

Case Studies: Empowerment 1

Proposed Answers

Case 1: Value analysis of TikTok's "For You" feed

For this case study, we analyze TikTok's "For You" feed and conduct a value analysis of it. To achieve this, relevant information has been gathered from a variety of sources, including official TikTok support and media articles that explain the workings of the TikTok algorithm.

Task

Your task is to extract and identify insights and key elements from the provided information below:

- 1) Fill the Artifact Values questionnaire in the appendix for the "For You" section of TikTok.
- 2) Identify a stakeholder of TikTok for whom there is one value-based benefit and one value-based harm: briefly describe the profile of this stakeholder (1 short paragraph) and fill out the table.
- 3) Draw the value-based tension map corresponding to the table: do you identify value-based tensions?

Provided information

[Source 1:](#)

"For You is a personalized feed of content based on your interests and engagement. The For You feed is the first feed you'll see when you open TikTok. The more you use TikTok, the more your For You feed will reflect your interests."

"You can use the following features to help influence the content you see on your For You feed or have a new set of videos recommended to you:

- Not interested: If you don't care for a specific video, you can share feedback if you're not interested and we'll show you fewer videos like it.
- Refresh your feed: You can refresh your For You feed to view a new set of popular videos, as if you've just signed up for TikTok."

[Source 2:](#)

"TikTok is designed around discovering content for you, not giving you a platform to find it for yourself. You open the app to the "For You" page — the stream of videos that TikTok thinks you'll like — which automatically plays a full-screen vertical video. There's no way to disable the autoplay. There are your typical engagement icons so you can "like," bookmark, share, and comment on the video."

"We have information overload and choice overload, and this is a response to that," said Alec Pollak, EVP of engagement strategy at Area 23, an IPG Health company. **"It's a comfortable space to be in when you don't have to make choices."**

"TikTok is classified as a social media app, but it isn't designed around the social network you've curated for yourself. The social side of it is there, sure, but it's peripheral. TikTok's center is choosing content for you and featuring that by default. You can "curate" that content to a degree by feeding TikTok as much information as possible about you through your interactions with the app to get the best algorithmically driven For You page possible."

[Source 3:](#)

“Here are the key reasons why getting featured on the FYP is so important for your growth on TikTok:

- Massive Visibility: The FYP is where most users spend the majority of their time on TikTok. When your video appears on this highly-trafficked page, it exposes your content to countless new viewers, **vastly expanding your reach beyond your existing follower base.**
- Diverse Audience: **The FYP caters to various interests and demographics.** Thus, landing on the FYP allows you to connect with a broader, more diverse audience that you might not have reached through other means. [...]
- Content Validation: Getting featured on the FYP is a strong indicator that your content resonates with TikTok users. **This validation can boost your confidence as a content creator** and motivate you to continue creating engaging videos.
- Viral Potential: When a video performs exceptionally well on the FYP, it has the potential to go viral. Viral videos can garner millions of views and substantially accelerate your growth on TikTok.”

“TikTok says it visually scans content to look for things that violate its rules, such as nudity, but the company insists the For You algorithm doesn’t take into account what videos look like or the way they were filmed.”

Source 4:

“When you view content in your Friends Tab, For You, Following, and LIVE feeds, our goal is to find a balance between suggesting content that’s relevant to you while also allowing you to discover new and diverse content and creators, and **experience new perspectives and ideas.** [...] We typically don't recommend content you've already seen and we'll encourage you to explore different categories of content and creators through recommendations.”

“Our recommender systems are designed with safety as a key consideration and we remove any content identified as violating our Community Guideline”

Proposed answer:

1)

	Yes	No	D K
Power-Resources (POR) Power through control of material and social resources	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifestation: “We have information overload and choice overload, and this is a response”			
Power-Dominance (POD) Power through exercising control over people	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifestation: “vastly expanding your reach beyond your existing follower base”			
Achievement (AC) Personal success through demonstrating competence according to social standards	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifestation: “This validation can boost your confidence as a content creator”			
Hedonism (HE) Pleasure and sensuous gratification for oneself	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifestation: “It’s a comfortable space to be in when you don’t have to make choices”			
Stimulation (ST) Excitement, novelty and challenge in life	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifestation: “experience new perspectives and ideas”			
Self-Direction Action (SDA) The freedom to determine one’s own actions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Manifestation: “You can use the following features to help influence the content you see on [...] For You”			
Self-Direction Thoughts (SDT) The freedom to cultivate one’s own ideas and abilities	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Manifestation:			
Universalism-Tolerance (UNT) Acceptance and understanding of those who are different from oneself	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

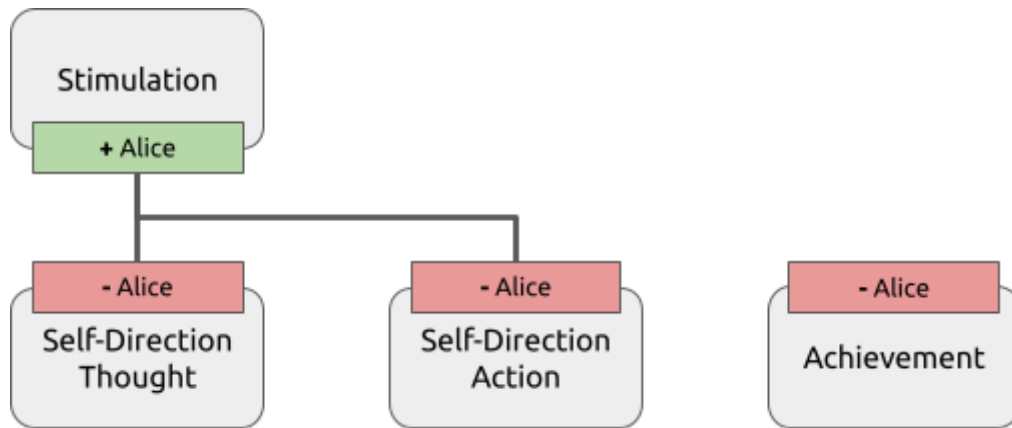
Manifestation: "The FYP caters to various interests and demographics."		
Universalism-Concern (UNC)	Commitment to equality, justice, and protection for all people	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Universalism-Nature (UNN)	Preservation of the natural environment	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Humility (HUM)	Recognizing one's insignificance in the larger scheme of things	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Benevolence-Dependability (BED)	Being a reliable a trustworthy member of the in-group	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Benevolence-Caring (BEC)	Devotion to the welfare of in-group members	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Tradition (TR)	Maintaining and preserving cultural, family, or religious traditions	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Conformity-Interpersonal (COI)	Avoidance of upsetting or harming other people	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Manifestation: "TikTok says it visually scans content to look for things that violate its rules, such as nudity"		
Conformity-Rules (COR)	Compliance with rules, laws, and formal obligations	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Manifestation: "we remove any content identified as violating our Community Guidelines"		
Security-Societal (SES)	Safety and stability in the wider society	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		
Security-Personal (SEP)	Safety in one's immediate environment	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Manifestation: "Our recommender systems are designed with safety as a key consideration"		
Face (FAC)	Security and power through maintaining one's public image and avoiding humiliation	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>
Manifestation:		

2) Alice is a 25-year-old woman with a passion for travel. Her curiosity drives her to explore new destinations, and her TikTok "For You" page has become an essential part of her life. The algorithm curates content that aligns with her interests, making it easier for her to discover new travel ideas without searching extensively. However, despite her frequent use of the app and her enthusiasm for sharing her adventures, she feels frustrated by her lack of followers. While her friends' content gets recommended on the For You feed, Alice feels overlooked and undervalued, leading to a sense of inferiority regarding her online presence.

Stakeholder	Key values	Manifested	Benefits	Harms
Alice	Stimulation	Yes	Get new perspectives and ideas	
	Self direction Thought	No		The recommendations she gets are driven by the algorithm (influence)
	Self direction Action	Yes		She has no way to make her content recommended

Stakeholder	Key values	Manifested	Benefits	Harms
	Achievement	Yes		Inferiority sentiment

3)



We identify one main value-based tension:

- Stimulation \longleftrightarrow Self direction thought: while Alice benefits from the algorithm in terms of getting new perspectives and ideas, she is not free to choose the recommendations that she gets and is potentially influenced by the content to which she is exposed.

In addition, we could also consider the following tension:

- Stimulation \longleftrightarrow Self-Direction Action: while Alice benefits from getting others' content recommended via the algorithm, she does not have the possibility to get her own content recommended to others.

Case 2: Digital Ethics Canvas

Scenario: Developing a Screen Time Reduction App

You are a developer working on an app called "QuitDoomScrolling" designed to help users reduce their screen time and promote healthier digital habits. The app tracks how much time users spend on various apps, sends notifications when they exceed their self-imposed limits, and offers suggestions for offline activities. The goal is to empower users to take control of their digital consumption and improve their overall well-being.

Task

Before proceeding with development, you decide to **apply the Digital Ethics Canvas** to evaluate the ethical implications of this algorithm. Your task is:

1. **Evaluate the benefits:** list expected benefits + describe briefly the context and solution (NB: in the Digital Ethics Canvas, the term "solution" is used to name the software under analysis)
2. **Evaluate the risks:** Identify risks using the five ethical lenses and evaluate their level
3. **Reduce the risks:** Outline mitigation measures
4. **Review:** Assess if benefits outweigh risks and decide whether to proceed with the project

Here is the original [Template for the digital ethics canvas](#)

Proposed answer

Context: The goal is to help users to reduce their screen time

Solution: We are analyzing the app called "QuitDoomScrolling", it is an app for smartphones

Benefits:

- **Healthier digital habits:** By encouraging balanced screen use, the app promotes mindful engagement with technology, reducing potential negative impacts on mental health.
- **Reduced screen addiction:** The app aids users in recognizing and managing their digital consumption, helping to prevent or lessen dependence on screens.
- **Enhanced productivity:** By limiting time on non-essential apps, users can allocate more focus to tasks that contribute to their personal and professional goals.
- **Minimized distraction:** The app's reminders help users stay mindful of their screen time, enabling them to avoid distractions and remain focused on their offline activities.

Risks and mitigation possibilities:

WELFARE	
RISK	MITIGATION
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid orange; padding: 5px; width: 45%;">Excessive reminders could lead to stress or anxiety rather than healthier habits.</div> <div style="border: 1px solid red; padding: 5px; width: 45%;">The app could be misused to control or monitor others without consent.</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid teal; padding: 5px; width: 45%;">Allow users to customize reminder frequency.</div> <div style="border: 1px solid teal; padding: 5px; width: 45%;">Add consent and usage warnings for third-party monitoring.</div> </div>
FAIRNESS	
RISK	MITIGATION
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid orange; padding: 5px; width: 45%;">May not be fully accessible to users with disabilities.</div> <div style="border: 1px solid orange; padding: 5px; width: 45%;">Recommendations might not reflect diverse user needs or backgrounds.</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid teal; padding: 5px; width: 45%;">Incorporate accessibility features (activities adapted to different disability)</div> <div style="border: 1px solid teal; padding: 5px; width: 45%;">Customize suggestions based on user preferences.</div> </div>
AUTONOMY	
RISK	MITIGATION
<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid orange; padding: 5px; width: 45%;">Users may feel constrained by default settings that don't match their preferences.</div> <div style="border: 1px solid red; padding: 5px; width: 45%;">Dependence on technology for habit management.</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid teal; padding: 5px; width: 45%;">Offer more flexible settings and personalization.</div> <div style="border: 1px solid teal; padding: 5px; width: 45%;">Include self-assessment tools to reduce reliance on app alerts.</div> </div>
PRIVACY	
RISK	MITIGATION

<div style="display: flex; justify-content: space-around;"> <div style="border: 2px solid red; padding: 5px; width: 45%;">Tracks personal app usage, raising privacy concerns.</div> <div style="border: 2px solid red; padding: 5px; width: 45%;">Inadequate security could lead to unauthorized data access.</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 2px solid teal; padding: 5px; width: 45%;">Minimize data collection to essential information only.</div> <div style="border: 2px solid teal; padding: 5px; width: 45%;">Implement robust encryption and regular security audits.</div> </div>
SUSTAINABILITY	
RISK	MITIGATION
<div style="display: flex; justify-content: space-around;"> <div style="border: 2px solid orange; padding: 5px; width: 45%;">Background processing may contribute to a higher carbon footprint.</div> <div style="border: 2px solid red; padding: 5px; width: 45%;">Increased charging needs could lead to higher electricity use and waste.</div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="border: 2px solid teal; padding: 5px; width: 45%;">Optimize code to reduce background processing.</div> <div style="border: 2px solid teal; padding: 5px; width: 45%;">Provide a low-power mode option for users.</div> </div>

Analysis of the level of risk:

In the canvas above we have used colors to identify the level of risk (orange = medium, red = high), which combines 2 elements: probability (🕒) and severity of impacts (🍊), following the risk matrix suggested in the video and the cheatsheet:

		Impact			
		x	🍊	🍊	🍊
Probability	🕒				
	🕒				
	🕒				
	🕒				

Green: Low risk
Yellow: Medium risk
Red: High risk

Here is the detailed analysis of 2 of the risks we have identified:

- "Tracks personal app usage, raising privacy concerns":
 - probability (🕒): high, it is actually a feature of the app so it will happen frequently
 - severity of impact(🍊): high, as the data collected includes sensitive data
 - ⇒ Resulting risk level = high

- "Background processing may contribute to a higher footprint":
 - probability (🕒): low, the type of processing will be of limited computing complexity (unless we use ML...), and the goal of the app is to otherwise reduce screen time for users therefore hopefully reducing their energy consumption
 - severity of impact(🍊): high, as carbon footprint contributes to global warming
 - ⇒ Resulting risk level = medium

Review: Given that the identified risks are largely manageable with careful design and mindful implementation, we can conclude that the benefits of the QuitDoomScrolling App should outweigh the associated risks. By incorporating robust customization options, data privacy measures, and accessibility improvements, the app's potential harms can be minimized effectively.

Case 3: Exploring “dark” patterns in digital design

Task

Visit the following website: [Dark Patterns](#) and engage with the various examples presented. Pay close attention to how these patterns affect your decision-making process. Then answer the following questions:

1. What emotions or reactions did you experience when encountering the patterns presented on the website?
2. Have you encountered similar or different types of patterns in apps or websites you use? If yes, what were they?
3. In what kind of situation might a software engineer find themselves implementing similar “dark” patterns in a software interface?

Proposed answer:

1) and 2)

The questions focus on your own experience so we cannot really propose answers here. However, we can highlight that “dark” patterns have been shown to produce, manipulate and exploit emotions for instance guilt, shame, fear of missing out, need to belong (e.g. see Leiser, 2023; Stark, 2016; Lacey & Caudwell, 2019).

3)

“Dark” patterns often get implemented for the following reasons:

- Business pressure: incentives or constraints to achieve increases on business metrics such as user engagement, sign-ups, conversions or sales.
- Doing the same as others: replicating existing designs without realizing they are unethical.
- Inattention: not realizing that a design specification is actually deceptive, manipulative or misleading and “simply” implementing what is requested, or reusing existing library components without realizing that they actually implement deceptive patterns.
- Normalization: some patterns are so widespread and normalized that they are not recognized as deceptive, especially in competitive industries.

References:

Leiser, M. (2023). Illuminating Manipulative Design: From “Dark Patterns” to Information Asymmetry and the Repression of Free Choice Under the Unfair Commercial Practices Directive. *Loyola Consumer Law Review*.

Stark, L. (2016). The emotional context of information privacy. *The Information Society*, 32(1), 14–27. <https://doi.org/10.1080/01972243.2015.1107167>

Lacey, C., & Caudwell, C. (2019). Cuteness as a ‘Dark Pattern’ in Home Robots. 2019 14th ACM/IEEE International Conference on Human-Robot Interaction (HRI), 374–381. <https://doi.org/10.1109/HRI.2019.8673274>

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