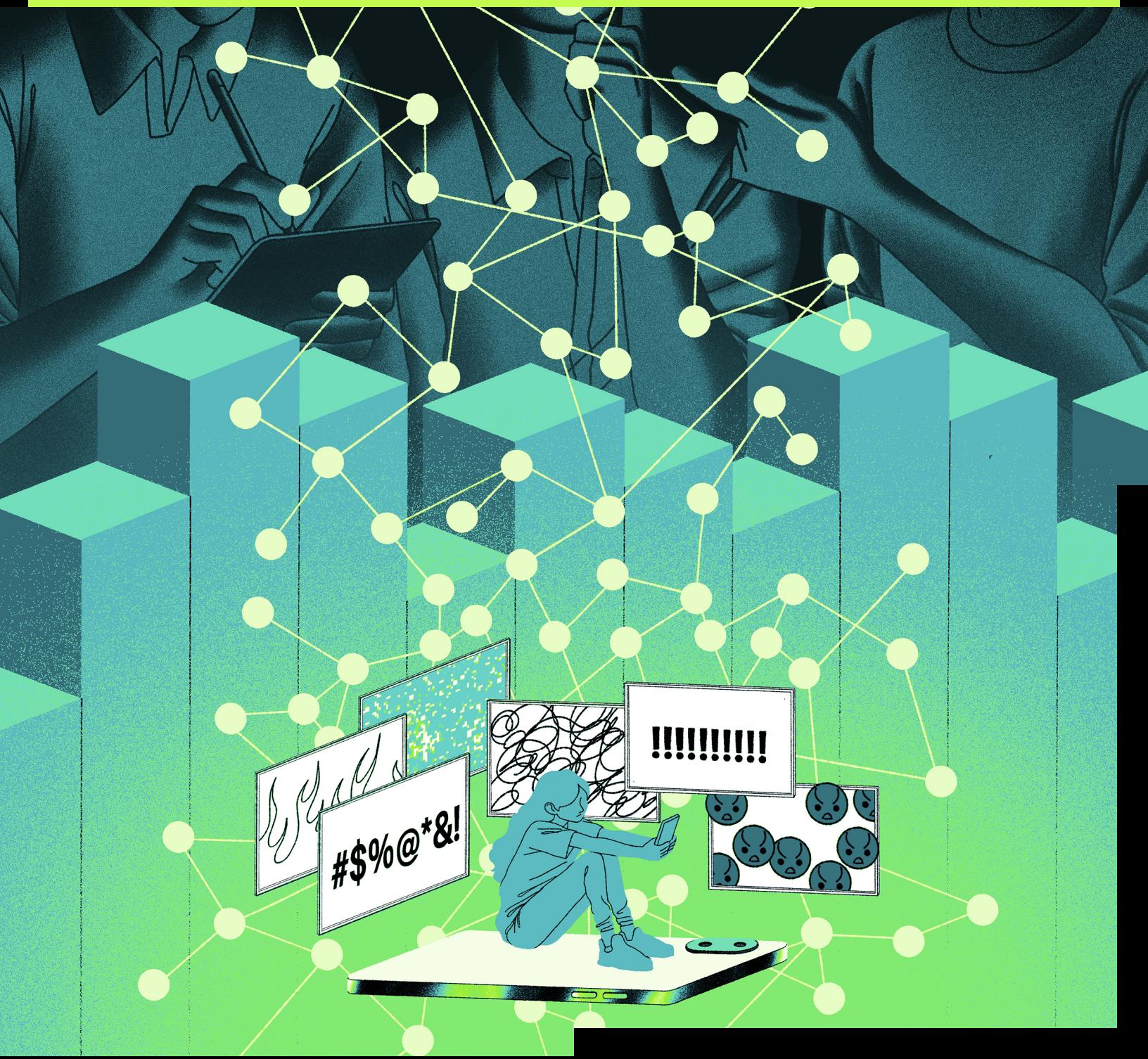


The Unseen Teen

DATA &
SOCIETY

The Challenges of
Building Healthy Tech
for Young People

Amanda Lenhart
Kellie Owens



SUMMARY

At social media and gaming companies, the user is the constant focus—at least in theory. How to get them to use this platform more? To stay longer? To come back tomorrow? Attention and resources are poured into answering these questions throughout the industry. That same attention and those same resources are not, however, put toward the well-being of a major group of their users: young people. This report asks: How do social media platform companies think about and design for the well-being of young people? Through a multi-year, qualitative research project interviewing tech company insiders in a variety of roles, we learned:

- **Many tech company workers tell us their companies treat adolescents' use of their products as an afterthought.** Given the widespread presence of adolescents on these platforms, we view this as a lost opportunity. Designing products with adolescents' health and well-being in mind will both address their particular developmental needs and improve the experience for all users.
- Defining what counts as digital well-being for adolescents, and the harms arising from social platforms, is a difficult task with no current consensus. Given the subjectivity of what counts as "healthy," many working on these topics focus on metrics like screen time rather than more holistic understandings of well-being.

Instead, **companies and regulators must recognize that the impacts of social platform use vary for different subgroups of adolescents.** While many adolescents have positive or neutral experiences on social platforms, a smaller subset face significant harm. Reducing the potential for harms associated with social platforms, and actively promoting digital well-being, requires specific attention to these subgroups.

- Companies struggle to address digital well-being for adolescents because they design for an imagined "average" user. **Averages miss the full range of user experiences on social platforms, and can hide major impacts of those platforms.** [Designing a product for the average user can lead to an outcome that doesn't fit anyone](#) well. Instead, explicitly designing products to mitigate negative impacts for smaller subgroups of users, like adolescents, will make that product better for everyone.
- **Many companies employ strategic forms of ignorance to abdicate responsibility** for how subgroups of users, like adolescents or minoritized populations, may be negatively impacted by their platform. By refusing to explicitly collect demographic data about users (while often simultaneously monitoring their behavior to target advertisements), siloing concern for

well-being to peripheral teams, or by fracturing responsibility for well-being across multiple disempowered groups of workers, companies reduce their liability for the harms of their platforms.

● **Company structures, cultures, and incentives do not prioritize adolescent or general user well-being.**

When companies do incorporate well-being into design processes, it is often too late to make major changes. Business models that incentivize exponential growth, product stickiness, and “average user” metrics also make it difficult to center adolescent well-being. In addition to harming user well-being, this can lead to companies facing strings of negative publicity and threats of regulation once harms to adolescents become public.

● **Both outside actors and workers within tech companies can improve adolescent well-being on social platforms.**

Use these links to access our full list of recommendations for:

○ [Social Platform Companies and Workers](#)

- Create targeted approaches and policies for adolescent users that empower them and allow for learning and rehabilitation among young people. Consider alternatives to age-gating and repeated parental consent.
- Remember the humans. Consider a broad range of user sub-groups when developing new features and products, and ensure that company employees represent user diversity. Intentionally

design and promote the desired environment and culture on a platform.

- Integrate expertise about user well-being into product teams at every point in the design process and across all roles.
- Hire, retain, and empower a diverse workforce, which includes providing safe avenues for critique, mitigating racism, and allowing employees to organize.

○ [Regulators and Civil Society](#)

- Judiciously applied outside pressure—from civil society and the media, especially when combined with public corporate missteps and personal tragedies—can help spur a change within companies and provide a more nuanced outlook on adolescent health and well-being.
- Regulation can be helpful, but requires careful thought about unintended effects. Poorly-designed regulation leads companies to focus on narrow definitions of harms, or drives them away from products that address adolescent needs.

CONTENTS

PART 1: INTRODUCTION

6

Adolescents Deserve Special Attention in Social Platform Product Design	8
Digital Well-being Is Hard to Define and Won't Mean the Same Thing to Every Adolescent or Population	9
Current Approaches to Healthy Technology for Teens Tend to Be Reductive and Narrowly Focused on Screen Time	11
The Risks and Harm of Social Platform Use Are Complicated, but Necessary for Tech Companies to Address	11
Methods	13

PART 2: KEY FINDINGS

14

Adolescents Are an Afterthought at Most Social Platform Companies	16
Companies Design for Their Imagined Average User, Which Leaves Out Youth and Others	18
• Business models and incentives contribute to ignoring important subgroups	19
• The centrality of growth metrics promotes viewing all users as the same	20
• Lack of diversity in tech workforces limits who is imagined as a user	21

Many Negative Health Impacts Stem From What Companies Choose Not to Know About Their Users	22
--	----

Tech Workers Who Explicitly Focus on User Well-being Often Have Little Power to Change Product Design and Processes	25
Platform Self-concept Influences the Choices Organizations Make About How to Build and Manage Their Online Spaces	27
• Leadership sets the tone for organizational culture, values and decision-making	27
• Advertisement-based business models may be fundamentally in tension with adolescent health and well-being	30

PART 3: LEVERS OF CHANGE AND BEST PRACTICES

34

Levers of Change for Regulators and Civil Society	35
• Outside pressure works	35
• Negative publicity—and tragedy—can force company changes	36
• Public failures at other companies also spur action and coordination	37
• Pressure from civil society can shift company decision-making	38
• Regulation can help, but can also have unintended effects	39

Best Practices for Companies and Workers

41

• Create targeted approaches and policies for adolescent users	41
• Intentionally design and promote the desired environment and culture on a platform	42

- Remind product teams of the humans using the platforms 43
- Integrate expertise about user well-being into product teams and across all roles 44
- Hire, retain, and empower a diverse workforce 44
- Require training in ethics and the humanities in all staff and new hires 45
- Consult experts, civil society, and diverse groups of users to anticipate effects on users prior to launch 46
- Collaborate with industry partners to mitigate harm across platforms 47

CONCLUSION

49

ACKNOWLEDGMENTS

50

PART 1

INTRODUCTION

Silicon Valley, and especially the social platforms it has birthed, has long promised its users the world at our fingertips—easy access to people, information, entertainment, and connection. For years, tech companies basked in a glow of consumer and funder excitement, rapid growth, and positive press coverage. But in recent years, as these platforms have become more ubiquitous and powerful, the [warm feelings have faded](#). One source of public concern is the potentially negative health effects of our increasing reliance on these platforms. What is all this time spent socializing and learning and watching and arguing online doing to our mental and physical health? And what is the responsibility of the platforms to their users?

Often, we focus our worries about social platform use on children and youth—for many our most precious and seemingly vulnerable group—in the process of developing into the adults who will carry our society forward. The developmental tasks of adolescence, coupled with their tendency and time to experiment and push boundaries, mean that youth are treated differently and, in some cases, have different needs than adults, including around their use of technology. Much of the legal and policy focus on social platforms has landed on the challenges and worries faced by young people online. Social platforms offer youth both positive and negative experiences—from enthusiastic pursuit of new learning and ideas, and connection with support

systems, to online harassment or radicalization. Many teenagers, for example, have experienced [cyberbullying](#) and view it as a major problem in their lives.

Researchers studying social platform use have directed their attention toward the impact of these technologies on adolescents and other users, rather than on the companies that make the products. Current research on the health effects of tech is often geared toward developing tips and tools designed to empower teens, adults, and communities to adjust their use of these platforms to prioritize their own health and well-being. By contrast, this project shifts the inquiry to the site of production. Addressing digital well-being requires more than shifting user behavior—platform companies should also share responsibility for the health impact of their products. We asked workers within technology companies about how they think about their products' impact on the health and well-being of the people who use them, with a particular focus on adolescents. What smooths or impedes workers' path toward creating platforms that are most beneficial to the young people who use them?

This report details our main findings from in-depth interviews with 25 current and former tech company workers within an assortment of organizations from large to small, all of which offer a platform for social interaction: either a social media platform,

or a social gaming space. We spoke to senior-level executives and more junior team members on trust and safety teams, as well as product managers, lawyers in product counsel roles, engineers and product designers, and internal researchers who work to understand how people use products. To promote an honest assessment of their experiences, interviewees were offered complete anonymity personally and for the products they discussed and the organizations that employ or employed them. For more detailed information about our interviews and methods, please see our [Methods](#) section. This report begins with an analysis of current approaches to healthy technology and digital well-being, then moves to key findings from interviews with social platform company workers, and concludes with potential actions for companies, regulators, and civil society to consider when working to reduce harm and promote the digital well-being of adolescents.

Adolescents deserve special attention in social platform product design

We believe that adolescents represent a particularly important age group to consider in product design because they are developing into adults physically, mentally, socially and culturally—actively learning and testing norms about how to interact with others and forging their identities. Their legal status as minors also necessitates more thought and oversight about how to protect and care for a potentially vulnerable population. While many adolescents thrive on social platforms, others report mental and physical health struggles.

Designing for adolescents doesn't just address some unique vulnerabilities they possess because of their developmental life stage and disempowered legal status, but can serve as a vanguard for better tech for everyone.

As researchers of [universal design](#) have long argued, creating products designed to benefit marginalized groups ends up benefiting everyone. While [curb cuts in sidewalks](#) were originally built to make streets accessible to people in wheelchairs, this design feature has widespread benefits for a range of other people including stroller-pushing parents, travelers with suitcases, and runners. This approach to product design also centers equity by prioritizing the needs of edge populations so that everyone has the ability to fully participate.

For these reasons, our report will intentionally focus on digital well-being and building healthy technology for adolescents. Critically, this does not mean that adolescents are the only subgroup in need of further attention by social platforms. Many minoritized groups (including minoritized adolescents) also deserve more direct attention by technology companies, as they face [increased levels of abuse and harassment online](#). While we focus on adolescents rather than other subgroups of users, we hope that our research findings will be applicable to a range of other groups that are often ignored in the design processes at social platform companies.

Definitions: Age

Throughout this report we use a variety of terms to talk about groups of respondents by age. In this report we will use the term adolescent to mean someone 13–17 and use the term interchangeably with the terms “teen” and “youth.” The term “child” means someone under 13, while “young people” or “minor” means anyone under age 18. However, we did not impose our definitions on our study participants, so they may be using these same words in their quotes to mean different age ranges.

Digital well-being is hard to define and won't mean the same thing to every adolescent or population

One of the key problems with trying to improve digital well-being for adolescents is that defining what counts as healthy or unhealthy technology use remains contested. These are still open questions in existing research on health and technology—one person’s problematic, time-consuming internet use is another person’s organizing for a social justice movement or life-changing support group.

When scholars have tried to define digital well-being, they include definitions as narrow as “optimal psychological functioning and experience,” or as broad as, “In the context of research on digital life, relevant dimensions of well-being span subjective experiences (e.g., affect, life satisfaction, self-esteem, social connectedness), mental health (e.g., depression), and physical behaviors (e.g., exercise).”¹ Researchers conducting meta-analyses involving the concept of well-being have also struggled to find consensus, concluding: “The nature of well-being was often ill-defined in the systematic reviews examined.”² Though health writ large is often a feature of these definitions, because of this broader lack of consistency, many researchers choose to treat well-being as a range of measures, including “mental health and psychosocial outcomes like depression, support from social surroundings, social connections, satisfaction with life, anxiety, self-esteem and loneliness.”³

Our research subjects similarly struggled to define these concepts, and when they did,

definitions of digital well-being encompassed ideas of happiness, satisfaction, mental health, physical health, self-efficacy, and broader concerns about equity and justice. Some platform workers viewed health and well-being as a measure of whether users could be their true selves, or felt supported on a platform. The concept of health also focused on whether users left their time on the platform feeling “better” and more fulfilled. When discussing adolescents in particular, some participants included exposure to new people and ideas as a part of digital well-being.

One study participant questioned the very premise of separating “digital” well-being from well-being more generally, referencing a conversation with a teenager in one of the focus groups the research participant runs as part of their work:

“So you mention digital well-being—one of my teenagers who I meet with every month, she just kind of went, ‘There’s no such thing as digital well-being, it’s just my well-being.’ And it’s those sorts of conversations that I’m hearing from them, but also then reflecting back to others because it really resonates.”

Ultimately, we found no consensus in prior research or in practice regarding a definition of digital well-being, what counts as “healthy,” who defines “healthy,” or how health is related to technology use. One participant explained the subjective nature of what different people value and prioritize:

“...We would find that the values within the company, as realized by different people within that company, were wildly different.

And so where we would say ‘Yes, here’s how we evaluate the trade-offs,’ others would come back and say, ‘Well, that’s not important. That’s not what people care about.’ And what they really meant was, ‘That’s not what I care about.’ And so that becomes its own meta-layer. When you’re working on systems that address well-being, they’re always filtered through the lens of people’s own expectations of what well-being means, and that includes the whole mix of biases and everything.”

With recognition of the subjective nature of terms like “digital well-being” and “healthy technology,” for the sake of this project we use the following definitions. Healthy technology is technology that improves, or at least does not diminish, the mental, social, and physical health of *all* of its users. We define digital well-being as a sense that use of an online space can be a positive force in a person’s mental, social, and physical life, and that the person has agency to manage their use of a platform or feature. Companies should build healthy technologies so their users can experience digital well-being. While we define these terms to clarify our own approach, our research subjects did not necessarily share this conceptualization, and are working from a range of definitions as outlined above.

This broader lack of widely agreed-upon definitional specificity is part of what pushes people and companies to adopt more limited and narrow metrics and measures of well-being that focus on time and attention, because the other concepts encapsulated within the broad bounds of digital well-being are less easily measurable—though no less important.

Current approaches to healthy technology for teens tend to be reductive and narrowly-focused on screen time

One of the main ways that our interviewees described healthy technology use was to focus on easily measurable, concrete concepts that could act as proxies for youth digital well-being. Some of the most common frameworks for discussing healthy technology use for adolescents and adults (seeded by places like the [Center for Humane Technology](#))—eager to find something concrete and specific within the otherwise amorphous well-being landscape—concentrate fairly narrowly on screen time, addiction, and the attention economy. Many of our interviewees mirrored this language and focused on how much time a person spends with a device or a screen, often in comparison with other physical or in-person activities. As our previous [research](#) has outlined, the concept of addiction does not encompass the full range of pleasures, risks, and uses that people create with technology. And health and well-being cannot be reduced to the single variable of screen time or condensed into one metric.

While we heard these narratives frequently in our interviews, many other participants expressed great frustration at the focus on screen time, suggesting that such a narrow focus grouped all time with screens into one bucket without differentiating the mental health impact of different screen-based experiences. For many adolescents and adults, time with screens in a supportive and caring environment can be a powerful and positive driver of well-being:

“To the screen time issue, I would say there’s a lot of research that shows that having kids use technology helps build digital literacy and supports more healthy habits. So you don’t just wanna cut off all access, but how—what is the right balance, and what is the right balance that’s in the best interest of the child’s development?”

While reaching consensus about what counts as healthy technology use remains difficult, we know that overly simplistic attempts to measure and address digital well-being are insufficient and do not fully account for the positive impact of technology. And many of the greatest harms on social platforms are not about individual screen time, but are instead about structures of abuse and discrimination against minoritized groups. Instead, conceptualizations of digital well-being and healthy technology use should be multi-faceted, contextual, and based on real engagement with a variety of individuals and populations.

The risks and harms of social platform use are complicated, but necessary for tech companies to address

If overly simplified approaches to addressing adolescent well-being online are insufficient, how can we better conceptualize the risks and harm of social platform use? There is abundant evidence that social technologies inform and connect us in critically important ways (which is particularly true during a global pandemic). But for some of us, these technologies can also distract us and compromise

our mental and physical health by exposing us to harmful interactions or content, reducing physical activity, and limiting sleep. Our collective worries about the impact on well-being for users of social networking and social gaming platforms are more often concentrated on young people. This is partly because of a perceived greater susceptibility to some of these forms of harm because of the developmental process young people must go through to become adults, and partly because youth often engage in unexpected behaviors and practices on these platforms that surprise and transgress expectations set by older adults.

But there remains little consensus as to the degree and nature of the harm felt, especially by youth, from online experiences and use of devices. While much work documents behaviors and practices suspected to be problematic, there is little evidence that actively demonstrates harm.⁴ Meta-analyses of the research on mental health impact of social platforms on youth suggest a very slight negative impact, though this work is hamstrung by lack of clarity around definitions.⁵ Work by the [Global Kids Research](#) team has demonstrated that some children and adolescents are upset by and disturbed by experiences they have online, and that children with offline vulnerabilities—like experiencing violence or parental conflict—are often more likely to experience things online that could be upsetting. Other research has begun to demonstrate that different adolescents [will be affected differently](#)—including small groups who are affected negatively—by the same platforms, product features and experiences. This research suggests that many of these slight negative effects on self-esteem

or self-reported well-being are often actually reflecting strong negative effects on a small group of adolescents.⁶

This new work is pushing scholars in the field to move away from the use of averages and population-level studies and instead look more deeply at person-specific experiences around emotional well-being and use of social platforms, to better describe what's happening, and to help improve the targeting of responses to the people that need it most.

Because harm is felt more acutely by a small subset of the population, companies will need to develop nimble systems to anticipate and address potential harm for these groups. Some of our interview respondents noted that even their best attempts to prevent negative impact to health and well-being often fail to anticipate some of the ways their products get used. Expecting tech companies to perfectly predict how products will get used in unintended and harmful ways is unrealistic and will only lead to disappointment. But companies should still take moral responsibility for the impact of their platform on user health. Our respondents pointed to many failures in the organization and culture of social platforms that could be changed to improve user well-being without expecting miracles or perfection. [See “[Best Practices](#)” below for further thoughts on how to implement these systems].

Methods

To understand how social platforms can improve their impact on adolescents and foster general user well-being, we spoke with tech company workers about current product design processes and approaches to health and well-being, and what they believe needs to change. These workers identified many places where problems arise, with a particular emphasis on breakdowns in the product design process.

The data presented in this report come from 25 semi-structured, in-depth interviews with current and former employees of social platform companies. Participants worked at a range of small, medium, and large social media and social gaming platforms. They worked in product management, engineering, research, product design, trust and safety, and policy at a variety of levels from junior employees to the C-suite. We asked participants about a range of topics including: the product design processes at their companies, how concerns for health and well-being were integrated into these processes, the extent of cross-coordination between their teams internally and across companies, and their company structures and cultures. We interviewed 14 women and 10 men (1 not reported), and 13 white/Caucasian, 6 Asian, 2 Latinx, and 1 multi-racial/ethnic (3 not reported) participants. We sought to include participants from a diverse range of genders and ethnicities. While we were able to speak with a large number of women, we were less successful in recruiting people of color, especially Black participants. This difficulty may stem from the lack of racial diversity in the tech workforce, and might also be a reflection of our

position as two white women conducting the interviews.⁷ Participants were asked to describe their daily work, the process for creating new products and features, and the culture and structure of their organization. They were also asked about how they, and their organization generally, conceptualize health and well-being on social platforms (with particular emphasis on adolescents). We found participants via LinkedIn searches, connections in the field, and snowball sampling. Each interview was conducted virtually between April and September 2020 and lasted approximately one hour. Interviewees were not compensated. Participants were offered full anonymity for themselves and their organizations. They were offered the opportunity to review any direct quotes from their interviews included in this report for identifiability. Even when offering strong privacy protections, it was still difficult to find participants because many workers feared retaliation from their employers for talking with outside researchers or were forbidden to do so. We followed a grounded theory approach to our analysis, letting themes emerge as we progressed through the interviewing and analysis process rather than beginning a priori with a set of defined topics.⁸

PART 2

KEY FINDINGS

Our research sought to understand how workers at social platform companies thought about and integrated concern for adolescent well-being into their work, and into the design and implementation of new products and features. When we asked tech company workers to describe how they think about adolescent and general user health and well-being, the most notable response was that these concepts are often not brought into the research and design process until very late, if at all. For example, when asked about user health, a respondent said bluntly:

“Yeah, I think that hasn’t come up...”

While this response was not universal, it was common enough that one of the primary goals of this research became analyzing *why* adolescent and user well-being is so often ignored. Why are these workers not thinking about health and well-being when this has been publicly articulated as a core priority by so many in [Silicon Valley](#)? And why are social platforms not prioritizing the promotion of health and mitigation of harm?

In this section on our key findings, we first provide examples of how adolescent users (and sometimes users more broadly) end up frequently overlooked at social media and social gaming platforms. We then explore a variety of mechanisms that may help explain why adolescents’ health and well-being is

not prioritized by these companies. First, we find that companies focus largely on their imagined “average” user, which tends to be younger (but still adult), white, and male. Company business models and incentives, the glorification of metrics, and the lack of diversity in the tech workforce all contribute to the problematic emphasis on this “average” user. Second, we find that companies employ strategic ignorance to avoid tackling thorny issues related to how adolescents use their products. Companies can abdicate responsibility for adolescent users by not recognizing their presence on their platforms, by fracturing responsibility across many teams, and by keeping unwanted information buried under piles of data. Third, the tech company workers who do think about adolescent and user well-being are disempowered and often made to feel like “blockers.” They rarely have the power to implement the changes they think would move the needle on improving adolescent and general user well-being. Finally, how social platforms and their leaders understand their own purpose and mission, how they build a culture within their organizations, and how they choose to monetize all have an impact on how and whether user well-being is prioritized or de-emphasized.

Adolescents are an afterthought at most social platform companies

Social platforms could prioritize adolescents in product design in ways that improve product experiences for their general user base as well. Instead, our interviews with social platform company employees suggest that adolescents are rarely considered explicitly in the product design process:

“But I’ll be honest. When we’re thinking about the new products, when we’re building out [product example], we’re thinking about over 18. We don’t often do—and I think this is a gap—any sort of user research or writing large research around the impact on teens of a [product].”

Another interviewee said:

“In terms of age, [Platform] tends to be an older platform generally than [other platforms]—so I don’t work super closely with how adolescents or teenagers are being impacted on the platform, so I don’t really feel like I can speak to that.”

The choice not to design for adolescents is often conscious, with some participants reporting that they shy away from designing for any specific social group, not just adolescents:

“We don’t have a younger-users filter or something like that. And we’ve been asked for that. It’s a feature request that people have asked for. And I think the answer always from the product side, is we should

just be tailoring this for your personal experience anyway. We don’t want to have these different tiers of experiences and things like that.”

Unless a platform is explicitly aiming for adolescent and young adult users, youth are an afterthought. Even platforms that a substantial portion of American adolescents use still tend to ignore them if they do not constitute the bulk of that platform’s users. Many of our research participants said that their companies were not specifically seeking out adolescent users, and thus were not designing products or features with them in mind.

Additionally, many companies do not collect data specifically about adolescent users, making their experiences hard to see. While companies may rightly resist collecting data on adolescents as a form of privacy protection, this should not absolve them from considering how their products may affect this large and particularly important group of users. [Widely available external research](#) shows that large numbers of adolescents are using social platforms, and technology companies cannot pretend not to know this. Laws regulating children’s online privacy, like the Children’s Online Privacy Protection Act (COPPA) have also led companies to steer away from products targeted to children and younger teens. Or, in some cases, this regulation has driven legal and policy teams to be the only ones concerned with adolescents, where they focus narrowly on managing compliance:

“We’re—I would say right now we’re just thinking about it from a ‘We need to protect them legally.’”

Another interviewee said:

“So when you’re talking about minors specifically, because there are so many laws around it, that’s something where the legal team would do most of the counseling there... anything that deals with children is really the legal team’s purview.”

Researchers at social platforms also report challenges including adolescents in product research because of difficulties enrolling participants under 18 years old in research. [Federal research guidelines](#) classify those under 18 as a vulnerable population requiring special protection, including requirements for parental consent to participate in research.⁹ Verifying parental consent in digital environments can be tricky, time-consuming, and expensive.

“Unfortunately [platform] does not pay as much attention to young people as they really should largely because from a research perspective, it’s just so much easier to work with adult populations.”

Another interviewee said:

“And so we wanted to talk to the 15- to 18-year-old or even 15- to 20-year-old group and we ended up just talking to 18- to 23-year-olds. Because trying to get consent to talk to underage minors was very, very difficult. And so that was one challenge we had in terms of just trying to understand the behavior of that younger group.”

Other companies may be avoiding designing products for adolescents or children because they

have seen other products, like YouTube Kids, [publicly struggle](#):

“I think companies much larger than ours and with much more money have perhaps tried to [make products geared toward adolescents] and it still didn’t work. And so you have YouTube Kids. Or you have other products that Facebook has bought or something and turned into other things. So, I think I don’t have an answer in terms of how our policies specifically fit younger folks.”

There are real consequences for platforms when they do not specifically think about how adolescent users might react to a new product or feature. For example, one social platform introduced a feature that became popular with teenagers, with potentially negative consequences, without much initial thought:

“There’s a young guy... and he made [a feature] up one day. He’s on the design team. He’s like, ‘We should just do, like, [new feature].’ And it’ll be fun, emoji, very little thought. Certainly he thought it would help with... virality and stickiness and engagement. But it wasn’t super-cynical, like, ‘Oh yeah, we’re just going to do this real hard, growth hacking, this is going to be addictive.’ He’s thinking of it as an adult, like, ‘Yeah, that’d be fun’.... And didn’t fully anticipate how extreme middle school-, high-school-aged kids would take it...”

Well-intentioned designers and product teams have unintentionally created [features](#) with negative mental health impact on many adolescents. If

platforms worked to anticipate harms in the design process, they could better serve this important segment of their audience.

Companies design for their imagined average user, which leaves out youth and others

Companies tend to design products with an imagined “average” adult user in mind, but this approach can leave out youth and other subgroups who do not fit that mold. This is the most critical organizational omission that our research uncovered, and one which underpins many of the flaws in the product design process.¹⁰ When researching, designing, and testing new products and features, employees were mostly thinking about early adopters or tech-savvy users resembling the employees themselves. These users tend to be adults, higher-income, white, and male. While some employees reported a desire to reach other populations, they often struggled to do so:

“[We] probably tend to attract more people who are the early adopters of technologies, who tend to be wealthier, more technologically advanced, and so on... I do feel that we often end up, like, ‘Oh, this is resonating with a bunch of techies who are already into this thing,’ and there’s some sort of disappointment among us, like, ‘Oh, we wanted the real people...’ We want other people who are not just techies just like us. And that often is a source of disappointment... What can I do to get my father to get excited about this thing?”

Some tech companies recognize that this emphasis on early adopters is problematic, and some teams are working to address this oversight by seeking out experiences from other groups:

“We do have specific work on marginalized communities. Right now we have a... study in place where we’re talking specifically to Black people who use our platform.”

At another company, a focus on the “average user” experience was intentionally cultivated. Employees were told not to examine the experiences of specific subgroups based on a belief that it was important to treat everyone the same:

“In terms of vulnerable demographic groups, especially people who are more vulnerable to privacy concerns, harassment, hate speech, etc., legal has been very allergic to us even asking people those questions... [leadership] is very allergic to the idea that we should be treating women differently than men or people of color differently than white people or any other basic fact of social science.”

At the same time that some platforms want to treat everyone the same, they also allow companies to target ads to very specific groups of people. As a respondent noted: “[Platform doesn’t want] to be perceived as collecting people’s races or sexual orientation or sensitive information like that. And I get it, I really do. But also when the advertising organization is built on creating these targeting criteria for Coca-Cola to be able to target, like, Black trans women if they want to... it’s infuriating and it makes your blood boil.”

Our respondents identified three main reasons why product design priorities tend to center themselves on an imagined “average” user: business incentives, metrification, and the lack of diversity in tech workforces.¹¹ The following sections explore these three areas in more detail.

▪ Business models and incentives contribute to ignoring important subgroups

Business models that structure how technology companies acquire and earn money forcefully shape decision-making at every point in the life of a company. Founders who accept venture capital funding face tremendous pressure to provide growth and returns to those initial investors. Investors won’t invest if they don’t believe they will get generous returns. Once a company goes public, [responsibilities](#) to [shareholders](#) also demand rapid increases in profits and growth.

“I can say this as a founder, I am under tremendous pressure to deliver results. I’ve taken... a lot of money from people who I care about and I respect and whose opinions matter in my personal career. There’s I think a lot of pressure to do anything or say anything in order to succeed, and I think that can lead you down the road of doing things that are not good for or to users. But ultimately it does improve your metrics. There are a lot of... UI [user interface] tricks that you can do to rope people back in to opening your app, to keeping their eyeballs glued, and it’s challenging to not do those things be-

cause at the end of the day, you are judged in comparison to companies who are doing that. And to say we don’t have as much time spent on our app or something, you just don’t get the benefit of anyone caring. Just nobody cares, because capitalism. I think that’s a real thing, and it’s challenging.”

If a company adopts an advertising-based revenue model, they are fundamentally interested in having as many users as possible using their product for as long as possible (and thus, viewing more ads). Time spent on the platform, made manifest in metrics like daily active users (DAU) and monthly active users (MAU), is quantifiable, which enables user attention to be sold to advertisers who pay to place their content in front of our eyes staring at the screen:

“Traditional social networks have all really touted their daily active users. In fact DAU/MAU as a percentage is the holy grail. You want a really high daily active over monthly active. People, one of the first things you walk into a venture capitalist’s office or something, they say what’s your DAU/MAU or what’s your WAU/MAU, weekly actives over monthly actives. It’s all about how frequently are they using your product.”

The product managers and designers we spoke with recognized that their ultimate goal was to build revenue for their companies, and that the most valued way of demonstrating that revenue potential was through tracking growth metrics. Even though data-harvesting and micro-targeting allows some companies and third parties to deliver ads to specific users with surgical precision, in developing

the platforms and products themselves, product teams tend to focus on the largest (and most financially desirable) group of users. By focusing on these groups, we miss the nuances—and potential harm faced by smaller groups of users, including adolescents.

- **The centrality of growth metrics promotes viewing all users as the same**

One of the problems with growth metrics is that they prioritize measures that treat users as a monolith rather than specific social groups with different needs. Research with adolescents pioneered over the past decade supports the idea of differential susceptibility—that different users have different reactions on the same platform and with the same content or experience, and that looking at averages obscures very real and substantial negative and positive effects of social platforms on a person’s subjective sense of well-being. Indeed, [recent research](#) with Dutch adolescents suggests that 9% of youth have negative effects on their sense of personal well-being after using social platforms, and nearly 20% exhibit positive effects on their well-being after social platform use. The remaining users report no impact on well-being. Viewing users as a single group misses the real challenges smaller, but no less important, subgroups face.

“...The patterns in large-scale, ‘here’s what tens of thousands of users are doing on [platform]’, that is considered ground truth. When obviously most negative experiences are happening to smaller groups of people,

to marginalized groups of people whose experiences aren’t going to show up when you’re looking at tens of thousands or hundreds of thousands of people.”

The emphasis on large-scale user data and trends makes the human users at the other side of the computer screen harder to see. For example, a worker described the negative consequences of “A/B testing culture.” In A/B tests, a small subgroup of users are unknowingly shown a slightly different product than the general user base. If this altered product is “successful” (generally measured through metrics like clicks, time spent on the platform, or purchases), the product is then rolled out to the whole user base:

“I think the scariest thing as a user and somebody who understands the process is just this A/B testing culture. To me, I think it’s, again, it’s abstracted the human out of the process because you’re just looking at these numbers. You’re just looking to see how you can pull these levers and move these numbers.”

Population-level metrics also make it nearly impossible to identify and address health concerns for smaller subgroups.

“We added a feature... and our hope was that [it] would help underrepresented users kind of retain better on the app.... But the reality is our dashboards can’t—aren’t—fine-grained enough for us to be able to understand and track that journey for an underrepresented user.”

Even when companies do try to improve user well-being and health, these efforts can be trampled by larger, more quantifiable goals:

“Anything about user happiness and user health that’s not—anything that’s measured through the absence of interaction with the platform... is just really at odds with... any metric I can think of that [platform] would like... unless someone came up with some really kind of out-of-the-box way of quantifying [well-being]... I think it would be really easy for those metrics to get plowed over by much more concrete, much more interpretable and potentially dollarizable metrics.”

If companies do not build processes that can conceptualize well-being or the experiences of different types of users, they will tend to design for their perceived “average” experience.¹² And, as many of our respondents reported, that perceived average user tends to look like the homogenous workforces that design tech products.

- **Lack of diversity in tech workforces limits who is imagined as a user**

Workers’ perceived understanding of the needs of users is based upon what they and their communities care about. This is perhaps unsurprising, but still problematic given the lack of diversity in the tech workforce.

Despite public pressure and company promises over the past decade, social platforms have largely failed to diversify their workforce. These companies

employ many more men than women, especially in technical roles, and the vast majority of employees identify as either white or Asian (while comprising a large percentage of the tech workforce, “Asian” is a category that represents many populations also [facing discrimination in Silicon Valley](#)). Platforms have particularly excluded Black workers—in the past six years, Facebook has only increased its Black workforce from 3% to 3.8%. Twitter is little better, expanding its Black workforce from 2% to 6%.¹³ Many workers in Silicon Valley are younger, childless, or the parents of very young children. This homogeneity cannot be separated from social platform companies’ general failure to address systemic negative health impact and harm for adolescents, minoritized, and vulnerable populations:

“To me, personally, one of the most impactful things about my path... is the fact that I am a mom and I have children of the age who could use the product I’m building. You just look at the world differently when that’s true. If you’re a college student and your user base... [is] your friends in your dorm room and you’re just excited to share disappearing photos because you want the girls to send you sexts, your framework is so different. I think that this is why the diversity of founders and entrepreneurs is actually so important, not even for empowerment of these groups, which is its own reason to do it. But I think for the good of society to have a diverse set of people at the table to think through options about how it impacts different groups.”

Our interview data and analysis, alongside a growing body of [literature](#), indicate that if tech companies continue to primarily employ young, white men to design and engineer their products, those products will be disproportionately designed for the needs and experiences of that population.

Many negative health impacts stem from what companies choose not to know about their users

In tandem with understanding the metrics and measurements that companies prioritize, it is equally important to analyze the types of data and information that companies choose to ignore. As prior [social science research](#) has found, companies make strategic choices about what types of information *not* to collect. Our research suggests that one of the primary ways companies fail to mitigate negative health and well-being impacts of their products on adolescents stems from what they choose not to know about their users. This strategic ignorance “is distinguishable from deception or the suppression of data by virtue of the fact that unsettling knowledge is thwarted from emerging in the first place, making it difficult to hold individuals legally liable for knowledge they can claim to have never possessed.”¹⁴ Social platform companies may employ strategic ignorance to avoid taking responsibility for how their products affect adolescent user experience and health.

We found three main ways that ignorance can be strategically designed into company structures: through not collecting data, through collecting too

much content, and through unclear lines of responsibility for knowledge.

First, companies can feign ignorance and abdicate responsibility by not collecting any data about a perceived problem. By not collecting this data, they can argue either that a problem does not exist, or that they had no way of knowing about it.¹⁵ For example, a worker noted:

“We don’t aim our product at children and, you know, we forbid the use of the product by anyone under 13. We’re not trying to get those users. Obviously we do have teen users, we assume, but we don’t collect age data about people. Just like we don’t collect really any personal data about people so we don’t have any basis to know who is a minor and who is not.”

While privacy protection is needed and important, it is also used as an excuse to not learn about adolescent users. Because many companies do not collect age data about their users, they feign ignorance about whether and how youth use their platforms. But plenty of other organizations have [documented adolescent use of social platforms](#). If companies wanted to know how many teenagers were using their products, they could get this information without violating privacy protections.

Second, information can be buried under piles of content, making it hard to find or understand.¹⁶ As companies grow, the amount of content that needs to be moderated on their platforms becomes so large that it can be easy to miss content that harms adolescents, even with robust content moderation teams. [Companies may argue that they](#)

cannot be held accountable for everything posted on their platform for this reason, even if some of that content may produce harmful health effects. But the pace and scale of content posted to social platforms is a choice that companies make as they encourage the growth of their platforms. If adolescent health and well-being—and the well-being of users more generally—were a larger concern, companies could make different choices about how many content moderators to hire, which types of content should be automatically flagged for review, how quickly content can be amplified, and what types of content should be removed.

Similarly, large companies are building many tools at a time. When coupled with staff turnover and lack of communication between teams, some tools and code can get lost in the shuffle, making it difficult to assess their potential for harmful impact. For example, a research participant recounted a time when they just happened to notice that a tool used to identify and moderate political speech was unintentionally silencing large amounts of political opposition:

“That one still haunts me just because if [co-worker] and I hadn’t noticed it and thought it was a problem and thought to correct it, like, it would still be happening and that’s terrifying. It’s terrifying that there is this machinery that’s governing the lives of... [so many] people and it takes a rando 30-year old to be like, wait a minute. Hmm, maybe we shouldn’t be doing that. And it’s not like anyone’s malicious... sitting there like plotting, like, I’m going to silence political opposition. It’s just that there’s so much going on all the

time and it’s moving way faster than we can move as a human organization.”

Finally, ignorance can be distributed across an organization. Companies can divide labor and build boundaries between teams in ways that serve to keep key facts and patterns from emerging or gaining attention. No one person or team can be deemed responsible for a problem.¹⁷ For example, decision-making at some social platforms is fractured among many teams. Each team is generally only able to sign off on product decisions as it relates to their particular area of focus. This makes it difficult to see or mitigate more general ethical and health-related problems with a potential product. Teams that may be more likely to spot these larger problems are rarely given power to address them unless they have particular seniority or rapport with leadership:

“Legal wants to keep it to ‘I’ll point out concerns but as far as the actual advice, the actual sign-off, I’m going to [limit] it to what’s legal or what our risk tolerance is.’ That’s often when I would get looped in on something that was particularly controversial, where everyone else in the process was like, ‘We’re just here to make it legally tolerable or we’re here to operationalize it and to implement safety as best we can.’ I could come in, in more of a subjective way and speak to—this is a bad thing to do. [I had] the relationship and seniority of having been there early to be able to kind of go outside those processes in the hierarchy and make my pitch directly to [CEO] or to whoever needed to hear....”

This fracturing may be particularly stark for adolescent health concerns. As mentioned above, our interview participants suggested that concern for adolescents is often limited to legal teams narrowly charged with identifying potential regulatory violations, or in larger organizations, specifically designated individuals or teams within trust and safety. One respondent described the narrow focus of their attention on adolescents:

“So I would say our thinking has been strictly legal for the most part. Like, legal requirements, ensuring that we’re not surfacing content that’s explicitly not allowed.”

Adolescents are not the only category to bear the consequences of strategic ignorance—other minoritized and systemically marginalized groups also face harm. Our interview participants identified many ways that lack of knowledge about different communities can lead to discrimination and negative health impacts. For example, this discrimination could include misclassification of slang or a general lack of understanding of cultural nuances:

“We don’t have cultural nuances in our [machine learning algorithms] so certain words that might be community slang or just words that certain communities use will actually trigger our ML to say that this is toxic, even if it’s ‘I slayed that,’ and that will come up as a bad thing even though the context of it is actually not.”

While some tech workers recognized bias and discrimination in their systems, companies are still struggling with how to address these issues. Black communities, for example, are still 1.5 times

more likely to have their content flagged than other groups.¹⁸ In July 2020, companies like Facebook and Instagram said they would study why Black and Latinx users are being both stifled on platforms and subject to higher rates of hate speech and threats.¹⁹ But public reporting indicates that researchers studying racial bias within social platforms like Facebook have felt ignored and have been told to stop working on projects related to bias.²⁰

Our research participants also reported a strong bias toward American users, even in companies with a large international user base. Because power is generally centralized in Silicon Valley, concerns for this region are prioritized:

“Everything’s about resources and prioritization, and the people who make those decisions tend to be people who are living in California.... It is even just little things, for example, running experiments in languages other than English. First, don’t ship things—it should almost be a rule that if you’re shipping something in English only, you have failed.”

Or, social platforms may spend fewer resources and attention on harassment against adolescent girls because these issues are not as visible to them:

“There’s a reason why harassment against women and gender-based issues generally have been badly dealt with by the tech industry, it’s because most people making decisions at the beginning are all men, [and] they built tech for themselves.”

The social group with perhaps the largest and most notable absence in the minds of our research participants was lower-income users and those without access to fast internet and new technology. This is a particularly troubling absence not only because of our current moment that requires broadband connection for children and teens to attend school and connect with family and peers, but also because current conversations about improving adolescent health and well-being online often include assumptions about the benefits and feasibility of disengaging from technology that are largely rooted in an upper-middle class problem of abundance. These concerns may look dramatically [different across the socioeconomic spectrum](#), where basic access remains a concern, and during a pandemic, when that access is so critical for education, health care, and human connection. Social platform companies should not treat all adolescents the same—different subpopulations may have very different experiences and needs in online spaces.

Other participants suggested that when social platforms *did* consider their products' impact on health for particular subgroups, it was primarily as a means to preserve their public image and reduce legal liability or threats of regulation:

“...People do, for political cover, for all kinds of things whether it's anti-bullying month and you need a campaign and you're like well who can we partner with? Ok, you've got Trevor Project or whatever. It's like a kind of checkbox or to cover for some liability where we're like. ‘Hey, our users are committing suicide a little bit.’ Maybe, all right, what can

we point to, to be like—as part of our social responsibility checkboxes for the quarter.”

Companies may strategically focus on these subpopulations to manage their public image, but they do not tend to prioritize these users in the product design process. Thus, while much of the critique of social platforms is centered on the massive amounts of data these companies collect about users, it is equally important to examine how and when they ignore many user subgroups, including but not limited to adolescents.

Tech workers who explicitly focus on user well-being often have little power to change product design and processes

Even as health and well-being concerns are often overlooked at social platforms, many (mostly larger) companies have still hired entire teams of people designated to think about the well-being of their users, and in some cases designate individuals or teams to focus specifically on adolescents and children. But while these teams are mandated to keep those users as safe and healthy as possible, they are most often able to flag issues, but not empowered to change product direction. We frequently heard that these employees are siloed or their recommendations are ignored:

“On paper [our team] would need to sign off, but, this is where you get into company politics a little bit and the reality of it is: [our team] does not want to be the blocker for launch.... We'll just rally for it but honestly

it's like, 'No, no, no.' If these things were operating responsibly, that would have been a no-go.... There's no point in really putting your foot down but you try to—yeah."

These workers often (but not always) sit in trust and safety departments where they have varying ranges of power. Trust and Safety teams are responsible for the "[principles and policies that define acceptable behavior and content online](#)." Workers tasked with thinking about well-being are also sometimes distributed onto product teams, or across different roles and teams within a larger organization. Generally, these employees do not want to be seen as blockers of innovation or revenue, and have devised communication strategies to work with product teams:

"I like to think of it as almost being a mine sweeper for them. I give them a map that shows them: where's the quicksand, where's the mine, where's the trip wire. And then it's their job to take that map and use it. So I want to illuminate things for them rather than being a blocker. Now, they don't always take that advice and that's fine, that's within their prerogative. Because as I said, tech companies are product-driven companies. But I view my job as making sure that they have all of the information to make a decision. And then they can use that information wisely or they can choose to disregard that information. And hopefully, they use it wisely."

Another respondent said:

"We often are seen as blockers and so very often I'm trying to frame things to [product managers] in a way that reaches them, around ensuring user experience, user growth, etc. None of that can happen if [users] don't feel safe or comfortable participating. So understanding what the motivations of a specific [product manager] is, is really important."

There will likely always be tensions among teams because these teams have different priorities to make products beautiful, functional, widely used, safe, or healthy. Some of these tensions can be productive:

"...Sometimes if you do what the designer wanted to do, it would take us 18 months to ship anything which is also not great. So you have this healthy tension of what is really, really the value and the core product.... I don't think it's a bad thing. I think when it becomes a bad thing is when certain people or certain functions' voices aren't heard and that can happen quite a bit."

In some organizations, particularly those where the people deputized to think about the well-being of adults and kids who use their products are a part of the team that designs and builds a project from the beginning, trust and safety isn't seen as a blocker to product launch or business interests, but rather a collaborator and integral part of the product team.

"So, that's been a really positive thing... Everyone on our team is super passionate

about making the world a better place, and like in many companies you could imagine that the trust and safety function is kind of seen as this blocker or risk function, or they're stopping us from growth. I haven't experienced that at [Platform] and that's been really refreshing."

But if the bulk of the people tasked with focusing on adolescent and user well-being in many companies are systematically the voices left unheard, platforms will continue to release products without anticipating negative impacts or designing features to proactively promote health.

Platform self-concept influences the choices organizations make about how to build and manage their online spaces

What companies think their platform is for, and the value it creates in the world, indelibly shapes the choices that leaders and employees make. For example, some companies see their role as building a community space for fun, pleasure, or empathy:

"From a platform perspective, the ones who do well, [are] where the core product and the core culture is fairly positive. It's your wedding board, it's mostly for happy, fun things. And if you go on there and you're posting things that aren't fun and happy, there's no rule that you can't, but it's not really the place for that. And that's a cultural thing, and those are norms. So giving the community tools and affordances and

product support to actually have the ability to propagate their values, and then holding a product, that also kind of fosters those things."

Platforms that view their space as a site of pleasure and joy are more willing than other companies to trim and remove content, and limit speech opportunities. But other companies see their product as more of a [digital commons](#). These platforms tend to [privilege free speech](#) and center it in their rulemaking.

"[We need to think] in more nuanced ways about what it means to support free expression and free speech. I think there's real oversimplifications at [Platform] for a long time, driven by engineers and people who... have very strong libertarianesque views on free speech, but have a very thin philosophical or political grounding in it. So it's really strong views, very shallowly considered, beating a loud drum of saying, 'No, we can't censor anything because [Platform]—we've been about free speech.'"

In contrast, we found that some interactive gaming platforms are thinking more seriously and holistically about shaping interactions to diminish user harm than their social media platform counterparts. Because gaming platforms often view themselves as building immersive worlds, they may find ways to build opportunities for more positive and healthful contributions into those worlds:

"I like to say that video games are our engines of humanity, they're engines of empathy, they're engines of culture, and

not just because of what they serve up to the world, but because of what we go through to produce them. This is why I love games so much because of that window into humanity that they provide.”

Social platform companies with an explicit focus on adolescents may also see themselves as more responsible for building communities that foster digital citizenship and prioritize users.

“...We do have a lot of a younger demographic on our platform. Safety is one thing, and they need to learn some digital literacy skills and some data literacy skills. That’s really important from a young age. So they get those good positive behaviors that they’re gonna use on every platform at some point in their life. We can be a training ground and we can provide the safety, and our responsibility is to do that. We can support parents to help their kids so that they’re good citizens, they know how to help themselves, how to help others. But there’s something else we can do. It’s like, that should just be the base level. We need to give them life skills that they can really carry through with them. As I say, they’re growing up online and offline.”

Another respondent said:

“I think about it from the standpoint of I always tell our team our quintessential user is my daughter. She’s 15. If I don’t feel good about her being here this can’t be. That is our North Star. Does it feel good for her to be here at one in the morning when I’m not

online? Because that’s the reality. She has a phone. This is parenting in 2020. I definitely feel a responsibility to our end users.”

If companies instead view their primary responsibility as meeting shareholders’ needs and desires, it can be trickier (but not impossible) to figure out how to develop products that prioritize users instead:

“So I think when it comes to things like how do we develop products for well-being... I believe the challenge that we’re facing is a need to fundamentally shift, A, how we think about our role as companies in these larger problems in society, and finding a way to get comfortable with that being part of our bottom line. And B, how do we create the space to allow these projects to ever have a chance to thrive, to see the level of success that would ever convince companies that it was possible. We’re in this weird chicken and egg state.”

The importance of platform self-concept highlights the fact that social media and gaming companies are not designing neutral spaces for users to interact. They have specific, sometimes competing ideas about the goal and purpose of their products, and make product design decisions based on those factors. For some companies, this leads to active promotion of fun, pleasure, or general well-being. For others, design decisions center on generating the most content, with a more ad-hoc and retrospective approach to addressing potential harms as they arise.

▪ Leadership sets the tone for organizational culture, values and decision-making

As with many businesses, what top leaders at a social platform company value drives the priorities they establish, which in turn shapes how others in their organizations make decisions. The beliefs and priorities of those at the top of an organization set the tone, the corporate culture, and ultimately determine how much the company focuses on growth and revenues at the expense of other metrics. For example, companies could focus on user retention, rather than meteoric growth, or explore business models that aren't ad-supported (e.g., in-product purchases, subscriptions) but which may not yield such robust returns. As one tech worker noted, purely focusing on key performance indicators (KPIs) pulls attention away from the "human aspect of the product and the way people interact with it." And often, prioritizing the health of users, especially subgroups of users like adolescents, is not a part of a CEO's or senior team's playbook, especially when leaders do not trust or believe their users.

"You have [Platform] where this idea of real micromanaging [means] we're not going to do user testing, we're not going to do these empirical things to figure out what people want. People are dumb and they don't know what they want and we need to just decide for them and have a kind of paternalistic mindset."

Sidelining potential harm to users often starts at the very beginning of the life of a company. Startups are founded on optimism, and pre-

cious few founders and early stage leaders spend time thinking about what could go wrong.

"I've never met a founder who really had this big idea and got enough enthusiasm behind it to actually create a company, and have funding, and then have staff to build a product who thought about what could go wrong. I think to be a founder is to be idealistic, it's to be positive, it's to think you can do something that hasn't been done. And everyone's gonna love your product and it's gonna be so cool, right? And then it builds and builds. And without exception, they're all kind of naïve and horrified when people start doing bad things using their products."

Some signs suggest that this is changing; more founders are thinking about possible harm and content moderation and social responsibility now than in the past. Leaders can drive change within their companies, through their own development, learning and growth.

"[Leader] had this quote where [they] said something like, 'Everything's on the table now. We're taking a fresh look at all these policies and everything's on the table.' And I'm reading this and I'm like, well, that's good. But also, do you mean things weren't on the table before? I think that's how you got here, was [by] having this institutional paralysis for years where you were afraid of your users, where you were afraid of actually making decisions and holding onto the steering wheel and not just letting the car go where it wants to. So I think it is, it's

institutional, it comes from the top, and leaders need to actually exhibit leadership and have that mindset, that you're actually responsible for outcomes..."

Another respondent said:

"I think that at the end of the day it's my responsibility. As the CEO, it's my responsibility, at this stage of the company at least, to be really taking care of what is the impact that we have on the world. And specifically that's obviously through our user base."

Without strong leadership support for adolescent and user well-being, these priorities will get lost. Our respondents suggested that it was difficult to build products focused on well-being with support only from lower-level, less-powerful employees. Leaders need to see the value in centering user health for it to become a part of the company culture and decision-making process.

- Advertisement-based business models may be fundamentally in tension with adolescent health and well-being**

While our interview participants identified many ways that company cultures, policies, and processes de-prioritize adolescent health and well-being, they also reported that the overall business model of many technology companies puts them fundamentally at odds with user well-being:

"If your whole business model is based on attention or advertisement, it's really hard to address some structural issues. It's not just like, 'Oh, turn on this lever or this setting.' It's like the existence of the whole company is predicated on this idea, then I don't—it's hard for them to change business models."

When companies are wrestling with real financial pressures to stay afloat or meet investor expectations, these pressures push toward monetizable features rather than "nice to have" features that prioritize user well-being:

"If I say we need to reduce hate and harassment [in] games, no one's gonna say, 'Nah, that sounds like a terrible idea. Keep it. It's getting worse.' Everyone is aligned with that. But when it comes down to the tight margins of developing a game, which are frankly very difficult to develop, and you're left with a choice between this super cool item in a game that players are going to love, and they're going to monetize, and it's going to help keep the company afloat, and players are going to love us for years to come versus this frou-frou social feature that... somebody... says might actually help players get along better? The choice is often very clear in the moment for that company."

Tech workers saw these tensions as structural, and hard for companies to overcome without larger changes in American capitalism:

"I honestly don't see a way forward without some kind of massive revolution in how

corporate governance happens in this country. So that's kind of a downer."

Another respondent said:

"It's just a byproduct of capitalism to some degree.... The way product design, and A/B testing, and feature development is done, you're not necessarily doing it for the benefit of a user, you're doing it for the benefit of your business. And so those are two different things, deciding how to make more money versus deciding how to make a better product for your users."

Because respondents pointed to large economic structures—like inequality—that made it difficult for people who used platforms to be able to afford to pay for them, some workers suggested that change would not come from within tech companies, but from broader societal changes:

"Honestly, it's not tech's fault.... It comes down to economic inequality, I think, is really the issue here. People have to use these technologies to participate in society.... But people are financially strapped, so instead of being willing to shell out five bucks a month on a service that somebody can build and thereby be [incentivized to] make a product that people wanted to stick around with and it's great, instead it's advertising-based.... I think advertising is—it seems great because it's free and you can give stuff to people... and still they can afford it. But I think in the end it's a devil's bargain."

But others did not see business incentives as necessarily in tension with prioritizing users. Instead, they suggested that prioritizing user well-being would also serve companies' bottom lines:

"I think eight years ago—there was zero thought into any safety measures 'til after something was built, particularly in gaming. And a very large gaming company that I know had a meeting recently, and they're about to put out a new game. And their head of Trust and Safety said, this is the first time that the developers called us in from the start of the process and said, 'Hey, we're building this thing. Can you help us with it?' And they put the tools in ahead of time. And he said, 'And we've seen the best launch of a new game we've ever seen in our company.'"

While many changes to our regulation of capitalism and business models will need to come from outside tech companies, social platforms may also choose to view the prioritization of adolescent well-being as complementary to their long-term growth strategies and monetization.

Our research has found that adolescents are generally an afterthought in the product design process at many social platform companies. The main reasons we identify for this oversight are:

1. Companies focus primarily on their imagined "average" user, who tends to be young, tech-savvy, white, adult, and male.
2. Companies maintain strategic ignorance about adolescents' use of their platforms to avoid taking responsibility for potential harm.

3. Company structures, business models, and cultures make it difficult for workers within those companies to make real progress toward prioritizing adolescent well-being. These findings suggest that if companies want to safeguard the well-being of all their users, including adolescents, fundamental cultural and leadership shifts may be required in order to do so.

After outlining the key mechanisms driving social platforms' disregard of adolescents, two key questions remain. First, what can be done by outside regulators and civil society to push social platform companies to prioritize adolescent health and well-being? Second, what should companies and workers change within their organizations to better prioritize adolescent well-being? The final section of this report addresses these two questions by presenting our recommendations on both the effective levers of external change and some best practices for tech company employees.

PART 3

LEVERS OF CHANGE AND BEST PRACTICES



Levers of Change for Regulators and Civil Society

One of the goals animating this research was to better understand product development inside many of the most popular and well-known social games and platforms, and to evaluate the potential impact of these processes and practices on the health of adolescents. We also wanted to understand what provokes change in these systems. What drives companies to think more rigorously about health, digital well-being and the impact of their products on young people—and not just their imagined average user?

▪ Outside pressure works

We asked our respondents about what levers drove change within their companies. We heard that outside pressure from negative media attention, civil society, and regulators—and the fear of these things—have the most impact in pushing organizations to change their behavior.

- **Negative publicity—and tragedy—can force company changes**

Despite a widespread absence of dedicated attention to adolescents in the product design process at social platform companies, there are moments when adolescent experiences come into stark focus. Unfortunately, this is usually when tragedy strikes and becomes publicized:

“What is more likely to drive that kind of change, particularly proprietary focus at kids, is... that there are likely to be terrifically bad outcomes—suicides, school shootings, sex trafficking, and those horrible incidents are the nightmare scenario that tends to drive the beginning of a consideration of safety.”

Public documentation of a concrete harm to a child provokes action. For example, after a U.K. teenager committed suicide, her family found disturbing content about suicide and depression on her social media pages.²¹ In response, many social media companies, like Instagram, publicly reported policy changes to prioritize removing self-harm content.²² These tragedies seem to instigate moments of deep reflection at many companies, but it should not take such a drastic event (and such a media-savvy parent) to make adolescent health concerns a priority.

Absent a tragedy, many participants noted that negative media coverage, or simply the threat of bad press, was a major driver for changes at tech companies.

“...historically the best lever for change has been negative press. So the thing [platform] cares about above all, besides money, is reputation, because that impacts money. So if there is a super-prominent *WIRED* article that talks about someone’s horrible experience with a part of our product, that becomes a priority and that—it gets picked up by a reporter and that person’s name and their specific experience becomes the driver for an entire product.”

Another respondent said:

“I think the sad reality is I think most companies came to their place in investing in such policies or efforts, because of bad press, and gripes, and unintended consequences.”

Additional press attention to adolescent health and digital well-being could hold companies accountable for negative impacts and spark entire new products or teams within companies that would be more empowered to safeguard adolescent well-being. The importance of press attention also highlights the need for journalists and other public commentators to take nuanced stances in their reporting on the impact of technology on health. Rather than focusing on overly simplistic notions of screen time and technology addiction, journalists could tell more complex stories about structural and community-based harm that would shift corporate attention to adolescents and other subgroups facing discrimination and abuse.

- **Public failures at other companies also spur action and coordination**

Beyond struggles and missteps of the corporation itself, companies take notice when other companies publicly fail, or take a big public relations hit. Workers, as well as civil society, can use those external failures to drive change.

“We’re building out a lot of aspects of our product for the first time. And one of the benefits of that is that other companies have usually done it first and built something before us. And so a lot of times they haven’t done that particularly well, and it’s blown up in their faces. And so like, ‘Hey, remember this product launch at this company?’ That’s really powerful for them because they don’t want to be the product manager that launches the thing that gets the company in trouble.”

Another respondent said:

“[Company failures are] used sort of talismanically to warn people. And they’re whipped out in really fraught conversations when something—a new product or service—really does have a feature that’s likely to raise significant press attention. And they say, ‘We can’t do that, we can’t be inBloom.’ It’s a conversation stopper. And those are the moments when a product or service sometimes will just get shelved. Or a feature just gets excised. Those conversations aren’t routine, but that’s usually the, ‘No, dude. I’m serious this time.’ You know, inBloom. See

Facebook, election disinformation.”

[InBloom](#)—a philanthropy-funded foray into personalized learning that hoped to mine educational data to tailor teaching to individual kids to improve outcomes—failed to understand the extent of public resistance and parent concerns about the privacy and use of children’s education data for personalized learning. Its collapse was the result of a multi-faceted set of failures and oversights.²³

While public failures of companies like inBloom, and public relations nightmares for companies like [Facebook](#), seem to shift company priorities, other research participants suggested that it may take more drastic failure of a larger social platform to really move the needle toward greater corporate accountability for user well-being.

“I mean, ultimately, one or more of these companies is probably going to have to die a painful death before they become an example for the others... I wonder if we’re not going to need something like that across the Valley at a bigger level. Where a company goes down, not because we’re in a world-wide pandemic, but because they were broken apart because their failure to anticipate and mitigate significant externalities caused a backlash which blew up the company. How’s that for happy and upbeat?”

Because these public failures loom so large over technology companies, newer startups are taking note. New social platforms could, for example, learn from the failures of [Parler](#) that they need to establish serious content moderation policies to avoid a similar fate. Public crises can also promote

cooperation between companies by creating momentum to collaborate to enhance crisis responses:

"Should our policies change when there is a potential for more harm? How do we assess that harm? How do we define that harm? So we kind of cover crisis response and a lot of that kind of came in the aftermath of Christ Church which was a large incident that all of the kind of large tech companies came together and said, 'We really need to do something more here'... So we launched a kind of crisis response policy function on our team to think about how our policies look in times of crisis and how do we identify risk before it escalates into a crisis and what's the role of social media there."

But that does not mean that outsiders need to wait for corporate failure or public crises to enact change. Pressure from nonprofits and advocacy groups can also influence company decision-making.

- **Pressure from civil society can shift company decision-making**

Larger companies have become more proactive about trying to anticipate what types of features might get bad press coverage. In addition to the media, outside entities like activists, nonprofits, and the public-at-large also have power to criticize a company, and this creates a desire within companies to have buy-in and validation from those external groups.

"If there's a product or a feature that you're launching that you know you can anticipate that's going to have sensitivities to it... [like] identity and you're trying to decide [on a] gender drop-down menu, what's the responsible thing for that? It depends on the org and who's in charge and how mature the organization is whether those types of considerations are going to be thought of in a programmatic way versus reactive or ad-hoc. Or you've been ignoring them and you've launched some feature that you think is innocuous and then you hear from activists or the press or just the public or [social media] and you have a little reckoning and maybe the next time you're like, 'OK, well wait. We don't want to get our hand slapped again. Do we need to check with somebody?' And that might be internal experts, or people who are known to have good sensibilities about these things. You might come to me as a public policy guy and I'd be like, 'Yeah, here's where I think the discourse is—I don't think we'll get hit if we do it this way. But let's get external validation and get, like, the National Network to End Domestic Violence... on the phone and have them vouch and be ready to defend us publicly for whatever this feature is.'"

External experts and nonprofits can build off of the companies' concern around bad press. Well-executed research reports, schemas, rankings, or frameworks created by trusted third parties like nonprofits, respected advocates, or academics can shape internal debate and action, or at a minimum, policy or trust and safety team recommendations.

“[Platforms need] very specific actionable [research], like, frameworks where I can say ‘Hey this place said [platform], you specifically should change X, Y, and Z.’ Another thing, you know EFF [Electronic Frontier Foundation] has a ‘[Fix It Already](#)’ campaign that has been a really helpful lever for the policy team to pull as well.”

Another respondent said:

“...if it becomes clear that we are lagging far behind our top peers in some way, that also is a major persuasive factor... like New America has their... [rankings](#). Yes, so things like that have some influence.”

Tech company workers suggested that they find reports and campaigns from civil society particularly helpful when they provide concrete examples of how companies could improve their products and their branding. These employees can point to these resources to drive change. Like press coverage, this points to the need for these outside groups to find more nuanced ways to conceptualize what healthy technology use and digital well-being should actually entail.

- Regulation can help, but can also have unintended effects**

Regulation, or threat of regulation, was a commonly mentioned lever that pressed companies to change their behavior:

“Regulation is a huge thing.... Our team also has a whole arm that focuses specifically

on legislation, not just in terms of ‘What is our position on X thing?’ But also, what do we need to do on the product side to get ourselves ready or to be a more constructive voice at the table in debating X...we’ll take [this] to different [vice presidents] of this team or that team, or engineering directors, so that they understand: this is what’s happening, here’s how serious it is. We need to do X, Y, and Z to be ready for this to come into force soon.”

Beyond regulation, legal judgments can drive organizational and structural change in companies, including deepening the expertise on harm-related topics among a greater number of people in a wider variety of roles.

“As a result of a consent decree and regulatory enforcement on the privacy stuff, we had a whole privacy governance program as part of the—what do you call it—the privacy team that would—we had controls for launch. So every new product has to go through privacy review. And it would be me and the privacy counsel and general counsel and some others on this, a cross-functional review team as well as everything had to go through for security review.”

However, focusing just on regulation and legality can lead companies to ignore broader discussions of toxicity and destructive behavior.

“I feel like we wouldn’t have let the conspiracy theory culture [get] nearly as prevalent or as dominant as it did on [Platform] if there had been someone there to be

like, ‘Hey, it’s not illegal yet, it doesn’t really violate our existing hate speech policies.... But this is toxic. This is not valuable to us from a community standpoint.’ Maybe it’s getting clicks but it doesn’t have good intrinsic value socially. And to be able to say ‘Yeah, actually...this sucks. Let’s get rid of it.’ And I think that’s what gets lost.”

That being said, poorly executed and poorly-designed legislation can create perverse incentives and lead to work-arounds at odds with the regulatory goals. The Child Online Privacy Protection Act (COPPA) was one such regulation mentioned by respondents.

“COPPA is an abject failure as a—I really can’t say this more directly. It is an abject failure as a means of changing product iteration and project development. It may tweak the end design and require UI [user interface] or UX [user experience] to be modified. It is usually a speed bump.”

Regulation can also have the unintended effect of driving companies away from a space, because it is seen as too risky, complicated or expensive to enter.²⁴ These gaps in innovation create “reg tech” spaces with high costs to enter and a lower likelihood of realizing returns on investment. Reg tech spaces include financial products (fin tech), educational tools and platforms, and health technology, as well as any type of space aimed at adolescents and children younger than 13.

“There has been a calculated decision by folks in the Valley just collectively, to avoid reg tech. To avoid building in a regulated

space. So, you see comparatively fewer fin tech companies, health tech companies. Services that are focused on schools.... So, if you’re going to choose which company to found, are you going to go the hard road where there’s laws and regulations, or are you going to go where there’s just none at all? Most people go to where there’s none at all because it’s just going to be easier and unlimited.”

While regulation is a powerful lever policymakers can use to force companies to shift their priorities towards adolescent and user well-being, there is much to learn from previous regulatory regimes that have failed to anticipate the negative outcomes and perverse incentives of these policies. While many of our research participants thought more regulation was necessary to address health and well-being on social platforms, they cautioned that these efforts will require lots of thought and expertise from a wider variety of stakeholders.



Best Practices for Companies and Workers

What should companies and workers do to ensure that technology is designed to minimize harm and promote adolescent and user well-being from its inception? While broader structural changes are likely necessary to fully center health and well-being online, there are plenty of concrete opportunities for change at the company level that would keep companies both accountable for the potential negative impacts of their platforms, and responsible for actively promoting civility and health. Because healthy technology use is difficult

to define and means different things to different people and populations, a one-size-fits-all approach to digital well-being is insufficient. Instead, companies will need to build a comprehensive strategy for improving well-being that remains nimble enough to address new situations as they arise:

“It’s got to be a lot of things working together and not just one or two things. And everyone thinks, ‘Oh, could we just have this new policy. No that’s not going to do it. Oh, we could add this platform feature. No, that’s not going to do it. Oh if we did this education campaign. Well, who’s doing

it because the last one we did was really boring and no one cared.' So it's trying to find how all those pieces fit together in this bigger puzzle and then it'll make it work."

Our research suggests that proactively thinking about adolescent and user well-being in the product development process is not only the ethical thing to do, it will also lead to value-adds for users, is often more profitable in the long term, and reduces the risk of losses from public relations and regulatory disasters.

- **Create targeted approaches and policies for adolescent users**

Focus on empowering, rather than just protecting adolescents on social platforms. So much of the online health and well-being work is for kids and teens, but it does not include their voices, or empower them to action. Consulting and doing user research with young people would allow platforms to design their products and features to best empower them from their perspective. Some participants mentioned the importance of balancing parental surveillance tools with the privacy interests of adolescents.

"I think to how we approach youth-facing groups, there's still a gluttony of safety orgs that protect kids rather than empower and elevate kids. I'd like to see that shift happen a little bit. Not to devalue anyone's work, but... how do we get youth in the conversation?"

Move away from parental consent models for adolescent technology use. Minors have a different legal status than adults, yet companies still expect them to navigate legal contracts like terms of service and privacy policies that are written for adults with the unspoken and unverified assumption that parents and parental consent are involved. The technological underpinnings make seeking parental consent onerous for online platforms, and the low-friction methods for verifying age are easy to circumvent. Rather than continue with the fiction that children and tweens are excluded from platforms through age gates and parental consent requirements, work to make the whole platform, and the whole system, safer for kids and teens:

"...the age of consent and parental consent model, I think, is just not working in today's [world]... Most kids have their own phone. Parental controls and age gates are quite easy to circumvent. And then, I'm seeing these like trends to double down on ID checks or having high levels of friction to signing up—in an attempt to enforce those requirements. I don't know if that's really the right direction to be going and if there's some totally different rethinking that we need to do in terms of what kids need and how to empower them instead of just assuming that their parents are going to approve or provide consent for every single app and website they sign up for. Instead of maybe just rethinking the system entirely to making that ecosystem safer for kids and not having to add that friction that probably doesn't help them in the end anyway."

Allow for adolescent learning and rehabilitation.

We treat children and adolescents differently from adults to acknowledge that they are in the process of developing into physically, cognitively, and emotionally mature adults prepared to be accountable for their decisions and choices. Making mistakes is part of that learning and development process. Companies should build systems that allow adolescents to make mistakes while still keeping them accountable for their behavior:

“So, we’ve been thinking a lot about when a young person violates our rules, or does something really wrong, and then they get suspended, is that something that they should be held accountable for forever? And should we be looking at permanent suspension, especially of young users where they’re still kind of formulating how they want to be in the world?... If someone got suspended for saying... ‘I want to kill you,’ that’s suspendable, because it’s a violent threat.... If you send that when you were 16 to somebody you hate and you actually have no intention of killing them, is there any kind of rehabilitation that we can do... there’s a lot of different things we can do to help educate especially younger users about how they should show up in society, and that’s something that I’ve been talking a lot [about] with the design team.”

At the same time, the context for violations of rules can be complex. And companies may not be the best vehicle for education or rehabilitation and may instead need to work with outside groups—parents, educators, or civil society—to craft

interventions for youth engaged in problematic online behavior.

- **Intentionally design and promote the desired environment and culture on a platform**

Culture and community do not passively or innately develop on a platform, they are created through intentional or unintentional design and marketing choices. We found that, in general, workers at social gaming platforms have put more thought into how to design products and features that will promote a healthy environment and culture, particularly for adolescents:

“We’re the Facebook society, and that doesn’t necessarily mean we know how to be good digital citizens ourselves. So there’s clearly a gap here. And so our premise was, well, what if we met kids where they are, which is they’re all playing games right now. And use that as a vehicle through which we could teach resilience, how to behave respectfully, how to identify problematic behaviors. And with that, pair that with training for caregivers. So how do you have the conversation with your kids? How do you show interest and involvement? Rather than thinking this is some silly thing that kids do on the side, but recognize that it’s a key part of their development years and play a role and bring your level of responsibility as a caregiver into that space. We thought that was a very powerful space to work...”

Social platforms are not neutral technologies that provide a blank space for users. Companies should be actively working to build a safe, healthy environment on a platform. Promoting a healthier and more pleasant platform culture can incentivize users to spend more time in the space, return more frequently, and generate more revenue for the company.

“Players who chat in their groups, like their clans, their alliances, if they’re chatting in their player group, their lifetime value is way higher than the other players who don’t engage in chat as much. It’s like 20 times more lifetime value. So they spend [more] time playing the game, their session length is longer and they spend more money as well in the game.”

- **Remind product teams of the humans using the platform**

Consider a broad range of user subgroups when developing new features and products. The humans using social platforms don’t all look or think like the folks who build them. Relatedly, tech workers should not assume that all adolescents are the same. Talk to those users, and collect data to determine which groups to focus on most urgently. These subgroups will likely vary by product, and responses should be tailored to the given context. Product teams should not assume that users will want the same features they would want, or would react similarly to design changes.

If employees wouldn’t want the adolescents or other vulnerable people in their life to use a product or feature, or could envision why some people would be negatively affected by their design choices, they should reconsider them and speak up.

“With my teams, I have always tried to emphasize the humanity of what we’re doing.... Those are real users on the other side, make decisions that feel good for yourself, your community, your children, your environment. And to remember that it’s not just numbers on the other side, to remember these are actual people.”

- **Integrate expertise about user well-being into product teams and across all roles**

Ensure that employees with expertise in user health and well-being are integrated into product teams. While there is little consensus about what constitutes healthy technology use or digital well-being, it is still important to include people on product teams who will serve as internal experts who think about these concepts from a variety of vantage points.

Our research suggests that companies engaging with user health and well-being early in the production process see better outcomes. Further, empowering internal experts on well-being to make decisions and truly considering their input in the decision-making process will also lead to fewer failed launches. One model is to permanently staff an internal expert to each product team to participate in

all aspects of the process from the very beginning, but also concurrently raising expectations that all members of product teams are thinking about user well-being as a part of the development process.

Thus, instead of relying only on policy, legal, or trust and safety teams, build product development infrastructures that include thinking about user well-being across roles and incorporate research on user experiences with well-being. This will help ensure that well-being is centered in the development process from product ideation to launch, not tacked on to the end.

When companies spend money to support policy teams charged with considering user well-being, but ignore these issues in product design, our respondents viewed these efforts as superficial window-dressing.

“One of the challenges is that companies often fund policy and they do not fund product, technology frameworks, and architecture to address [well-being] or even put those people in positions of leadership or power, and that is a massive, massive problem.”

Companies seemed interested in thinking abstractly about well-being but not in empowering experts on well-being or investing in new infrastructures in the product design process to ensure that well-being measures are put into practice.

However, proactively integrating health and well-being into the product development process by empowering internal experts, integrating them on product teams and expanding thinking about well-

being among all staff is not only the ethical thing to do, it will also lead to value-adds for users and serve as a way to reduce the reputational and financial risk of public relations and regulatory disasters.

- **Hire, retain, and empower a diverse workforce**

Diversify the tech workforce, particularly for product development, design, and technical roles. Our research, in addition to a large and growing body of literature, suggests that teams with diverse sets of lived experiences produce better results, both for users and for companies’ bottom lines.

“...Most importantly, and often most overlooked, is the environment. And that environment is not just the conditions that you create within a game that afford different behavior patterns or set expectations consciously or unconsciously among players, but that environment also includes your development environment. And if that company with which you work does not align necessarily in that process, then that can become very difficult as now you’re facing, in some cases, pretty explicit contradiction of the values that you’re trying to promote.”

Build infrastructures that allow employees to voice their concerns without fear of retaliation.

Employees shouldn’t be seen as blockers if they express apprehension about a product. If employees with training in health and well-being were brought in at the beginning of product development, they would be able to add their expertise and insight

instead of blocking products that are already near shipment. Similar to other kinds of internal reporting, create dedicated systems and a culture that allow all employees to raise concerns about the impact of products in-development on users without fear of professional repercussions.

Nurture unions. Another way to build this infrastructure is to encourage unionization. While Silicon Valley has traditionally been quite hostile to worker organizing, workers increasingly find themselves at odds with decision-making, business practices and product decisions at the companies that employ them. Recently a small group of employees at Google formed the [Alphabet Workers Union](#) to begin to concentrate employee voices and create a point of contact and action for concerned workers. The formation of the union was the culmination of a number of years of employee actions like walkouts and protests at Google and other large tech companies.

Acknowledge racism and work to mitigate racial discrimination.

Acknowledge that racism and racial discrimination is systemic across multiple institutions including the tech industry and broader systems of education, health care, and wealth distribution. Building equity and fairness on social platforms requires active dismantling of racism in these systems, prioritizing the needs of minoritized communities. This means, for example, prioritizing these communities in product design, and in research around product use and development. Mitigating racial discrimination also requires significant changes in decision-making processes regarding hiring and promotions at tech companies.

▪ Require training in ethics and the humanities in all staff and new hires

Ensure that all staff members receive **ethics and humanities** training that isn't perfunctory. This training should deeply engage with a wide range of thinking, perspectives and issues, and connect to an organization-wide commitment and belief in the importance of diversity and ethical work. Ethics training will help companies and workers recognize sources of structural discrimination and bias, and how personal experiences and behavior may obscure the view of important harms. Look to hire people with substantive educational backgrounds in the humanities and humanistic social sciences.

"First of all, I wouldn't let a single person graduate from any coding program, any CS program, any engineering program, that did not have ethics training. I think simply exposing engineers to ethics, at a formative moment, would be really meaningful."

On a broader level, work to change industry expectations, hiring parameters, and higher education graduation requirements across technical, engineering and computer science fields to include more humanistic and social science course work. Such broadening of tech company employees' university training would go a long way toward bringing the human to the forefront of factors considered during product development.

- **Consult experts, civil society, and diverse groups of users to anticipate effects on users prior to launch**

Assume responsibility for the disparate impact of products on different subgroups of users, regardless of the intent behind them. Work to anticipate and avoid potential negative effects **by consulting experts and members of those user subgroups.**

When proactive responses fail, take real action to mitigate unintended negative effects and discrimination.

“...I do believe there’s a, kind of, maybe, a renaissance happening where there are many individuals in the company who are saying, ‘Hey, the stuff that we’re doing, the decisions we make have lasting impacts.’ We previously kind of pretended that wasn’t true, and now there’s no ignoring that it is in fact true. So the next generation of entrepreneurs, I think there’s just no pretending and covering your eyes.”

Our research suggests that there is already growing recognition that social media and social gaming platforms cannot keep their heads in the sand about their potential and actual harms to users. Companies can and should build on this proactive momentum.

- **Collaborate with industry partners to mitigate harm across platforms**

Cross-organizational collaboration and exchange of information with others in similar roles at other

organizations can help platforms work through thorny problems, public crises, and scale challenges.

Allow for sharing of information related to enforcement against bad actors and human well-being across companies. For example, one participant floated the idea of a shared repository of terms and harmful media as a way of avoiding duplicate work and enhancing responsiveness.

“If we all kind of partner to create some kind of repository around these words or to share information around these words. Each company can do what they want with them, right? We all have our own policies, we all approach these issues slightly differently, but the terms are the same for all of us.... If we could have that information more readily available and shared more rapidly, I think that would help all of the companies to be able to get ahead of some of these things.”

Connect with and share learning with others in similar roles. This is currently executed informally through relationships, Slack channels and conversations at conferences, but could be professionalized in a third party group that serves employees in certain roles (like the newly formed [Trust and Safety Professional Association](#)) or a membership organization for companies interested in pushing their thinking on certain topics, like the [Fair Play Alliance](#) or a multi-stakeholder entity like the [Global Network Initiative](#) that provides a place for companies, academics and civil society to come together around an issue.

Many folks we talked to in trust and safety roles found the larger community of workers in this space

to be collaborative and helpful, though others asked “Who brings everyone together?” and pointed to corporate competitiveness as inhibiting collaboration.

“I think one of the reasons I personally love working in this space is that it’s not necessarily competitive compared to other product teams or other parts of the company. It’s very much like a rising tide lifts all ships kind of community.”

Our research suggests that there are many ways that both outside actors and workers inside technology companies can work to improve the digital health and well-being of adolescents. For regulators and members of civil society, we find that outside pressure and threats of regulation are some of the primary mechanisms driving change within technology companies. Within tech companies, many workers are looking for recommendations to build and improve their approaches to adolescent and user health, and would benefit from the thinking of outside organizations and from more power within. Ideally, these moments of collaboration would not just occur during highly-publicized moments of extreme harm, but would become sustained community relationships. These ongoing relationships are especially important because addressing the harm of social platform use for adolescents requires a nuanced understanding of the differential impact of social platforms on different subgroups of adolescents, not just an ad-hoc response to extreme events.

For workers inside technology companies, our primary recommendations include:

- Rebuilding the way new products are designed and implemented to focus more specifically on adolescents and on digital well-being generally, from beginning to launch and beyond;
- Diversifying the tech workforce to include technical staff with a variety of lived experiences and training;
- Broadening engagement and outreach to both user subgroups and civil society.

All of our specific recommendations in these categories are designed to shift companies away from a focus on their imagined average user, to hold companies accountable for their strategic ignorance about adolescent health, and to shift power dynamics in companies so that workers have the ability to prioritize and design for adolescent health.

CONCLUSION

Despite high levels of public concern about adolescents' use of social platforms, especially during the COVID-19 pandemic, adolescents are often ignored in the product design process at social platform companies. Centering adolescents in social platform product design is warranted both because this population has particular developmental needs and because designing for their needs could improve products for everyone. Instead, companies focus on an "average" user in part because their business models and incentives valorize aggregated growth metrics, and average users are seen as easy, large targets for growth. A lack of diversity in the tech workforce makes companies vulnerable to missing the key desires and problems of populations who are different from the majority of their employees.

Second, we argue that companies maintain strategic ignorance about adolescents' (and other subgroups') use of their platforms. They often choose not to collect age data about their users to avoid responsibility for potential harm to this community, their company structures leave no one responsible for, or powerful enough to, prioritize adolescent well-being, and they hide behind the massive amount of user content they host to suggest that they cannot be held responsible for potential harm on their platform.

Finally, company structure, culture, and self-concept all factor into adolescents' general

absence in product design processes. Many social platform companies are allergic to addressing particular needs of subgroups like adolescents because they view themselves as a digital commons supporting free expression for everyone, without differentiation between the needs of different populations. And many participants worried that advertisement-based business models that prioritize stickiness and user attention may be fundamentally at odds with prioritizing adolescent health and well-being.

We encourage social platform companies to rethink their approach to healthy technology by shifting concerns for adolescents' digital well-being to the center of their design infrastructures rather than leaving youth on the periphery. Because healthy technology use looks different for different groups and individuals, this will require careful consideration and engagement with a variety of adolescent subgroups. Regulators and members of civil society can push this process forward with nuanced thinking and legislation that does not reduce well-being to technology addiction or screen time. As a global pandemic forces youth onto social platforms, now is the time for companies to take responsibility for the health of these users so they can learn, grow, and thrive in an increasingly online world.

ACKNOWLEDGMENTS

The authors would like to acknowledge the groundwork, feedback, advice, editorial assistance, design work, and process management provided by the following folks: Mary Madden and Erin McAweeney who kicked off this project at Data & Society; our Health & Data Advisory Board members Aden Van Noppen, Danya Glabau, Elaine Nsoesie, Robin Stevens and Sara Grimes; our current and former colleagues Brittany Smith, Manny Moss, Jake Metcalf, Robyn Caplan, Will Partin, Madeleine Clare Elish, Alex Rosenblat, Molly Laas, Joan Mukogosi, Ireti Akinrinade, Yichi Liu, Natalie Kerby, Audrey Evans, and Chris Redwood.

This research and report was supported by Pivotal Ventures, the investment and incubation company created by Melinda Gates.

Endnotes

- 1 R. M. Ryan and E. L. Deci, "On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being," *Annual Review of Psychology* 52 (2001): 141–66, <https://doi.org/10.1146/annurev.psych.52.1.141>; Carrie James et al., "Digital Life and Youth Well-Being, Social Connectedness, Empathy, and Narcissism," *Pediatrics* 140, no. Supplement 2 (November 2017): S71–75, <https://doi.org/10.1542/peds.2016-1758F>.
- 2 Amy Orben, "Teenagers, Screens and Social Media: A Narrative Review of Reviews and Key Studies," *Social Psychiatry and Psychiatric Epidemiology* 55, no. 4 (April 1, 2020): 407–14, <https://doi.org/10.1007/s00127-019-01825-4>.
- 3 *Ibid.*
- 4 Sonia Livingstone, "Online Risk, Harm and Vulnerability: Reflections on the Evidence Base for Child Internet Safety Policy," *ZER: Journal of Communication Studies* 18, no. 35 (November 2013): 13–28.
- 5 Amy Orben, "Teenagers, Screens and Social Media."
- 6 Patti Valkenburg et al., "Social Media Use and Adolescents' Self-Esteem: Heading for a Person-Specific Media Effects Paradigm," *Journal of Communication* 71, no. 1 (February 1, 2021): 56–78, <https://doi.org/10.1093/joc/jcaa039>; Ine Beyens et al., "The Effect of Social Media on Well-Being Differs from Adolescent to Adolescent," *Scientific Reports* 10, no. 1 (July 1, 2020): 10763, <https://doi.org/10.1038/s41598-020-67727-7>.
- 7 Sara Harrison, "Five Years of Tech Diversity Reports—And Little Progress" *WIRED* October 1, 2019, <https://www.wired.com/story/five-years-tech-diversity-reports-little-progress/>.
- 8 Barney G. Glaser and Anselm L. Strauss, *The Discovery of Grounded Theory: Strategies for Qualitative Research* (Chicago: Aldine Publishing Company, 1967).
- 9 "Special Protections for Children as Research Subjects," HHS.gov, February 25, 2016, <https://www.hhs.gov/ohrp/regulations-and-policy/guidance/special-protections-for-children/index.html>.
- 10 Nelly Oudshoorn, Els Rommes, and Marcelle Stienstra, "Configuring the User as Everybody: Gender and Design Cultures in Information and Communication Technologies," *Science, Technology, & Human Values* 29, no. 1 (January 1, 2004): 30–63, <https://doi.org/10.1177/0162243903259190>.
- 11 *Ibid.*
- 12 For more on the inaccuracies of platform data collection, see: Angela Xiao Wu, "How Not to Know Ourselves." *Points: Data & Society*. July 28, 2020, <https://points.datasociety.net/how-not-to-know-ourselves-5227c185569>.
- 13 Kate Rooney and Yasmin Khorram, "Tech companies say they value diversity, but reports show little change in last six years." *CNBC* June 12, 2020, <https://www.cnbc.com/2020/06/12/six-years-into-diversity-reports-big-tech-has-made-little-progress.html>.

- 14 Linsey McGoey, "The Logic of Strategic Ignorance." *British Journal of Sociology* 63, no. 3 (September 2012): 559, <https://doi.org/10.1111/j.1468-4446.2012.01424>.
- 15 Abby Kinchy, "Contentious Baselining: The Politics of 'Pre-Drilling' Environmental Measures in Shale Gas Territory." *Environment and Planning E: Nature and Space* 3, no. 1 (March 2020): 76–94, <https://doi.org/10.1177/2514848619877585>.
- 16 *Ibid.*
- 17 Carol A. Heimer, "Inert Facts and the Illusion of Knowledge: Strategic Uses of Ignorance in HIV Clinics," *Economy and Society* 41, no. 1 (February 1, 2012): 17–41, <https://doi.org/10.1080/03085147.2011.637332>.
- 18 Shirin Ghaffary, "The algorithms that detect hate speech online are biased against black people." *Vox/Recode* August 15, 2019, <https://www.vox.com/recode/2019/8/15/20806384/social-media-hate-speech-bias-black-african-american-facebook-twitter>.
- 19 Jessica Guynn, "Facebook and Instagram to Study Racial Bias against African Americans, Hispanics on Their Platforms," *USA TODAY*, July 21, 2020, <https://www.usatoday.com/story/tech/2020/07/21/facebook-instagram-racial-bias-african-americans-hispanics/5483986002/>.
- 20 Olivia Solon, "Facebook Management Ignored Internal Research Showing Racial Bias, Current and Former Employees Say," *NBC News*, July 23, 2020, <https://www.nbcnews.com/tech/tech-news/facebook-management-ignored-internal-research-showing-racial-bias-current-former-n1234746>.
- 21 Sarah Marsh and Jim Waterson, "Instagram bans 'graphic' self-harm images after Molly Russell's death." *The Guardian* February 7, 2019, <https://www.theguardian.com/technology/2019/feb/07/instagram-bans-graphic-self-harm-images-after-molly-russells-death>.
- 22 Adam Mosseri, "Taking More Steps to Keep The People Who Use Instagram Safe," Instagram, October 27, 2019, <https://about.instagram.com/blog/announcements/more-steps-to-keep-instagram-users-safe>.
- 23 For more on inBloom, see: Monica Bulger, Patrick McCormick, and Mikaela Pitcan, "The Legacy of inBloom," Data & Society Research Institute February 2, 2017, <https://datasociety.net/library/the-legacy-of-inbloom/>.
- 24 Sara Grimes and Deborah Fields, "Kids Online: A New Research Agenda for Understanding Social Networking Forums" (Joan Ganz Cooney Center at Sesame Workshop, 2012), https://joanganzcooneycenter.org/wp-content/uploads/2012/11/jgcc_kidsonline.pdf.

Data & Society is an independent nonprofit research institute that advances new frames for understanding the implications of data-centric and automated technology. We conduct research and build the field of actors to ensure that knowledge guides debate, decision-making, and technical choices.

www.datasociety.net | @datasociety

Illustrations by [Cathryn Virginia](#) | Designed by [Yichi Liu](#)

May 2021