Social Engineering

Lecture 6: Influence and Persuasion

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The same topic?

- On the one hand, this one has definite connection to psychology (and its applications)

- On the other hand, it is art vs science:
  - The mind tricks and memory errors are based on observed objective features
  - Building and using influence is more subjective (it does have connections to rapport though

A definition

- Christopher Hadnagy:
  - "Influence and the art of persuasion is the process of getting someone else to want to do, react, think, or believe in the way you want them to"

- According to this, influence is essentially the alignment of frames! Or more precisely: setting the other person's frame what the influencer wants it to be

A scene from *Hackers* (1995)

- (Phantom Phreak is at a pay phone)

- Operator (on phone): Please deposit five dollars for the first minute.

- (Phreak holds a small box up to the receiver, presses a button, and the box emits a series of tones)

- Operator: Thank you.

- Phreak: Nonono, thank YOU!

https://i.gifer.com/9314.gif

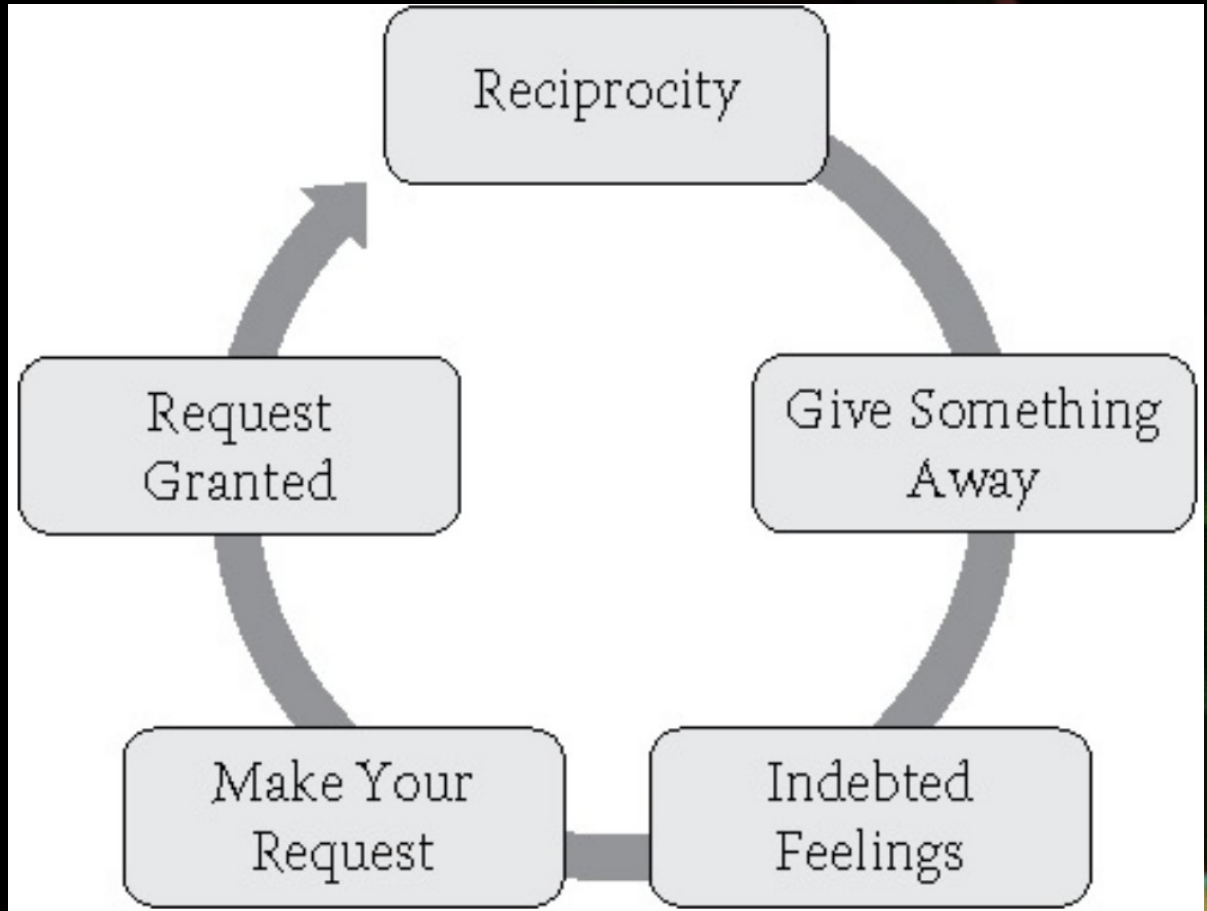(https://subslikescript.com/movie/Hackers-113243)

Five fundamentals (Hadnagy 2011)

- Setting clear goals (understanding the mission)

- Building rapport (understanding people)

- Being observant of your surroundings (understanding the situation; also detect microexpressions)

- Being flexible (understand the changes; adapt and improvise)

- Getting in touch with yourself (understand your own emotions)

Tactics: reciprocity

- (Note: the following tactics are mostly based on Robert Cialdini ("Influence: The Psychology of Persuasion", 3rd edition, 2007), some ideas added from other authors)

- Giving back in kind, returning the favour

- Part of most cultures

- Examples:
  - Lobbyists at political campaigns

  - Business dinners

  - Big Pharma and doctors

- In SE, usually imbalanced/unfair exchanges

Cycle of reciprocity

- Hadnagy 2011:

Tactics: obligation

- Related to reciprocity (and like that, bred in people)
- "Thank you": "much obliged", "muito obrigado" (=> "arigato"), "sumimasen"
- Creating a situation where the person feels that s/he must act in a certain way (duty, promise, contract, social norms)
- Sometimes works over great distances of time and place (making 'sleeper agent' scenarios possible – people are willing to give up the comfortable cover situation and take on a dangerous real task)
- An interesting variant: the initial gift as the actual attack vector (e.g. a malware-infested phone), the 'obligation' can be just a placeholder

Tactics: concession

- Another relative to reciprocity
- "I'll scratch your back if you scratch mine"
- Also, bargaining with favours ("Please give me 50 euros. No? OK, just 5 will do.")
- Excessive concessions may hurt rapport or destroy pretext!

Tactics: scarcity

- One of the bugs in the brain: scarcity bias, or "rare must be good!"

- Examples:
  - Sales: "Only today!", "The first 10 callers get a free phone", "Clearance sale"
  - Social events: "exclusive", "VIP tickets/zone" …
  - Economics: resources valued for scarcity (e.g. gold, but also finite resources like land; NB! Information is different!)
  - Social interaction: "The boss is very busy!"

- An important tool for manipulating people

Tactics: valuation

- Another aspect of scarcity: something held valuable/expensive
- Works in more than one way, often by association:
    - Expensive = exclusive (e.g. gift)
    - Ego boost ("You deserve only the best" at gifts, but can also be "You are that good, you can afford it" (e.g. "You are a professor, you should afford this car!")
- Can also be part of the scheme itself (e.g. fake products)

Tactics: authority

- If someone is deemed a person of authority, *s/he* is easier to obey (and not only in the specific field)
- Aspects:
  - Legal: enforcers of the rules
  - Organizational: higher ones in the hierarchy
  - Social: natural 'pecking order' - informal hierarchies, but also based on status symbols (in the West, Top 3 are titles, clothes and vehicles)
- A really interesting notion by Cialdini: height distortion (the authority figure feels *taller* to the bystanders)
- In different scenarios of SE, both raising and lowering are used!

Tactics: commitment/consistency

- People want to be consistent (a component in trustworthiness)

- Changing one's mind is often felt as shameful

- The experiment by Thomas Moriarty in 1972
  - a) the 'victim' listened to a radio on the beach, then went to buy a drink, leaving the radio unguarded but near other people – the 'thief' grabbed it and ran away. 4 bystanders out of 20 reacted

  - b) all the same, but the 'victim' asked people to 'watch his radio'. 19 out of 20 reacted

- Also described by Cialdini *et al* as lowball technique (https://www.researchgate.net/profile/John-Cacioppo/publication/232431436_Low-Ball_Procedure_for_Producing_Compliance_Commitment_Then_Cost/links/53f74a300cf2823e5bd63603/Low-Ball-Procedure-for-Producing-Compliance-Commitment-Then-Cost.pdf)

Consistency attack

- https://www.social-engineer.org/ framework/influencing-others/influence-tactics/commitment-consistency/

Using Commitment & Consistency to harvest information

Ask questions the target must answer "YES "

The desire to see "self" as consistent is a powerful motivator

People desire to be called consistent by others too

A verbal, public, non-coerced commitment will be almost impossible for the person to go back on....

Use escalation to increase the seriousness of what they are committing to

Obtaining Information Commitment

Tactics: liking

- People like people who like them (see Facebook!)

- Salespeople push things, friends give tips and advice (foundation of multilevel marketing: Tupperware etc)

- Halo effect: attractive people in ads

- Aspects:
  - Visuals (attraction)
  - Familiarity
  - Positive reinforcement (compliments)
  - Appreciation (see rapport building in the previous topic)

Tactics: social proof

- a.k.a. consensus (a.k.a. herd mindset) – many people thinking alike must be right

- Especially potent in uncertain situations and with people with many similarities

- An interesting case: both Cialdini and Hadnagy argue for effectiveness of the 'laugh track' (recorded laughter) in U.S. TV shows. However, Europeans almost universally hate them (and quite many consider them a distinct case of 'American stupidity'), so they are rare in European-produced shows

Tactics: unity

- Belonging, kinship, shared place/location, joint activity

- We vs Them

- The enemy of my enemy is…

- Infiltration of We

- Who is shouting the loudest?

- Echo chambers and cancel culture: artificial/forced/fake unity ("kick out everyone else until achieved")?

Discussion break

- Pick a tactic above, and find three different scenarios for attempting it: a) success, b) silent failure (no backfire), c) explosive failure (backfiring)

Framing (revisited)

- A kind of reality bending caused by earlier experience
- The story of a nasty captain and smart first officer
- Common in politics, but also advertisement/sales
- Not just 'way with words', but a function of our brain to remove clutter and focus on important things

Find the arrow

https://www.social-engineer.org/wiki/images/1/1f/FedEx-Truck.jpg

Diseases and cures

- Tversky and Kahneman 1981 – questions about two diseases for two groups (pick one option):

- Group 1
  - treatment A saves 200 peoples' lives
  - treatment B has a 33% chance of saving all 600 people and a 66% possibility of saving no one

- Group 2
  - option C in which 400 people die
  - option D has a 33% chance that no people will die but a 66% probability that all 600 will die

- Most of Group 1 picked A, most of Group 2 picked D

- https://www.academia.edu/8285369/The_Framing_of_Decisions_and_the_Psychology_of_Choice

7 steps of persuasion (by Nick Kolenda)

- **Mold their perception** (shape mindset, anchor it, set high hopes)
- **Elicit congruent attitudes** (body language, consistent behaviour)
- **Trigger social pressure** (social norms => unity)
- **Habituate your message** (repetitions, desensitize negativity)
- **Optimize your message** (alter their frame, adjust message)
- **Drive their momentum** (incentives; motivation vs limitations)
- **Sustain their compliance** (find positive associations)

Source: Nick Kolenda, *Methods of Persuasion: How to Use Psychology to Influence Human Behavior* 2013

Manipulation (in the narrower sense)

- Typically understood as influence on steroids
- Common techniques include
  - Increase suggestibility (can be subtly or with force, e.g. sleep, water or food deprivation)
  - Control environment (from total blackout to FB campaigns)
  - Create doubt
  - Create a sense of powerlessness
  - Create strong emotional responses (guilt, humiliation, confusion)
  - Heavy intimidation and violence
- Read Hadnagy (2011) for more

Information manipulation (Michael Pace)

- In his *Subliminal Psychology 101* (2018), Michael Pace lists four governing rules of conversation:
  - Quantity: one will give information as expected
  - Quality: one tells the truth
  - Relation: one talks about things relevant to the conversation
  - Manner: one talks in a way that the other can understand
- Information can thus be manipulated by a) not telling everything, b) lying, c) changing the subject, or d) talking unsuitably for the other (e.g. as if talking to a child, or using heavy techie slang)
- "WTF?" => "Hey, who is the crazy one here…?" => unsureness

The "10 strategies of manipulation"

- https://www.autocraticforthepeople.com/2012/07/noam-chomsky-top-10-media-manipulation.html (and several other places)
- An interesting text: a manipulation by itself (falsely attributed to Noam Chomsky!) and most versions are badly written, yet most of the points are quite apt (NB! Comments by me):
  - Distraction – replace actual problems with distractions and keep the pace hectic to avoid thinking
  - Problem-reaction-solution (create a problem, then offer a solution; a way to get 'necessary evils' accepted)
  - Gradual approach – the frog-boiling way (various trends in Europe)
  - Deferrence – sacrifice today to get better tomorrow (Russia...)

…

- Infantilization – talk to people as if they were children or with developmental disabilities (memory errors!)

- Emotions rather than reflections – "Think about children!"

- Promote ignorance and mediocrity – erm… Microsoft? :P

- Keep ignorance cool and fashionable – "He talks like a fag, too" (Idiocracy)

- Blamethrowing – "You DO know that your great-great-granduncle kept slaves, RIGHT? So shut up!"

- Knowing people better than they themselves do (including the weaknesses and the ways to exploit them)

• A fake document with a lot of actual points…

Some other techniques

- **Astroturfing** (pun on 'grassroots'!) - fake grassroots movements

- **Clickbaiting** – using 'teasers' to direct people to the message

- **Propaganda laundering** – using secondary references; get the message published in a minor/dubious place, then get a major/'respectable' source to report on the former

- **Straw man** – shifting the argument to an easily refutable one

- **Scapegoating** – (re)directing the blame ("Those f...ers are all like that!")

Discussion break

- Which manipulation (if any) techniques have you noticed in different media channels?

- Is astroturfing fought better by a) encouraging more genuine grassroot organizations, or b) keeping everything top-down?

Summing up

- Influencing is manipulating people's will

- Most tactics centre on rapport building and using social biases in human brain

- Influence and persuasion work because people are brought up to be nice (again!)

- Next time: some ninja stuff :)

Thanks