destruction to be really assured, but also because, for more than a decade, we have though it advisable to test the force against the "higher-than-expected" threat. Given

the built-in surplus of warheads generated by this force-sizing calculation, we could allocate additional weapons to non-urban targets and thereby acquire a limited set of options, including the option to attack some hard targets.

President Nixon has strongly insisted on continuing this prudent policy of maintaining sufficiency. As a result, I can say with confidence that, in 1974, even after a more brilliantly executed and devastating attack than we believe our potential adversaries could deliver, the United States would retain the capability to kill more than 30 percent of the Soviet population and destroy more than 75 percent of Soviet industry. At the same time, we could hold in reserve a major capability against the PRC.

Such reassurances may bring solace to those who enjoy the simple but arcane calculations of assured destruction. But they are of no great comfort to policymakers who must face the actual decisions about the design and possible use of the strategic nuclear forces. Not only must those in power consider the morality of threatening such terrible retribution on the Soviet people for some ill-defined transgression by their leaders; in the most practical terms, they must also question the prudence and plausibility of such a response when the enemy is able, even after some sort of first strike, to maintain the capability of destroying our cities. The wisdom and credibility of relying simply on the preplanned strikes of assured destruction are even more in doubt when allies rather than the United States itself face the threat of a nuclear war.

The Need for Options, pp. 35-41

President Nixon underlined the drawbacks to sole reliance on assured destruction in 1970, when he asked:

"Should a President, in the event of a nuclear attack, be left with the single option of ordering the mass destruction of enemy civilians, in the face of the certainty that it would be followed by the mass slaughter of Americans? Should the concept of assured destruction be narrowly defined, and should it be the only measure of our ability to deter the variety of threats we may face?"

The questions are not new. They have arisen many times during the nuclear era, and a number of efforts have been made to answer them. We actually added several response options to our contingency plans in 1961 and undertook the retargeting necessary for them. However, they all involved large numbers of weapons. In addition, we publicly adopted to some degree the philosophies of counterforce and damage-limiting. Although differences existed between those two concepts as then formulated, particularly in their diverging assumptions about cities as likely targets of attack, both had a number of features in common.

- Each required the maintenance of a capability to destroy urban-industrial targets, but as a reserve to deter attacks on US and allied cities rather than as the main instrument of retaliation.
- Both recognized that contingencies other than a massive surprise attack on the United States might arise and should be deterred; both argued that the ability and willingness to attack military targets were prerequisites to deterrence.
- Each stressed that a major objective, in the event that deterrence should fail, would be to avoid to the extent possible causing collateral damage in the USSR, and to limit damage to the societies of the United States and its allies.

- Neither contained a clear-cut vision of how a nuclear war might end, or what role the strategic forces would play in their termination.
- Both were considered by critics to be open-ended in their requirement for forces, very threatening to the retaliatory capabilities of the USSR, and therefore dangerously stimulating to the arms race and the chances of preemptive war.
- The military tasks that each involved, whether offensive counterforce or defense damagelimiting, became increasingly costly, complex, and difficult as Soviet strategic forces grew in size, diversity, and survivability.

Of the two concepts, damage-limiting was the more demanding and costly because it required both active and passive defenses as well as a counterforce capability to attack hard targets and other strategic delivery systems. Added to this was the assumption (at least for planning purposes) that an enemy would divide his initial attack between our cities and our retaliatory forces, or switch his fire to our cities at some later stage in the attack. Whatever the realism of that assumption, it placed an enormous burden on our active and passive defenses—and particularly on antiballistic missile (ABM) systems—for the limitation of damage.

With the ratification of the ABM treaty in 1972, and the limitation it imposes on both the United States and the Soviet Union to construct no more than two widely separated ABM sites (with no more than 100 interceptors at each), an essential building-block of the entire damage-limiting concept has now been removed. As I shall discuss later, the treaty has also brought into question the utility of large, dedicated anti-bomber defenses, since, without a defense against missiles, it is clear than an active defense against bombers has little value in protecting our cities. The salient point, however, is that the ABM treaty has effectively removed the concept of defensive damage limitation (at least as it was defined in the 1960s) from contention as a major strategic option.

Does all of this mean that we have no choice but to rely solely on the threat of destroying cities? Does it even matter if we do? What is wrong, in the final analysis, with staking everything on this massive deterrent and pressing ahead with a further limitation of these devastating arsenals?

No one who has thought much about these questions disagrees with the need, as a minimum, to maintain a conservatively designed reserve for the ultimate threat of large-scale destruction. Even more, if we could all be guaranteed that this threat would prove fully credible (to friend and foe alike) across the relevant range of contingencies—and that deterrence would never be severely tested or fail—we might also agree that nothing more in the way of options would ever be needed. The difficulty is that no such guarantee can be given. There are several reasons why any assurance on this score is impossible.

Since we ourselves find it difficult to believe that we would actually implement the threat of assured destruction in response to a limited attack on military targets that caused relatively few civilian casualties, there can be no certainty that, in a crisis, prospective opponents would be deterred from testing our resolve. Allied concern about the credibility of this particular threat has been evident for more than a decade. In any event, the actuality of such a response would be utter folly, except where our own or allied cities were attacked.

Today, such a massive retaliation against cities, in response to anything less than an all-out attack on the US and its cities, appears less and less credible. Yet as pointed out above, deterrence can fail in many ways. What we need is a series of measured responses to

aggression which bear some relation to the provocation, have prospects of terminating hostilities before general nuclear war breaks out, and leave some possibility for restoring deterrence. It has been this problem of not having sufficient options between massive response and doing nothing, as the Soviets built up their strategic forces, that has prompted the President's concerns and those of our Allies.

Threats against Allied forces, to the extent that they could be deterred by the prospect of nuclear retaliation, demand both more limited responses than destroying cities and advanced planning tailored to such lesser responses. Nuclear threats to our strategic forces, whether limited or large-scale, might well call for an option to respond in kind against the attacker's military forces. In other words, to be credible, and hence effective, over the range of possible contingencies, deterrence must rest on many options and on a spectrum of capabilities (within the constraints of SALT) to support these options. Certainly such complex matters as response options cannot be left hanging until a crisis. They must be thought through beforehand. Moreover, appropriate sensors to assist in determining the nature of the attack, and adequately responsive command-control arrangements, must also be available. And a venturesome opponent must know that we have all of these capabilities.

Flexibility of response is also essential because, despite our best efforts, we cannot guarantee that deterrence will never fail; nor can we forecast the situations that would cause it to fail. Accidents and unauthorized acts could occur, especially if nuclear proliferation should increase. Conventional conflicts could escalate into nuclear exchanges; indeed, some observers believe that this is precisely what would happen should a major war break out in Europe. Ill-informed or cornered and desperate leaders might challenge us to a nuclear test of wills. We cannot even totally preclude the massive surprise attack on our forces which we use to test the design of our second-strike forces, although I regard the probability of such an attack as close to zero under existing conditions. To the extent that we have selective response options—smaller and more precisely focused than in the past—we should be able to deter such challenges. But if deterrence fails, we may be able to bring all but the largest nuclear conflicts to a rapid conclusion before cities are struck. Damage may thus be limited and further escalation avoided.

I should point out in this connection that the critics of options cannot have the argument both ways. If the nuclear balance is no longer delicate, and if substantial force asymmetries are quite tolerable, then the kinds of changes I have been discussing here will neither perturb the balance nor stimulate an arms race. If, on the other hand, asymmetries do matter (despite the existence of some highly survivable forces), then the critics themselves should consider seriously what responses we should make to the major programs that the Soviets currently have underway to exploit their advantages in numbers of missiles and payload.

Whichever argument the critics prefer, they should recognize that:

- Inertia is hardly an appropriate policy for the United States in these vital areas;
- We have had some large-scale pre-planned options other than attacking cities for many years, despite the rhetoric of assured destruction;
- Adding more selective, relatively small-scale options is not necessarily synonymous with adding forces, even though we may wish to change their mix and improve our command, control, and communications.

However strong in principle the case for selective options, several questions about it remain. What kinds of options are feasible? To what extent would their collateral effects be distinguishable from those of attacks deliberately aimed at cities? And what are their implications for the future size and composition of our strategic forces and hence for our arms control objectives in this realm?

Many of the factors bearing on these questions will become more evident later in this statement. It is worth stressing at this point, however, that targets for nuclear weapons may include not only cities and silos but also airfields, many other types of military installations, and a variety of other important assets that are no necessarily collocated with urban populations. We already have a long list of such possible targets; now we are grouping them into operation plans which would be more responsible to the range of challenges that might face us. To the extent necessary, we are retargeting our forces accordingly.

Which among these options we might choose in a crisis would depend on the nature of an enemy's attack and on his objectives. Many types of targets can be pre-programmed as options—cities, other targets of value, military installations of many different kinds, soft strategic targets, hard strategic targets. A number of so-called counterforce targets, such as airfields, are quite soft and can be destroyed without pinpoint accuracy. the fact that we are able to knock out these targets—counterforce though they may be—does not appear to be the subject of much concern.

In some circumstances, however, a set of hard targets might be the most appropriate objective for our retaliation, and this is realize is a subject fraught with great emotion. Even so, several points about it need to be made.

- The destruction of a hardened target is not simply a function of accuracy; it results from the combined effects of accuracy, nuclear yield, and the number of warheads applied to the target.
- Both the United States and the Soviet Union already have the necessary combinations of accuracy, yield, and numbers in the missile forces to provide them with some hard-target-kill capability, but it is not a particularly efficient capability.
- Neither the United States nor the Soviet Union now has a disarming first strike capability. Nor are they in any position to acquire such a capability in the foreseeable future, since each side has large numbers of strategic offensive systems that remain untargetable by the other side. Moreover, the ABM Treaty forecloses a defense against missiles. As I have already noted in public: "The soviets, under the Interim Offensive Agreement, are allowed 62 submarines and 950 SLBM launchers. In addition, they have many other nuclear forces. Any reasonable calculation would demonstrate, I believe, that it is not possible for us even to begin to eliminate the city-destruction potential embodied in their ICBMs, let along their SLBM force."

The moral of all this is that we should not single out accuracy as some sort of unilateral or key culprit in the hard-target-kill controversy. To the extent that we want to minimize unintended civilian damage from attacks on even soft targets, as I believe we should, we will want to emphasize high accuracy, low yields, and airburst weapons.

To enhance deterrence, we may also want a more efficient hard-target-kill capability than we now possess, both to threaten specialized sets of targets (possibly of concern to Allies) with a greater economy of force, and to make it clear to a potential enemy that he cannot proceed with impunity to jeopardize our own system of hard targets.

Thus, the real issue is now much hard-target-kill capability we need, rather than the development of new combinations of accuracy and yield, per se. Resolution of the quantitative issue, as I will discuss later, depends directly on the further evolution of the Soviet strategic offensive forces and on progress in the current phase of the Strategic Arms Limitation Talks.

In the meantime, I would be remiss if I did not recommend further research and development on both better accuracy and improved yield-to-weight ratios in our warheads. Both are essential, whether we decide primarily on high accuracy and low yields or whether we move toward an improved accuracy-yield combination for a more-efficient hard-target-kill capability than we now deploy in our missiles and bombers. Whichever way we go, we have more need than the soviets for increased accuracy because of our constrained payloads and low-yield MIRVs which have resulted from our lower missile throw-weights.

With a reserve capability for threatening urban-industrial targets, with offensive systems capable of increased flexibility and discrimination in targeting, and with concomitant improvements in sensors, surveillance, and command-control, we could implement response options that cause far less civilian damage than would now be the case. For those who consider such changes potentially destabilizing because of their fear that the options might be used, let me emphasize that, without substantially more of an effect in other directions than we have any intention of proposing, there is simply no possibility of reducing civilian damage from a large-scale nuclear exchange sufficiently to make it a tempting prospect for any sane leader. But that is not what we are talking about here. At the present time, we are acquiring selective and discriminating options that are intended to deter another power from exercising any form of nuclear pressure. Simultaneously, as I shall discuss later, we and our allies are improving our general purpose forces precisely so as to raise the threshold against the use of any nuclear forces.

Targeting Doctrine and Sizing of Forces, p. 41-42

The evolution in targeting doctrine is quite separable from, and need not affect, the sizing of the strategic forces. It is quite feasible to have the foregoing options within the limits set by the ABM Treaty and the Interim Agreement on offensive forces. What is more, none of the options we are adopting and none of the programs we are proposing for research and development need preclude further mutually agreed constraints on or reductions in strategic offensive systems through SALT. If the Soviets are prepared to reduce these arsenals in an equitable fashion, we are prepared to accommodate them. In fact, I can say that we would join in such an effort with enthusiasm and alacrity.

To stress changes in targeting doctrine and new options does no mean radical departures from past practice. Nor does it imply any possibility of acquiring a first strike disarming capability. As I have repeatedly stated, both the United States and the Soviet Union now have and will continue to have large, invulnerable second strike forces. If both powers continue to behave intelligently and perceptively, the likelihood that they would unleash the strategic forces is so low that it approaches zero. We are determined, nonetheless, to have credible responses at hand for any nuclear contingency that might arise and to maintain the clear ability to prevent any potential enemy from achieving objectives against us that he might consider meaningful. The availability of carefully tailored, pre-planned options will contribute to that end. They do not invite nuclear war; they discourage it.

I repeat, we are eager to begin a reduction of the strategic forces by mutual agreement and on terms of parity. That is our first preference. We would be quite content if both the United States and the Soviet Union avoided the acquisition of major counterforce capabilities. But we are

troubled by Soviet weapons momentum, and we simply cannot ignore the prospect of a growing disparity between the two major nuclear powers. We do not propose to let an opponent threaten a major component of our forces without our being able to pose a comparable threat. We do not propose to let an enemy put us in a position where we are left with no more than a capability to hold his cities hostage after the first phase of a nuclear conflict.

And certainly we do not propose to see an enemy threaten one or more of our allies with his nuclear capabilities in the expectation that we would lack the flexibility and resolve to strike back at his assets (and those of any countries supporting the threat) in such a way as to make his effort both high in cost and ultimately unsuccessful.

How we proceed on these counts will depend on the USSR. But I do not believe that we can any longer delay putting our potential countermeasures into research and development. The Soviets must be under no illusion about our determination to proceed with whatever responses their actions may require. And if we undertake the programs that I shall discuss later, the prospects for misunderstanding should be low. More sensible arrangements for both parties may then be feasible.