

CMSC 304 Computer Ethics

App development: "After reading the three articles, I have an urge to turn off all devices and go wandering off into the woods"

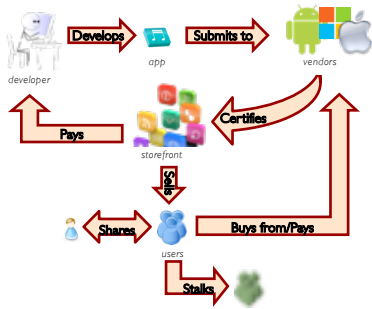
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Bookkeeping

- Reading Journals:
 - Read **each** article
 - Bring insights from articles **together** in discussion
 - Don't just post about, for example, microtransactions
 - Since this is the first topics RJ, won't lose points
- EA2 topic posted
- Start thinking about paper topics
- Come to office hours with questions / drafts / ideas

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App Development



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Ethical topics in app development

- Data sharing, data leakage, data theft
- Manipulating users into spending money
 - Note, this is distinct from simply selling something
- Apps with unethical target behaviors
- Taking advantage of lax permissions (e.g., location)
- Addictive design
- Weak cybersecurity, lax handling of PII
 - Personally identifiable information – this acronym will come up a lot

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What is (un)ethical app design?

- Consider the following pattern:



- The intent is to deceive people into clicking the only "button"
- The non-button option is designed to shame the user
- This is an example of a "dark pattern"

<https://www.telerik.com/blog/why-ethical-design-is-critical-for-mobile-app-designers>

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Dark Patterns

- Dark Patterns are **deceptive UX/UI interactions**, designed to mislead or trick users to make them do something they don't want to do.
 - Vague or confusing questions to trick users into positive responses.
 - Collecting too much information from contact forms.
 - Ads disguised as regular content.
 - Misdirection (similar to the button example).
 - Starting a subscription without reminding users the trial is about to expire.
 - Auto-ticking checkboxes so that add-ons are placed in the shopping cart or users are subscribed to a newsletter without knowing.
- "Dark patterns are design patterns that are effective, but evil."

uxdesign.cc/dark-patterns-in-ux-design-7009a83b2331
www.uxmatters.com/mt/archives/2019/11/mobile-dark-patterns.php
www.telerik.com/blog/why-ethical-design-is-critical-for-mobile-app-designers

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Beware of sneaky dark patterns



- “For UX designers to fall prey to dark patterns, it is not necessary for there to be an actual cackling villain ... or to decide to use dark patterns because you hate users. These patterns sneak up on you ... as you try to meet business requirements or simply accept that what others are doing is best practice.”
- More examples:
 - Notification Fatigue (Instagram)
 - Do-or-Die Permissions (Waze)
 - Too Much Location Information (everybody)
 - Unclear or Impossible Touch Interactions

www.usability.com/m/for/news/2019/01/mobile-dark-patterns

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Is it getting better?

- “Fortunately these leaks have been sealed...”
- Actually, it’s getting worse.
 - Dark patterns are *more* pervasive
 - Data exfiltration is a monotonically increasing problem
 - Non-CS users are not getting more sophisticated about problems
 - Microtransactions have become more effective
- We haven’t even touched on actual malware
 - Ethically, app developers should make secure apps
 - In practice there’s no incentive to do so
- Or on spyware apps, or...

www.spyphone.com
threatpost.com/dark-herring-billing-malware-android/178033

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Do they (we) deserve it?

- People just shouldn’t make those purchases.
- It’s just bad parenting.
- Don’t put your info on social media then.
- Manage your permissions better.
- Don’t put so many apps on your phone.
- What’s wrong here?

- Victim blaming is usually a tactic for **shutting down discussion**.
- These underestimate how sophisticated manipulation can get.
 - If you need to understand operant conditioning theory...

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Ethics & Responsibility





- Claim: Everyone has some responsibility for the consequences of their actions
- Some (usually implicit) counter-arguments:
 - “I didn’t mean for it to do that / didn’t intend that use”
 - “It wouldn’t have worked if people weren’t _____ ...”
 - Stupid / careless / inattentive / indifferent / ...
 - “They had to make a decision, too”
 - “I may have offered the bribe, but...”
 - “She put her info on Facebook and Foursquare...”
- None of these are ethically (or legally) defensible

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Ethics & Responsibility

Everyone?





- The person/people/entity who *did* the damage?
- The person/people/entity who *enabled* the damage?
- The person/people/entity who *allowed* the damage?
- The person/people/entities *who are* damaged?
 - Very rarely.
- These parties do not all bear the **same** responsibility.

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Relevant Questions

- Who are members of these groups?
 - Stakeholders!
- Could they have been reasonably expected to foresee that damage?
 - Given reasonable (but probably imperfect) people
 - Think about a variety of situations.
 - For us: would they have to be above average tech savvy?
- Would the actions that could avoid damage *themselves* violate ethics or infringe on rights?
 - Just don’t use Facebook! (Well, only some people.)

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Due Diligence & SOCs

- So what responsibilities do we have? Perfection?
- Due Diligence:
 - "...refers to the care a reasonable person should take before entering into ... a transaction with another party." ^[1]
 - "Reasonable steps taken by a person in order to satisfy a legal requirement, especially in buying or selling something." ^[2]
- Standard of Care:
 - "Such reasonable caution as a prudent [person] would have exercised under such circumstances." ^[3]

^[2] Google web definitions

^[1] www.investopedia.com/terms/d/

^[3] en.wikipedia.org/wiki/Standard_of_care

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Discussion Questions

For ALL of the topics covered in the readings

- Was damage done (or could it be?) **What is the damage?**
- **Who's responsible?**
 - Girls Around Me
 - Microtransaction developers
 - Apps and privacy
- **Could they (each) have reasonably foreseen the damage?**
- **Could they avoid it? Could they be required to? Ethically? Legally?**
- **Who's responsible for fixing it? For preventing it? How?**

Who *did/does* the damage?
Who *enables* the damage?
Who *allows* the damage?
Who *is* damaged?

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