Consent Form Design for Geolocation Capture in Mobile Web Surveys

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Acknowledgements

Robert H. Young (SoundRocket)
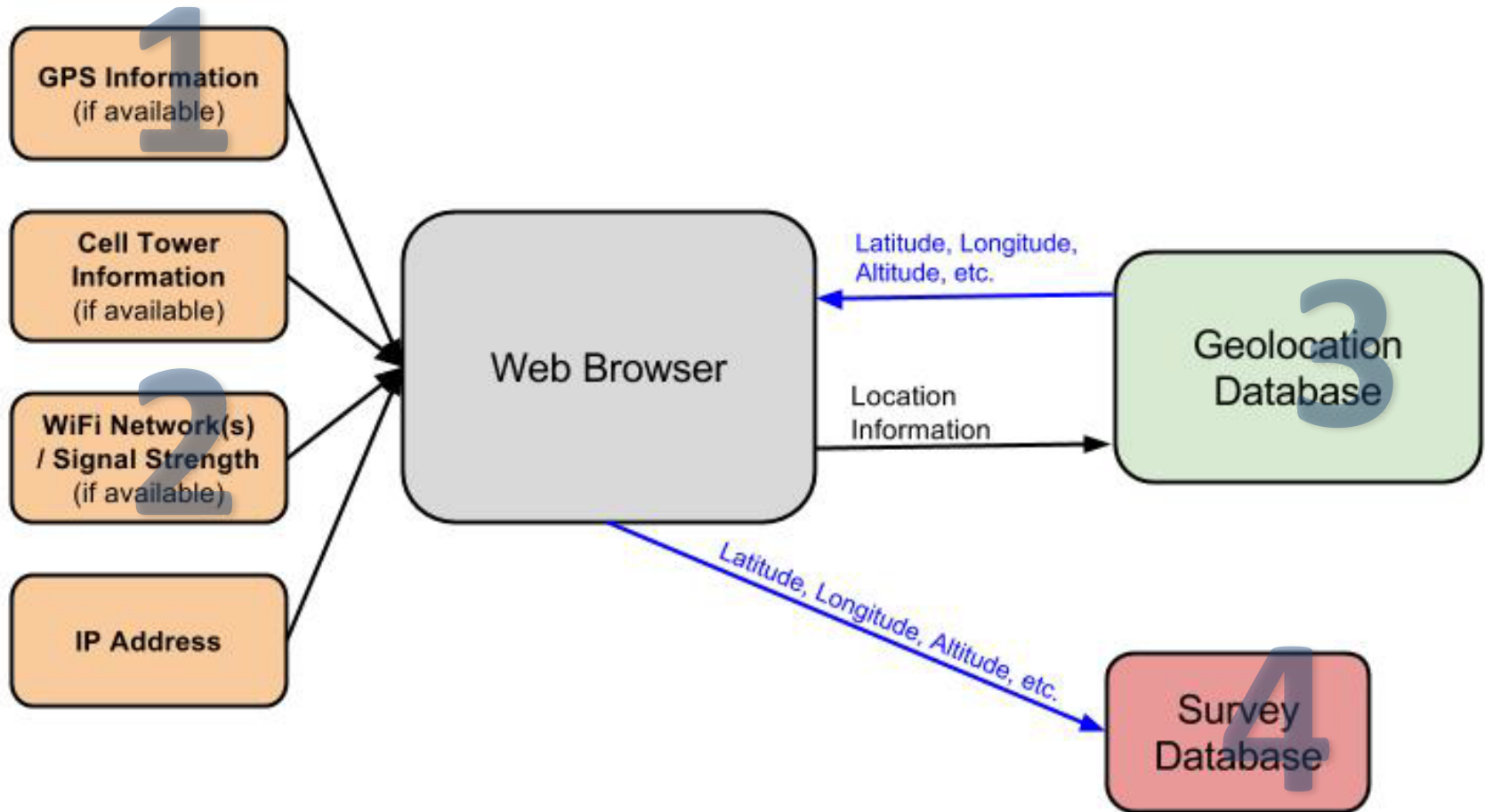
Toben Nelson, Ph.D. (University of Minnesota)

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Mobile Devices are Here - Geolocation is just one new tool that they bring to the social scientist…

Credit: http://www.intomobile.com/2012/05/14/texting-while-walking-illegal-ft-lee-new-jersey/

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Geolocation - Defined

Requesting Geolocation Data: Devices Already Do This – But Beware

Respondents may refuse geolocation data capture from within their device.

- Only Rs can control their device settings; however, we know if they refuse as the location capture script can return an error code.

- Rs don't always read consent statements, thus we believe that some may be alarmed when they receive the device prompt.
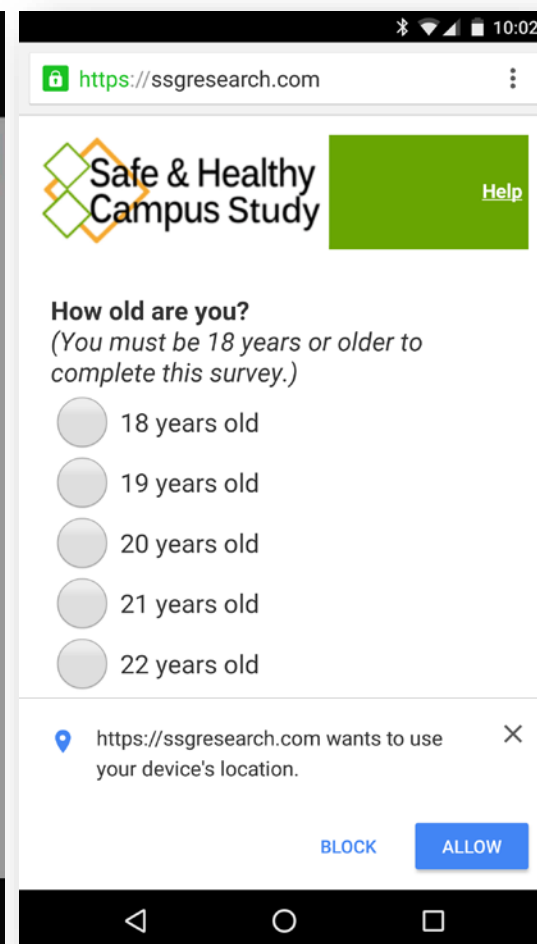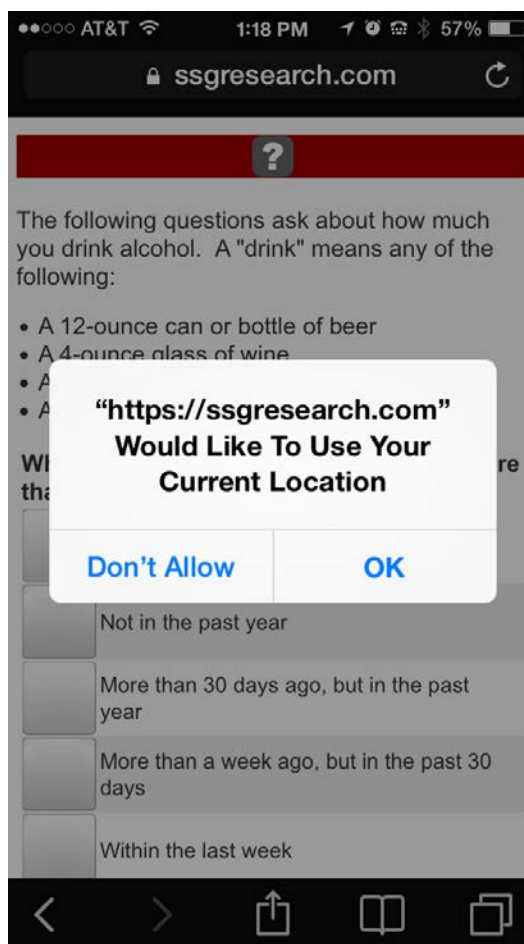
W3C Geolocation API Specs
Call for More

W3C Geolocation API Specifications require permission is obtained to capture geolocation[1]

While the technology currently requests permission prior to capturing this type of data, we do not have control over that and we cannot guarantee that it will be maintained. *We believe that the automated request provided by the technology is not sufficient and it should be supplemented*.

1) http://www.w3.org/TR/geolocation-API/#security

Previous Work

- A majority of respondents (student populations) **will allow** geolocation data capture within a survey. [1]

- Geolocation is more **accurate and more reliable on mobile** devices than on laptops/desktops.[1]

- Respondents' **self-reporting of their movement correlates with** what we see in their **geolocation** data.[2]

- The **proportion** of respondents that provide useful geolocation data **increases if you directly ask for their consent** to capture.[1]

1. Crawford, Scott D. et al. 'Understanding Mobility: Consent and Capture of Geolocation Data in Web Surveys'. 2014. AAPOR Presentation.
2. Crawford, Scott D. et al. 'Self-Report Location vs. Geolocation: Speeding Down the Highway or Couch Surfing?'. 2014. MAPOR Presentation.

Two approaches – Covert vs. Overt

Add Language to the Survey Consent

In addition to the questions in this brief survey we would like to collect data on the location where you are completing this survey using features available in desktop computers and mobile devices. You will be asked whether you will allow location data to be collected and you may choose not to allow collection of location data.

Separate Geolocation Consent Question

We would like to understand more about where respondents are when they participate in surveys. We would like to collect information made available by your computer/mobile device on your geographic location. Do you accept or decline our request to collect your location?
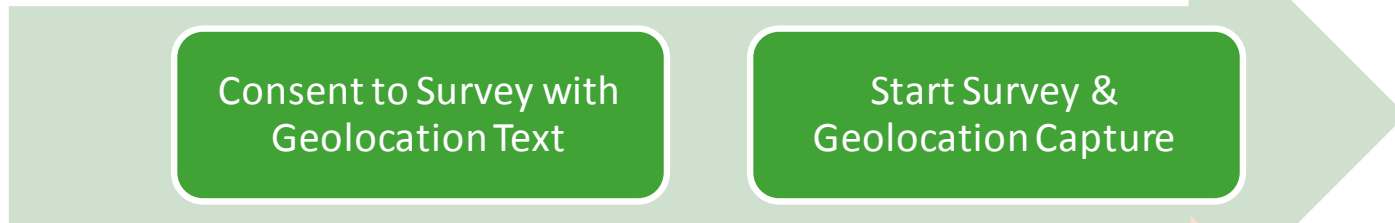
- o *Yes, you may collect geographic data*
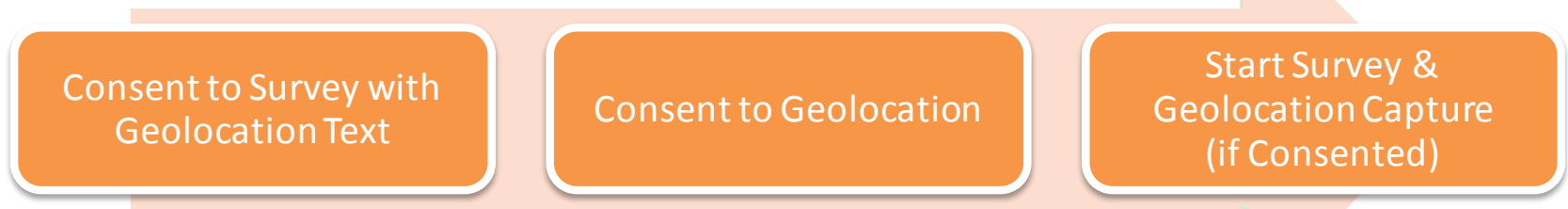- o *No you may not collect geographic data*

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The Consent Experiment Treatments

Treatment A: **Consent Form Only**

Consent to Survey with Geolocation Text	Start Survey & Geolocation Capture

Treatment B: **Geolocation Consent Question**

Consent to Survey with Geolocation Text	Consent to Geolocation	Start Survey & Geolocation Capture (if Consented)

Treatment C: **Control (No Geolocation Capture)**

Consent to Survey	Start Survey

Did respondents **consent** to the survey?

Treatment A: Consent Form Only

| Consent to Survey **96%** | Start Survey & Geolocation Capture |

Treatment B: Geolocation Consent Question

| Consent to Survey **96%** | Consent to Geolocation | Start Survey & Geolocation Capture (if Consented) |

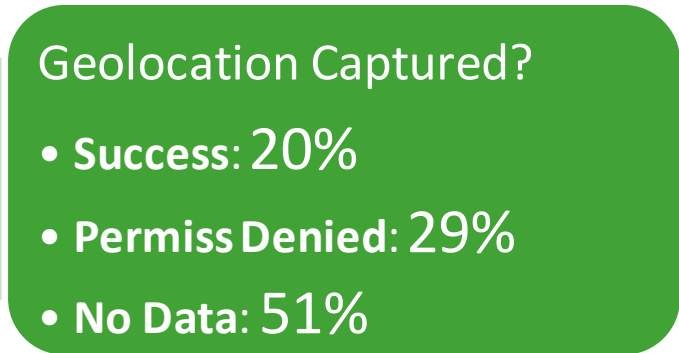**Treatment C: Control**

| Consent to Survey **93%** | Start Survey |
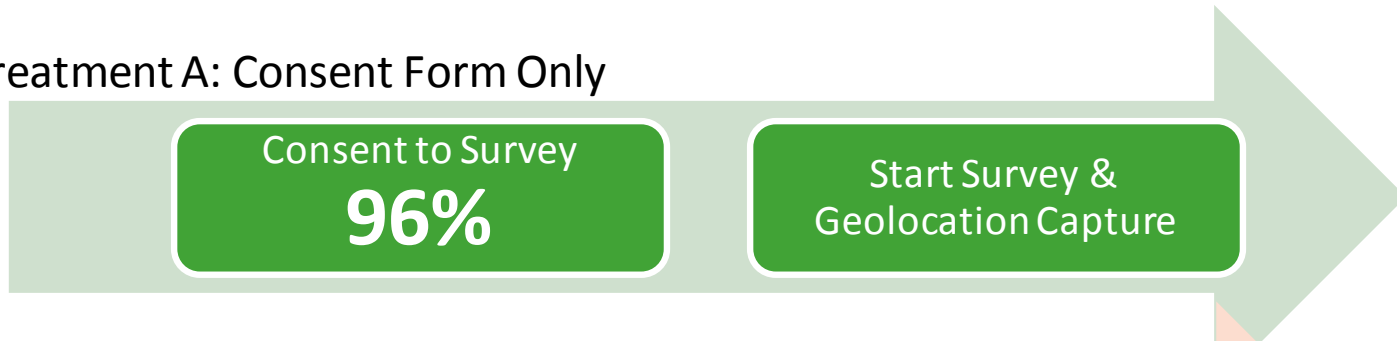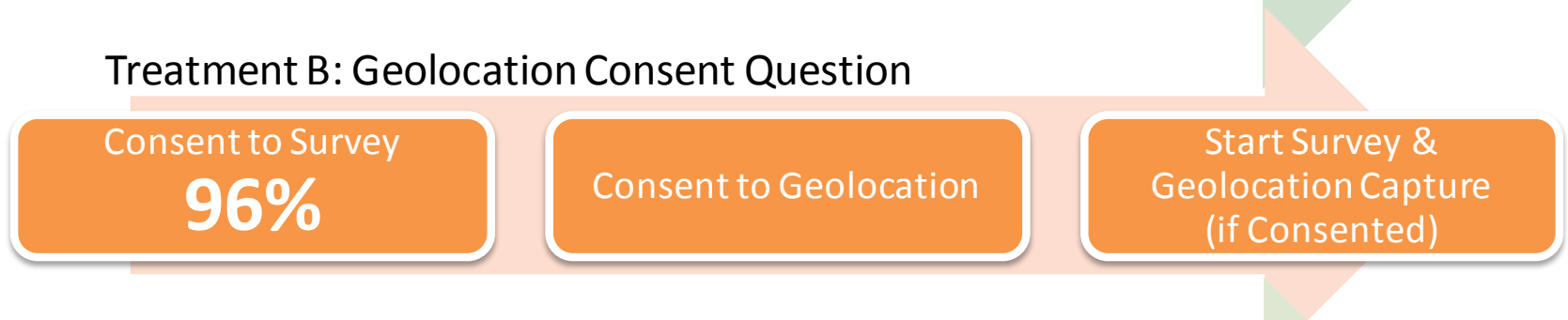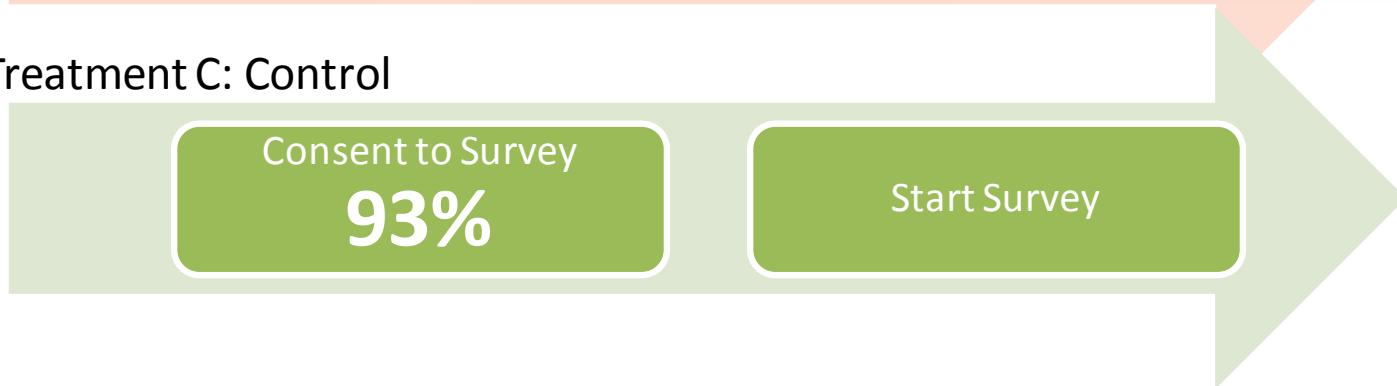
Did respondents **geoconsent**?

Treatment B**: Geolocation Consent Question**

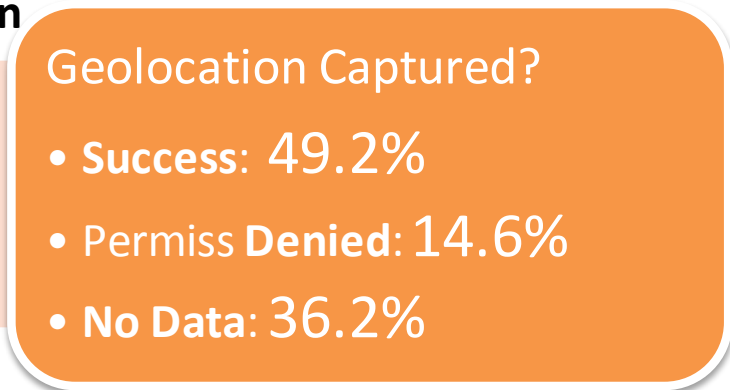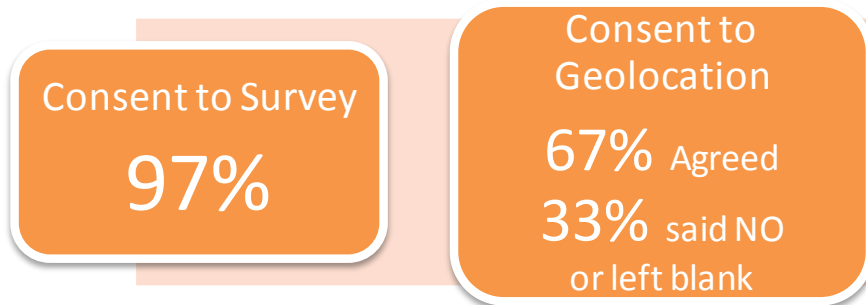| Consent to Survey **96%** | Consent to Geolocation **60% Agreed** **40% said NO or blank** | Start Survey & Geolocation Capture (if Consented) |

Did we capture data after consent? (New Study With Error Code Detail)

Treatment A: **Consent Form Only**

Consent to Survey (with Geolocation text)
97%

Geolocation Captured?

- **Success**: 20%
- **Permiss Denied**: 29%
- **No Data**: 51%

Treatment B: **Geolocation Consent Question**

Consent to Survey
97%

Consent to Geolocation

67% Agreed
33% said NO or left blank

Geolocation Captured?

- **Success**: 49.2%
- Permiss **Denied**: 14.6%
- **No Data**: 36.2%

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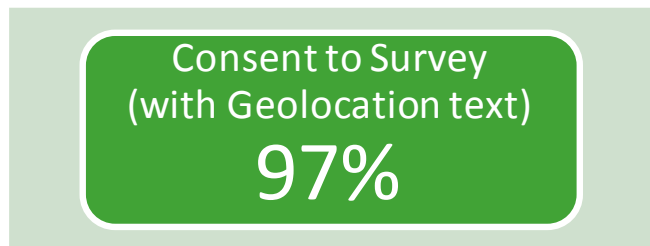
Longitudinal Surveys with Geoconsent

Typically in a longitudinal design, participants are consented initially, but then not explicitly re-consented again at T2, unless significant time has passed.

Will respondents remember the geoconsent?

Would a prompt alerting respondents to expect a machine prompt help?

Location Alert Prompt

Thank you for allowing us to capture your geographic data during this survey. This will give us added insight into how Minnesota students participate in surveys!

Depending on what type of device you are using, after you click Next on this page, you may be prompted by your device to allow the geographic location capture to happen. Please say "Yes" or "Accept" to that prompt if it is presented to you.

Experiment with Prompt

We followed up a T1 data collection at T2 (which was the same weekend in a rapid response momentary assessment). We experimentally assigned the following treatment groups:

Those who consented at any T1:

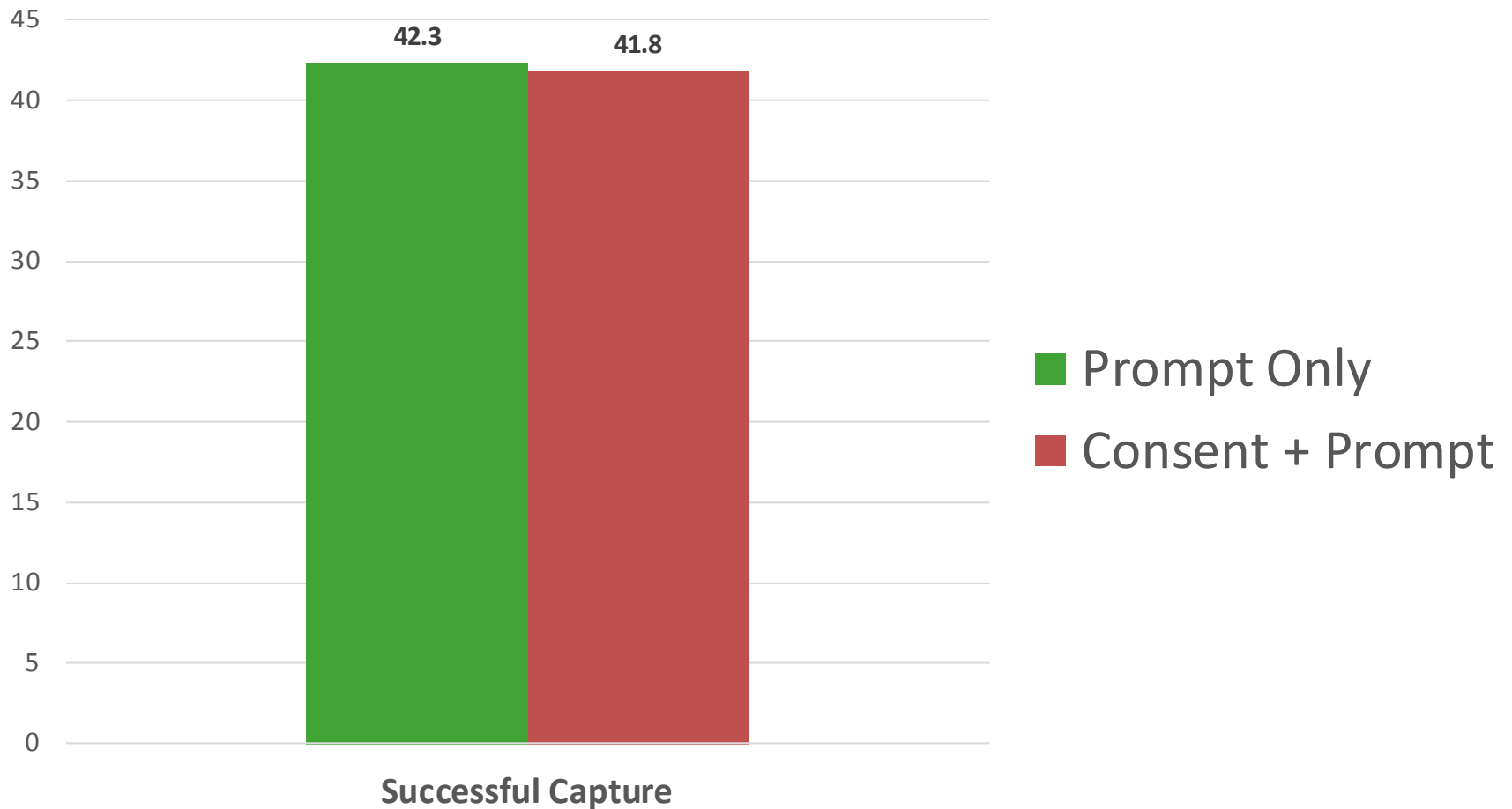- Prompt Only
- Consent + Prompt
- Nothing

Those who didn't consent at T1:

- Re-consent
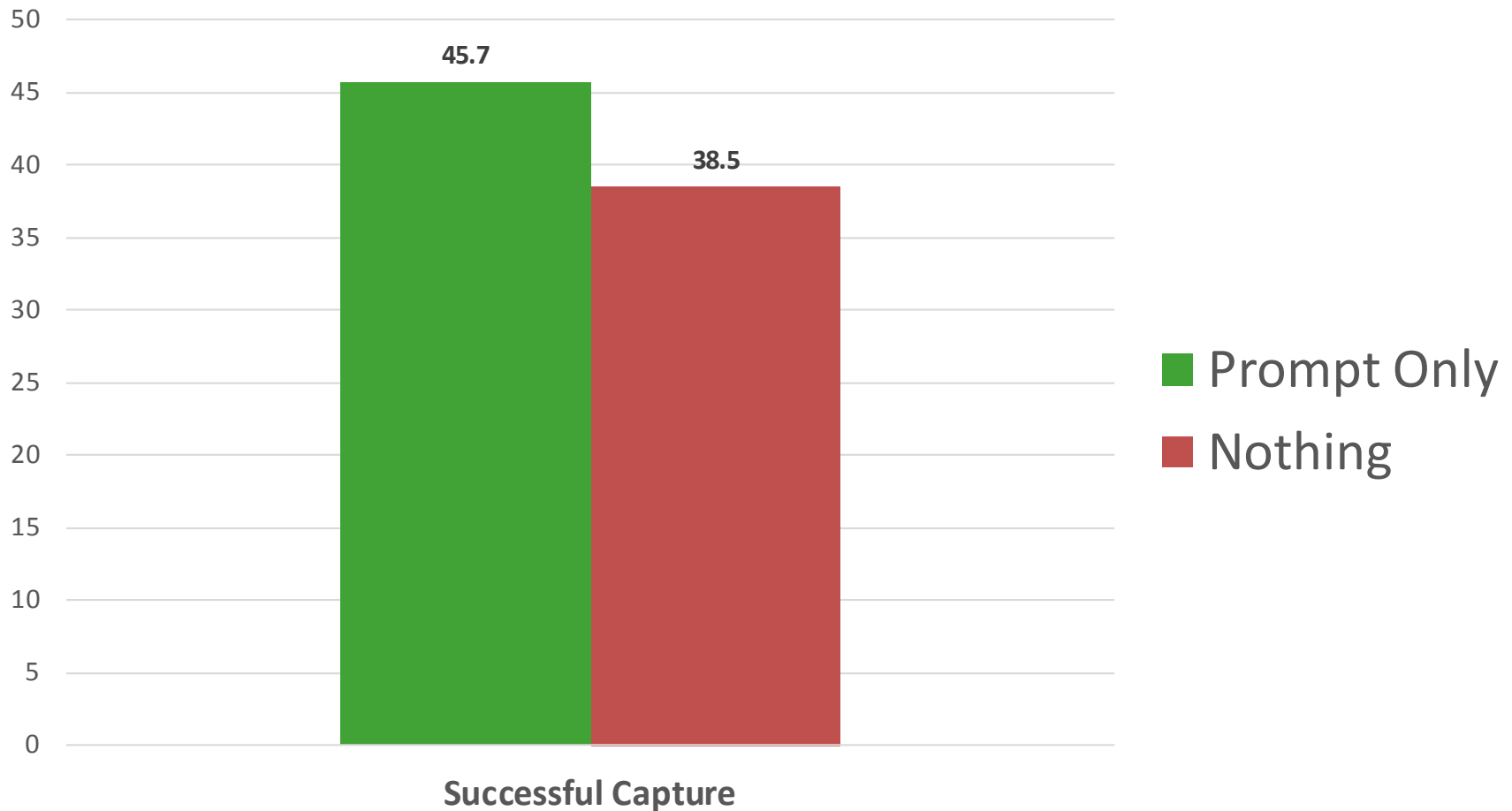- Nothing

Prompting Immediately After Consent
- *No Impact*

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Longitudinal with Prior Consent - *Improvement (but not significant)*

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Does re-consenting refusers work?

Those who refused at T1 consented to provide geolocation data at T2 24% of the time.

Overview – Geolocation Consent Recommendations

1. Do not bury geolocation consent statements in standard consent forms. Ask for geolocation consent separately.

2. Prompting to alert participants of the geolocation capture immediately after a geolocation consent does not help (or hurt).

3. Always re-consent for geolocation when starting a new survey even if previous consent was provided. Prompting is not sufficient.

4. Re-consenting cases who had refused geolocation consent previously will bring in more cases who had previously refused (24% in our case).

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Next Steps

- Everything presented today was done with student populations, where we often see well over 50% using mobile devices. Move carefully when considering how this plays out in other populations. More studies are needed.

- Cursory looks at the data seem to tell us that longitudinal respondents are fairly predictable in how they'll respond to repeated geolocation prompts. This hints that there may be something systematic about who refuses geolocation consent (i.e. nonresponse bias may be an issue). Consider carefully how this may play a role in your study.

- Longitudinal studies had small(ish) sample sizes. More studies are needed to see if the differences we are seeing are actually significant.

- How does geolocation capture impact other forms of data quality (item missing data, truthfulness of responses on sensitive items, etc.)

Thank you!

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