Long Beach Center for Humane Technology

Sammy Feingold

What is the Center for Humane Technology?

- The Center for Humane Technology (CHT) is a nonprofit organization co-founded by Tristan Harris and Aza Raskin in 2018
  - Both Harris and Raskin appeared in the docudrama *The Social Dilemma*
- The mission of the CHT is to shift society towards utilizing more humane technology by exposing the causes of harmful technology
- Humane technology can be defined as technology that supports our well-being, democratic functioning, and shared information environment

Purpose of the Long Beach CHT

By using the resources provided by the CHT's Youth Toolkit, the goal of the Long Beach Center for Humane Technology is to educate those just being exposed to social media on their devices about the dangers of such "inhumane technology".

By participating in this four-part webinar, you are showing an interest in learning about the negative impact that harmful technology has on our society today.

https://nextnature.net/story/2018/on-inhumane-technology

My rationale for starting this webinar

One day, I forgot to bring my phone to school.

I was super surprised by how out-of-place I felt.

That day, I discovered that my phone was a source of comfort.

I found the effects of my friends' use of social media to be amplified since they were glued to their phones and in-person communication with them was difficult.

Part 1: The Attention Economy

Objective: Learn about the economic factors and larger systems that drive tech companies to sell your attention and behavior to advertisers

What is the attention economy?

The attention economy is the management of information by social media companies in order to solicit the most attention (treated as a scarce commodity) from consumers.

Let's watch a video:

https://www.youtube.com/watch?v=50R21mblLb0 (0:47-3:26)

https://finshots.in/archive/the-kings-of-the-attention-economy/

Consider the following questions…

1. Which social media platforms do you think are the most successful at diverting your attention?
2. Can you think of examples when social media companies kept you on an app for longer than you had intended?

Let's look at some people's experiences…

"I constantly refreshed my likes as they came in, spent hours reading and replying to comments and taking in other people's posts. I became obsessed with living what social media promotes as a worthwhile and perfect life."

–Anuja, Age 20, Fresno

"My morning time ritual became an afternoon ritual to a night ritual, to an all day ritual where I would habitually check my phone every hour, eagerly waiting for the next notification to come in."

–Sam, Age 18, New York City

Think about your own experience on social media.

1. Do Anuja and Sam's experiences of addiction and distortion compare to yours?
2. How are they similar?
3. How are they different?

Q1: How do social media companies make money?

How do social media companies make money?

- Social media companies sell our attention to advertisers, who in turn pay the social media companies to display ads that capture our attention
- The result of this is that social media companies become multi billion-dollar companies whose apps are free for us to download

https://www.techdetoxbox.com/weapons-of-digital-manipulation/how-attention-economy-works/
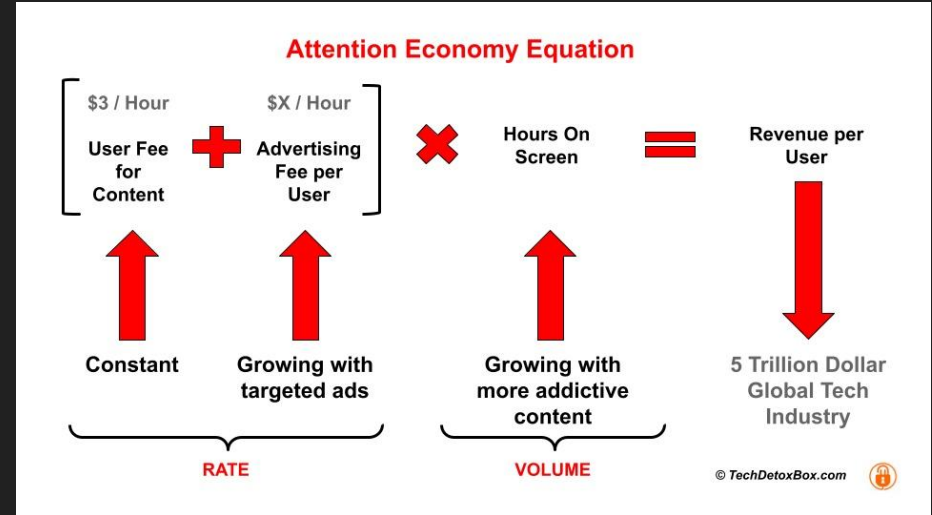
How do social media companies make money?

The effects of advertising are amplified through the following aspects of social media:

- Artificial intelligence: supercomputers predict what information will keep us the most engaged
- 24/7 influence: we are constantly thinking about what we see on social media
- Social control: social media impacts our self-esteem, when we believe we are missing out, and our perception that others agree with us
- Personalization: social media keeps track of everything we have said, shared, clicked, and watched in order implement personalized ways of keeping us engaged

https://www.techradar.com/news/metas-new-ai-supercomputer-will-create-the-backbone-for-the-metaverse

How do social media companies make money?

Consider…

1. After learning about how social media companies sell our attention to advertisers, does this change how you think about your use of these apps? Why or why not?
2. What types of ads are the most prevalent on the social media that you use?

Q2: How does attention economy competition shape the social media products we use?

How does attention economy competition shape the social media products we use?

- Data is collected by social media apps and used to find better ways of capturing your attention
- The type of data includes:
    - The types of videos we watch
    - The news we click on
    - The products we search for
    - Who we talk to
    - Which posts we linger on
- This data is then fed into complex algorithms so social media apps can determine which information/content to show us next

https://mobilemarketingreads.com/report-which-companies-use-most-data/

How does attention economy competition shape the social media products we use?

When an advertiser selects a social media platform to advertise on, targeting options allow for the ad to reach certain demographics.

Facebook Ad Targeting Options by Demographics, Interests, and Behaviors

How does attention economy competition shape the social media products we use?

"This is what every business has always dreamt of: to have a guarantee that if it places an ad, it will be successful. That's their [social media companies'] business. They sell certainty. In order to be successful in that business, you have to have great predictions. Great predictions begin with one imperative: you need a lot of data."

–Shoshana Zuboff, professor and author of The Age of Surveillance Capitalism in The Social Dilemma

In Shoshana Zuboff's quote above, she says that the ability to guarantee a successful ad is "what every business has always dreamt of."

- Why is this ability to make predictions accurately so valuable to businesses?

How does attention economy competition shape the social media products we use?

Now, take a look at the apps you use the most. Consider the things you post and the way you use the app.

1. What do you think the app could know about you?
2. How do you think that knowledge helps them sell advertising?
3. How do you think they use that information to keep you engaged?

Q3: How does the race for attention distort how we see the world?

How does the race for attention distort how we see the world?

- Social media apps display more attention-grabbing content to keep you engaged and coming back
- Algorithms select the most emotionally-engaging content, hence you only see the most interesting posts
  - Even if you are following someone on social media, the algorithms prevent you from seeing everything that he/she posts

https://faculty.lsu.edu/fakenews/about/social-dilemma.php
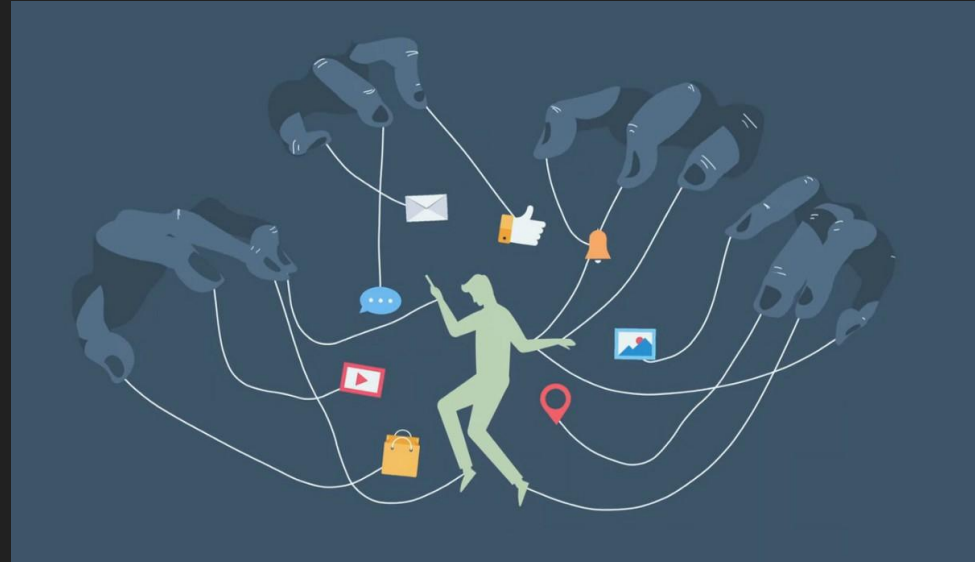
How does the race for attention distort how we see the world?

In order for a social media user to be "heard" by drawing the most attention, they need their posts to be more interesting. This can be done by including:

- More hyperbolic language: e.g. "This is the most amazing dog video I've ever seen!"
- More "beautiful" photos: enhanced by filters
- Posting in greater frequency: more chances to get attention

https://www.quora.com/Why-shouldnt-kids-use-filters-on-social-media

How does the race for attention distort how we see the world?

- The cost of gaining attention = we create less authentic versions of ourselves
- If you are "heard" on social media (people like, comment, and share your posts), then the algorithms will pick up on it and reward you with more attention
- Influencers: social media users with the most attention-grabbing content who are paid to produce more attention-grabbing content

https://www.dw.com/en/hidden-code-algorithms-in-social-networks/video-4349382 6
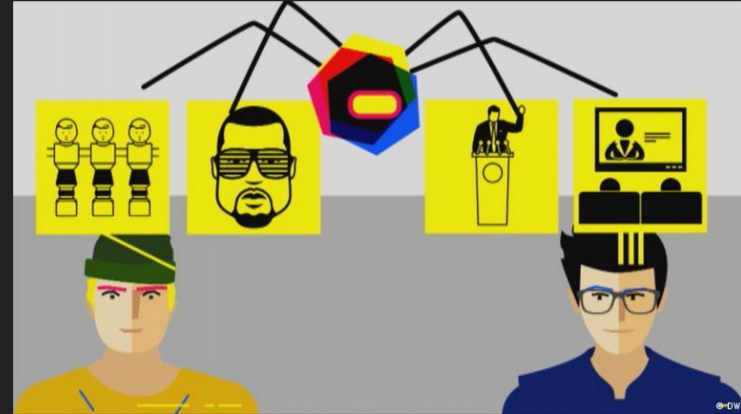
How does the race for attention distort how we see the world?

Let's do an activity:

Find a partner, and open up the same social media app. Scroll through their main feed (and please refrain from looking at any of their notifications, messages, etc.).

1. What is the same about your feeds?
2. What is different?

How does the race for attention distort how we see the world?

Now, think about someone who deeply disagrees with you about some of your core beliefs.

1. How might their feed look different from yours?
2. What do you think their feed does to their view of the world?
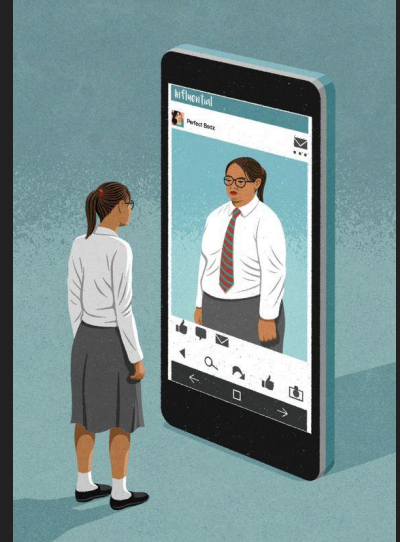3. What does your feed do to your view of the world?

Q4: What do the distortions of the attention economy mean for our future?

What do the distortions of the attention economy mean for our future?

As a result of social media use, a pattern of negative experiences has arisen. Here's an example from #MySocialTruth:

"I really struggled when I looked in the mirror after joining social media – I'm too fat, or I have ugly features, or my neck is too long, or my hair doesn't frame my face correctly. I overthought every word that I spoke for fear of being unliked by someone. It was always something, and it still comes back every once in a while. I also have seriously struggled with depression and anxiety that I never had before social media."

–Morgan, Age 14, St. Louis, MO

https://www.theteenmagazine.com/how-social-media-can-contribute-to-body-dysmorphia

What do the distortions of the attention economy mean for our future?

This pattern of experiences is a result of the mechanisms/algorithms that optimize for engagement and create concrete features that define our relationship with technology.

The implementation of these algorithms is a result of the ways of thinking within technology companies: "if people are engaging with our product it must be helping them live better lives".

What do the distortions of the attention economy mean for our future?

Society is being harmed in a plethora of ways:

- **Skewing our Sense of the World:** misinformation, conspiracies and fake news
- **Undermining our Relationships:** less empathy, more confusion, and misinterpretation
- **Disrupting Attention & Cognition:** loss of crucial abilities including memory and focus
- **Degrading Physical & Mental Health:** stress, loneliness, addiction, and increased risky health behaviors
- **Polarizing our Politics & Elections:** widespread propaganda, distorted dialogue, and voter suppression
- **Amplifying Systemic Oppression:** racism, sexism, homophobia, and ableism
- **Challenges for Young People:** increased risk of self harm

Q5: How do we change such a big system?

How do we change such a big system?

For individual change, we must reconsider the following beliefs:

- …we need to be on social media because everyone else is
- ...having a large number of friends online is important
- ...constant engagement on social media is useful

These beliefs have NO SCIENTIFIC GROUND

How do we change such a big system?

For societal change, <u>advocacy</u> is an important way for the public to put pressure on companies.

This will cause companies to spend time and money on addressing the harms of their practices.

Such advocacy is crucial because often times, politicians and social workers will have conversations about young people's experiences on social media without their voices in the room.

How do we change such a big system?

We've discussed how technology designed to capture as much attention as possible from as many people as possible creates major societal harms.

1. What would you like to see change about the technology you use every day?
2. What beliefs and values would tech companies need to have to make those changes?

Thank you!

Part 2 will be held on July 18th:
https://www.eventbrite.com/e/653461600237

Part 2: Persuasive Technology

How social media products subtly manipulate you to capture your attention and change your behavior

Let's look at some people's experiences…

"I got addicted, always checking my phone, obsessed with keeping my streaks, worrying that someone needed my attention 24/7."

–Dasani, Age 16, Phoenix, AZ

"I remember one night specifically that was probably when I was at my peak of using [TikTok] when I just caught myself using it for a couple of hours without stopping."

–Siri, Age 13, Cary, NC

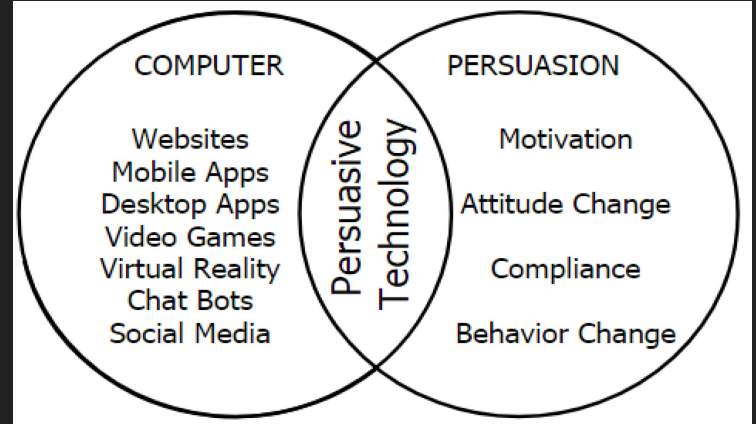Think about your own experiences on social media.

1. Have you ever looked down at your phone and immediately gotten distracted without knowing why?
2. Does Dasani's experience feeling controlled by social media compare to yours?
3. Does Siri's experience passively using social media compare to yours?

Q1: What is persuasive technology?

What is persuasive technology?

Persuasive technology is technology created specifically to change its users' opinions, attitudes, or behaviors to meet its goals.

Platforms like Facebook, Twitter, Instagram, Snapchat, and TikTok are all built on persuasive technology.

COMPUTER

Websites
Mobile Apps
Desktop Apps
Video Games
Virtual Reality
Chat Bots
Social Media

Persuasive Technology

PERSUASION

Motivation

Attitude Change

Compliance

Behavior Change

https://www.mdpi.com/2414-4088/4/2/17

What is persuasive technology?

The ultimate goal of technology companies is to create apps that persuade you to spend more time clicking and scrolling.

With this goal in mind, tech companies consider the following factors when designing their apps:

- Motivation: can be our desire for social connection
- Ability: users must be able to easily do what the app wants them to
- Triggers: prompting features, such as notifications, that keep you coming back to the app

In addition to designers, psychologists and behavioral science experts in designing the products features that capture your attention.

What is persuasive technology?

Red dots: notifications located on apps that can be viewed by turning on the home screen of your phone.

A designer intentionally made the decision to put those dots there, put a number in it, and make it red instead of, say, green, because we instinctively respond with urgency to red.

Red dots are thus a persuasive technique because when we see them, we feel the need to open the app(s).
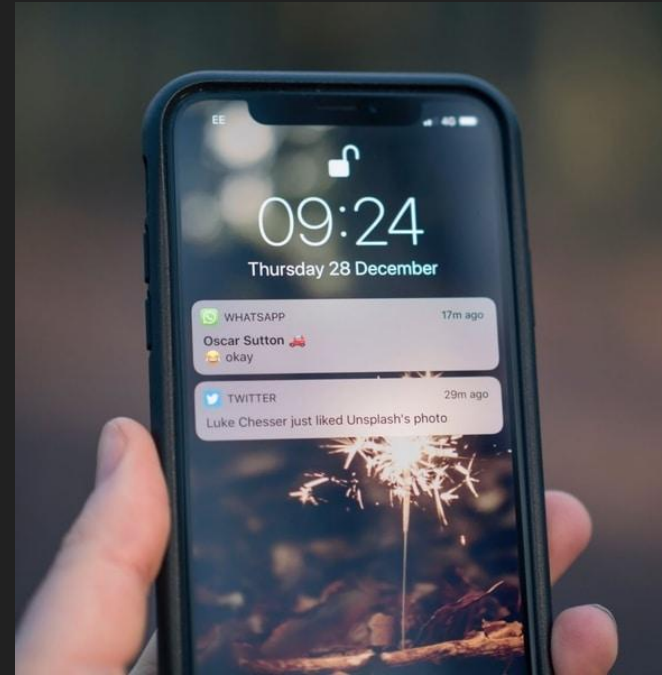
What is persuasive technology?

Push notifications: the notifications we receive from our apps when they're not open.

A simple tap of a push notification conveniently brings you right into the app.

https://www.humanetech.com/youth/persuasive-technology

What is persuasive technology?

Because we are social animals motivated to care what others think of us, push notifications are almost impossible to ignore.

Examples of our behavior in response to push notifications includes:

- When our push notifications tell us that someone has just tagged us in a photo, we are immediately motivated to see what that photo is and how we look in it.
- If someone commented on a post we made, it is only natural for us to want to read that comment.
- If someone we're interested in begins a livestream, we're going to want to hop in.

What is persuasive technology?

Consider…

Think about your favorite social media app.

1. How does it pull you in?
2. What are some ways you use the app that are not aligned with your goals for yourself?

Q2: What is artificial intelligence and how do social media companies use it?

What is artificial intelligence and how do social media companies use it?

Artificial intelligence (AI) enables computers to mimic some of the ways human minds work, from learning to problem-solving to decision-making.

- AI drives the posts in your feeds, notifications you receive, recommendations, and much more.

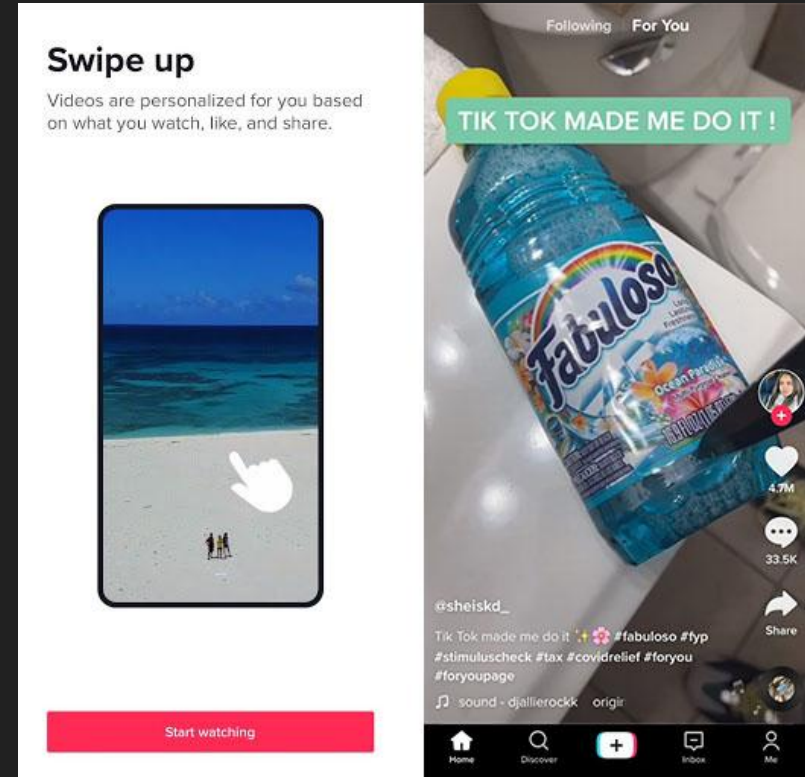AI is powered by algorithms, which are instructions that tell a computer how to operate.

Persuasive technology companies specialize in algorithms that influence human behavior because that's what they sell to the advertisers, who are their customers.

What is artificial intelligence and how do social media companies use it?

ByteDance: AI company that owns TikTok and several other apps worldwide.

- Their success as a business comes from the sophisticated algorithms their apps are built on.
- They study how people use TikTok, considering everything about their users from the websites they browse to how they type to keystroke rhythms and patterns.

TikTok is thus an addictive app because it uses one of the most sophisticated persuasive algorithms on the planet.

Swipe up
Videos are personalized for you based on what you watch, like, and share.

Start watching

Following   For You

TIK TOK MADE ME DO IT !

Fabuloso
Ocean Breeze

4.7M

33.5K

Share

@sheiskd_

Tik Tok made me do it ✨💅 #fabuloso #fyp #stimuluscheck #tax #covidrelief #foryou #foryoupage
♫ sound - djallierockk   origir

Home   Discover   Inbox   Me

https://www.humanetech.com/youth/persuasive-technology

What is artificial intelligence and how do social media companies use it?

Consider…

Take another look at your favorite social media app.

1. Keeping in mind what you have learned about algorithms, what do you notice about what your feeds are showing you?
2. Why do you think the algorithm decided to show you what it did?

Q3: What makes persuasive technology so powerful?

What makes persuasive technology so powerful?

Persuasive technology is honed to tap into our psychology and push us towards certain behaviors. For example:

- Notifications (like vibrations, buzzing, red dots, flashing lights, etc.) mimic naturally occurring signs of danger to pull us into apps.
- The possibility of new comments or "likes" keeps us compulsively monitoring for updates, seeking feelings of pleasure and reward.
- Design features like infinite scroll (where when you reach the bottom of the page and more content loads automatically) keep us continuously engaged.

What makes persuasive technology so powerful?

Our human physiology changes very slowly over hundreds of thousands of years.

Meanwhile, our technological capabilities have been growing <u>exponentially</u> since the computer was invented in 1946.

- As technological capabilities increase, so too does the ability to model and manipulate human minds

https://www.humanetech.com/youth/persuasive-technology

What makes persuasive technology so powerful?

Advanced algorithms compare our behavior with the behavior of others like us to discover how to best influence us. Apps then sell that access to companies or individuals who want to influence behavior, opinions, or votes.

Persuasive technology constantly learns more about us and pairs that information with compelling and creative design ideas to influence our behavior more effectively each day.

Sadly, if we keep putting our brains in competition with these continually improving persuasive technologies, we're destined to be exploited.

What makes persuasive technology so powerful?

Reflect:

We've discussed how persuasive technology is behind all of the social media platforms we use each day. It learns from our behavior and taps into our psychology to build increasingly reliable algorithms that further influence our behavior.

1. Now that you know more about the role persuasive technology plays in our online lives, what concerns do you have about its impact?
2. What are some steps you think individuals can take to better combat persuasive technology's impact on your life?

Q4: What harms are caused by persuasive technology?

What harms are caused by persuasive technology?

Let's look at some people's stories:

"Meanwhile, you get slowly sucked in, spending more and more time on it. I began to be aware that I was believing things that…didn't exist."

–Jasper, Age 24, Cape Town, South Africa

"I got on social media around high school, and I saw people become more distant because of it. There used to be such freedom in the way that we behaved as kids, and now people were obsessing over likes and hearts and everything."

–Amanda, Age 19, Sydney, Australia

As evident in Jasper and Amanda's stories, apps can change our behavior, what we think, how we feel, and ultimately how we understand ourselves.

What harms are caused by persuasive technology?

Each of the features of persuasive technology that we discussed has unintended consequences.

Persuasive technology teaches all of us habits that can become compulsions and even addictions.

Persuasive technology often creates a "funhouse mirror" that can shape what we think about culture, politics, and even our own bodies.

https://www.humanetech.com/youth/persuasive-technology

What harms are caused by persuasive technology?

Let's look at an analogy: *imagine an AI algorithm observing human behavior, trying to figure out what humans want. It notices that whenever people drive past a car crash, they slow down and give it their close attention.*

- People look at car crashes because they need to be aware of a potentially dangerous situation, and because we are naturally curious about the world around us (NOT because people are drawn to car crashes).

Explanation of analogy: Algorithms fill our news feeds with metaphorical car crashes by promoting more provocative and performative content, leaving us in the online equivalent of a traffic jam. Algorithms show us not what we want, but the things we can't help looking at.

What harms are caused by persuasive technology?

Consider…

YouTube's recommendation algorithms, which determine 70% of what billions of people watch, has found that a great way to keep people watching is to suggest content that is more extreme, more negative, or more conspiratorial. You'll find keywords like "destroys" and "hates" showing up more often in YouTube's algorithm.

1. What do you notice about the kind of content that YouTube's recommendation algorithm finds most engaging?
2. How might amplifying this content change how people see the world?

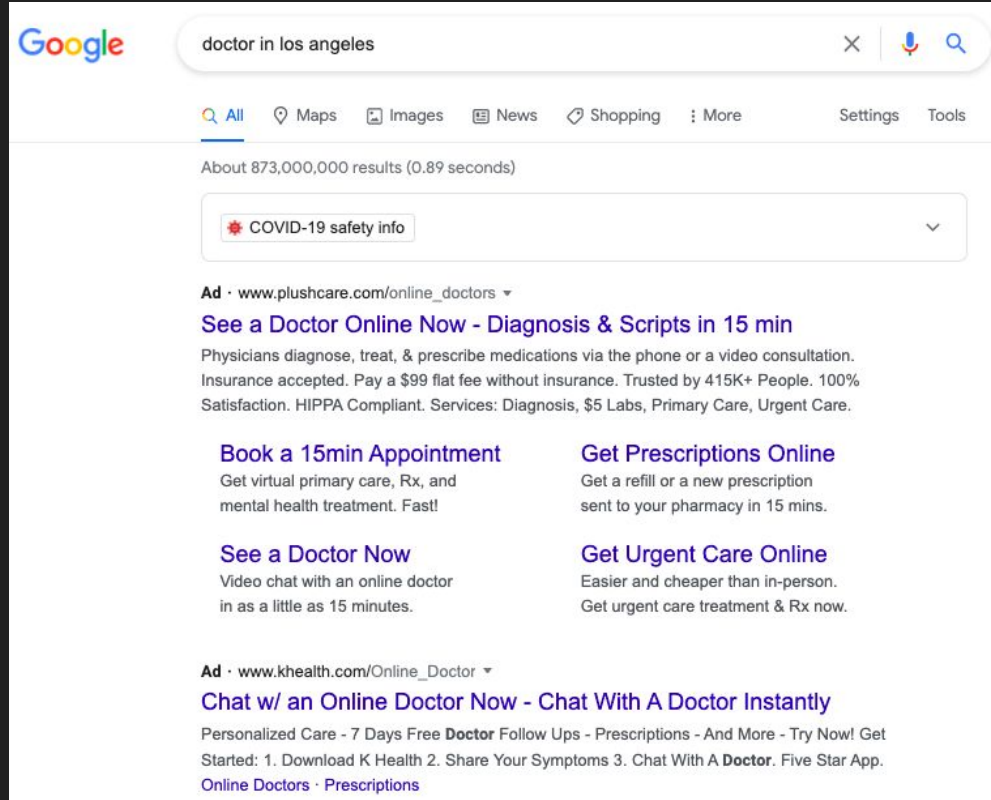# Q5: Where is all this persuasive technology taking us?

Where is all this persuasive technology taking us?

Companies motivated by profit are adding persuasive technology to more types of apps. For example:

- Many game apps use loot boxes, which are mystery clicks (often costing real money) that yield random virtual rewards. They operate much like scratch lottery tickets and can easily become addicting.
- Google Search uses a sophisticated algorithm to find the best matches for what you're looking for. Above those "best matches", however, there are paid ads that look like search results.
- On Google Maps, advertisers can pay for their location to be a promoted pin on the map. So now, instead of simply offering users directions, Google Maps offers advertisers the ability to compete for your attention while you're using the app for another purpose.

Where is all this persuasive technology taking us?

For example, a simple Google search for a doctor is optimized to feed us ads.

Activity:

In a notebook, create a simple chart like this one:

APP	Persuasive Technique	Notes
Instagram	Received a push notification that I had three unread messages	Received first thing in the morning, when I usually check social media
Google	Recommended articles about celebrity gossip	I tend to click on these types of articles

From now until the next webinar (or for the rest of your life), pay close attention to the role persuasive technology plays in your life. At the beginning of the next webinar, we'll reflect on what you find.

Thank you!

Part 3 will be held on July 25th:
https://www.eventbrite.com/e/653461600237

Part 3: Social Media & The Brain

Explore the brain and behavioral science of how social media keeps us hooked

Activity from last webinar…

Consider…

Look back over the observations you recorded. If you're working in a classroom or group, share your observations with others.

1. What was surprising about what you observed?
2. What did you notice about the amount of technology you use that can be described as "persuasive?"
3. How do you think using persuasive technology this way is affecting you?
4. Your experience is one among billions. How do you think using this much persuasive technology is affecting society?

Q1: What are cognitive biases?

What are cognitive biases?

Our brains use shortcuts to navigate the complex world around us and keep us safe and healthy:

- We pay more attention to fearful, dangerous stimuli to stay safe.
- We remember things that hurt us more than things that help us so we can predict future consequences.
- We tend to follow the popular opinion of those around us to build stronger communities around shared ideas.

But these shortcuts don't work perfectly in every situation. They can become **cognitive biases**, or ways in which our brains' patterns make us **vulnerable** to errors in judgment, manipulation, and exploitation.

What are cognitive biases?

To understand this better, let's do an experiment. Take a look at the image below. Which labeled square is darker: A or B?

Edward H. Adelson
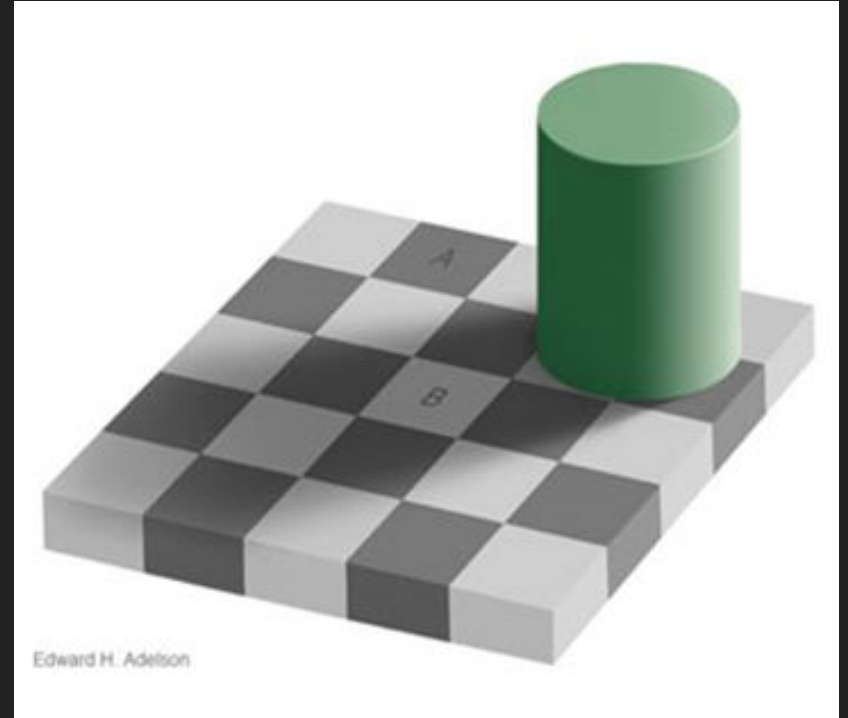
What are cognitive biases?

The squares are actually the same color.

The difficulty in identifying this comes from your brain helpfully analyzing the colors, the shadows, and the shapes and viewing the picture as a three-dimensional scene.

Your brain views square B as a light-colored square that happens to be in the green cylinder's shadow. Your knowledge that squares A and B are the same color doesn't change your perception.

But when we draw lines of the same color through both squares, the shortcuts your brain was using no longer work. Now the two squares are clearly the same color.
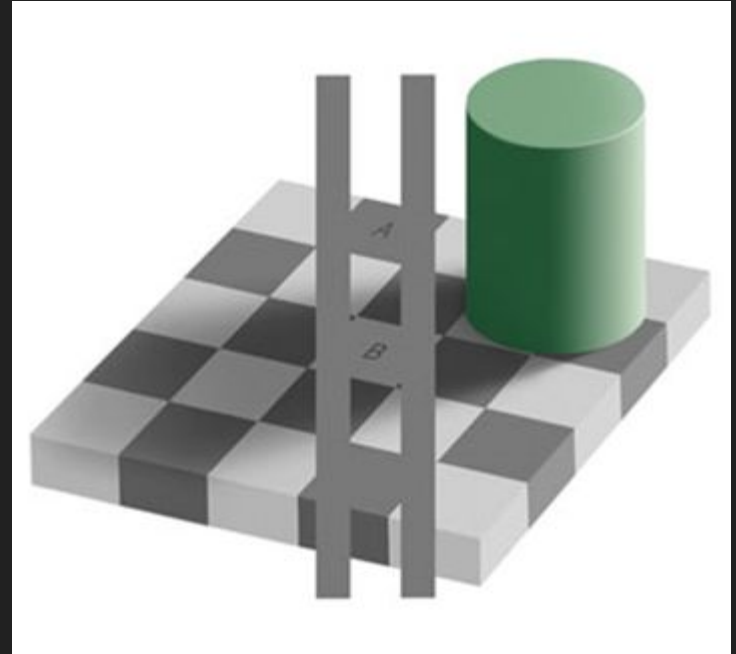
What are cognitive biases?

Even if you understand how the trick works, a few carefully chosen design elements (color, shading, shapes, and patterns) take advantage of our brain's helpful shortcuts for processing what we see. What we perceive to be true depends on the context in which we see it. This is cognitive bias in action.

What are cognitive biases?

Let's look at another example: the Solomon Asch experiment on social conformity. Subjects were asked to match a **reference line** (on the left) to one of three **comparison lines** (on the right):

Which comparison line is the same length as the reference line?

https://www.humanetech.com/youth/persuasive-technology
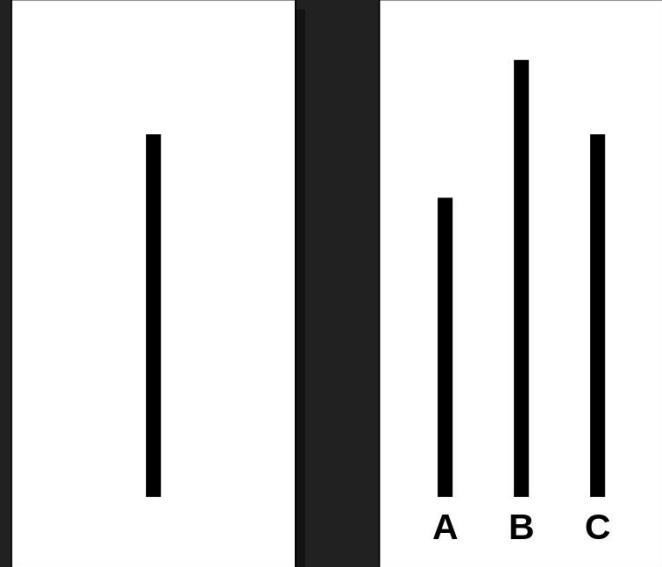
What are cognitive biases?

The correct answer is <u>Line C</u>. Seems obvious, doesn't it? People in the experiment correctly matched those two lines more than 99% of the time—when they were on their own.

Do you think you would still have answered C if several other people answered A or B? That's what the experiment explored. When multiple actors were added, and they gave the wrong line as their answer, over 36% of the experiment participants chose the wrong line!

What are cognitive biases?

This finding may be surprising: <u>social reality can override physical reality</u>. This is a form of **conformity bias**: we tend to want to conform to the social norms around us.

Conformity bias can intersect with **confirmation bias**—the tendency for our brains to collect evidence that supports our existing viewpoints—compounding our tendency to favor people we already identify with: our friends, family, coworkers, or others who share our interests or opinions. You're more likely to react favorably to a viewpoint coming from a group you identify with than a group you don't identify with.

What are cognitive biases?

Consider…

The Solomon Asch experiment on social conformity suggests that without realizing it, many people conform to initial perceptions and social norms, selectively ignoring contradictory evidence.

This has profound implications:

- First, that some people's behavior can be manipulated by their social environment.
- Second, that the technology that shapes our social environments has immense power over what we say we believe.
- And finally, that our democracies are vulnerable to technologies that manipulate consensus.

How do you see social conformity bias and confirmation bias show up in social media?

Q2: How does social media take advantage of our cognitive vulnerabilities?

How does social media take advantage of our cognitive vulnerabilities?

Creating urgency:

Because our attention is a limited resource, at any given moment our brains need to determine what is important. The "salience network" of the brain helps us do that by alerting us to threats and opportunities. Notifications (vibrations, red dots, flashing lights, banners) constantly trigger the salience network. Most notifications are designed to pull us into an app rather than offer important information.

How does social media take advantage of our cognitive vulnerabilities?

Encouraging constant seeking:

The brain circuit involved in wanting is much more powerful than the brain circuit involved in satisfaction. Social media capitalizes on this, providing endless possibilities for seeking in the form of features like infinite scroll, recommendations, and swiping to new content.

Layout Shift as content loads

Infinite Scroll   Load More

@addyosmani

https://addyosmani.com/blog/infinite-scroll-without-layout-shifts/
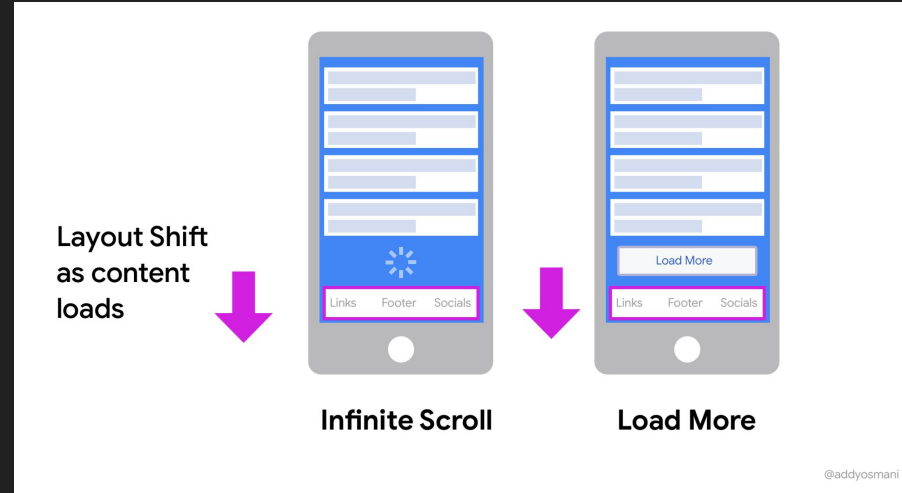
How does social media take advantage of our cognitive vulnerabilities?

Engaging with negative content:

Have you ever noticed that if you get five positive comments and one negative one you still tend to focus more on the negative? Research shows that negative information gets more attention and shapes emotion and behavior more powerfully than positive information does. To keep us safe, our brains process negative information—especially if it causes fear—more quickly and thoroughly than positive information. Social media content that generates fear, anger, or disgust sees higher engagement, and spreads much more quickly, than positive content. Recommendation algorithms often multiply this effect.
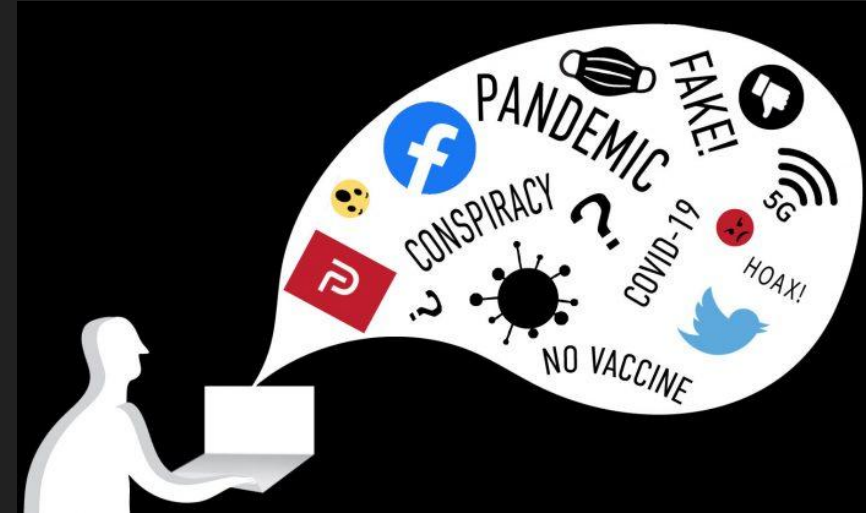
How does social media take advantage of our cognitive vulnerabilities?

Comparing ourselves to others:

Social media creates an environment in which we are constantly comparing ourselves to others. Our brains pay close attention to information about ourselves, and tend to compare information about ourselves to what we learn about other people so we fit in socially. Our feeds are filled with highly curated images featuring people in select moments showing only what they want you to see, validated by likes that activate powerful reward circuits in the brain. This environment dramatically escalates the scope and stakes of our comparisons.

https://us.calmerry.com/blog/self-esteem/how-to-stop-social-media-comparison/

How does social media take advantage of our cognitive vulnerabilities?

Isolating us in bubbles:

Just as our brains are sensitive to social comparison, they're also sensitive to social exclusion. Our brains process rejection and physical pain using some of the same neural pathways, meaning that when your feelings "get hurt," your brain processes it in a similar way to how it processes physical pain. Social media algorithms take advantage of this vulnerability. They learn about our preferences and curate the information we receive. In our individualized feeds with limited perspectives, we struggle with the fear of rejection.

https://mashable.com/article/how-to-burst-social-media-filter-bubble-election

Q3: How does social media impact our behavior?

How does social media impact our behavior?

Consider…

Think about the environment that helped to shape your life: where you live, the schools you've attended, and the activities and communities outside of school that you've participated in.

1. How have you been shaped by these places and communities?

Think about the people in your life, your family, friends, teachers, classmates, and many others.

2. How have these people shaped your life?

Think about something you've learned that's important to you.

3. How did you learn it?

Think of someone who has shaped your life for the better. Email or call them and tell them what they did for you and how you feel about it.

How does social media impact our behavior?

Social media impacts us both online and offline. For example:

- When we are bombarded with notifications, it compromises our ability to attend to what is important.
- When endless content creates an overwhelming amount of want, we can end up addicted to seeking satisfaction, clicking and scrolling, mindlessly consuming content, often with minimal oversight from cognitive control regions of the brain. Ultimately, this behavior drains our energy.
- When social media forces us to constantly engage in social comparison, we're filled with negative emotions: envy, shame, anxiety, or conceit.
- When we're frequently exposed to negative content, fear and outrage can become the norm, eroding our sense of goodness and shared humanity.
- When algorithms tell us what we want to believe, we become more polarized and shared understanding across society breaks down.

None of this is healthy for us. Social media's ability to profit from our vulnerabilities is putting our brains—and our society—at risk.

How does social media impact our behavior?

Consider…

These features show how social media prioritizes profit for tech companies over being sensitive to the intricacies of our brains or the potential impacts on our mental health.

- Keeping in mind what you've learned about cognitive biases, what would be different about social media if it was designed to respect our brains' vulnerabilities?

Q4: How does social media impact the brain as it develops?

How does social media impact the brain as it develops?

Let's watch a clip from *The Social Dilemma* to better understand how social media is a threat to youth mental health:

https://www.youtube.com/watch?v=PEOm7u8Cysg&t=2s

How does social media impact the brain as it develops?

As discussed in the video, the **<u>prefrontal cortex</u>**, the area of the brain that helps us process and direct our attention based on our goals, is the last part of our brain to mature. That makes it especially difficult for young people to resist persuasive design—the brain is still developing, so self-awareness and willpower are still building up.

Social media can permanently change young people's brain structure and impact how they will think, feel, and act throughout their lives.

https://www.humanetech.com/youth/persuasive-technology

How does social media impact the brain as it develops?

Furthermore, the U.S. is in the midst of a youth mental health crisis. While still low, suicide rates increased nearly 60% between 2007 and 2017 among 10-24 year-olds, according to the CDC. Many experts point to the rise of social media around 2009 as a key reason for this increase.

https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/

How does social media impact the brain as it develops?

Consider…

Social media has a powerful impact on young people like you and your peers. Now that we've discussed the intersections between social media and the brain, and particularly how our social media taps into our cognitive biases, think about your experiences online.

1. What are some ways that you see social media taking advantage of you and those around you?
2. How do you think tech companies should react to the research and statistics we've discussed?

Q5: What happens when we can't resist persuasive technology?

What happens when we can't resist persuasive technology?

We are all affected by technology to different degrees. We can find ways to resist its effects. But persuasive technologies are constantly getting better at finding our vulnerabilities and taking advantage of them to keep us engaged and influence our behavior. As social media takes on a bigger role in the world—how we connect online, how we get information, who we vote for—it shapes more and more of what we're thinking and feeling. Even if we know it's happening, we end up with less and less control over who we are and what we really believe.

Activity:

In a notebook, create a simple chart like this one:

APP	Time of day/time used	Observations	How it made me feel
Snapchat	Morning/30 minutes	I wanted to do my homework, but I kept getting notified to keep talking to my friend	I was frustrated that I couldn't just ignore it
Instagram	After school/an hour, in and out	A group of friends took selfies showing off new makeup	I felt bad that I can't afford new makeup, and stressed about how tired I looked
TikTok	In bed/an hour, in and out	I got sucked in by a live video of a user I'd never seen before, and then I clicked to other similar issues	It was really entertaining, but then I couldn't sleep and I felt tired and unfocused the next day

Use this chart to help you think through what is happening while you're on social media. Keep track for 24 hours or a week. Be honest with yourself about what you're experiencing.

We'll reflect on what you observe at the beginning of the next webinar.

Thank you!

Part 4 will be held on August 1st:
https://www.eventbrite.com/e/653461600237

Part 4: Seeing the Consequences

Why do we need to change the system?

Activity from last webinar…

Consider…

You were asked to track your experiences on social media, focusing on how each experience made you feel.

Look back over the observations you recorded. If you're working in a classroom or group, share your observations with others.

1. Did you notice certain themes come up across all of your usage?
2. What was surprising about what you observed?
3. Consider that your experience is one among billions. What do you think other users' charts would look like?
4. When you look closely at the technology you use every day, is it helping you become the person who you want to be?

Q1: How does persuasive technology amplify societal problems?

How does persuasive technology amplify societal problems?

Some ways in which AI-powered technology amplifies these problems:

- **Fake news spreads six times faster** than true news
- The **level of social media use** on a given day is linked to **weaker memory function** the next day.
- The **outcomes of elections** around the world are being **more easily manipulated** via social media.
- AI algorithms have shown **significant stereotypical bias** by gender, race, profession, and religion.

How does persuasive technology amplify societal problems?

Let's explore the discrimination dilemma by watching this clip from *The Social Dilemma*:

https://www.youtube.com/watch?v=r34aENF8vUY

Q2: How does persuasive technology keep us from solving problems?

How does persuasive technology keep us from solving problems?

Social media is diminishing our capacity for shared understanding and to make wise, informed choices.

To bring about a better future, we need to collaborate to solve difficult problems, yet the distortions of social media make this very difficult. When we lose trust in one another, fewer people vote, fewer people step into public service in good faith, fewer people are willing to listen and compromise, and fewer people show up to support and shape our communities.

https://www.humanetech.com/youth/seeing-the-consequences#question-1

When shared understanding shatters, democracy shatters.

How does persuasive technology keep us from solving problems?

Let's watch this clip from *The Social Dilemma* to learn more about how social media platforms have been used to undermine democracies around the world:

https://www.youtube.com/watch?v=KELRMSRWmVA&embeds_referring_euri=https%3A%2F%2Fwww.humanetech.com%2F&embeds_referring_origin=https%3A%2F%2Fwww.humanetech.com&source_ve_path=Mjg2NjY&feature=emb_logo

Q3: Why do we need to think systemically?

Why do we need to think systemically?

When we see that a product or industry is generating a whole bunch of problems, what's the best way to handle them?

Although you could solve each problem as it arises, if similar problems continuously occur, we can end up in an exhausting, never-ending battle to fix them. In a situation like that, we need to see if there's a root cause generating all the fires, because fixing that root cause in the system might be a much more efficient solution. That's called a **systemic solution.**

Why do we need to think systemically?

Let's consider an example: fast food

About 85 million adults in the U.S. consume fast food every day because it's affordable, quick, and takes advantage of our bias for salty, fatty, and sweet foods.

For many people, the addictive quality of fast foods makes resisting them very difficult, leading to a crisis of obesity, high blood pressure, Type 2 diabetes, and heart disease that's spreading globally.

If we want to address problems like obesity and heart disease we can (and should) build more hospitals and research better medical treatments. But doing so is extremely expensive, especially if millions more people each year are eating food that's worse for our bodies.

https://www.dailymail.co.uk/news/article-10348867/Plan-fight-obesity-crisis-doomed-fail-junk-food-available-ministers-warned.html

Why do we need to think systemically?

In this example, examples of more *systemic solutions* are:

- **Adding a tax** to fast food and using that revenue to make healthy food cheaper.
- **Adding nutrition facts and recommendations to menus** so people understand the risks in their diets.
- **Education** to help people realize that just because something tastes good in the short term, it can be harmful in the long term.

These types of systemic solutions can **reduce the overall number of dangerous outcomes** that require expensive medical treatment.

Why do we need to think systemically?

Similarly to addressing fast foods, if we want to address the harms of social media, we should directly address problems like misinformation, hate speech, cyberbullying and addiction. But we should also address the mechanisms that cause these problems by changing the way that algorithms are trained, products are built, and the technology industry is regulated.

Ultimately we will need to change the way we think about consumption if we are to build technology that helps us lead healthy and balanced lives.
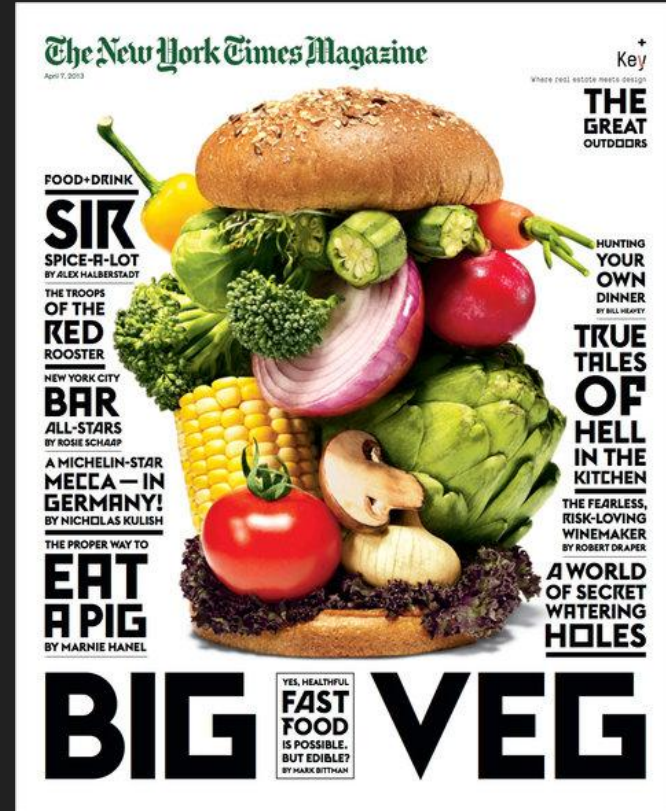
Why do we need to think systemically?

What is true for food is also true for social media:

At the root is a **way of thinking**, an idea that people consuming things makes them happy.

This leads to a set of **mechanisms** designed to give people engaging content, things like recommendation algorithms and product features.

These mechanisms lead to **patterns** in the kinds of information that people see on social media.

Things like COVID-19 misinformation and hate speech are huge problems in large part because they are a highly engaging form of content. People will consume a lot of them even if doing so doesn't make them happy or healthy in the long run.

Why do we need to think systemically?

Consider…

1. What similarities do you see in the ways of thinking that drive how social media and fast food make money?
2. What do the consequences of social media and fast food have in common?

Q4: Why do we need to shift from current paradigms?

Why do we need to shift from current paradigms?

Most of our biggest challenges in industrialized countries are driven by some important underlying **paradigms**, or ways of thinking:

- More is always better.
- What someone chooses in the short term is "what they want."
- Nature is a stock of resources to be converted to human purposes.

These paradigms show up everywhere: in our economic systems (which reward bigger companies, but without considering many of the harms they create), in the way we treat plants and animals, in the ways we spend time socially, and in many other decisions we make.

Why do we need to shift from current paradigms?

Consider…

1. What are some of the ways that these paradigms show up in the design of social media applications?
2. When are these paradigms not true?
   ○ When is more not better?
   ○ When are short-term choices people make not what they want?
   ○ When does treating nature as a stock of resources for human purposes backfire?

Why do we need to shift from current paradigms?

The result of paradigms (e.g. "more is better") is that companies compete to find the fastest legal paths to profitability and growth.

Almost always, that means using the latest technologies to find new ways of driving consumption, which also drives more rapid extraction and harm of our natural resources.

This approach can lead to big problems in the longer term, which is what's happened with social media, fast food, deforestation, carbon dioxide generation, and much more:

- McDonald's sells about 50 million burgers each day.
- Global food production accounts for 25% of all greenhouse gas emissions; 7.5% of emissions are from meat and fish production alone.
- We cut down about 10 million hectares of trees each year—that's an area of about 24,700,000 football fields.

Actions like these at massive scale have put the world in a dangerous situation—one that will be inherited by your generation.

Q5: What new paradigms do we need to shift towards?

What new paradigms do we need to shift towards?

- **Growth must be balanced with responsibility.** For example, a business shouldn't be able to extract a resource (like a tree, or our attention) so much that the resource can't replenish (deforestation, or addiction).

- **People often need support to make informed choices in their own long-term interest.** We often get caught up in the moment, but see more clearly in hindsight.

- **People thrive when they can live a balanced life filled with the relationships and activities that they find most meaningful.** Too few of these and we can feel bored or unfulfilled, but too many lead us to overwhelm.

What new paradigms do we need to shift towards?

Consider…

Can you think of a historical example of a paradigm that has shifted? Of a deeply held, almost unquestionable belief that was challenged and then replaced? How about a time in your own life when you've made this kind of shift?

- What did it take to make this shift come about?

Thank you!

Website: https://lbcht.com