

You Needn't Build That

Reusable Ethics-Compliance Infrastructure
for Human Subjects Research

Cristian Bravo-Lillo	(CMU)
Serge Egelman	(UC Berkeley)
Cormac Herley	(Microsoft Research)
Stuart Schechter	(Microsoft Research)
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Outside the laboratory...

- Researchers aren't present to witness your distress
- Nobody will see you fly through that consent form
- If you view Mechanical Turk tasks as work, reading consent forms lowers your hourly wage

Getting ethics right is getting harder

I study secondary tasks

Secondary tasks

Security

- Users rarely pick up their computers with the primary goal of minimizing their security risk

Ethics

- Researchers rarely engage in science with the primary goal of minimizing the risk to participants
 - Have you ever heard of a “most ethical paper award”?

Ethics as a secondary task

- Anticipating harms or reactions
- Writing consent forms
- Investigating whether any participant felt harmed as a result of being part of a study
- Determining how well disclosures (e.g., post-deception) ameliorate concerns or feelings of harms

Secondary tasks

Security

- Users rarely pick up their computers with the primary goal of minimizing their security risk
- Common approach: **make the safest path the easiest**

Ethics

- Researchers rarely engage in science with the primary goal of minimizing the risk to participants
 - Have you ever heard of a “most ethical paper award”?

Can we make the most ethical path the easiest?

Ethics as a service (EaaS)

- Surrogate surveys
- Consent-form building tools
- Post-debriefing measures of harm

Surrogate surveys

Surrogate participants are asked how they would react to an hypothetically-posed experiment.

Security warning attention study

Computer security researchers want to measure different techniques for presenting security warnings.

One challenge in studying security decision making is that if participants are made aware that researchers are studying their security behavior, or become aware of it, they are likely to behave differently than they normally would. **The researchers thus plan to deceive participants as to the purpose of the task (HIT) they will be asked to complete:**

- The participants will be given a task unrelated to security, but will **encounter a security warning during the task.**
- While the warning will create the illusion that the participant is facing a security risk, **the researchers will not actually expose participants to any real security risks.**
- **The researchers will measure how different ways of presenting a warning may make that warning more or less effective in convincing users to avoid a risk.**
- **At the conclusion of the experiment, the researchers will present a detailed explanation of the deception to participants,** reveal the true purpose of the study, and reassure participants that they were never at any real risk.
- **The aggregate results of the experiment will be used to publish a scientific paper.** Participants' identities will remain anonymous.

If they are not allowed to collect this data, they cannot measure the effectiveness of different designs for computer security warnings. Therefore, they cannot publish recommendations to help improve the effectiveness of future security warnings.

Surrogate surveys

Surrogate participants are asked how they would react to an hypothetically-posed experiment.

- Can identify potential risks and reactions before exposing real participants to the experiment
 - 12% thought the above experiment shouldn't be permitted*
- Our early research suggests that surrogate surveys overestimate negative reactions (and are thus conservative)

Surrogate surveys: Our service

- Submit an description of your planned experiment.
- We'll provide all the surrogates' responses.
- We'll show you how your experiment ranks against other experiments (some classic, some planned).

Ethics as a service (EaaS)

- Surrogate surveys
- Consent-form building tools
- Post-debriefing measures of harm

Consent-form building tools

Prior research suggests that participants are more likely to read consent forms if they...

- Are split into small pages to make material easier to digest
- Are paired with questions about key facts to disclose

Ethics as a service (EaaS)

- Surrogate surveys
- Consent-form building tools
- Post-debriefing measures of harm

Post-debriefing measures of harm

Please complete the sentence below, taking into account any potential harms from this experiment (or other concerns) and any benefit to science and to society as a whole. Your feedback may determine whether other participants will be asked to take part in this experiment (or others like it) in the future.

This experiment should...

- definitely be allowed to proceed.
- probably be allowed to proceed, but with caution.
- probably not be allowed to proceed.
- definitely not be allowed to proceed.
- I prefer not to answer.

Post-debriefing measures of harm

Please complete the sentence below, taking into account any potential harms from this experiment (or other concerns) and any benefit to science and to society as a whole. Your feedback may determine whether other participants will be asked to take part in this experiment (or others like it) in the future.

In the future, experiments like this one should...

- definitely be allowed to proceed.
- probably be allowed to proceed, but with caution.
- probably not be allowed to proceed.
- definitely not be allowed to proceed.
- I prefer not to answer.

Post-debriefing measures of harm

Please complete the following sentence:

If someone I cared about was considering participating in this experiment, I would...

- strongly discourage them from participating.
- gently discourage them from participating, but not try to stop them.
- neither discourage nor encourage their participation
- gently encourage them to participate.
- strongly encourage them to participate.

Ethics as a service (EaaS)

- Surrogate surveys
- Consent-form building tools
- Post-debriefing measures of harm

Building out ethics infrastructure:
What's in it for us?

What's in it for us?

Rich **cross-experiment** ethics data

- Surrogate surveys responses
- Measures of how informed participants are after consent experiences
- Responses to debriefings indicating concerns or harms

What's in it for us **all**?

Rich cross-experiment ethics data

- Surrogate surveys responses
- Measures of how informed participants are after consent experiences
- Responses to debriefings indicating concerns or harms

What's in it for us **all**?

Rich cross-experiment ethics data

- Surrogate surveys responses
- Measures of how informed participants are after consent experiences
- Responses to debriefings indicating concerns or harms

Back to that disclosure survey

If you would like to limit who can see your answers to the following questions about the use of deception in this experiment, check the appropriate box(es) below.

- Do not share my responses with the researcher(s) who conducted the deception experiment.
- Do not share my responses with the ethics review board(s) that approved the deception experiment.
- Do not share my responses with outside scientists who study the ethics of scientific experiments.

Ethics as a Service can provide...

- Researchers with an easier path to ethical compliance.
- Ethics researchers a source of cross-experiment ethics data for quantitative research.
- IRBs with data to use in place of hunches, and speculation.
- IRBs the ability to monitor ethical feedback in real-time and limit the damage if studies prove harmful.



HELP

WANTED