This appendix draws heavily on the literature of warning and surprise and of military and technological innovation to assess Army intelligence’s tools for supporting the Army Strategic Planning System. Warning, surprise, and innovation are good analogues to use to evaluate Army intelligence assets for their appropriateness in support of the proposed decision-based planning system, for several reasons. First, long-range planning is all about anticipating trouble and taking appropriate steps to respond to it. The warning and surprise literature studies the same problem while emphasizing the causes of failure in the past: the organizational, perceptual, and other factors that have allowed surprise and failed to produce credible warning. Second, ACQ and FD are especially concerned with technical and military innovation and the weapons and foreign military capabilities that such innovation may produce. The innovation literature should help establish the degree to which Army intelligence is likely to be able to improve its ability to spot signs of foreign innovation useful for ACQ and FD purposes.

CLASSICAL ERRORS

The literature suggests that certain factors have interfered with good warning and allowed surprise; still others make spotting innovation difficult.
Key Observations About Warning and Surprise

Synthesizing the most salient points from the warning and surprise studies suggests that at least seven major factors have injured the ability of military planners and their intelligence colleagues to avoid surprise and offer credible warning of enemy action.1 These include:

Interpretive errors in which the psychological dynamics of individual, small group, and organizational behavior cause analysts to misinterpret the evidence. An example of this type of error from Army intelligence—but hardly unique to it—would be the Soviet Battlefield Development Plans,2 which persisted in overstating Soviet capabilities. The Soviet experts responsible for much of the document were heavily indoctrinated in Soviet military prowess through the Army’s foreign area officer program and as a result were often unable to interpret emerging evidence objectively.

Receptivity errors in which the “signal-to-noise ratio” surrounding the information makes its meaning difficult to understand, or the analyst’s expectations are so disparate from the data that they cannot be accurately understood, or where the rewards and costs associated with making the assessment interfere (e.g., the data would lead to a conclusion so widely at variance with the conventional wisdom as to make the analyst appear foolish). Those familiar with Army planning in the mid-1980s for developing the Extended Planning Annex to the POM would agree that analysts persisted in exaggerated expectations of Army budget growth despite clear evidence and signals from the administration to the contrary, because doing so was consistent with local conventional wisdom and because it made otherwise impossible programs appear plausible.


2A product of the U.S. Army Intelligence and Threat Analysis Center during the 1980s.
The fallacy of the perfect analogy, in which an analyst concludes that because two cases share some similarities, they are in every way analogous.

The ethnomorphic fallacy, in which an analyst concludes that because U.S. culture perceives events a certain way, other cultures do as well. One example from Army intelligence involves a study of Soviet tanks from the mid-1980s that concluded certain tanks were inferior to their U.S. counterparts because they did not employ thermal-imaging sights, when in fact the Soviets were developing a different technology of equal sophistication. But the analysis assumed that because the U.S. solution called for thermal imaging, the Soviet solution would, too.

The quantitative fallacy, which elevates the value of facts in proportion to their susceptibility to quantification. Estimates that focused on the “bean count” of tanks and other primary weapons forecasted to be in the inventory of various foreign states typified the quantitative fallacy. Analysts counted what could be seen, without giving due attention to qualitative factors like the state of training and morale of the military forces, among other things. As a result, many Warsaw Pact forces and others were credited with greater capability than was ever the case.

The evidence gradient, where the more improbable or unwanted the event, the stiffer the tests of veracity and reliability for any evidence suggesting the event may be about to occur.

Organizational factors, where centralization, the use of single, authoritative estimates, and intelligence constrained by policy lead to inaccurate and faulty conventional wisdom. Trickle-down planning guidance typifies this error, in which the Army planners in the past found that successive layers of Defense Guidance, Joint Strategic Planning Estimates, and similar documents left them in a planning straightjacket.