January 2022
AH, MF, NB

hi

hi, Social?

Benign Intentions, Now Lost At Sea

The original promise of a social internet went something like this: through new platforms of the digital age, we'll become more connected, happier, better informed and more understanding of others [1].

In the early days, it was beautiful. With new long range communications and the world wide web, finding like-minded communities and socializing changed for good– and primarily for the better. Classic examples include email, early blogging, forums, and AOL Instant Messenger (AIM) [2].

Then the "social media" companies arrived. At first, they were exciting and efficient, changing the way we connected to each other (ex. college campuses with Facebook in 2004). But now over a decade in, a major problem is becoming clear: too often, social media isn't social!

We are spending vast amounts of time immersed in screens in ways that are making our personal and collective lives less social, healthy & happy [3, 4, 5].

So what happened? While it is a complex story- with pros, cons, and billions of anecdotes- this new reality (Social 1.0) has transformed our lives in foundational ways.

The Birth of Mobile: A New Epoch

As a key inflection point, the iPhone was released in 2007.

Whereas personal computers, cell phones, texting, and the internet had already changed the world by the turn of the century, we now became online at all times.

With the rise of smartphones and mobile applications, we entered into a new epoch of hyperconnectivity [6]. What emerged in this next generation of the social internet was a 24/7 online lifestyle, and a blossoming digital media universe centerfold in our society.

To be pithy: Social 1.0 sought to make platforms the social reality- and in large part, they have.

The Standard Model of Social 1.0

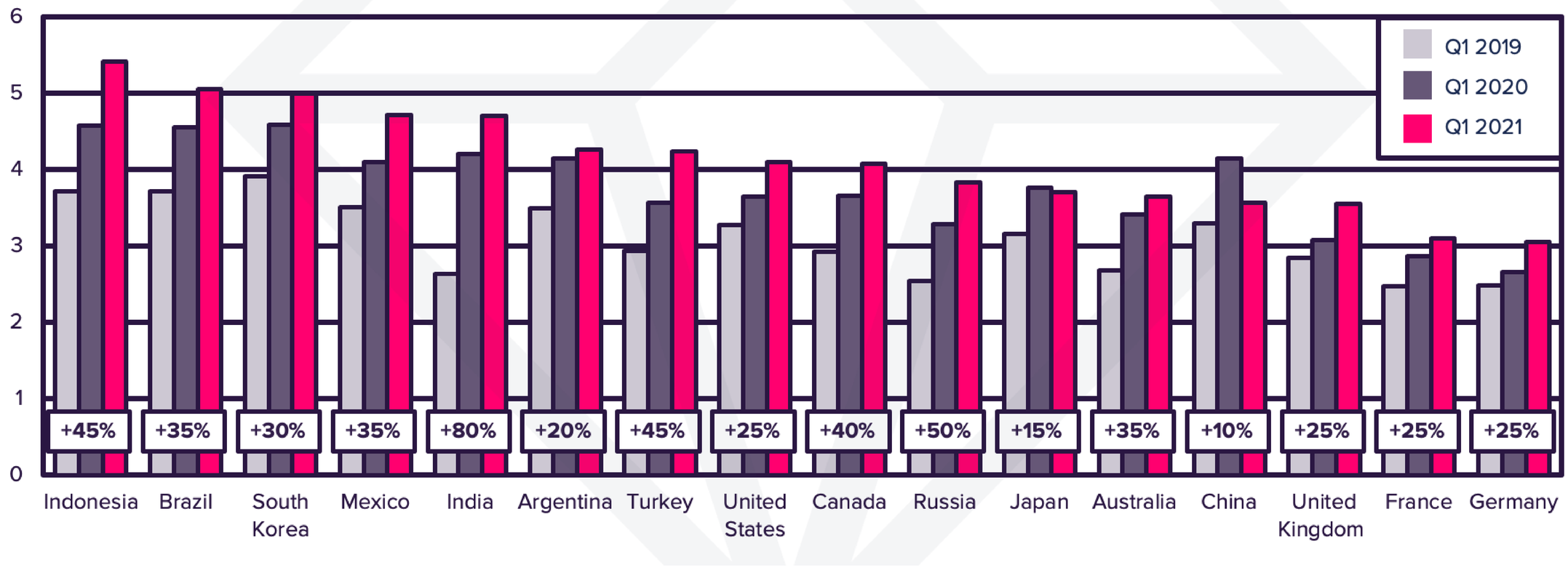
Let's consider the dominant model of today's social media (1.0): A primary goal is to maximize user screen time; in other words, to capture your attention. Social 1.0 maximizes user engagement and company-focused metrics (likes, clicks, comments, posts, etc.), collects large amounts of (relevant) user data, and seeks to keep you interacting digitally [3, 4, 5, 7, 8].

To do so, platforms make design decisions [9] and use algorithms to optimize the items above. In accomplishing these objectives, platforms have shown a concerning willingness to deliberately manipulate our behaviors and emotions [4, 5, 10].

They have been quite effective. As of Q1 of 2021, mobile usage data found that Americans are spending over 4 hours per day on mobile apps (primarily social networks), up 25% since 2019 [11]. This equates to over 60 days of screen time on mobile apps per year! This upward trend existed long before the pandemic, and there are 0 signs of these levels diminishing.

In today's standard model of social media users, their time, and their data are often the true product. Our apps have increasingly become destinations, akin to slot machines, with big social media companies as well managed casinos [4, 5, 7, 8].

Average Daily Hours Spent in Apps



Source: https://www.appannie.com/en/insights/market-data/q1-2021-market-index (Android Useage Data)

While we've all experienced rabbit holes of "mindless scrolling" [12], usage reports suggest our behavior is not just absent-minded, but a strange combination of sporadic yet predictable. We check our smartphones 58 times/day on average, with 70% of sessions less than 2 minutes in total and 50% of sessions starting within 3 minutes of the previous one [13].

In the present paradigm too many users are becoming Skinner's digital manifestation: dopaminergic agents habituated to the "rewards" of an artificial and algorithmic construct. Given the scale of these platforms, one could argue society is running on a universal wheel with feed that is making us increasingly unhealthy and unhappy [2, 3, 4, 5].

Despite these well documented concerns [14, 15], social media (1.0) is omnipresent across morning, noon and night-- with all ages & demographics-- and is a major basis in sensemaking.

A New Hope: Reimagining Social

Today, 10 people can be in a room each existing in their own reality (a filter bubble or pocket universe). They all exist as part of a globally connected system, yet have less and less shared and veridical social experience. Whereas online conversations and curated digital identities abound, essential in-person, peer-to-peer (p2p) human interactions have waned [16, 17].

With this contextual backdrop, the authors set out to explore and remedy this status quo.

We wondered if there was a different way to harness the benefits of connectivity and the power of mobile, to create a new kind of social application? Can we solve the connectivity paradox: whereas increased connectivity (mobile) decreased in-person interactions, can we use it to increase them? Can we make real life more social through a new model?

A New Kind of Social: Ideas for 2.0

In pursuit of this hope, we developed a basic framework to juxtapose certain platform principles and design choices of yesterday (Social 1.0) vs. tomorrow (Social 2.0). In summarizing the guiding philosophy of this framework: whereas Social 1.0 sought to create digital reality, Social 2.0 seeks to enhance real life by making it more social.

(1) **On Screen Time:** Social 1.0 sought to maximize screen time and to exist as a basis of reality. Instead of maximizing screen time, Social 2.0 should minimize it: allowing you to look up, live life, and have fun to the fullest. In the next era of the social internet, we should augment and enhance real life by designing background applications that minimize screen time to necessity (app-less apps). Modern technologies have empowered wonderful communications otherwise impossible and now indispensabile (ex. FaceTime, Zoom, Twitter, YouTube). We are not arguing against screens of today or tomorrow outright (ex. the emergence of compelling Virtual Reality and Augmented Reality experiences), but find it worrisome when one's digital representation becomes a more significant expression than one's authentic organic self. Our belief is that enhanced immersion and application with the real world-- as the primary backbone of (social) reality-- is more optimal and sustainable at-scale for individuals and collectively.

(2) **Local vs. Global:** Social 1.0 is commonly plagued with bad non-local interactions (global). This can be emboldened by a distance between users and (artificial) digital identities, resulting in dehumanizing abstraction. Instead, we imagine a new kind of social system which prioritizes and enables authentic in-person interactions (local). We believe that real-world communities and in-network ecosystems have greater incentives for positivity-- and that communities and campuses can become more immersive, inclusive, and social. For optimal experience, safety and trust, networks that also incorporate real world verification sources can be useful in many instances (ex. private networks joined via .edu email).

(3) **Data in Interaction:** Data not collected is private (0-party or data-0). And data shared can be valuable. In Social 1.0, a centralized and "platform-centric" model dominates where users give up their data maximally: often unnecessarily, not knowing what kinds, when it's happening, how it's used, and where it goes [7, 8, 18, 19]. While the user generates data on various platforms, they don't get the full benefits of this data. One can imagine a future where platforms instead store 0 or less long-term session or user data, and users each have a personal data store (PDS) which harnesses data, by choice [20, 21]. Because information is a non-rivalrous good, the power of data can be unlocked for the user [22, 23, 24], even where it is also shared knowingly and willingly with a platform.

We believe in a future age of "data accountability", with affirmative rather than passive responsibility, where users are unambiguously made aware of whether their data is stored explicitly, anonymized, or aggregated. To facilitate this "user-centric" future of internet, the authors have long proposed a framework with simplified and standardized terms of service [25, 26], and a democratization of full access [8]. There are benefits to centralization [27], decentralization (ex. crypto Web3), hybrid models, and quantum information [28] for different contexts like application vs. privacy [21]-- but with any of them-- "user-centrism", principally including consent & control, must be prioritized.

(4) **New Metrics:** Social 1.0 is largely measured by eyeballs, likes, clicks and comments. That's because it was about platform engagement towards maximizing screen time, advertising effectiveness, and purchasing behavior-- rather than individual or societal utility optimization. With the next adaptation in social we believe new metrics are important [29]: how many real in-person interactions are facilitated? How many fun spontaneous moments are enabled? How many meaningful new relationships are created-- whether they be friends, dating, academic or business? How many communities are enhanced? And because your space, time and degrees of freedom are precious [30], how many unnecessary hours on screens can be saved?

(5) **Shared Space:** The benefits of mutual connectivity and co-presence can be achieved in many ways for different applications. In prioritizing local in-person interactions (2.0) vs. global communications (1.0), consider the important difference between a mutual environment (i.e. multiple people sharing 1 space) vs. mutualizing environments (multiple people in different environments being brought into sync). Mind-bending new technology will blossom over the long future, with examples running from "Ready Player One" to "Body to Body" connectivity (ex. where a person's inner thoughts and feelings can be shared and synchronized with, so as to connect in a new way). Notwithstanding these sensational prospects, we still contend that co-location and proximity enhances the fidelity of an experience. When considering people smelling roses together in the future-- rather than high resolution digital roses-- when available, we prefer a future of sharing more moments together in a rose garden [31]. Towards making this goal a reality,

and in relativizing tomorrow's platforms to better augment the social life of the individuals using them, we envision a world where a user's 1st party data--ex. the places you go and the people you intersect-- is given (exclusive) priority in powering application (rather than users abstractly existing within and being served a 3rd party algorithmic soup).

A New Kind of Social: 1.0 vs. 2.0

Social 1.0 (Today)	Social 2.0 (Tomorrow)
• Slogan: **Make Social Media Reality**	• Slogan: **Make Real Life More Social**
• Strategy: **MAX Screen Time**	• Strategy: **MIN Screen Time**
• Interactions: **Global (Online)**	• Interactions: **Local (In Real Life)**
• With: **Digital Representations**	• With: **Real Physical People**
• Metrics: **Engagement (Eyes, Clicks, Followers)**	• Metrics: **Magical In-Person Experiences**
• Data: **Limited Agency & MAX**	• Data: **Full Agency & MIN**
• Privacy: **MIN (Platform-centrism)**	• Privacy: **MAX (User-centrism)**

A Better Model (Proposed Solution)

Social norms and tendencies for in-person interactions have changed in recent times, particularly in the challenging era of Covid-19. Paradoxically, we have never been more connected, yet increasingly are or feel more alone.

We believe this fundamental problem must and can be solved.

With something privacy-preserving seamlessly running in the background, we imagine the ability to digitally nudge and connect nearby individuals mutually interested in meeting in real life (IRL).

To successfully build vibrant communities, we prefer a membership model and private networks with validated users: something safe, secure, and exciting. Minimized screen time, no ads, and 0 location data tracking--where you only get notified when there is a new experience available.

We dream of producing serendipitous moments that make your day and change your life, and believe this is the next evolution in social interaction.

Fortes Fortuna Adiuvat!

We've learned tough but valuable lessons from the recent history of social media. But, tomorrow is ours to build and to enjoy. Technology can better serve, not dominate; and a futurist can enjoy a pint with a Luddite.

The internet is not done evolving, and neither is the way we use our technology to power electrifying and meaningful social experiences.

In terms of testing these hypotheses, the authors have designed a new system and are excited to roll out an initial application in 2022.

We hope to demonstrate a viable new model for enhancing real life social experiences, and driving meaningful interactions.

Upon our results, we shall update this lite-paper to share our findings.

Until then.

References

[1] Berners-Lee, Tim, and Mark Fischetti. Weaving the Web: The Original Design and Ultimate Destiny of the World Wide Web by Its Inventor. New York: HarperBusiness, 2000. Print.

[2] Isaacson, Walter. The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution. , 2014. Print.

[3] Lanier, Jaron. Who Owns the Future? London: Penguin, 2014. Print.

[4] Lanier, Jaron. Ten Arguments for Deleting Your Social Media Accounts Right Now. 2018. Print.

[5] The Social Dilemma. Directed by Jeff Orlowski, Exposure Labs, 2020. Netflix.

[6] Wu, Tim. The Master Switch: The Rise and Fall of Information Empires. New York: Alfred A. Knopf, 2010. Print.

[7] Hartford, Andrew. "The Silent Market" (Data as the 21st Century Oil, and the complex antitrust considerations). 2015.

[8] Hartford, Andrew. The Economics of Information Inside of An Internet of Everything (a survey of legal, economic, technological, and business considerations of the data models in our digital future). 2016.

[9] Lytle, Nicholas, Mark Floryan, and David Amin. Experience, experiment, evaluate: A framework for assessing experiential games. International Journal of Serious Games, 4, 15-30. 2017.

[10] Lander, Eric, and Alondra Nelson. "Americans Need a Bill of Rights for an AI-Powered World." Wired, Conde Nast, 8 Oct. 2021, https://www.wired.com/story/opinion-bill-of-rights-artificial-intelligence/.

[11] Kristianto, Donny. "Winning the Attention War." App Annie (Blog on Market Report), 2021, https://www.appannie.com/en/insights/market-data/q1-2021-market-index.

[12] Owen, Charlotte. "Tim Cook: 'Mental Health Is a Crisis.'" Bustle, Bustle, 5 Oct. 2021,https://www.bustle.com/wellness/tim-cook-mental-health-shine-app.

[13] MacKay, Jory. "Screen Time Stats 2019" RescueTime Blog, 20 Feb. 2020, https://blog.rescuetime.com/screen-time-stats-2018/.

[14] Shakya, Holly B., and Christakis, Nicholas A. "Association of Facebook Use With Compromised Well-Being: A Longitudinal Study," American Journal of Epidemiology, Volume 185, Issue 3, February 2017, Pages 203-211.

[15] Haidt, Jonathan. "How Social Media Is Changing Social Networks, Group Dynamics, Democracies, and Gen Z". American Group Psychotherapy Association Connect. 2020.

[16] Twenge, Jean M., et al. “Less In-Person Social Interaction with Peers among U.S. Adolescents in the 21st Century and Links to Loneliness.” Journal of Social and Personal Relationships, Volume 36, No. 6, June 2019, Pages. 1892-1913.

[17] Baumeister, R. F., and M. R. Leary. “The need to belong: desire for interpersonal attachments as a fundamental human motivation.” Psychological Bulletin, Volume 117 (1995): 497-529.

[18] Stankovic, John A., “Research directions for the Internet of Things,” IEEE Internet Things Journal, vol. 1, no. 1, pp. 3-9, Feb. 2014.

[19] Citron, Danielle Keats, and Daniel J. Solove. “Privacy Harms.” SSRN, 18 Feb. 2021, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3782222.

[20] Narayanan, Arvind, Solon Barocas, Vincent Toubiana, Helen Nissenbaum, and Dan Boneh. "A Critical Look at Decentralized Personal Data Architectures." (2012).

[22] Coase, R. H. "The Problem of Social Cost." The Journal of Law and Economics (1960).

[23] Laudon, Kenneth C. "Markets and Privacy." Communications of the ACM Commun. ACM 39.9 (1996): 92-104.

[24] Cooter, Robert, "The Falcon's Gyre: Legal Foundations of Economic Innovation and Growth" (2014). Berkeley Law Books. Book 1.

[25] Posner, Eric A. ProCD v Zeidenberg and Cognitive Overload in Contractual Bargaining, 77 U. CHI. L. REV. 1181 (2010).

[26] Wilkinson-Ryan, Tess, "Contracts Without Terms" (2016). Faculty Scholarship. Paper 1633.

[27] Brunelle, Nathan. “Super-Scalable Algorithms” (PhD Dissertation). University of Virginia Computer Science Department. 2017. https://www.cs.virginia.edu/~njb2b/Brunelle_phdDissertation_UVACS_2017.pdf

[28] Aaronson, Scott and Paul Christiano. “Quantum Money from Hidden Subspaces.” Proceedings of the Annual ACM Symposium on Theory of Computing, pages 41-60, 2012.

[29] Systrom, Kevin, and Lex Fridman. “Lex Fridman Podcast” (Number 243). 23 November 2021. Youtube.

[30] Warren, S.D., and Brandeis, L.D. The right to privacy. Harvard Law Rev., 193 (1890), 193-220.

[31] Inspired by iceland. “Introducing the Icelandverse”. YouTube, 11 Nov. 2021, https://www.youtube.com/watch?v=enMwwQy_noI.