

## Herman Kahn's Doomsday Machine

*By 1960, there had emerged an orthodox view of nuclear war: It would be all-out—an instant, automatic, unstoppable plunge into megadeath. Herman Kahn, a RAND nuclear strategist, thought this was nuts. To dramatize the point, Kahn outlined a bizarre—and imaginary—“Doomsday Machine,” a computer linked to nuclear bombs primed to destroy Earth. It would, if the US were attacked, go off by itself and could not be stopped. Khan noted that, though the device reflected the orthodox view of nuclear war, no one would ever dream of building one. There had to be control, some option between surrender and the end of the world. The machine was parodied in the 1964 movie “Dr. Strangelove.” Ever since, it and Kahn have been slammed by critics. They are evidently unaware that no one opposed Doomsday Machine-like thinking—or lack of thinking—more than Kahn himself.*

I would like to start ... with some comments on the strategic theory of three conceptualized devices, which I will call the Doomsday Machine, the Doomsday-in-a-Hurry Machine, and the Homicide Pact Machine. Discussing these idealized (almost caricaturized) devices will both focus attention on the most spectacular and ominous possibilities and clarify a good deal of current strategic thinking.

A Doomsday weapons system might be imaginatively (and entirely hypothetically) described as follows: Assume that for, say, \$10 billion we could build a device whose only function is to destroy all human life. The device is protected from enemy action (perhaps by being put thousands of feet underground) and then connected to a computer, which is in turn connected by a reliable communication system to hundreds of sensory devices all over the United States. The computer would then be programmed so that if, say, five nuclear bombs exploded over the United States, the device would be triggered and the Earth destroyed.

Barring such things as coding errors (an important technical consideration) the above machine would seem to be the “ideal” Type I Deterrent.\* If [Soviet Premier Nikita] Khrushchev should order an attack, both Khrushchev and the Soviet population would be automatically and efficiently annihilated. ...

Let us discuss how one might adapt the Doomsday Machine to Type II and Type III Deterrent purposes. ... I would like to call this model the Doomsday-in-a-Hurry Machine. The computer would be given all the facilities it would need to be “well-informed” about world affairs. We could then unilaterally legislate into existence a Soviet (or Chinese) Criminal Code. This would list in great detail all the acts which the Soviets were not allowed to commit. The Soviets would then be informed that if the computer detects them in any violations it will blow up the world. ...

We will now have drawn a line ... the Soviets would not dare to cross. We could relax forever our interest in defense and turn our attention to other matters.

Unfortunately, the world is not that simple. First, the Soviets would rush to build their own machine. There would be a rather hectic race to publish [its own criminal code] first. ... There almost has to be an incompatibility between the two sets of rules, since paragraph one of each probably states that the opponent shall not build a Doomsday Machine!

To many people, to build a Doomsday Machine would be the most provoking thing short of an attack that the opponent could do. In fact, because it may destroy so many people, some find it more provoking than an attack. ...

### “Not Look or Be Too Dangerous”

Herman Kahn  
Excerpt from Chapter IV  
*On Thermonuclear War*  
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Find the full text on the  
*Air Force Magazine's* website  
[www.airforcemag.com](http://www.airforcemag.com)  
“Keeper File”

The Doomsday Machine is not sufficiently controllable. Even though it maximizes the probability that deterrence will work, ... it is totally unsatisfactory. One must still examine the consequences of a failure. In this case a failure kills too many people and kills them too automatically. There is no chance of human intervention, control, and final decision. And even if we give up the computer and make the Doomsday Machine reliably controllable by the decision-makers, it is still not controllable enough. Neither NATO nor the United States, and possibly not even the Soviet Union, would be willing to spend billions of dollars to give a few individuals this particular kind of life-and-death power over the entire world. ...

Most decision-makers, if forced to choose between accommodation to the point of surrender, a large risk of surprise attack, and buying a Doomsday Machine, would choose one of the first two as against the last one.

I have been surprised at the unanimity with which the notion of the unacceptability of a Doomsday Machine is greeted. I used to be wary of discussing the concept for fear that some colonel would get out a General Operating Requirement or Development Planning Objective for the device, but it seems that I need not have worried. ...

Aside from the obvious moral and political reasons, and the repugnance policy-makers and practical men have for a device which is aimed at their own population, the main reason the Soviet Union and the United States would not build a Doomsday Machine is that they are both status quo powers, the US because it has so much, and the Soviet Union partly because it also has much and partly because it expects to get so much more without running any excessive risks. ...

There is another form of deterrence which, while not a Doomsday Machine, is still an “ultimate” of a sort. This could be called the Homicide Pact Machine, an attempt to make failure of Type I Deterrence mean automatic mutual homicide. ... We destroy the enemy and the enemy destroys us. ...

The Homicide Pact system has many of the same drawbacks as the Doomsday Machine, though not in so extreme a form. The major advantage of the Homicide Pact is that one is not in the bizarre situation of being killed with his own equipment; while intellectuals may not so distinguish, the policy-makers and practical men prefer being killed by the other side. It is just because this view no longer strikes some people as bizarre that it is so dangerous.

\*Type I deters direct attack on the US. Type II deters severe aggression but not directly against the US. Type III deters minor provocations or small-scale aggression not against the US. ■