

# Ethics of User Interface Design

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ID 405: Human-Computer Interaction

# Ethical & Moral dimensions of UI Design

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- 1 High-level ethical and moral issues surrounding the design of human-computer interactions that are increasingly autonomous and algorithmic, that diminish user's sense of moral agency or may even mitigate moral responsibility for computer mediated actions.
- 2 Low-level interface design patterns used in websites and web-based applications to deceive users into actions that are generally not in their interest.

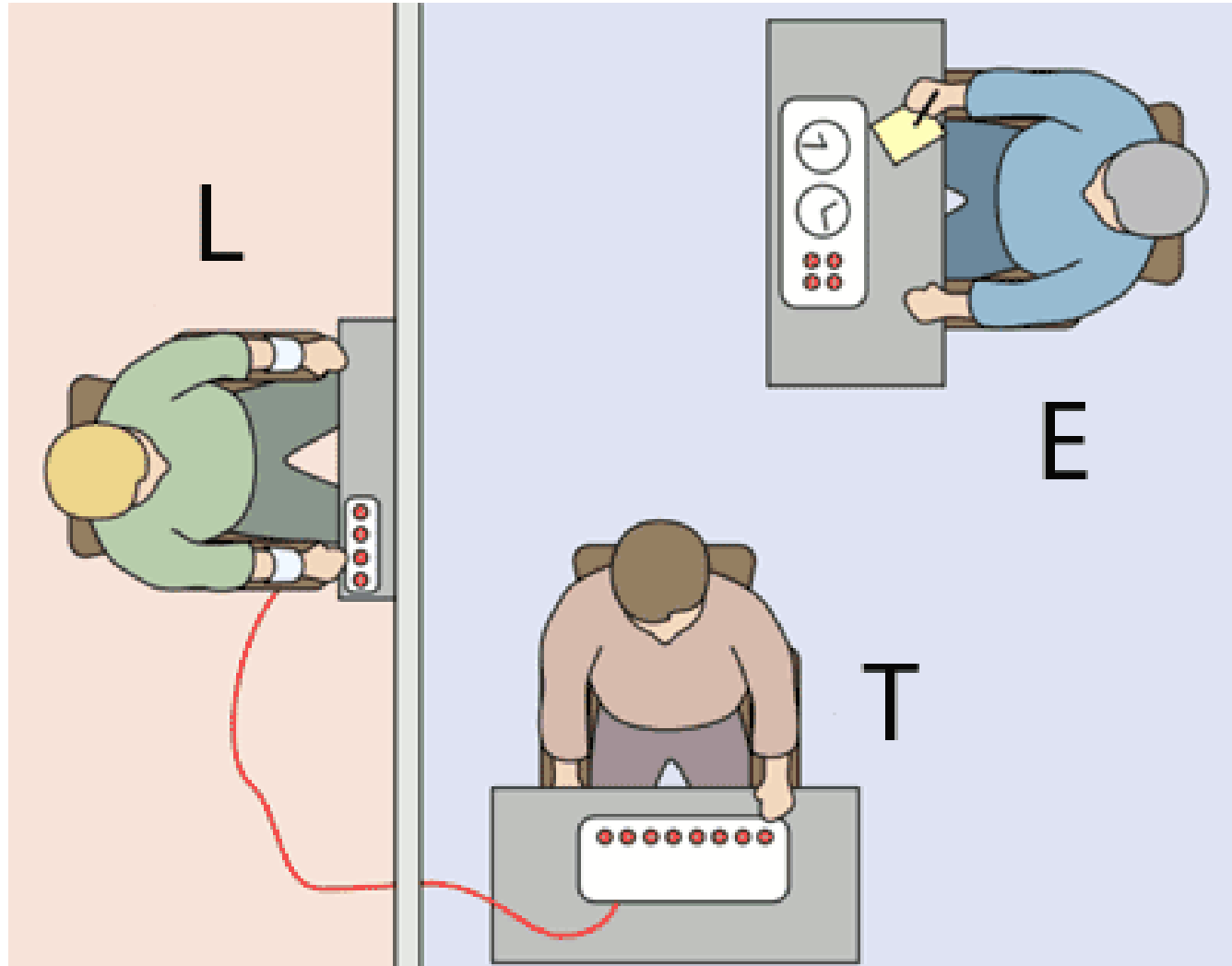
## Creating moral buffers in weapon control interface design

By Cummings, M.L. ; MIT in *Technology and Society Magazine*, IEEE (Volume:23, Issue:3) Fall 2004

- The Author takes a look at military and medical settings and describes the moral implications that decisions in those areas of interface design inevitably have.
- The basic argument she makes is, that a user interface can create a “gap” between a person’s actions and their consequences which results in psychological/emotional/physical distancing from those consequences and therefore in a diminished sense of accountability and responsibility: the moral buffer.

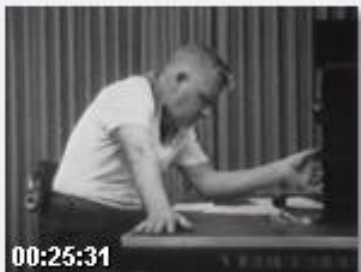
# The Moral Buffer

## Stanley Milgram's Obedience Experiments, 1961



# The Moral Buffer

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# The Moral Buffer



# The Moral Buffer

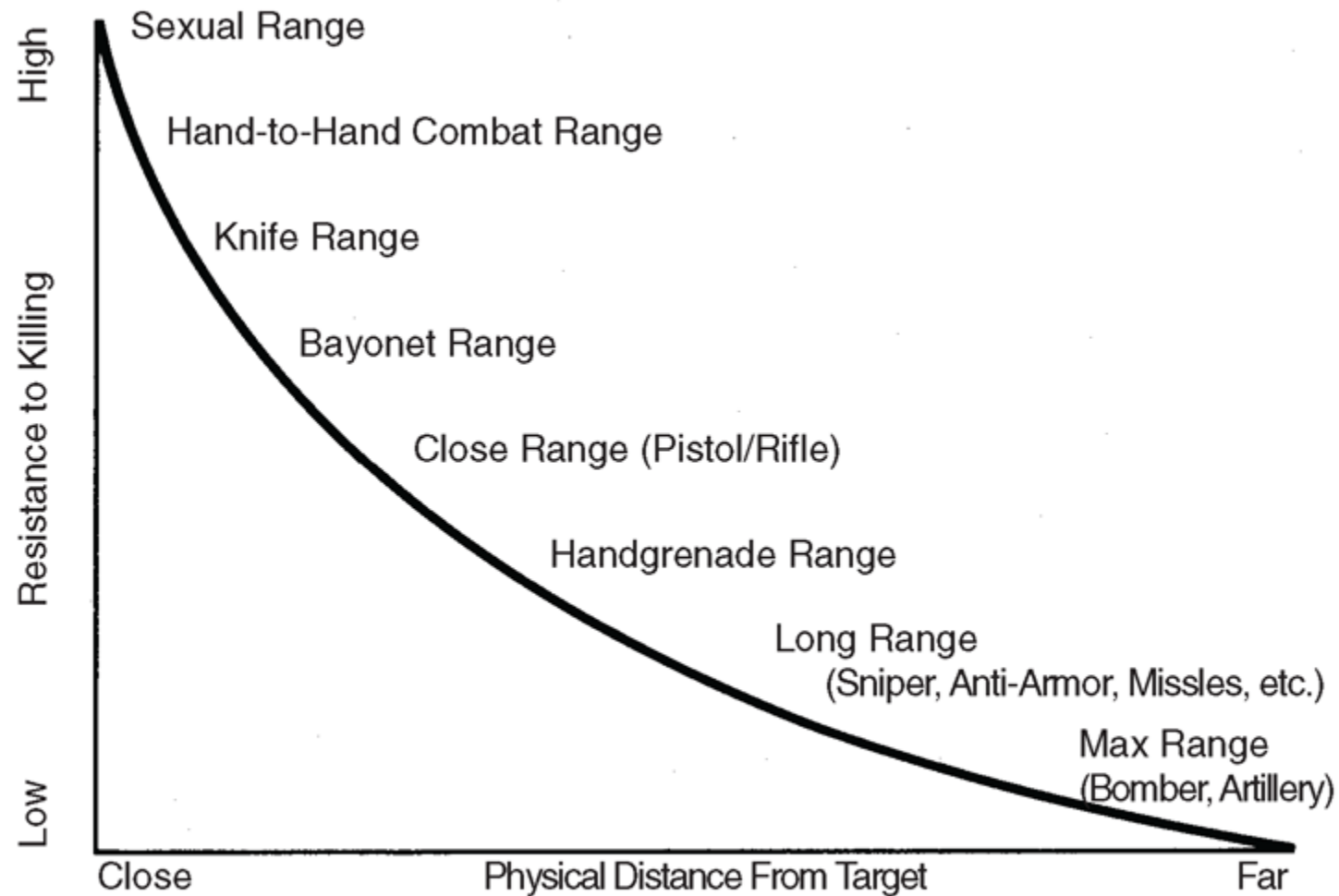


Fig. 1. Resistance to killing as a function of distance [4].

# The Moral Buffer



FLY ADMIN MSN ADMIN  
REP DRAMA ON / 444  
TR 015  
LAD  
FUEL A LOT  
TRF ACT. RESO  
GIB  
EYE  
AB M/S  
BAC  
CUST FAA  
ERI ?  
DET CW ?  
TOT WME/BOC: CLOUDS  
COOP:  
95  
105



# The Moral Buffer



## Autonomous weapon systems and killer robots

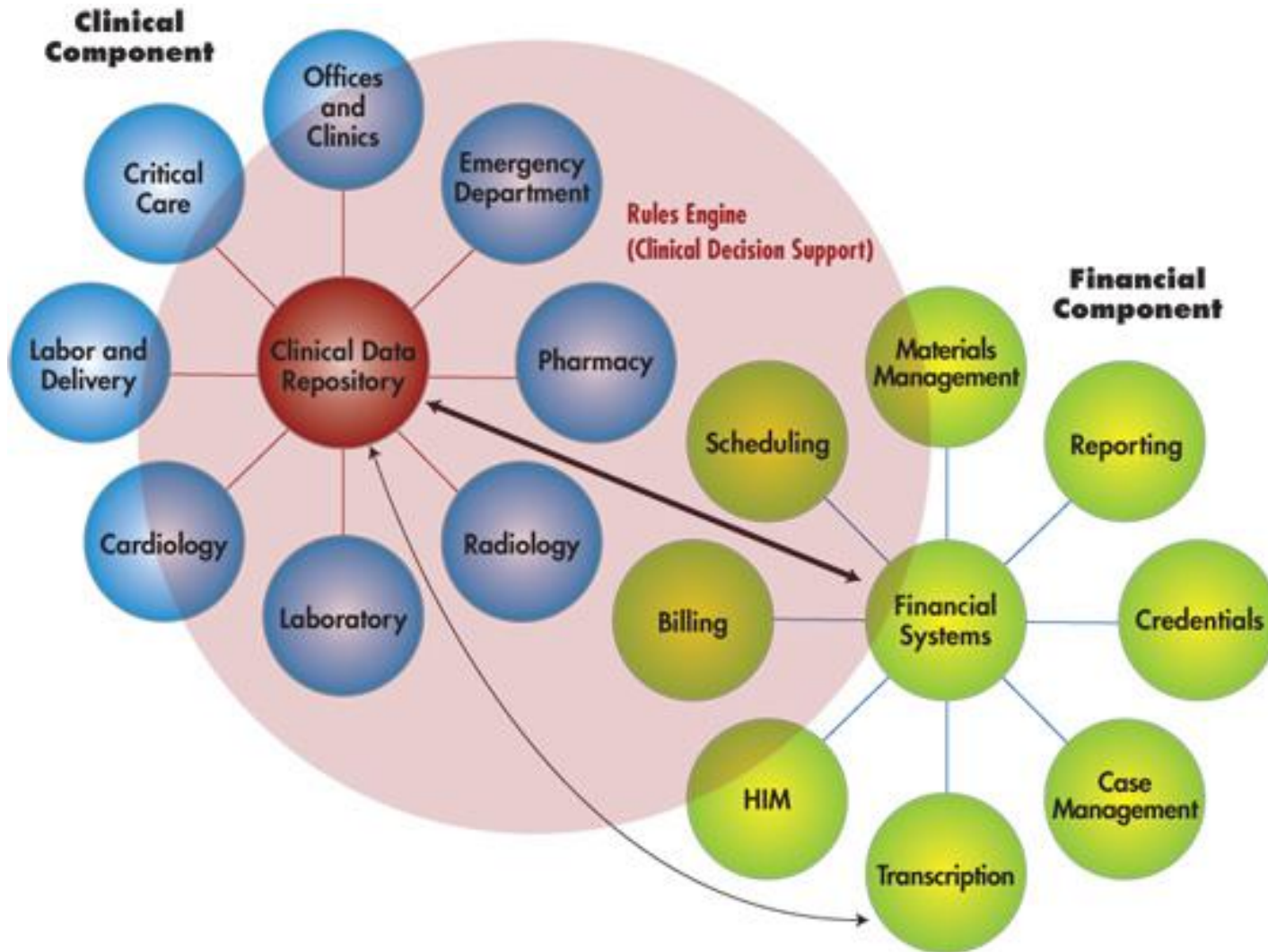
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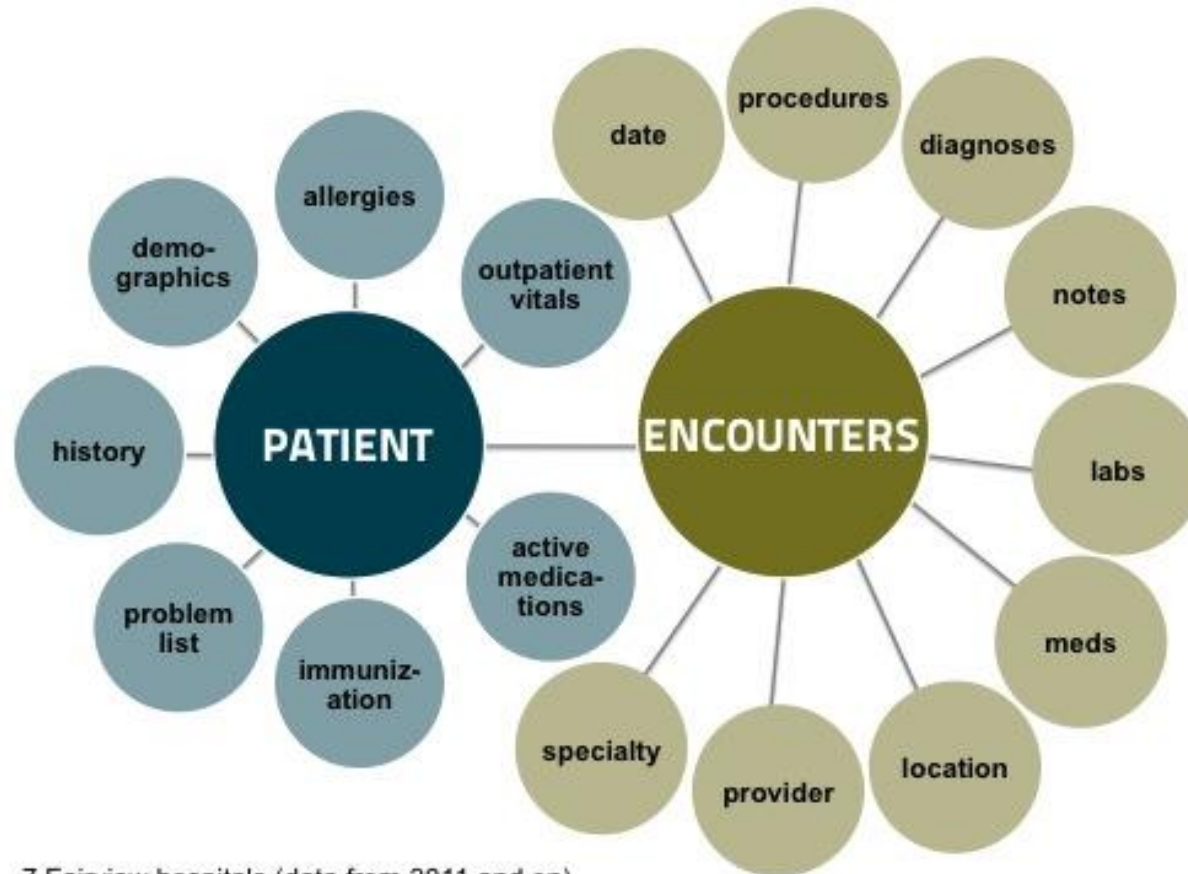
## Medical decision support systems

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## Medical decision support systems

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7 Fairview hospitals (data from 2011 and on)  
40+ Fairview (from 2005) and UMP clinics (from 2011)

**Data available to University of Minnesota  
researchers via the Clinical Data Repository**

## Data-driven algo-cracy

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Government & public policy – UK, Singapore

Terrorism & national security

Transportation

Insurance

Education

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# What causes the moral buffer?

## Lack of empathic clues

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When people are remotely painful stimuli, they are only aware in a conceptual sense of the suffering from their actions

## Out of sight, out of mind

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Distance/obedience creates the narrowing of the cognitive field of the subjects

## Physical distance

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Physical separation between an action and the resultant consequences, increases the ability of humans to inflict greater suffering through remote conditions

## Psychological distance

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Psychological distances are created by race, religion, nationality, ideology, technical superiority etc.

## Users tendency to anthropomorphise computers

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People have a tendency to assign human attributes and moral responsibility to computers, without consciously recognizing it

# The Moral Buffer

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1. Can interface design also have the contrary effect, creating a deeper sense of moral involvement by the user?
2. Are there other moral pitfalls in a User Interface Designers work – even when not concerned with life-critical systems?



# The Moral Buffer





# The Moral Buffer

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In KOTOR you typically have with you one to three computer-controlled characters, who comment on your actions. Doing something morally questionable would result in "Why did you do that?", "Was that really necessary? He needed his money more than we do." or something to that effect, and usually you had to answer something.

In GTA, your victims typically die with a faint moan, and praise is the only thing you'll hear.

Not deceive

Not mislead/misguide/misdirect

Not manipulate

Not disguise

Not hide or obscure

Not misrepresent

Not confuse/confound

Not exploit errors

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1. Dark Patterns
2. Malicious Interface Design
3. Evil by Design

## Dark Patterns

*To spread awareness about Dark Patterns, to name & shame sites that use them.*

14 Patterns

Curated by Harry Brignull

## Bait & Switch

Invite user to do one thing, switch to something else (that is undesirable)



## Disguised Ads

Misleading ads to get people to click, but act as a navigation device

## Forced Continuity

*Aka Credit card rollover, automatically billing customers*

## Forced Disclosure

Extensive personal information, forced to disclosed in return of low-cost action

## Friend Spam

Quick signups using existing credentials, and spamming contacts posing as you

## Hidden Costs

Costs revealed only once you reach the last stage of checkout process

## Misdirection

Focus on one thing to distract attention from another

## Privacy Zuckery

Deliberate use of confusing jargons & UI components to let users share more

## Roach Motel

Easy to get in, hard to get out



## Road Block

Prevent task completion by making them do another task

## Sneak into Bucket

Sneak items based on obscure options in previous steps

## Price Comparison Prevention

Avoiding ease of comparison and forcing user to memorize costs

## Faraway Bill

Moving away from physical bills (push) to online equivalent (pull)

## Trick questions

Quick glance vs detailed reading to figure out the reverse meaning

## Malicious Interface Design: Exploiting the User

*Taxonomy of malicious UI design techniques.*

11 techniques

Paper by Gregory Conti, Edward Sobiesk

## Coercion

Threatening or forcing user to do mandatory (unnecessary) actions

## Confusion

Ask questions or tasks that the user doesn't understand



## Distraction

Distraction by exploiting perception & pre-attentive processing

## Exploiting Errors

Using user's errors in your advantage (like mistyping urls)

## Forced Work

Delay the actual task, or make the task complex

## Interruption

Interrupt the user's task flow

## Manipulating Navigation

Using IA & navigational mechanisms to prevent user to easily reach a section

## Obfuscation

Hiding or complicating certain elements of the page

## Restricting functionality

Limiting or omitting controls

## Trick

Misleading and deception, including lies & spoofs as baits



## Shock

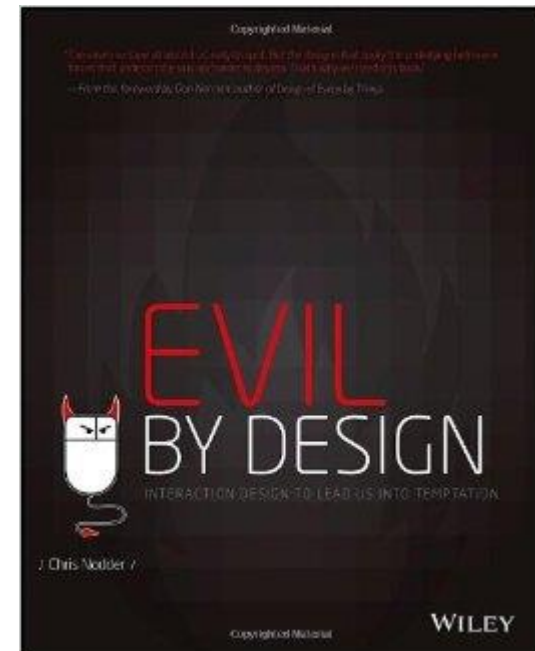
Disturbing & controversial content

## Evil by Design

*Persuasive/Manipulative design patterns.*

57 patterns (based on 7 sins)

Website (& also a book) by Chris Nodder



Pride

Sloth

Gluttony

Anger

Envy

Lust

Greed

**Pride:** Positive messages, desirability, commitment...

Sloth

Gluttony

Anger

Envy

Lust

Greed

Pride

**Sloth:** Least resistance, defaults, obfuscate...

Gluttony

Anger

Envy

Lust

Greed

Pride

Sloth

**Gluttony:** Reward, foot in door, door in face, impatience-compliance...

Anger

Envy

Lust

Greed

Pride

Sloth

Gluttony

**Anger:** Scare, slippery slope, anonymity...

Envy

Lust

Greed

Pride

Sloth

Gluttony

Anger

**Envy:** Manufacture desirability, status, ownership before purchase...

Lust

Greed



Pride

Sloth

Gluttony

Anger

Envy

**Lust:** Flatter, push polls (message/question), give to get...

Greed

Pride

Sloth

Gluttony

Anger

Envy

Lust

**Greed:** Gamify it, don't finish, win!, illusive superiority...