To meet our all-around deterrent requirements, writes the author, we need "strategic forces that do not have to go off like a fireworks factory when the lights start flashing." We need a broad range of deterrent capabilities. We must be able to respond with care, control, and sensitivity. Perhaps most important of all, we must have a force that can survive. With such a force, we can meet the demands of cold war and, if need be, all levels of hot war. Further, we are in a favorable position to combat the very real dangers of "accidental," "preemptive," "false alarm," or mischief-inspired aggressor attack. Such deterrent forces would provide optimum survival insurance in a world haunted by visions of . . .

Meteors, Mischief, and War
Thomas C. Schelling

All is too important to leave to the generals, and war should not be left to novelists. But in the time they have it; and while few of we have given a full scenario of how war mightount, they have at least been more explicit in print than the analysts.

We have had a number of hints, including some notes from Khrushchev and his colleagues, that for meteors may look like aircraft or missiles in a telescope, and that personnel screening in an nscope, and that personnel screening in an instance, though not that one can detonate under circumstances. But while it is easy to imagine how an incident might occur, it is not so easy to trace out any process that might lead to war.

Flashback

In addition to whimsy inspired by the meteorites in Arizona and Siberia, we have had factual efforts to get a war plausibly started. *On the Beach* has an advantage: We may in the aftermath before the origin of the war is revealed. The war being taken for granted, its onset is too easy to be sketchy and ironic. Still, the course of events may illustrate what people have said apparently never played a leading role, once an incident started. (The war occurred, incidentally, just about a year from now.) By the time the war was badly out of hand, whoever was making decisions lacked the organization to stop it.

This may be too easy: false alarms, misunderstandings, nth-country problems, and two of the large countries premeditating war anyhow. With all these ingredients—and a little accelerated technology and dramatic license—the reader may assume a horrendous casserole no matter how they are mixed. But even if it is a caricature, the picture of human error and impotence probably epitomizes the popular notion of "accidental war" and the widespread sensation that the machines are taking over.

*Alas, Babylon*, by Pat Frank, also gets its war started in the Middle East, but the mixture is a little different. In this one deterrence fails because, though we can lick the Russians and we know it, they don't. We also, in this one, have the advantage of "strategic warning"; we know that the Russians are willing to press the issue in the Middle East to the point of general war, but apparently cannot use our forewarning either to attack them first or to persuade them that, their secret having leaked, their chances of success are small. Some interesting dynamics are included: Though the Russian decision is prompted by a Middle East crisis, it is affected by their belief that their forces, though superior, are only temporarily superior and that the opportunity will be gone if they wait until we catch up. Finally, there is at least one inflammatory "accident," an air-to-air rocket that misses its target and falls on Latakia with vivid results. This novel, too, is mainly about the aftermath of war; it is an imaginative study of civil defense and organization, but getting the war started is incidental. The causation is impressionistic; and the role of "accidents" is only hinted at.

The Brink of War

For a detailed scenario of how war might start, or almost start, we have to turn to the paperbacks. One (Continued on following page)
of the niftiest little analyses to come along is Red Alert, by Peter Bryant, which explores the possibility that a really sophisticated SAC general, properly placed, with a few lucky breaks, might get the United States committed to an all-out war with Russia, a war that he believes inevitable but only on highly unfavorable terms unless he can force his country to take the initiative. The sheer ingenuity of the scheme, beautifully analyzed in "realistic" detail, with emphasis on the system rather than on personalities, exceeds in thoughtfulness any nonfiction available on how war might start. The value of the narrative does not lie in the possibility that SAC is so organized that the story could be true; one can suppose that the crucial details have been invented for the sake of the story. What is impressive is how plausible a story can be invented. The author does not frighten us with how loosely SAC might be organized and how easily the system could be subverted; what makes this book good fiction is what makes a good mystery—the author has used his ingenuity to make the problem hard.

The climax, though, is what deserves pondering. The last-minute bargaining by the Russian and American governments, though less plausible than the rest of the book in its details, is a unique examination of the brink of war. As a contribution to the literature on war and peace, Red Alert not only demonstrates the occasional superiority of dramatic over logical discourse, but by its example indicts a public discussion that has not got beyond "Prewar Strategy" to Chapter 2, "The Brink of War." If an accident, or a bit of mischief, or a false alarm, or a misunderstanding, can lead to war but not necessarily, what makes the difference, if anything, other than luck?

Accidents or Decisions?

The point is that accidents do not cause war. Decisions cause war. Accidents can trigger decisions; and this may be all that anybody meant. But the distinction needs to be made, because the remedy is not just preventing accidents but constraining decisions. If we think of the decisions as well as the accidents we can see that accidental war, like premeditated war, is subject to "deterrence." Deterrence, it is usually said, is aimed at the rational calculator in full control of his faculties and his forces; accidents may trigger war in spite of deterrence. But it is really better to consider accidental war as the deterrence problem, not a separate one.

We want to deter an enemy decision to attack us—not only a cool-headed, premeditated decision that might be taken in the normal course of the cold war, at a time when Russia does not consider an attack by us to be imminent, but also a nervous, hot-headed, frightened, desperate decision that might be precipitated at the peak of a crisis, that might result from an accident or false alarm, that might be engineered by somebody's mischief—a decision taken at a moment when sudden attack by the United States is believed a live possibility.

Either way it takes a decision to initiate war. The
But when speed is critical, the need for speed aggravates the problem: each minute to its enemy a similar urgency. The critical question is what do we do if we do get warning? A system that can react within fifteen minutes may be a potent deterrent, but it poses an awful choice whenever we think we have warning. We can exploit our speed of response and risk having started war by false alarm. Or we can wait, avoiding an awful war by mistake but risking a dead retaliatory system if the alarm was real. The problem may be personal and psychological as well as electronic; the finest products of modern physics are of no avail if the top-ranking decision-maker, whoever he may be, within the time available— is too indecisive, or too wise, to act with the alacrity of an electronic computer.

So the choice between spending money on better warning, and spending money on systems that depend less on warning, is a real choice, and one especially pertinent to inadvertent war. And again, we get double security out of the system that can survive without warning: The Russian knowledge that we can wait in the face of ambiguous evidence, that we can take a few minutes to check on the origin of accidents or mischief, that we are not dependent on instant reaction to a fallible warning system, may permit them, too, to wait a few minutes in the face of an accident, and permit them at the peak of a crisis to attribute less jumpy behavior to us and to be less jumpy themselves.

Arms Control and Accidental War

Accidental war is often adduced as a powerful motive for disarmament. The multiplication and dispersion of ever more powerful weapons seems to carry an ever growing danger of accidental war; and many who are confident that deliberate attack is adequately deterred are apprehensive about the accidental-war possibilities inherent in the arms race.

But there is a conflict—and a serious one—between the urge to have fewer weapons in the interest of fewer accidents and the need—still thinking about accidental war—to have forces so secure and so adequate that they need not react with haste for fear of being unable to react at all, and that the enemy has enough confidence in our ability to be calm to be calm himself. A retaliatory system that is inadequate not only makes the possessor jumpy but is ground for the enemy's being jumpy, too.

It is important to keep in mind, too, that (as in any other business) accidents can be reduced by spending more money. To correlate weapons, accidents, and arms budgets, ignores the fact that the security of, control over, and communication with, one's retaliatory forces is an important and expensive part of the military establishment. For a given number of weapons, more money may mean more reliable


(Continued on following page)
METEORS, MISCHIEF, AND WAR

communications and command procedures. Skimpy budgets can mean skimpy protection against malfunc-
tion, confusion, and mischief.

But if we get away from the notion that arms con-
trol means simply the elimination of weapons, and
search instead for cooperative arrangements that may
reduce the likelihood of war—whether they cost more
or cost less, involve more weapons or less weapons (or
just different kinds of weapons)—and if we recognize
that the security we and the Russians both can achieve
may be enhanced by some kind of cooperation, there
probably are things to be done jointly to reduce the
likelihood of "accidental war."

This was stressed by Secretary Herter in his speech
of February 18. He pointed out that "observers might
prove useful, during a major crisis, helping to verify
that neither side was preparing a surprise attack upon
the other. "Other arrangements," he said, "for ex-
changing information might be developed to assure
against potentially dangerous misunderstandings about
events in outer space."

To be sure, it is not obvious that observers could
prevent "miscalculation"; furthermore, to the extent
that observers help an enemy target one's own re-
taliatory weapons, or help the enemy to know when
they are momentarily disabled for one reason or an-
other, observers could be harmful. Nevertheless,
exchange of facilities for some kinds of surveillance and
warning can perhaps improve both sides' warning
systems, particularly with respect to false alarm.

Furthermore, in the event of literal accidents, or pos-
sible mischief by a third party, there may be an im-
portant reassurance process by which we and the
Russians could verify—if not just what kind of an ac-
cident it was—at least that neither of us was reacting
on the assumption that it was more than an accident.

Just alerting the enemy to the fact that an accident
has occurred, asking him to sit still until the dust
settles, letting him know that we know it was an ac-
cident it *was—at least that neither of us was reacting
Russians could verify—if not just what kind of an ac-
cident it was. This alone might substantially deter attack; but each is in a good
position to attack if the other prematurely relaxes.
Furthermore, a posture of extraordinary alert may be
positively dangerous misunderstandings about
sides' warning
the> emergency both perceived that the
will never agree to, on condition that the other temporar
It is difficult to describe such emergences in advance and to predict the status of forces on both
sides. It is difficult to design in advance an ideal stand-
off inspection scheme that could be called on under
circumstances. But some adaptable, flexible facili-
ties, available to see with their own eyes what the host country invites them to see and sup-
port authentically at home what they have seen, in
the host country's motives are to provide positive
dence sufficient to reassure the enemy, is a workable
idea and not a terribly expensive one; nor is it necessarily involves acute political difficulties.

"Crash" Disarmament

The "accidental war" contingency also suggests that
arms control of a serious kind may eventually be
about, if it ever does. There is presently no ex-
clusive belief among the leaders of the USA and the
USSR that arms control offers an important alter-
to a grave danger of war. There is no desperation on
either side, hardly any urgency, little imagination,
to short-run propaganda, and too little logi-
cal consistency between each side's disarmament
proposals and its national security policies to sug-
n that we are near a turning point in the history of
control.

Things would be different if an accident, a false
alarm, or a misunderstanding, sent us both hur-
to the brink of war. It might not be easy, or even
possible, to return to the status quo ante. One thing
would be to use all the advantages currently keeps the balance of deterrence stable, reduces the fear of preemption and hence the
urge to preempt, and reduces the incidence of false
alarms, is sheer inertia, lack of initiative, lack of
imagination about the reality of war. But if an ac-
crisis occurs, and both sides demonstrate unres-
singly that they are prepared to go, or may get drawn
to the brink of war, and that they now attribute
each other a readiness to attack, the situation will
altogether different. This would be especially true
in the emergency both perceived that the only thing
restraining the other was a temporary (and per-
mently impossible), and that each would proceed
henceforward on the assumption that the other will
strike at the first good opportunity.

Synchronized Relaxation

An important problem, if an emergency ever arises,
will be working out a synchronized relaxation. If both
we and the Russians, in the face of some accident or
incident, recognizing that war may be imminent, go
temporarily on an extraordinary alert status, the ques-
tion of who relaxes first can prove a genuine problem.
Each side, as long as it maintains extraordinary alert,
may substantially deter attack; but each is in a good
good position to attack if the other prematurely relaxes.
Furthermore, a posture of extraordinary alert may be
one in which misunderstandings, false alarms, and
literal accidents, are more likely to occur, and are
more likely to be interpreted as significant. Facilities
for quick negotiation of a synchronized relaxation
could be extremely important; equally important would
be having thought ahead of time about what kind of
relaxation schedule would be both acceptable and re-
Assuring to oneself as well as acceptable to the other.

Finally, under the circumstances each side would
submit to kinds of surveillance that would be sui-
ble, unpalatable, or too expensive, in the context
of cold-war mutual surveillance. Being able to
improvise, or to call into action some available facili-
ties and personnel, when the motives on both sides
are to demonstrate compliance sufficiently but in
some understanding possible, could be of crucial im-
portance. Assuming both sides are aware of the
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cases would never agree to, on condition that the other
temporarily do likewise.
In these circumstances both sides might recognize a balance of deterrence had become genuinely, visibly unstable. It is at this point that "crashment" might suddenly become an important fire to a nearly inevitable war. Just getting on the brink may require collaboration; but stations have been permanently altered, and see has been destroyed, more is required.

"more" is presumably an improvised, but partly permanent, synchronized establishment of measures to safeguard against surprise attack," tent and drastic than any that have yet been—on the occasion any such measures are and have been sufficiently anticipated to be.

Arms control is suddenly desired it may not to wait. Preparing, in ideas and material, for -ingency—for a sudden improvisation of arms -could be crucial on the occasion when arms becomes a possibility and a necessity.

### The Consequences

Aomaly of "accidental war" is that if it occurs or both may know that it was accidental or at spot that it was. This could affect our punish -We might feel less vengeful in retaliat -ted and drastic than any that have yet been -is whether this affects the way we conduct the war. If the concept of "acciden- -r whatever we choose to call a war that is altogether deliberately—has any meaning, ly a war in which our urge for revenge and is less than our urge to curtail the conse- of the error, regardless of whose error it was. -jekt, in the event war should come, is to save of the country as possible and to provide for -security, we should think not only about -er war, and how to enter it most effectively -s, but how to terminate it to best advantage. -while strategy is to strike at the Russians in punishing millions of them for the misdeeds of leaders. Another is to go after their military -we know where they are and can get there -ough, hoping to destroy them before they -s further and hoping to reduce the enemy -en. But a valuable asset, in case of attack, is live Russians rather than dead -all our own unspent weapons. The threat of can still do to the enemy may be our great- -If we failed to deter his initial attack (or -ital attack was ours) we may still deter his -tion of a war that he has already lost, or of a which the best he can do is break even. Espe- the war started by an "accident," or if the -ected for fear that we were about to -our interest in punishment should be less -rest in ending the war and disarming the by the threat of continued action.

This possibility is most plausible if we recognize that, contrary to popular expectation, the enemy may feel that he cannot afford in his initial strike to waste valuable weapons on low-priority targets like American cities—at least if we have so located our strategic forces that he does not have to destroy our cities in his vain (or successful) attempt to get them, and if we have made some provision for protection against fall-out.

Not only might cities be low-priority targets in the strategic sense, but he may go to some risk to avoid them if he thinks we can recognize his restraint and react to it. Just preserving some choice for this contingency—just being able, if we wish, to fight anything but a war of extermination—to keep open the possibility that we can demand his surrender or disarmament, limit the general war and bring it to a close, requires that we have the military ability to do more than go after the enemy in a single spasm, and the organizational ability to communicate something more than a quick "go" signal to our strategic forces at the instant war seems to be on. It requires that we be able to preserve some of our forces and our control over them for hours, days, or longer.

(This, of course, does not mean no retaliation. It may mean a more sophisticated course of retaliation than is usually assumed, retaliation in impressive but measured doses, and in a meaningful pattern that preserves with each act of punishment the promise of more.)

There is a genuine dilemma. If we appear to be capable of conducting a war with control, capable of withholding damage to use the further threat of it in coercing the enemy, capable of responding to how he conducts himself in a general war, and conscious of the possibility of "intrawar deterrence," we possibly weaken our "prewar deterrence." We may encourage the enemy to reduce his estimate of the "cost" of general war, by lowering the risk in case things go wrong. Just being able, for example, to accept his surrender may suggest that surrender is the worst outcome he has to consider in deciding on war. While this is a valid argument, it is not necessarily conclusive.

Even for "prewar deterrence" it is not obvious that the most effective threat is instant punitive destruction without regard to ourselves. To deter or forestall the unpremeditated attack—the "preemptive attack," or the "accidental," "false-alarm," or mischief-inspired attack—we ought to cultivate the enemy's belief that we shall respond to what may be the opening moves in a general war with deliberate care and control and sensitivity to what is going on, not with an instant, all-out, indiscriminate effort to destroy all the enemies who may have been involved.

So if we want to avoid foreclosing the possibility of using our surviving retaliatory capability as an instrument of coercion; if we want to retain an option of limiting the war; even if we just want to be able to receive the enemy's surrender in case his attack goes badly; we need strategic forces that do not have to go off like a match in a fireworks factory when the lights start flashing.—END