Yakov Ben-Haim, How Much Specialization? An Info-Gap Analysis of Uncertainty, *Military Operations Research*, to appear.

Abstract The array of specializations in a military force is chosen to deter potential adversaries and assure success in conflict when deterrence fails. However, effectiveness of military force in future conflict is often uncertain. Hence force planners must identify critical goals of future conflict, and must maximize robustness against uncertainty in achieving these goals. The goals of conflict are *not* maximized: robustness against uncertainty *is* maximized and goals are satisficed. This methodology is called robust satisficing.

Two propositions are proven, employing the concept of robust dominance. One force composition is robust dominant over another force composition if the first composition assures adequate military effectiveness over a wider range of uncertainty in the effectiveness. Proposition 1 establishes a sufficient condition for one force composition to be robust dominant over another force composition, if both compositions have the same predicted military effectiveness. Proposition 2 considers two force compositions whose estimated military effectivenesses are not the same, and the composition with lower estimated effectiveness is less uncertain than the composition with greater estimated effectiveness. The proposition establishes that neither composition is robust dominant over the other, and establishes ranges of critical effectiveness for which each composition is robust preferred.

Keywords military specialization, uncertainty, info-gap theory.

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