Comment Submission
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The Menlo Report: Ethical Principles Guiding Information and Communication Technology Research
Cyber Security Division (CSD)
Science and Technology,
Department of Homeland Security (DHS)
Washington, DC

Dear Authors:

"The Menlo Report: Ethical Principles Guiding Information and Communication Technology Research" is a praiseworthy and important first step for the challenges of privacy and risk of participants in networking research. These problems were long-recognized but for which, until now, there was not forward-moving formal action. I compliment, applaud, and appreciate the Menlo Report participants.

I offer tightly focused and actionable comments to inform the continuing process. I contest the conclusion that Institutional Review Boards (IRB) are an appropriate mechanism for oversight. I propose four characteristics that arise naturally from my objections. I conclude with three organizational structures that meet these characteristics.

My comment is from a researcher who has worked extensively with Institutional Review Boards (IRB) as a researcher. In my professional role as a professor I have authored two books, edited one, published over one hundred additional works, and supervised some three million in competitively-awarded funds. I submit this comment as an individual. My comments do not represent the opinion of my employer or any funding agency.

I have three substantive objection to the use of the IRB structure. First, the IRB itself is struggling. Expansion into an area of networks, explosions in data science, and uncertainty about the ethos of genetic models and science are already sources of difficulty. The IRB is structurally ill-suited to take on the additional tasks enumerated in Menlo.

Second, IRBs are notably inconsistent across institutions and time. The result of an experimental request is very much a function of not only the institution but also the personnel at the institution. The IRB model will create tremendous uncertainty in networking research, and make cross-institution repetition of experiments problematic. Sometimes the greater delay is associated with positive interaction; at its best the IRB improves both outcomes and experiment design based on their extensive experience in research design. Yet sometimes the IRB personnel are unsure of the science, and thus delay and refusal are the organizational responses.

Third, IRBs lack the technical expertise to identify privacy and security risks. To some extent, those researchers who can graciously be characterized as pushing boundaries will be less complete in their description of risks, while the more ethical may be more limited. The lack of incentive for risk disclosure may have perverse incentives, given the lack of expertise on the IRB to detect obfuscation.

Having made these less positive comments, I offer a some characteristics that would be part of an improved implementation. I then propose organizational approaches that might work in this mode, with no knowledge if these organizations are willing, but rather to prove the concept.

I propose that the committee seek a model of ethical research in which there is 1) consistent outcomes in terms of ethical standards, 2) uniform expectations in terms of delay for approval, 3) reviewers with institutional independence with respect to researchers, and 4) reviewers with technical expertise to evaluate the risks. Optimistically, the result could be (over time) an organization that can offer (but not require) improvements in experimentation; thus enhancing science and reducing risks. A secondary benefit of a national structure is that the organization can compile its experimental requests and their classification. Audits could evaluate the direction of risk in research. A tertiary role of this organization may be data compilation and sharing in compliance with funding agencies. However, neither the data compilation of research nor results is the focus of this comment.

I have three examples of organizations which could provide these functions, obviously with funding. The first is the Regional Internet Registries. These also have a history of university and corporate cooperation with information flow that would be difficult to recreate in the IRB context.

The second is an association of professional organizations, e.g., USENIX, the IEEE and the ACM. Both IEEE and ACM have distinct sub-organzations that are only members located in America or with American citizenship. A strong advantage of working with these organizations is that, together, they could effectively regulate through requiring review for publication. These also meet the four characteristics above.

The third is ISOC; however, its international nature hinder this option. Please note that the history of ethical and governance issues with ICANN make it uniquely ill-suited for this role, distinct from the fact that such an international organization is inappropriate for governance of research predominantly funded by Federal agencies. Other parties that spring to mind are disqualified by one or more of the four characteristics above. For example, ISI, based on its experience with domain names, might appear attractive. Yet its individuals would not be institutionally independent from ISI researchers. GNOC might appear attractive, but there exist similar problems with IU.

Processes for selecting one of these range from a structured evaluation; a two-stage evaluation by a third party (e.g., NAS, CRS, DoD); or open voting by network and security researchers. Should these characteristics prove of interest, I would be more than pleased to serve in the design or evaluation of selection mechanisms.

In summary, I have offered four characteristics of an ethical review structure for networking research: 1) consistent outcomes in terms of ethical standards, 2) uniform expectations in terms of delay for approval, 3) reviewers with institutional independence with respect to researchers, and 4) reviewers with technical expertise to evaluate the risks. I have argued that IRBs are structurally incapable of embodying these characteristics.

I have proposed two possible additional functions for a national organization which embeds the characteristics above. First is to provide an audible compilation of requests and reviews. Second is to serve as a structure for data diffusion according to agency guidelines. These are offered as supporting arguments.

In closing, I again express my appreciation for the authors of the Menlo Report. Please do contact me if there is any interest in my recommendations.

Sincerely yours,

L Jean Camp