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To: "Dr. Baruch Fischhoff - Chair, National Academy of Sciences Study on Social & Behavioral Science and Improving Intelligence for National Security" <baruch@cmu.edu>

From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

Subject: The Incentive Systems chapter. Meta-solutions and rapid-learning systems for data and analysis

Dear Dr. Fischhoff and Colleagues:

A military tradition is that parachutists pack their own parachutes. This is an intelligent way to structure incentive and accountability. The National Academy of Sciences might want to review, in one chapter of your Report, the social science literature concerning incentive systems. Social science research suggests that organizational designs that give people incentives (& accountability) get better performance and also, with leadership, continually improve databases and analysis methods.

(By contrast to Weber's ideal-type model, as members of your Study Group will know, bureaucratic systems often manage to diffuse accountabilities and incentives.)

Here is one possible implication to improve US airline security:

- For airline security: designate security supervisors for each international flight. The security supervisors will be responsible for training and supervising their airport screening team; for reviewing and approving passenger lists (with background data) for each flight; and for any additional airport inspections and questioning of passengers, that they designate.

The security supervisors for each flight also will fly, and continue to serve as security supervisors, on these flights. <1>

They also will be able to review and recommend upgrades for the database/analysis systems that give them their passenger lists and background information.

- A related example of accountability and incentives is reflected in the traditional OMB standard that the analyst who writes a paper comes to the meeting with the Director. It's difficult to do in a $N = 200,000$ system, which is one reason to worry about institutional performance.

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<1> They also should be authorized, at their discretion, to sit in jump seats at the front of cabins that allow them to face the other passengers, and observe them during the flight rather than flying anonymously.

[About this issue: You might want to review the databases and analysis involved in these airline security decisions. Hiding "undercover" agents among passengers could make sense if you expect armed terrorists to be boarded on the flight - who might begin by shooting an obvious security guard at the front of their cabin. However if you expect suicide bombers, especially people who are young, inexperienced, and nervous, you might want to increase their fear and behavioral warning signs by a visible security guard who can be looking at them, or in their direction, during the flight.

A post-action scientific analysis of the shoe bomber, for example, concluded that his bomb failed because he had perspired so profusely since initially putting on his shoes. And the underwear bomber's behavior may have reflected ambivalence or nervousness that could be exploited in future cases.

Security supervisors, with direct incentives, could raise these issues for evaluation and/or change methods depending upon the risks they foresee for a specific flight.]

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