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## EDITORIAL

### The Importance of Intelligence

From the days when the Spartans used scytales for encoding military messages through the recent past when the Purple and Ultra codes played major roles in World War II, intelligence has been an important factor in war and prevention of war. In this age of computers, terrorism, and excess plutonium, military intelligence has become more important than ever. At this moment President Clinton is facing the choice of a new head for the Central Intelligence Agency (CIA) at a crucial moment in history and after a scandalous story of betrayal and loose administration in that key agency.

The characteristics of such a person easily come to mind—dedication, integrity, objectivity, and creativity are some of them—but one not often mentioned is the need for a scientific background. We can opt for someone very smart who will learn, but the CIA in a world with sophisticated computers, timed and radio-activated bomb devices, and plutonium and purified uranium, is far better off if someone is chosen who does not need to be taught about mathematics and physics, chemistry and biology, and codes and computers.

Intelligence gathering is, in part, based on deliberate, methodical analyses of resources and capabilities, but it is also based on chance fragments of data, wisps of information that flit across the consciousness, from sources of questionable reliability, about subjects in which importance and unimportance are not easily identified. The cross section of an atom would mean nothing to a nonscientist, but is clearly information that a scientist would recognize as interesting to a bomb maker. Since the means of potential devastation, particularly by small fanatical bands, are frequently technological explosive devices, a technically trained person who knows the periodic table and the mathematics of computers has an edge over a nonscientist, assuming all other qualities are equal.

Many scientists wish that science could sever all connection with warfare, but, unfortunately, that connection can never be separated. Any student of history is aware of the relationship and its importance. From the bow and arrow to the smart bomb and the laser, history shows that wars are won and prevented most often by superior technology. There is ample evidence that the future will add to that historical fact.

There is one additional qualification that argues for an individual with scientific expertise, and that is the value of having someone from outside the intelligence community. After the Ames case and because of the view that those who missed it were lenient to those who were primarily negligent, it might be helpful to have a person of undoubted independence, not beholden to any group of insiders, to "clean up the mess." Such a person could come in afresh, see new directions, and implement them without any legacy of past loyalties or past favors.

To most of us who have recently escaped from a world in which one mistake could easily have plunged us into Armageddon, it is more pleasant to pretend the pressure is off; we can relax with a nonfunctioning intelligence service and a weak army. But this new world, with its economic hardship and political instability together with the rise of fanaticism, poses intelligence and defense problems not imagined before. There are some budget cutters who glibly say that the Cold War is over and therefore we can cut back on weapons and intelligence. It is true that one threat is past, but the danger of terrorist weapons and terrorist states demands not only new types of information and weapons, but also overwhelming power that serves as an effective deterrent, just as it did in the Cold War.

Scientific training cannot, of course, be the only criterion, as general administrative skill and broad knowledge will surely be required of an intelligence chief. However, there are scientists who are also good administrators, and it is from that list that the right individual should be selected.

The person who helps the President and the Congress by providing needed information must be one of a new breed, able to cope with new challenges. To be versed in the scientific background that makes seemingly esoteric facts very important and scientific realities very relevant seems to be the kind of training that the present danger demands.

Daniel E. Koshland Jr.