## Absent Weapons Don't Imply Faulty Intelligence

THE U.S. DECISION TO LAUNCH military action against Iraq was heavily influenced by a belief that Iraq possessed weapons of mass destruction (WMD) that, if not destroyed, could, directly or indirectly, and sooner or later, threaten the security of the United States. Thus far, the weapons have not been found, although they may be in the future. On the other hand, they may not be.

In light of this possibility, the media, Congress, and the intelligence community itself have begun to focus on whether the absence of WMD in Iraq would imply that the intelligence on which the prior belief was based was either flawed or deliberately slanted? Many respondents to this question—especially, but not only, those who had originally opposed the war in Iraq—would answer it affirmatively.

They would be wrong: an unexpected outcome from an inescapably probabilistic estimate does not signify that the estimate was flawed or slanted! Intelligence estimates in general, as well as in the specific instance of WMD in Iraq, are inherently and

A slightly edited version was published in the *Wall Street Journal Europe* on July 18–20, 2003, under the title ". . . But the Decision for War Was Still Right."

inescapably uncertain, which is to say that they are probabilistic. Estimates made about something to be found or experienced in the future can at most only lead to a conclusion that there is a probability of some conjectured magnitude that a specified outcome will be realized.

Colin Powell's strong presentation to the U.N. Security Council on February 5 cited cell phone intercepts, satellite imagery, and other information sources to support the belief that Iraq possessed WMD. Yet, no matter how compelling the evidence, the inference from it was inescapably probabilistic. Yesterday's evidence, no matter how abundant and compelling, can only yield an estimate that there's a high probability—never a certainty—of what will be found tomorrow. Tangible evidence compiled yesterday, let alone strong circumstantial clues, can only warrant an inference that the probability of one particular outcome, in this case Iraq's possession of WMD, is higher than that of another, namely, the probability of nonpossession.

If, despite these relative probabilities, WMD are not found, this outcome does not imply that the prior estimate was wrong. The prior estimate may have been accurate even given the unexpected outcome, which may be attributable not only to the absence of WMD but also to the possibility that weapons possessed by Iraq prior to March 19 were subsequently destroyed, moved to another country, or, in the case of chemical and biological weapons, decomposed into relatively inconspicuous and innocuous precursor elements or agents. So an unexpected outcome may ensue notwithstanding the accuracy of a prior forecast that its occurrence was unlikely.

This line of reasoning raises two central questions that have been largely ignored in the debate about the elusive or nonexisting WMD in Iraq. The first is how to make intelligence estimates and estimators accountable. Unexpected outcomes can occur notwithstanding the accuracy of prior estimates that such outcomes are unlikely. But unexpected outcomes may also ensue because the estimates of their likelihood were faulty. How can intelligence users, let alone the general public, know whether the occurrence of an unexpected outcome resulted from the complexity of circumstances and the range of uncertainty associated with them or from the incompetence of the estimators?

The laws of probability suggest an answer. If an unexpected outcome ensues once or twice, it may not be surprising or conclusive: for example, if there were something like a five-to-one probability that Iraq had WMD, but in fact none is found, this would hardly provide grounds for faulting the estimate. If, however, for several unrelated estimates—for example, the probability of North Korea's development of nuclear weapons and delivery capabilities—unexpected outcomes recur, then the likelihood that the estimators and the estimation process are broken and need repair rises exponentially.

The second question is whether the war in Iraq should have been delayed until even more conclusive evidence of Iraq's possession of WMD had been acquired or, to the contrary, some compelling evidence of Iraq's nonpossession of WMD was brought to light.

The answer requires recognizing two different types of error that decision makers confront, either explicitly or implicitly. One type may result if the decision maker supposes that a particular outcome will materialize—say, that Iraq has (or did have) WMD but, despite the high probability associated with this outcome, it turns out that this supposition is wrong, that is, Iraq really does (or did) not have WMD. The second type of error is the reverse: if the decision maker supposes that a different outcome will materialize—for example, Iraq doesn't (or didn't) have WMD—but instead it turns out that this supposition is wrong, namely, that Iraq really does (or did) have WMD.

The decision maker's dilemma is to choose which of the two

possible errors is less hazardous to accept or, more important, to avoid. The Bush administration clearly decided that the second type of error was of such grave concern for the security interests of the United States that the risk of making this error had to be avoided.

Whether one agrees with this decision (which I do), or disagrees with it, there's no question that in the final analysis it is precisely the sort of judgment that the American public pays the president to make.

## POSTAUDIT

This primer on some elements of probability theory and the dilemma facing decision makers remains as valid now and prospectively as it was then.