#### CHAPTER SIXTEEN OF LIFE IN THE HIVE

All grew so fast his life was overgrown, Till he forgot what all had once been made for: He gathered into crowds but was alone... —W. H. AUDEN. SONNETS FROM CHINA, VIII.

#### I. Our Canaries in the Coal Mine

"I felt so lonely... I could not sleep well without sharing or connecting to others," a Chinese girl recalled. "Emptiness," an Argentine boy moaned. "Emptiness overwhelms me." A Ugandan teenager muttered, "I felt like there was a problem with me," and an American college student whimpered, "I went into absolute panic mode." These are but a few of the lamentations plucked from one thousand student participants in an international study of media use that spanned ten countries and five continents. They had been asked to abstain from all digital media for a mere twenty-four hours, and the experience released a planet-wide gnashing of teeth and tearing of flesh that even the study's directors found disquieting. Capping the collective *cri de coeur*, a Slovakian university student reflected, "Maybe it is unhealthy that I can't be without knowing what people are saying and feeling, where they are, and what's happening."

The students' accounts are a message in a bottle for the rest of us, narrating the mental and emotional milieu of life in an instrumentarian society with its architectures of behavioral control, social pressure, and asymmetrical power. Most significantly, our children are harbingers of the emotional toll of the viewpoint of the Other-One as young people find themselves immersed in a hive life, where the other is an "it" to me, and I experience myself as the "it" that others see. These messages offer a glimpse of the instrumentarian future, like the scenes revealed by Dickens's Ghost of Christmas Yet to Come. So shaken was Scrooge by his glimpse of bitter destiny that he devoted the remainder of his life to altering its course. What will we do?

The question hangs over this chapter. Pentland celebrates Facebook as the perfect milieu for effective social pressure and tuning. In the sections that follow, we explore the mechanisms that Pentland admires. Why is it so difficult for young people to unplug? What are the consequences of that attachment for them and for all of us? Facebook has learned to bite hard on the psychological needs of young people, creating new challenges for the developmental processes that build individual identity and personal autonomy. The effects of these challenges are already evident in a parade of studies that document the emotional toll of social media on young people. As we shall see, the hive and its larger architecture of Big Other plunge us into an intolerable world of "no exit."

The international "unplug" study helps to set the stage, for it reveals a range of emotional anguish summarized in six categories: addiction, failure to unplug, boredom, confusion, distress, and isolation. The students' sudden disconnection from the network produced the kinds of cravings, depression, and anxiety that are characteristic of clinically diagnosed addictions. The result was that a majority in every country admitted that they could not last out the day unplugged. Their angst was compounded by the same Faustian pact with which we are all too familiar, as they discovered that nearly all daily logistical, communicative, and informational requirements were dependent upon their connected devices: "Meeting with

friends became difficult or impossible, finding the way to a destination without an online map or access to the internet became a problem, and simply organizing an evening at home became a challenge." Worse yet, the students found it impossible to imagine even casual social participation without social media, especially Facebook: "Increasingly no young person who wants a social life can afford not to be active on the site, and being active on the site means living one's life on the site."

Business and tech analysts cite "network effects" as a structural source of Facebook's dominance in social media, but those effects initially derived from the demand characteristics of adolescents and emerging adults, reflecting the peer orientation of their age and stage. Indeed, Facebook's early advantage in this work arose in no small measure from the simple fact that its founders and original designers were themselves adolescents and emerging adults. They designed practices for an imagined universe of adolescent users and college students, and those practices were later institutionalized for the rest of us, reducing the social world to a tally of "friends" who are not friends and "likes" that provide a continuous ticker tape of one's value on the social market, stoking the anxieties of pre-adulthood and anticipating the mesmerizing social disciplines of the hive.<sup>2</sup>

The researchers concluded that their global study of students had "ripped back the curtain" on the loneliness and acute disorientation that overwhelm young people when faced with disconnection from social media. It wasn't simply that they didn't know what to do with themselves but rather that "they had problems articulating what they were feeling or even who they were if they couldn't connect." The students felt as though "they had lost part of themselves."

These feelings of disorientation and isolation suggest a psychological dependency on the "others," and additional studies only deepen our understanding of how "Generation Z," the demographic cohort born in and after 1996—the first group of digital natives, with no memory of life before the rise of surveillance capitalism—relies on a range of social media for psychological sustenance as they bounce between four or five platforms more or less simultaneously. Consider first the older cohorts. A 2012 survey concluded that emerging adults devote more time to using media than any other daily activity, spending nearly twelve hours each day with media of some form.<sup>4</sup> By 2018 Pew Research reported that nearly 40 percent of young people ages 18–29 report being online "almost constantly," as do 36 percent of those ages 30-49. Generation Z intensifies the trend: 95 percent use smartphones, and 45 percent of teens say they are online "on a near-constant basis." If that is how you spend your days and nights, then the findings of a 2016 study are all too logical, as 42 percent of teenage respondents said that social media affects how people see them, having adopted what the researchers call an outside-looking-in approach to how they express themselves. Their dependency penetrates deeply into their sense of well-being, affecting how they feel about themselves (42 percent) and their happiness (37 percent).<sup>6</sup>

In a subsequent elaboration on the psychological consequences of experiencing oneself from the "outside looking in," a 2017 survey of young British women ages 11–21 suggests that the social principles of instrumentarian society, so enthusiastically elaborated by Pentland and endorsed by surveillance capitalist leaders, appear to be working effectively.<sup>7</sup> Thirty-five percent of the women said that their biggest worry online was comparing themselves and their

lives with others as they are drawn into "constant comparisons with often idealized versions of the lives, and bodies, of others."

A director of the project observed that even the youngest girls in this cohort feel pressured to create a "personal brand," the ultimate in self-objectification, as they seek reassurance "in the form of likes and shares." When the *Guardian* tried to explore girls' reflections on these survey findings, the responses eloquently betray the plight of the organism among organisms. "I do feel I need to be perfect and compare myself to others all the time," says one. "You see other people's lives and what they are doing... you... see their 'perfect' lives and it makes you think yours isn't," says another.<sup>9</sup>

In light of these findings, one UK medical specialist comments on the young people in her practice: "People are growing up to want to be influencers and that is now a job role.... I am not sure if parents are fully aware of the pressure people face...." <sup>10</sup> Indeed, only 12 percent of respondents in that 2017 survey reckoned that their parents understood these pressures. The reports confirm that social pressure is well institutionalized as the means of online social influence, but contrary to Pentland's belief that "class" divisions would disappear, life in the hive produces new cleavages and forms of stratification: not only tune or be tuned but also pressure or be pressured.

North American marketing director, Michelle Klein, who told an audience in 2016 that while the average adult checks his or her phone 30 times a day, the average millennial, she enthusiastically reported, checks more than 157 times daily. Generation Z, we now know, exceeds this pace. Klein described Facebook's engineering feat: "a sensory experience of communication that helps us connect to others, without having to look away," noting with satisfaction that this condition is a boon to marketers. She underscored the design characteristics that produce this mesmerizing effect: design is narrative, engrossing, immediate, expressive, immersive, adaptive, and dynamic.<sup>11</sup>

If you are over the age of thirty, you know that Klein is not describing your adolescence, or that of your parents, and certainly not that of your grandparents. Adolescence and emerging adulthood in the hive are a human first, meticulously crafted by the science of behavioral engineering; institutionalized in the vast and complex architectures of computer-mediated means of behavior modification; overseen by Big Other; directed toward economies of scale, scope, and action in the capture of behavioral surplus; and funded by the surveillance capital that accrues from unprecedented concentrations of knowledge and power. Our children endeavor to come of age in a hive that is owned and operated by the applied utopianists of surveillance capitalism and is continuously monitored and shaped by the gathering force of instrumentarian power. Is this the life that we want for the most open, pliable, eager, self-conscious, and promising members of our society?

## II. The Hand and the Glove

The magnetic pull that social media exerts on young people drives them toward more automatic and less voluntary behavior. For too many, that behavior shades into the territory of genuine compulsion. What is it that mesmerizes the youngest among us, lashing them to this mediated world despite the stress and disquiet that they encounter there?

The answer lies in a combination of behavioral science and high-stakes design that is precision-tooled to bite hard on the felt needs of this age and stage: a perfectly fitted hand and glove. Social media is designed to engage and hold people of all ages, but it is principally molded to the psychological structure of adolescence and emerging adulthood, when one is naturally oriented toward the "others," especially toward the rewards of group recognition, acceptance, belonging, and inclusion. For many, this close tailoring, combined with the practical dependencies of social participation, turns social media into a toxic milieu. Not only does this milieu extract a heavy psychological toll, but it also threatens the course of human development for today's young and the generations that follow, all spirits of a Christmas Yet to Come.

The hand-and-glove relationship of technology addiction was not invented at Facebook, but rather it was pioneered, tested, and perfected with outstanding success in the gaming industry, another setting where addiction is formally recognized as a boundless source of profit. Skinner had anticipated the relevance of his methods to the casino environment, which executives and engineers have transformed into as vivid an illustration as one can muster of the startling power of behavioral engineering and its ability to exploit individual inclinations and transform them into closed loops of obsession and compulsion.

No one has mapped the casino terrain more insightfully than MIT social anthropologist Natasha Dow Schüll in her fascinating examination of machine gambling in Las Vegas, Addiction by Design. Most interesting for us is her account of the symbiotic design principles of a new generation of slot machines calculated to manipulate the psychological orientation of players so that first they never have to look away, and eventually they become incapable of doing so. Schüll learned that addictive players seek neither entertainment nor the mythical jackpot of cash. Instead, they chase what Harvard Medical School addiction researcher Howard Shaffer calls "the capacity of the drug or gamble to shift subjective experience," pursuing an experiential state that Schüll calls the "machine zone," a state of self-forgetting in which one is carried along by an irresistible irresistible momentum that feels like one is "played by the machine."12 The machine zone achieves a sense of complete immersion that recalls Klein's description of Facebook's design principles—engrossing, immersive, immediate—and is associated with a loss of self-awareness, automatic behavior, and a total rhythmic absorption carried along on a wave of compulsion. Eventually, every aspect of casino machine design was geared to echo, enhance, and intensify the hunger for that subjective shift, but always in ways that elude the player's awareness.

Schüll describes the multi-decade learning curve as gaming executives gradually came to appreciate that a new generation of computer-based slot machines could trigger and amplify the compulsion to chase the zone, as well as extend the time that each player spends in the zone. These innovations drive up revenues with the sheer volume of extended play as each machine is transformed into a "personalized reward device." The idea, as the casinos came to understand it, is to avoid anything that distracts, diverts, or interrupts the player's fusion with the machine; consoles "mold to the player's natural posture," eliminating the distance between the player's body and frictionless touch screens: "Every feature of a slot machine—its mathematical structure, visual graphics, sound dynamics, seating and screen ergonomics—is calibrated to increase a gambler's 'time on device' and to encourage 'play to extinction.'" The aim is a kind of crazed machine sex, an intimate closed-loop architecture of obsession, loss of

self, and auto-gratification. The key, one casino executive says in words that are all too familiar, "is figuring out how to leverage technology to act on customers' preferences [while making] it as invisible—or what I call auto-magic—as possible." The psychological hazards of the handglove fit have spread far beyond the casino pits where players seek the machine zone: they define the raw heart of Facebook's success. The corporation brings more capital, information, and science to this parasitic symbiosis than the gaming industry could ever muster. Its achievements, pursued in the name of surveillance revenues, have produced a prototype of instrumentarian society and its social principles, especially for the youngest among us. There is much that we can grasp about the lived experience of the hive in the challenges faced by the young people whose fate it is to come of age in this novel social milieu in which the forces of capital are dedicated to the production of compulsion. Facebook's marketing director openly boasts that its precision tools craft a medium in which users "never have to look away," but the corporation has been far more circumspect about the design practices that eventually make users, especially young users, incapable of looking away.

There are some chinks in the armor. For example, in 2017 Napster cofounder and one-time Facebook president Sean Parker frankly admitted that Facebook was designed to consume the maximum possible amount of users' time and consciousness. The idea was to send you "a little dopamine hit every once in a while"—a.k.a. "variable reinforcement—in the form of 'likes' and comments. The goal was to keep users glued to the hive, chasing those hits while leaving a stream of raw materials in their wake." 16

Shaffer, the addiction researcher, has identified five elements that characterize this state of compulsion: frequency of use, duration of action, potency, route of administration, and player attributes. We already know quite a bit about the high frequency and long duration of young people's engagement in social media. What we need to understand is something of (1) the psychological attributes that draw them to social media in the first place (the hand), (2) the design practices that ratchet up potency in order to transform inclinations into unquenchable need (the glove), and (3) the mental and emotional consequences of Facebook's ever-more-exquisite ability to enmesh young people in chasing their own kind of zone.

Consider the final moments of a 2017 Washington Post profile on a thirteen-year-old girl, part of a series chronicling "what it's like to grow up in the age of likes, lols, and longing." It is the girl's birthday, and only one question will decide her happiness: do her friends like her enough to post pictures of her on their pages in appreciation of the occasion? "She scrolls, she waits. For that little notification box to appear." Regardless of your age, who among us does not feel a painful blast of recognition? Adolescence has always been a time when acceptance, inclusion, and recognition from the "others" can feel like matters of life and death, and social media has not been required to make it so. Is adolescence really any different today than in any other era? The answer is yes... and no.

Adolescence was officially "discovered" in the United States in 1904 by G. Stanley Hall, and even then, Hall, the first doctor of psychology in the country, located the challenges of youth in the rapidly changing context of "our urbanized hothouse life that tends to ripen everything before its time." While writing about teenagers in 1904, he observed that adolescence is a period of extreme orientation toward the peer group: "Some seem for a time to have no resource in themselves, but to be abjectly dependent for their happiness upon their mates." He also pointed to the potential for cruelty within the peer group, a phenomenon

that contemporary psychologists refer to as "relational aggression." Decades later, the central challenge of adolescence was famously characterized as "identity formation" by the developmental psychologist Erik Erikson, who did much to explain twentieth-century adolescence. Erikson emphasized the adolescent struggle to construct a coherent identity from the mutual "joinedness" of the adolescent clique. He described the "normative crisis" when fundamental questions of "right" and "wrong" require inner resources associated with "introspection" and "personal experimentation." The healthy resolution of that conflict between self and other leads to a durable sense of identity.<sup>20</sup>

Today, most psychologists agree that our longer lives combined with the challenges of an information-intensive society have further lengthened the time between childhood and adulthood. Many have settled on the notion of "emerging adulthood" to denote the years between eighteen and the late twenties as a new life stage: emerging adulthood is to the twenty-first century what adolescence was to the twentieth. And although contemporary researchers embrace a diverse range of methods and paradigms, most concur that the essential challenge of emerging adulthood is the differentiation of a "self" from the "others."

There is a broad consensus that our extended life spans often require us to revisit the core questions of identity more than once during our lives, but researchers agree that psychological success during emerging adulthood depends on at least some resolution of identity issues as the basis for the shift toward full adulthood. As one research scholar writes, "A prime challenge of emerging adulthood is to become the author of your own life." Who among us does not recognize that call? This existential challenge is enduring, a source of continuity that links generations. What has changed are the circumstances in which young people today must meet this challenge.

## III. Proof of Life

Emerging adulthood is "ground zero" in the struggle for the "relational autonomy" that prepares young people for the transition into adulthood, as Notre Dame psychologists Daniel Lapsley and Ryan Woodbury characterize it.<sup>24</sup> By "relational autonomy," they mean to underscore the idea that autonomy is not a simplistic cliché of "individualism," unencumbered by attachment or empathy, but instead it strikes a vital balance between the cultivation of inner resources and the capacity for intimacy and relationship. Emerging adulthood requires "hard bargaining" to establish a self that is separate from but still connected to others, and the quality of this inner bargain "gives emerging adulthood a sense of anticipation and urgency," aiding a successful transition to adulthood.<sup>25</sup>

Even with these insights, it remains difficult to fully grasp the felt experiences of young people who, as Hall aptly described more than a century ago, "seem... to have no resources in themselves." Perhaps the most difficult quality to capture is that in this period that precedes the hard bargaining, an "inner" sense of "self" simply does not yet exist. It is a time when "I" am whatever the "others" think of me, and how "I" feel is a function of how the "others" treat me. Instead of a stable sense of identity, there is only a chameleon that reinvents itself depending upon the social mirror into which it is drawn. In this condition, the "others" are not individuals but the audience for whom I perform. Who "I" am depends upon the audience. This state of existence in the mirror is pure "fusion," and it captures the meaning of a thirteen-year-old girl

anxiously awaiting the appearance of the little notification box as a sign of her existence and her worth. The young person who has not yet carved out an inward space exists for herself only in the viewpoint of the Other-One. Without the "others," the lights go out. Anger is out of the question: one dare not alienate the others who are one's mirror and thus one's proof of life.

In this most elemental sense, the young person who feels compelled to use social media is more truly and accurately described as *hanging on for dear life*, alive in the gaze of others because it's the only life one has, even when it hurts. As developmental psychologist Robert Kegan described the adolescent experience long before the advent of Facebook, "There is no self independent of the context of 'other people liking.'"<sup>26</sup> This is not a moral or emotional shortcoming but a fact of life in this developmental moment, and it entails certain predictable consequences. For example, one tends to operate through social comparison. One can be easy prey to manipulation, with few defenses against social pressure and other forms of social influence. The fixed belief system of an established group can all too easily fill the inner void, substituting an externally sourced identity for the work of self-construction.<sup>27</sup>

Moving on from "fusion" means a transition from being someone who is their relationships to someone who has their relationships. It entails a deep reconfiguration of how we make sense of our experience. In Kegan's language, this means a shift away from a "culture of mutuality" to a more complex "culture of identity, self-authorship, and personal autonomy." This shift depends upon encountering people and life experiences that demand something more than our reflection in the mirror. It requires individuals and situations that insist on our first-person voice, provoking us to carve out our own unique response to the world. This is an inner act that eludes rendition or datafication as we begin to compose an inward sense of valid truth and moral authority.

This is the reference point from which we can say, "I think," "I feel," "I believe." Gradually, this "I" learns to feel authorship and ownership of its experiences. It can reflect on itself, know itself, and regulate itself with intentional choices and purposive action. Research shows that these big leaps in self-construction are stimulated by experiences such as structured reflection, conflict, dissonance, crisis, and failure. The people who help trigger this new inward connection refuse to act as our mirrors. They reject fusion in favor of genuine reciprocity. "Who comes into a person's life," Kegan observes, "may be the single greatest factor to influence what that life becomes." 28

What are the consequences of the failure to win a healthy balance between inner and outer, self and relationship? Clinical studies identify specific patterns associated with this developmental stagnation. Not surprisingly, these include an inability to tolerate solitude, the feeling of being merged with others, an unstable sense of self, and even an excessive need to control others as a way of keeping the mirror close. Loss of the mirror is the felt equivalent of extinction.<sup>29</sup>

The cultivation of inner resources is thus critical to the capacity for intimacy and relationship, challenges that have become more time-consuming with each new phase of the modern era. And while young people are bound as ever to the enduring existential task of self-making, our story suggests three critical ways in which this task now converges with history and the unique conditions of existence in our time.

First, the waning of traditional society and the evolution of social complexity have accelerated the processes of individualization. individualization. We must rely upon our self-

making and inner resources more than at any time in the human story, and when these are thwarted, the sense of dislocation and isolation is bitter.

Second, digital connection has become a necessary means of social participation, in part because of a widespread institutional failure to adapt to the needs of a new society of individuals. The computer mediation of the social infrastructure simultaneously alters human communication, illuminating individual and collective behavior, as reflected in the undulating waves of tweets, likes, clicks, patterns of mobility, search queries, posts, and thousands of other daily actions.

Third, surveillance capitalism dominates and instrumentalizes digital connection. "What is different as a result of social media," writes researcher danah boyd in her examination of the social lives of networked teens, "is that teens' perennial desire for social connection and autonomy is now being expressed in *networked publics*." "30 It's true that for the sake of connection, the travails of identity are visible to a wider group. But the notion of "networked publics" is a paradox. In fact, our visibility is magnified and compelled not only by the publicness of networked spaces but by the fact that they are privatized. Young life now unfolds in the spaces of private capital, owned and operated by surveillance capitalists, mediated by their "economic orientation," and operationalized in practices designed to maximize surveillance revenues. These private spaces are the media through which every form of social influence—social pressure, social comparison, modeling, subliminal priming—is summoned to tune, herd, and manipulate behavior in the name of surveillance revenues. This is where adulthood is now expected to emerge.

Whereas casino executives and slot machine developers can be garrulous and boastful, eager to share their "addiction by design" achievements, the surveillance capitalist project relies on secrecy. An entire discourse has thus sprung to life, trained on decoding the stealth design that first deters users from ever looking away and then makes them incapable of doing so. There are chat groups and endless query threads as people try to divine what Facebook actually does. Relevant design practices are discussed in journalistic accounts as well as in books with such titles as *Evil by Design*, *Hooked*, and *Irresistible*, all of which help to normalize the very methods they discuss. For example, *Evil by Design* author Chris Nodder, a user-experience consultant, explains that evil design aims to exploit human weakness by creating interfaces that "make users emotionally involved in doing something that benefits the designer more than them." He coaches his readers in psychic numbing, urging them to accept the fact that such practices have become the standard suggesting that consumers and designers find ways to "turn them to your advantage." <sup>31</sup>

If we are to judge coming of age in our time, then we have to understand something of the specific practices that turn social participation into a glove that doesn't simply embrace the hand but rather magnetizes and paralyzes the hand for the sake of economic imperatives. Facebook relies on specific practices that feed the inclinations of people, especially young people, to know themselves from "the outside looking in." Most critical is that the more the need for the "others" is fed, the less able one is to engage the work of self-construction. So devastating is the failure to attain that positive equilibrium between inner and outer life that Lapsley and Woodbury say it is "at the heart" of most adult personality disorders.<sup>32</sup>

For example, Nodder highlights Facebook's precocious mastery of "social proof": "Much of our behavior is determined by our impressions of what is the correct thing to do... based on

what we observe others doing.... This influence is known as *social proof*."<sup>33</sup> The company instrumentalizes this aspect of adolescent nature by using messages from "friends" to make a product, service, or activity feel "more personal and emotional." This ubiquitous tactic, much admired by Pentland, was used in the Facebook voting experiment. It fuels young people's needs to garner approval and avoid disapproval by doing what the others are doing. Facebook's single most momentous innovation in behavioral engineering is the now equally ubiquitous "Like" button, adopted in 2009. According to contemporaneous blog posts by longtime Facebook executive Andrew Bosworth, the "Like" button had been debated internally for more than a year and a half before Zuckerberg's final decision to incorporate it. He had rejected the idea more than once, fearing that it would detract from other features intended to lift monetization, such as the controversial Beacon program. Significantly, the founder embraced the button only when new data revealed it as a powerful source of behavioral surplus that helped to ratchet up the magnetism of the Facebook News Feed, as measured by the volume of comments.<sup>34</sup>

Facebook's leadership appears to have realized only gradually that the button could transform the platform from a book into a blizzard of mirrors, a passive read into an active sea of mutual reflections that would glue users to their news feeds. On the supply side, the "Like" button was a planet-size one-way mirror capable of exponentially increasing raw-material supplies. The more that a user "liked," the more that she informed Facebook about the precise shape and composition of her "hand," thus allowing the company to continuously tighten the glove and increase the predictive value of her signals.

The protocols at Instagram, a Facebook property, provide another good example of these processes. Here one sees these tight linkages as compulsion draws more surplus to feed more compulsion. Instagram rivets its users with photos that appeal to their interests, so how does it select those photos from the millions that are available? The obvious, but incorrect, answer would be that it analyzes the contents of photos that you like and shows you more. Instead, Instagram's analytics are drawn from behavioral surplus: the shadow text. As one manager describes it, "You base predictions off an action, and then you do stuff around that action." Actions are signals like "following," "liking," and "sharing," now and in the past. The circle widens from there. With whom did you share? Who do they follow, like, and share with? "Instagram is mining the multilayered social web between users," but that mining is based on observable, measurable behaviors moving through time: the dynamic surplus of the shadow text drawn from its own caches as well as Facebook's, not the content displayed in the public text. In the end, the photos you see resonate with strange relevance for your life. More begets more.

On the demand side, Facebook's "likes" were quickly coveted and craved, morphing into a universal reward system or what one young app designer called "our generation's crack cocaine." "Likes" became those variably timed dopamine shots, driving users to double down on their bets "every time they shared a photo, web link, or status update. A post with zero likes wasn't just privately painful, but also a kind of public condemnation." In fact, most users craved the reward more than they feared humiliation, and the "Like" button became Facebook's signature, spreading across the digital universe and actively fusing users in a new kind of mutual dependency expressed in a pastel orgy of giving and receiving reinforcement.

The "Like" button was only the start of what was to be an historic construction of a new social world that for many users is defined by fusion with the social mirror, especially among the young. Just as gamblers chase the zone of fusion with the machine, a young person embedded in the culture of mutuality chases the zone of fusion with the social mirror. For anyone already struggling with the challenge of the self-other balance, the "Like" button and its brethren continuously tip the scales toward regression.

The short history of Facebook's News Feed is further evidence of the efficacy of the ever-tightening feedback loops that aim to shape and sustain this fusion. When News Feed was first launched in 2006, it transformed Facebook from a site where users had to visit friends' pages to see their updates to having those messages automatically shared in a stream on each person's home page. Hundreds of thousands of users joined opposition groups, repelled by the company's unilateral invasion of privacy. "No one was prepared for their online activity to suddenly be fodder for mass consumption," recalled the tech news site TechCrunch on News Feed's tenth anniversary in 2016, as it offered readers "The Ultimate Guide to the News Feed," with instructions on "how you can get your content seen by more people," how to appear "prominently," and how to resonate with your "audience." Ten years earlier a TechCrunch reporter had presciently noted, "Users who don't participate will quickly find that they are falling out of the attention stream, and I suspect will quickly add themselves back in." \*\*

Playing to the fear of invisibility and abandonment worked in 2006, when Facebook had just 9.5 million users (and required a college e-mail address to sign up), and it has driven the acceptance of every subsequent tweak to News Feed as Facebook has amassed more than 2 billion users. News Feed grew to become the "epicenter" of the corporation's revenue success and "the most valuable billboard on Earth," as Time magazine stated in 2015, just three years after Facebook's IPO.<sup>39</sup>

News Feed is also the fulcrum of the social mirror. In the years between revulsion and reverence, News Feed became Facebook's most intensely scrutinized object of data science and the subject of extensive organizational innovation, all of it undertaken at a level of sophistication and capital intensity that one might more naturally associate with the drive to solve world hunger, cure cancer, or avert climate destruction.

In addition to Facebook's already complex computational machinery for targeting ads, by 2016 the News Feed function depended upon one of the world's most secretive predictive algorithms, derived from a God view of more than 100,000 elements of behavioral surplus that are continuously computed to determine the "personal relevancy" score of thousands of possible posts as it "scans and collects everything posted in the past week by each of your friends, everyone you follow, each group you belong to, and every Facebook page you've liked," writes Will Oremus in Slate. "The post you see at the top of your feed, then, has been chosen over thousands of others as the one most likely to make you laugh, cry, smile, click, like, share, or comment." The glove tightens around the hand with closed feedback loops enabled by the God view, which favors posts from people with whom you have already interacted, posts that have drawn high levels of engagement from others, and posts that are like the ones with which you have already engaged.

In 2015 the See First "curation tool" was introduced to channel direct data on the shape of a user's social mirror by soliciting his or her personal priorities for the News Feed. Facebook's chief product officer describes the corporation's interest in supplying what is "most

meaningful" for you to know today from "everything that happened on Earth... published anywhere by any of your friends, any of your family, any news source." Each post sequenced in the News Feed also now hosts a range of explicit feedback options: I want more of this. I want none of that. These direct surplus supply lines are important sources of innovation aimed at broadening the target of the fusion zone, increasing the tenacity of an ever-tightening glove. In 2016 Facebook's product director confirmed that this direct sourcing of surplus "led to an increase in overall engagement and time spent on the site."

Facebook's science and design expertise aim for a closed loop that feeds on, reinforces, and amplifies the individual user's inclination toward fusion with the group and the tendency to over-share personal information. Although these vulnerabilities run deepest among the young, the tendency to over-share is not restricted to them. The difficulty of self-imposed discipline in the sharing of private thoughts, feelings, and other personal information has been amply demonstrated in social research and summarized in an important 2015 review by Carnegie Mellon professors Alessandro Acquisti, Laura Brandimarte, and George Loewenstein. They concluded that because of a range of psychological and contextual factors, "People are often unaware of the information they are sharing, unaware of how it can be used, and even in the rare situations when they have full knowledge of the consequences of sharing, uncertain about their own preferences...." The researchers cautioned that people are "easily influenced in what and how much they disclose. Moreover, what they share can be used to influence their emotions, thoughts, and behaviors...." The result is alteration in "the balance of power between those holding the data and those who are the subjects of that data."

Facebook has Pentland's prized God view on its side, an unparalleled resource that is drawn upon to remake this naturally longed-for fusion into a space of no escape. Science and capital are united in this long-game project. Yesterday it was the "Like" button, today it is augmented reality, and tomorrow there will be new innovations added to this repertoire. The company's growth in user engagement, surplus capture, and revenue are evidence that these innovations have hit their marks.

Young people crave the hive, and Facebook gives it to them, but this time it's owned and operated by surveillance capital and scientifically engineered into a continuous spiral of escalating fusion, amply fulfilling Shaffer's five criteria for achieving an addictive state of compulsion. Potency is engineered according to a recipe dictated by the hidden attributes of those who crave valorization from the group to fill the void where a self must eventually stand.

These cravings may not be the sole motivations of Facebook's currently two billion users, but they aptly describe the attributes upon which Facebook's incentives are designed to bite the hardest. Climbing the mountain of the self-other balance is an adventure that we each must undertake: a journey of risk, conflict, uncertainty, and electrifying discovery. But what happens when the forces of surveillance capital turn the mountain into a mountain range? Look at us! Yes, you are alive! Do not look away! Why would you? How could you? Today, we might "like" you!

## IV. The Next Human Nature

A growing body of evidence testifies to the psychic toll of life in the hive, where surveillance capital's behavioral engineering expertise collides with the centuries- in-the-making human

impulse toward self-construction. Researchers are already providing answers to two key questions: What are the psychological processes that dominate the hive? What are the individual and societal consequences of these processes? According to the 302 most significant quantitative research studies on the relationships between social media use and mental health (most of them produced since 2013), the psychological process that most defines the Facebook experience is what psychologists call "social comparison." It is usually considered a natural and virtually automatic process that operates outside of awareness, "effectively forced upon the individual by his social environment" as we apply evaluative criteria tacitly internalized from our society, community, group, family, and friends. As one research review summarizes, "Almost at the moment of exposure, an initial holistic assessment of the similarity between the target and the self is made." As we go through life being exposed to other people, we naturally compare ourselves along the lines of similarity and contrast—I am like you. I am different from you—subliminal perceptions that translate into judgments—I am better than you. You are better than I.

Researchers have come to appreciate the way in which these automatic human processes converge with the changing conditions of each historical era. For most of human history, people lived in small enclaves and were typically surrounded by others very much like themselves. Social comparisons with little variation are unlikely to entail great psychological risk. Research suggests that the diffusion of television in the second half of the twentieth century dramatically increased the intensity and negativity of social comparison, as it brought vivid evidence of varied and more-affluent lives dramatically different from one's own. One study found an increase in criminal larceny as television diffused across society, awakening an awareness of and desire for consumer goods. A related issue was that increased exposure to television programs depicting affluence led to "the overestimation of others' wealth and more dissatisfaction with one's own life."<sup>48</sup>

Social media marks a new era in the intensity, density, and pervasiveness of social comparison processes, especially for the youngest among us, who are "almost constantly online" at a time of life when one's own identity, voice, and moral agency are a work in progress. In fact, the psychological tsunami of social comparison triggered by the social media experience is considered unprecedented. If television created more life dissatisfaction, what happens in the infinite spaces of social media?

Both television and social media deprive us of real-life encounters, in which we sense the other's inwardness and share something of our own, thus establishing some threads of communality. Unlike television, however, social media entails active self-presentation characterized by "profile inflation," in which biographical information, photos, and updates are crafted to appear ever more marvelous in anticipation of the stakes for popularity, self-worth, and happiness. <sup>49</sup> Profile inflation triggers more negative self-evaluation among individuals as people compare themselves to others, which then leads to more profile inflation, especially among larger networks that include more "distant friends." As one study concluded, "Expanding one's social network by adding a number of distant friends through Facebook may be detrimental by stimulating negative emotions for users." <sup>50</sup>

One consequence of the new density of social comparison triggers and their negative feedback loops is a psychological condition known as FOMO ("fear of missing out"). It is a form of social anxiety defined as "the uneasy and sometimes all-consuming feeling that... your peers

are doing, in the know about, or in possession of more or something better than you."<sup>51</sup> It's a young person's affliction that is associated with negative mood and low levels of life satisfaction. Research has identified FOMO with compulsive Facebook use: FOMO sufferers obsessively checked their Facebook feeds—during meals, while driving, immediately upon waking or before sleeping, and so on. This compulsive behavior is intended to produce relief in the form of social reassurance, but it predictably breeds more anxiety and more searching.<sup>52</sup>

Social comparison can make people do things that they might not otherwise do. Facebook's experiments and Pokémon Go's augmented reality each exploit mutual visibility and its inevitable release of social comparison processes for successful tuning and herding. Both of these illustrate the ways in which once-natural psychological processes are repurposed to heighten the effectiveness of Pentland's vaunted "social pressure," thus enabling behavior modification at scale. Social pressure is activated by "I want to be like you" as the risks of difference and exclusion threaten negative social comparison.

What do we know about the mental health consequences of social comparison as it ensnares Facebook users, especially the young? Most of the research aimed at a deeper grasp of cause and effect in the user experience has been conducted with college-age participants, and even a brief review of a few key studies tells a grim tale, as adolescents and emerging adults run naked through these digitally mediated social territories in search of proof of life. A 2011 study found that social media users exposed to pictures of "beautiful users" developed a more negative self-image than those who were shown less attractive profile pictures. Men who were shown profiles of high-career-status men judged their own pursuits as inadequate, compared to others who saw profiles of less successful men.<sup>53</sup> By 2013, researchers found that Facebook use could predict negative shifts in both how their young subjects felt moment to moment as well as their overall life satisfaction.<sup>54</sup> That year, German researchers found that the "astounding... wealth of social information" presented on Facebook produces "a basis for social comparison and envy on an unprecedented scale." Their work demonstrated that "passive following" on Facebook exacerbates feelings of envy and decreases life satisfaction. More than 20 percent of all recent experiences of envy reported by the students in the research study had been triggered by Facebook exposure.<sup>55</sup>

A three-phase investigation in 2014 found that spending a lot of time browsing profiles on Facebook produced a negative mood immediately afterward. Then, upon reflection, those users felt worse, reckoning that they had wasted their time. Instead of walking away, they typically chose to spend even more time browsing the network in the hope of feeling better, chasing the dream of a sudden and magical reversal of fortune that would justify past suffering. This cycle not only leads to more social comparison and more envy, but it can also predict depressive symptoms.<sup>56</sup>

The self-objectification associated with social comparison is also associated with other psychological dangers. First we present ourselves as data objects for inspection, and then we experience ourselves as the "it" that others see. One 2014 study demonstrated the deleterious effect of these loops on body consciousness. An analysis of young men and women who had used Facebook for at least six years concluded that, regardless of gender, more Facebook participation leads to more body surveillance. A sense of self-worth comes to depend on physical appearance and being perceived as a sex object. Body shame leads to constant rounds of manicuring self-portrayals for a largely unknown audience of "followers." <sup>57</sup>

Life in the hive favors those who most naturally orient toward external cues rather than toward one's own thoughts, feelings, values, and sense of personal identity.<sup>58</sup> When considered from the vantage point of the self-other balance, positive social comparisons are just as pernicious as negative comparisons. Both are substitutes for the "hard bargain" of carving out a self that is capable of reciprocity rather than fusion. Whether the needle moves up or down, social comparison is the flywheel that powers the closed loop between the inclination toward the social mirror and its reinforcement. Both ego gratification and ego injury drive the chase for more external cues.

Over time, studies increase in complexity as they try to identify the underlying mechanisms through which social comparison in social media is associated with symptoms of depression and feelings of social isolation.<sup>59</sup> One notable three-year study published in 2017 considered both the direct Facebook data of more than five thousand participants as well as self-reported data on their "real-world social networks." This approach enabled ongoing direct comparisons between real-world relationships and Facebook associations across four domains of self-reported well-being: physical health, mental health, life satisfaction, and body mass index. "Liking others' content and clicking links to posts by friends," the researchers summarized, "were consistently related to compromised well-being, whereas the number of status updates was related to reports of diminished mental health." So strong was this relationship that "a 1-standard-deviation increase in 'likes clicked'... 'links clicked'... or 'status updates' was associated with a decrease of 5%-8% of a standard deviation in self-reported mental health," even controlling for a person's initial state of well-being. The researchers' definitive conclusion? "Facebook use does not promote well-being.... Individual social media users might do well to curtail their use of social media and focus instead on real-world relationships."60

# V. Homing to the Herd

This is not a rehearsal. This is the show. Facebook is a prototype of instrumentarian society, not a prophecy. It is the first frontier of a new societal territory, and the youngest among us are its vanguard. The frontier experience is an epidemic of the viewpoint of the Other-One, a hyper-objectification of one's own personhood shaped by the relentless amplification of life lived from the "outside looking in." The consequence is a pattern of overwhelming anxiety and disorientation in the simple act of digital disconnection, while connection itself is haunted by fresh anxieties that paradoxically leave too many feeling isolated, diminished, and depressed. One wants to say that the struggles of youth can be painful in any era and that it is simply the destiny of today's young people to encounter the work of self-construction in this milieu of digital connection and illumination, with its truly marvelous opportunities for voice, community, information, and exploration. One wants to say they will get through it, just as other generations survived the adolescent trials of their time and place.

But this time it is not a question of simply packing their lunch and crossing our fingers as they head into the school-day maze of adolescent cliques, or sending them off to college knowing that they may stumble or fall but eventually find their passions and their people as they find themselves. This time, we have sent them into the raw heart of a rogue capitalism

that amassed its fortune and power through behavioral dispossession parlayed into behavior modification in the service of others' guaranteed outcomes.

They crave the hive, just as Hall's teenagers did in 1904, but the hive they encounter encounter is not the unadulterated product of their natures and their culture of mutuality. It is a zone of asymmetrical power, constructed by surveillance capital as it operates in secrecy beyond confrontation or accountability. It is an artificial creation designed in the service of surveillance capital's greater good. When young people enter this hive, they keep company with a surveillance priesthood: the world's most-sophisticated data scientists, programmers, machine learning experts, and technology designers, whose single-minded mission to tighten the glove is mandated by the economic imperatives of surveillance capital and its "laws of motion."

Innocent hangouts and conversations are embedded in a behavioral engineering project of planetary scope and ambition that is institutionalized in Big Other's architectures of ubiquitous monitoring, analysis, and control. In their encounter with the self-other balance, teenagers step onto a playing field already tilted by surveillance capital to tip them into the social mirror and keep them fixed on its reflections. Everything depends upon feeding the algorithms that can effectively and precisely bite on him and bite on her and not let go. All those outlays of genius and money are devoted to this one goal of keeping users, especially young users, plastered to the social mirror like bugs on the windshield.

The research studies and first-person accounts that we have reviewed reveal the coercive underbelly of the instrumentarian's much revered "confluence," in which harmonies are achieved at the expense of the psychological integrity of participants. This is the world of Pentland's "social learning," his theory of "tuning" little more than the systematic manipulation of the rewards and punishments of inclusion and exclusion. It succeeds through the natural human inclination to avoid psychological pain. Just as ordinary consumers can become compulsive gamblers at the hands of the gaming industry's behavioral technologies, psychologically ordinary young people are drawn into an unprecedented vortex of social information that automatically triggers social comparison on an equally unprecedented scale. This mental and emotional milieu appears to produce a virus of insecurity and anxiety that drives a young person deeper into this closed loop of escalating compulsion as he or she chases relief in longed-for signals of valorization.

This cycle unnaturally exacerbates and intensifies the natural orientation toward the group. And although we all share in this disposition to varying degrees, it is most pronounced in the stages of life that we call adolescence and emerging adulthood. Ethologists call this orientation "homing to the herd," an adaptation of certain species, such as passenger pigeons and herring, that home to the crowd rather than to a particular territory. In the confrontation with human predators, however, however, this instinct has proven fatal.

For example, biologist Bernd Heinrich describes the fate of the passenger pigeons, whose "social sense was so strong that it drew the new predator, technologically equipped humans, from afar. It made them not only easy targets, but easily duped." Commercial harvesters followed the pigeons' flight and nesting patterns, and then used huge nets to catch thousands of pigeons at a time, shipping millions by rail each year to the markets from St. Louis to Boston. The harvesters used a specific technique, designed to exploit the extraordinary bonds of empathy among the birds and immortalized in the term "stool pigeon." A few birds

would be captured first and attached to a perch with their eyes sewn shut. As these birds fluttered in panic, the flock would descend to "attend to them." This made it easy for the harvesters to "catch and slaughter" thousands at once. The last passenger pigeon died in the Cincinnati Zoo in 1914: "The pigeon had no home boundaries over which to spread itself and continued to orient only to itself, so it could be everywhere, even to the end.... To the pigeons, the only 'home' they knew was in the crowd, and now they had become victims of it... the lack of territorial boundaries of human predators had tipped the scales to make their adaptation their doom."

Facebook, social media in general—these are environments engineered to induce and exaggerate this homing to the human herd, particularly among the young. We are lured to the social mirror, our attention riveted by its dark charms of social comparison, social pressure, social influence. "Online all day," "online almost all day." As we fixate on the crowd, the technologically equipped commercial harvesters circle quietly and cast their nets. This artificial intensification of homing to the herd can only complicate, delay, or impede the hard psychological bargain of the self-other balance. When we multiply this effect by hundreds of millions and distribute it across the globe, what might it portend for the prospects of human and societal development?

Facebook is the crucible of this new dark science. It aims to perfect the relentless relentless stimulation of social comparison in which natural empathy is manipulated and instrumentalized to modify behavior toward others' ends. This synthetic hive is a devilish pact for a young person. In terms of sheer everyday effectiveness—contact, logistics, transactions, communications—turn away, and you are lost. And if you simply crave the fusion juice that is proof of life at a certain age and stage—turn away, and you are extinguished. It is a new phenomenon to live continuously in the milieu of the gaze of others, to be followed by hundreds or thousands of eyes, augmented by Big Other's devices, sensors, beams, and waves rendering, recording, analyzing, and actuating. The unceasing pace, density, and volume of the gaze deliver a perpetual stream of evaluative metrics that raise or lower one's social currency with each click. In China, these rankings are public territory, shiny badges of honor and scarlet letters that open or shut every door. In the West, we have "likes," "friends," "followers," and hundreds of other secret rankings that invisibly pattern our lives.

The extension and depth of exposure include every data point but necessarily omit the latency within each person, precisely because it cannot be observed and measured. This is the latency of a possible self that awaits ignition from that one spark caused by the caring attention of another embodied human being. It is in that clash of oxygen and ember that the latent is perceived, comprehended, and yanked forward into existence. This is real life: fleshy, soft, uncertain, and replete with silence, risk, and, when fortune smiles, genuine intimacy.

Facebook entered the world bypassing old institutional boundaries, offering us freedom to connect and express ourselves at will. It is impossible to say what the Facebook experience might have been had the company chosen a path that did not depend upon surveillance revenues. Instead, we confront the sudden accretion of an instrumentarian power that spins our society in an unanticipated direction. Facebook's applied utopistics are a prototype of an instrumentarian future, showcasing feats of behavioral engineering that groom populations for the rigors of instrumentarianism's coercive harmonies. Its operations are designed to exploit the human inclination toward empathy, belonging, and acceptance. The system tunes the pitch

of our behavior with the rewards and punishments of social pressure, herding the human heart toward confluence as a means to others' commercial ends.

From this vantage point, we see that the full scope of the Facebook operation constitutes a vast experiment in behavior modification designed not only to test the specific capabilities of its tuning mechanisms, as in its official "large-scale experiments," but also to do so on the broadest possible social and psychological canvas. Most significantly, the applied utopistics of social pressure, its flywheel of social comparison, and the closed loops that bind each user to the group system vividly confirm Pentland's theoretical rendering of the case. Instrumentarian social principles are evident here, not as hypotheses but as facts, the facts that currently constitute the spaces where our children are meant to "grow up."

What we witness here is a bet-the-farm commitment to the socialization and normalization of instrumentarian power for the sake of surveillance revenues. Just as Pentland stipulated, these closed loops are imposed outside the realm of politics and individual volition. They move in stealth, crafting their effects at the level of automatic psychological responses and tipping the self-other balance toward the pseudo-harmonies of the hive mind. In this process, the inwardness that is the necessary source of autonomous action and moral judgment suffers and suffocates. These are the preparatory steps toward the death of individuality that Pentland advocates.

In fact, this death devours centuries of individualities: (1) the eighteenth century's political ideal of the individual as the repository of inalienable dignity, rights, and obligations; (2) the early twentieth century's individualized human being called into existence by history, embarking on Machado's road because she must, destined to create "a life of one's own" in a world of ever-intensifying social complexity complexity and receding traditions; and (3) the late twentieth century's psychologically autonomous individual whose inner resources and capacity for moral judgment rise to the challenges of self-authorship that history demands and act as a bulwark against the predations of power. The self-authorship toward which young people strive carries forward these histories, strengthening, protecting, and rejuvenating each era's claims to the sanctity and sovereignty of the individual person.

What we have seen in Facebook is a living example of the third modernity that instrumentarianism proffers, defined by a new collectivism owned and operated by surveillance capital. The God view drives the computations. The computations enable tuning. Tuning replaces private governance and public politics, without which individuality is merely vestigial. And just as the uncontract bypasses social mistrust rather than healing it, the post-political societal processes that bind the hive rely on social comparison and social pressure for their durability and predictive certainty, eliminating the need for trust. Rights to the future tense, their expression in the will to will, and their sanctification in promises are drawn into the fortress of surveillance capital. On the strength of that expropriation, the tuners tighten their grasp, and the system flourishes.

Industrial capitalism depended upon the exploitation and control of nature, with catastrophic consequences that we only now recognize. Surveillance capitalism, I have suggested, depends instead upon the exploitation and control of human nature. The market reduces us to our behavior, transformed into another fictional commodity and packaged for others' consumption. In the social principles of instrumentarian society, already brought to life in the experiences of our young, we can see more clearly how this novel capitalism aims to

reshape our natures for the sake of its success. We are to be monitored and telestimulated like MacKay's herds and flocks, Pentland's beavers and bees, and Nadella's machines. We are to live in the hive: a life that is naturally challenging and often painful, as any adolescent can attest, but the hive life in store for us is not a natural one. "Men made it." Surveillance capitalists made it. The young people we have considered in this chapter are the spirits of a Christmas Yet to Come. They live on the frontier of a new form of power that declares the end of a human future, with its antique allegiances to individuals, democracy, and the human agency necessary for moral judgment. Should we awaken from distraction, resignation, and psychic numbing with Scrooge's determination, it is a future that we may still avert.

# VI. No Exit

When Samuel Bentham, brother of philosopher Jeremy, first designed the panopticon as a means of overseeing unruly serfs on the estate of Prince Potemkin in the late eighteenth century, he drew inspiration from the architecture of the Russian Orthodox churches that dotted the countryside. Typically, these structures were built around a central dome from which a portrait of an all-powerful "Christ Pantokrator" stared down at the congregation and, by implication, all humanity. There was to be no exit from this line of sight. This is the meaning of the hand and glove. The closed loop and the tight fit are meant to create the conditions of no exit. Once, it was no exit from God's total knowledge and power. Today, it is no exit from the others, from Big Other, and from the surveillance capitalists who decide. This condition of no exit creeps on slippered feet. First we do not even have to look away, and later we cannot.

In the closing lines of Jean-Paul Sartre's existential drama *No Exit*, the character Garcin arrives at his famous realization, "Hell is other people." This was not intended as a statement of misanthropy but rather a recognition that the self-other balance can never be adequately struck as long as the "others" are constantly "watching." Another mid-century social psychologist, Erving Goffman, took up these themes in his immortal *The Presentation of Self in Everyday Life*. Goffman developed the idea of the "backstage" as the region in which the self retreats from the performative demands of social life.

The language of backstage and onstage, inspired by observations of the theater, became a metaphor for the universal need for a place of retreat in which we can "be ourselves." Backstage is where the "impression fostered by performance is knowingly contradicted" along with its "illusions and impressions." Devices such as the telephone are "sequestered" for "private" use. Conversation is "relaxed," "truthful." It is the place where "vital secrets" can be visible. Goffman observed that in work as in life, "control of the backstage" allows individuals "to buffer themselves from the deterministic demands that surround them." Backstage, the language is one of reciprocity, familiarity, intimacy, humor. It offers the seclusion in which one can surrender to the "uncomposed" face in sleep, defecation, sex, "whistling, chewing, nibbling, belching, and flatulence." Perhaps most of all, it is an opportunity for "regression," in which we don't have to be "nice": "The surest sign of backstage solidarity is to feel that it is safe to lapse into an asociable mood of sullen, silent irritability." In the absence of such respite where a "real" self can incubate and grow, Sartre's idea of hell begins to make sense. 62

In a classroom of undergraduates, students discuss their strategies of self-presentation on Facebook. Scholars refer to these as "chilling effects": the continuous "curation" of one's

photos, comments, and profile with deletions, additions, and modifications, all of it geared to the maximization of "likes" as the signal of one's value in this existential marketplace. <sup>63</sup> I ask if this twenty-first-century work of self-presentation is really that much different from what Goffman had described: have we just traded the real world for the virtual in constructing and performing our personas? There is a lull as the students reflect, and then a young woman speaks:

The difference is that Goffman assumed a backstage where you could be your true self. For us, the backstage is shrinking. There is almost no place left where I can be my true self. Even when I am walking by myself, and I think I am backstage, something happens—an ad appears on my phone or someone takes a photo, and, I discover that I am onstage, and everything changes.<sup>64</sup>

The "everything" that changes is the sudden cognizance, part realization and part reminder, that Big Other knows no boundaries. Experience is seamlessly rendered across the once-reliable borders of the virtual and real worlds. This accrues to the immediate benefit of surveillance capital—"Welcome to McDonald's!" "Buy this jacket!"—but any worldly experience can just as immediately be delivered to the hive: a post here, a photo there. Ubiquitous connection means that the audience is never far, and this fact brings all the pressures of the hive into the world and the body.

Recent research has begun to turn to this dour fact that a team of British researchers describes as the "extended chilling effect." The idea here is that people—especially, though not exclusively, young people—now censor and curate their real-world behavior in consideration of their own online networks as well as the larger prospect of the internet masses. The researchers conclude that participation in social media "is profoundly intertwined with the knowledge that information about our offline activities may be communicated online, and that the thought of displeasing 'imagined audiences' alters our 'real-life' behavior."

When I catch myself wanting to cheer the students who are anguished by connection and terrified of its loss, I consider the meaning of "no exit" as recounted in a personal recollection of the social psychologist Stanley Milgram regarding an experiment that demonstrated "the power of immediate circumstances on feelings and behavior." 66

Milgram's class was studying the force with which social norms control behavior. He had the idea of examining the real-life phenomenon by having his students approach a person on the subway and, without providing any justification, simply look the person in the eye and ask for his or her seat. One afternoon, Milgram himself boarded the subway ready to make his contribution. Despite his years of observing observing and theorizing disturbing patterns of human behavior, it turned out that he was unprepared for his own moment of social confrontation. Assuming that it would be an "easy" caper, Milgram approached a passenger and was about to utter the "magical phrase" when "the words seemed lodged in my trachea and would simply not emerge. I stood there frozen, then retreated... I was overwhelmed by paralyzing inhibition." The psychologist eventually hectored himself into trying again. He recounts what occurred when he finally approached a passenger and "choked out" his request:

"Excuse me, sir, may I have your seat?" A moment of stark anomic panic overcame me. But the man got right up and gave me the seat.... Taking the man's seat, I was overwhelmed by the need to behave in a way that would justify my request. My head sank between my knees, and I could feel my face blanching. I was not role-playing. I actually felt as if I were going to perish.

Moments later the train pulled into the next station, and Milgram exited. He was surprised to discover that as soon as he left the train, "all the tension disappeared." Milgram left the subway, where he vibrated in tune with the "others," and that exit enabled a return to his "self."

Milgram identified three key themes in the subway experiment as he and his students debriefed their experiences. The first was a new sense of gravitas toward "the enormous inhibitory anxiety that ordinarily prevents us from breaching social norms." Second was that the reactions of the "breacher" are not an expression of individual personality but rather are "a compelled playing out of the logic of social relations." The intense "anxiety" that Milgram and others experienced in confronting a social norm "forms a powerful barrier that must be surmounted, whether one's action is consequential—disobeying an authority—or trivial, asking for a seat on the subway.... Embarrassment and the fear of violating apparently trivial norms often lock us into intolerable predicaments.... These are not minor regulatory forces in social life, but basic ones."

Finally, Milgram understood that any confrontation of social norms crucially depends upon the ability to escape. It was not an adolescent who boarded the subway that day. Milgram was an erudite adult and an expert on human behavior, especially the mechanisms entailed in obedience to authority, social influence, and conformity. The subway was just an ordinary slice of life, not a capital-intensive architecture of surveillance and behavior modification, not a "personalized reward device." Still, Milgram could not fight off the anxiety of the situation. The only thing that made it tolerable was the possibility of an exit.

Unlike Milgram, we face an intolerable situation. Like the gamblers in their machine wombs, we are meant to fuse with the system and play to extinction: not the extinction of our funds but rather the extinction of our selves. Extinction is a design feature formalized in the conditions of no exit. The aim of the tuners is to contain us within "the power of immediate circumstances" as we are compelled by the "logic of social relations" in the hive to bow to social pressure exerted in calculated patterns that exploit our natural empathy. Continuously tightening feedback loops cut off the means of exit, creating impossible levels of anxiety that further drive the loops toward confluence. What is to be killed here is the inner impulse toward autonomy and the arduous, exciting elaboration of the autonomous self as a source of moral judgment and authority capable of asking for a subway seat or standing against rogue power.

Inside the hive, it is easy to forget that every exit is an entrance. To exit the hive means to enter that territory beyond, where one finds refuge from the artificially tuned-up social pressure of the others. Exit leaves behind the point of view of the Other-One in favor of entering a space in which one's gaze can finally settle inward. To exit means to enter the place where a self can be birthed and nurtured. History has a name for that kind of place: sanctuary.

## **NOTES**

- <sup>1.</sup> "The World UNPLUGGED," The World UNPLUGGED, https://theworld unplugged.wordpress.com.
- <sup>2.</sup> For an insightful account, see Katherine Losse, The Boy Kings: A Journey into the Heart of the Social Network (New York: Free Press, 2012).
- <sup>3.</sup> "Confusion," The World UNPLUGGED, February 26, 2011, https://theworldunplugged.wordpress.com/emotion/confusion.

- <sup>4.</sup> "College Students Spend 12 Hours/Day with Media, Gadgets," Marketing Charts, November 30, 2009, https://www.marketingcharts.com/television-11195.
- <sup>5.</sup> Andrew Perrin and Jingjing Jiang, "About a Quarter of U.S. Adults Say They Are 'Almost Constantly' Online," Pew Research Center, March 14, 2018, http://www.pewresearch.org/fact-tank/2018/03/14/about-a-quarter- of-americans-report-going-online-almost-constantly; Monica Anderson and Jingjing Jiang, "Teens, Social Media & Technology 2018," Pew Research Center, May 31, 2018, <a href="http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/">http://www.pewinternet.org/2018/05/31/teens-social-media-technology-2018/</a>.
- <sup>6.</sup> Jason Dorsey, "Gen Z—Tech Disruption: 2016 National Study on Technology and the Generation After Millennials," Center for Generational Kinetics, 2016, <a href="http://3pur2814p18t46fuop22hvvu.wpengine.netdna-cdn.com/wp-content/uploads/2017/01/Research-White-Paper-Gen-Z-Tech-Disruption-c-2016-Center-for-Generational-Kinetics.pdf">http://3pur2814p18t46fuop22hvvu.wpengine.netdna-cdn.com/wp-content/uploads/2017/01/Research-White-Paper-Gen-Z-Tech-Disruption-c-2016-Center-for-Generational-Kinetics.pdf</a>.
- <sup>7.</sup> Sarah Marsh, "Girls Suffer Under Pressure of Online 'Perfection,' Poll Finds," Guardian, August 22, 2017, http://www.theguardian.com/society/2017/aug/23/girls-suffer-under-pressure-of-online-perfection-poll-finds.
- <sup>8.</sup> For an early and insightful theoretical discussion of the internet as a zone of personal objectification, see Julie E. Cohen, "Examined Lives: Informational Privacy and the Subject as Object" (SSRN Scholarly Paper, Rochester, NY: Social Science Research Network, August 15, 2000), <a href="https://papers.ssrn.com/abstract=233597">https://papers.ssrn.com/abstract=233597</a>.
- <sup>9.</sup> Sarah Marsh and Guardian readers, "Girls and Social Media: 'You Are Expected to Live Up to an Impossible Standard,'" Guardian, August 22, 2017, http://www.theguardian.com/ society/2017/aug/23/girls-and-social-media-you-are-expected-to-live-up-to-an-impossible-standard.
- <sup>10.</sup> See Marsh, "Girls and Social Media."
- <sup>11.</sup> "Millennials Check Their Phones More Than 157 Times per Day," New York, May 31, 2016, https://socialmediaweek.org/newyork/2016/05/31/millennials-check-phones-157-times-perday (italics mine).
- <sup>12.</sup> Natasha Dow Schüll, Addiction by Design: Machine Gambling in Las Vegas (Princeton, NJ: Princeton University Press, 2014), 166–67.
- <sup>13.</sup> Schüll, Addiction by Design, 160.
- <sup>14.</sup> Natasha Dow Schüll, "Beware: 'Machine Zone' Ahead," Washington Post, July 6, 2008, http://www.washingtonpost.com/wp-
- dyn/content/article/2008/07/04/AR2008070402134.html (italics mine).
- <sup>15.</sup> See Schüll, Addiction by Design, 174.
- <sup>16.</sup> Alex Hern, "'Never Get High on Your Own Supply'—Why Social Media Bosses Don't Use Social Media," Guardian, January 23, 2018,
- http://www.theguardian.com/media/2018/jan/23/never-get-high-on-your-own-supply-why-social-media-bosses-dont-use-social-media.
- <sup>17.</sup> Jessica Contrera, "This Is What It's Like to Grow Up in the Age of Likes, Lols and Longing," Washington Post, May 25, 2016, <a href="http://www.washingtonpost.com/sf/style/2016/05/25/13-right-now-this-is-what-its-like-to-grow-up-in-the-age-of-likes-lols-and-longing">http://www.washingtonpost.com/sf/style/2016/05/25/13-right-now-this-is-what-its-like-to-grow-up-in-the-age-of-likes-lols-and-longing</a>.

- <sup>18.</sup> Granville Stanley Hall, Adolescence: Its Psychology and Its Relations to Physiology, Anthropology, Sociology, Sex, Crime, Religion and Education (Memphis, TN: General Books, 2013), 1:3.
- <sup>19.</sup> Hall, Adolescence, 1:84.
- <sup>20.</sup> Erik H. Erikson, Identity and the Life Cycle (New York: W. W. Norton, 1994), 126–27. See also Erik H. Erikson, Identity: Youth and Crisis (New York: W. W. Norton, 1994), especially 128–35.
- <sup>21.</sup> For an introduction to this concept, see Jeffrey Jensen Arnett, Emerging Adulthood: The Winding Road from the Late Teens Through the Twenties (Oxford: Oxford University Press, 2006).
- <sup>22.</sup> See, for example, Laurence Steinberg and Richard M. Lerner, "The Scientific Scientific Study of Adolescence: A Brief History," Journal of Early Adolescence 24, no. 1 (2004): 45–54, https://doi.org/10.1177/0272431603260879; Arnett, Emerging Adulthood; Daniel Lapsley and Ryan D. Woodbury, "Social Cognitive Development in Emerging Adulthood," in The Oxford Handbook of Emerging Adulthood (Oxford: Oxford University Press, 2015); Wim Meeus, "Adolescent Psychosocial Development: A Review of Longitudinal Models and Research," Developmental Psychology 52, no. 12 (2016): 1969–93, https://doi.org/10.1037/dev0000243; Jeffrey Jensen Arnett et al., Debating Emerging Adulthood: Stage or Process? (Oxford: Oxford University Press, 2011).
- <sup>23.</sup> Dan P. McAdams, "Life Authorship in Emerging Adulthood," in The Oxford Handbook of Emerging Adulthood (Oxford: Oxford University Press, 2015), 438.
- <sup>24.</sup> Lapsley and Woodbury, "Social Cognitive Development," 152.
- <sup>25.</sup> Lapsley and Woodbury, 155. Academic discussions of the individuation-attachment balance frequently turn on questions of culture. How universal are these developmental insights? A passage from Lapsley and Woodbury's review addresses this question in way that I find balanced and reasonable: How individuation plays out in different ethnoracial groups, in different cultural settings, and within national boundaries or in cross-national samples, are all matters of empirical inquiry. But the tension between agency and communion is a basic duality of human existence (Bakan, 1966) in our view. How it is calibrated may well show variability across cultures. Some societies may prioritize communion, but agency is not thereby neglected. Other societies may prioritize agency, but the yearning for attachment, communion, and bonding is never absent. Moreover, how agency-communion is manifested will vary within the life course of the self-same individual, depending on relational status, developmental priorities, or life circumstances. However the compromise is struck between agency and communion, emerging adulthood is the developmental period during which the hard bargaining will have to take place, with important implications for later adjustment in adulthood. The reference in this extract is to David Bakan, The Duality of Human Existence: Isolation and Communion in Western Man (Boston: Beacon, 1966).
- <sup>26.</sup> Robert Kegan, The Evolving Self: Problem and Process in Human Development (Cambridge, MA: Harvard University Press, 1982), 96. See the discussion on 95–100.
- <sup>27.</sup> Erikson, Identity: Youth and Crisis, 130.
- <sup>28.</sup> Kegan, The Evolving Self, 19.
- <sup>29.</sup> Lapsley and Woodbury, "Social Cognitive Development," 152.
- <sup>30.</sup> danah boyd, It's Complicated: The Social Lives of Networked Teens (New Haven, CT: Yale University Press, 2014), 8.

- <sup>31</sup>. Chris Nodder, Evil by Design: Interaction Design to Lead Us into Temptation (Indianapolis: Wiley, 2013), xv.
- <sup>32.</sup> Lapsley and Woodbury, "Social Cognitive Development," 152.
- <sup>33.</sup> Nodder, Evil by Design, 5.
- <sup>34.</sup> "What's the History of the Awesome Button (That Eventually Became the Like Button) on Facebook?" Quora, September 19, 2017, <a href="https://www.quora.com/Whats-the-history-of-the-Awesome-Button-that-eventually-became-the-Like-button-on-Facebook">https://www.quora.com/Whats-the-history-of-the-Awesome-Button-that-eventually-became-the-Like-button-on-Facebook</a>.
- <sup>35.</sup> See John Paul Titlow, "How Instagram Learns from Your Likes to Keep You Hooked," Fast Company, July 7, 2017, https://www.fastcompany.com/4043 4598/how-instagram-learns-from-your-likes-to-keep-you-hooked.
- <sup>36.</sup> Adam Alter, Irresistible: The Rise of Addictive Technology and the Business of Keeping Us Hooked (New York: Penguin, 2017), 128.
- <sup>37.</sup> Josh Constine, "How Facebook News Feed Works," TechCrunch, September 6, 2016, http://social.techcrunch.com/2016/09/06/ultimate-guide-to-the-news-feed.
- <sup>38.</sup> Michael Arrington, "Facebook Users Revolt, Facebook Replies," TechCrunch, <a href="http://social.techcrunch.com/2006/09/06/facebook-users-revolt-facebook-replies">http://social.techcrunch.com/2006/09/06/facebook-users-revolt-facebook-replies</a>.
- <sup>39.</sup> Victor Luckerson, "Here's How Your Facebook News Feed Actually Works," Time, July 9, 2015, http://time.com/collection-post/3950525/facebook-news-feed-algorithm.
- <sup>40.</sup> See Constine, "How Facebook News Feed Works." The quotation is from Will Oremus, "Who Controls Your Facebook Feed," Slate, January 3, 2016,
- http://www.slate.com/articles/technology/cover\_story/2016/01/how\_facebook\_s\_news\_feed algorithm works.html.
- <sup>41.</sup> Constine, "How Facebook News Feed Works."
- <sup>42.</sup> See Luckerson, "Here's How Your Facebook News Feed Actually Works."
- <sup>43.</sup> See Oremus, "Who Controls Your Facebook Facebook Feed."
- <sup>44.</sup> Alessandro Acquisti, Laura Brandimarte, and George Loewenstein, "Privacy and Human Behavior in the Age of Information," Science 347, no. 6221 (2015): 509–14, https://doi.org/10.1126/science.aaa1465.
- <sup>45.</sup> Jerry Suls and Ladd Wheeler, "Social Comparison Theory," in Theories of Social Psychology, ed. Paul A. M. Van Lange, Arie W. Kruglanski, and E. Tory Higgins, vol. 2 (Thousand Oaks, CA: Sage, 2012), 460–82.
- <sup>46.</sup> David R. Mettee and John Riskind, "Size of Defeat and Liking for Superior and Similar Ability Competitors," Journal of Experimental Social Psychology 10, no. 4 (1974): 333–51; See also T. Mussweiler and K. Rütter, "What Friends Are For! The Use of Routine Standards in Social Comparison," Journal of Personality and Social Psychology 85, no. 3 (2003): 467–81.
- <sup>47.</sup> Suls and Wheeler, "Social Comparison Theory."
- <sup>48.</sup> K. Hennigan and L. Heath, "Impact of the Introduction of Television on Crime in the United States: Empirical Findings and Theoretical Implications," Journal of Personality and Social Psychology 42, no. 3 (1982): 461–77; Hyeseung Yang and Mary Beth Oliver, "Exploring the Effects of Television Viewing on Perceived Life Quality: A Combined Perspective of Material Value and Upward Social Comparison," Mass Communication and Society 13, no. 2 (2010): 118–38.
- <sup>49.</sup> Amanda L. Forest and Joanne V. Wood, "When Social Networking Is Not Working," Psychological Science 23, no. 3 (2012): 295–302; Lin Qiu et al., "Putting Their Best Foot

- Forward: Emotional Disclosure on Facebook," Cyberpsychology, Behavior, and Social Networking 15, no. 10 (2012): 569–72.
- <sup>50.</sup> Jiangmeng Liu et al., "Do Our Facebook Friends Make Us Feel Worse? A Study of Social Comparison and Emotion," Human Communication Research 42, no. 4 (2016): 619–40, https://doi.org/10.1111/hcre.12090.
- <sup>51.</sup> Andrew K. Przybylski et al., "Motivational, Emotional, and Behavioral Correlates of Fear of Missing Out," Computers in Human Behavior 29, no. 4 (2013): 1841–48, https://doi.org/10.1016/j.chb.2013.02.014.
- <sup>52.</sup> Qin-Xue Liu et al., "Need Satisfaction and Adolescent Pathological Internet Use: Comparison of Satisfaction Perceived Online and Offline," Computers in Human Behavior 55 (February 2016): 695–700, https://doi.org/10.1016/j.chb.2015.09.048; Dorit Alt, "College Students' Academic Motivation, Media Engagement and Fear of Missing Out," Computers in Human Behavior 49 (August 2015): 111–19, https://doi.org/10.1016/j.chb.2015.02.057; Roselyn J. Lee-Won, Leo Herzog, and Sung Gwan Park, "Hooked on Facebook: The Role of Social Anxiety and Need for Social Assurance in Problematic Use of Facebook," Cyberpsychology, Behavior, and Social Networking 18, no. 10 (2015): 567–74, https://doi.org/10.1089/cyber.2015.0002; Jon D. Elhai et al., "Fear of Missing Out, Need for Touch, Anxiety and Depression Are Related to Problematic Smartphone Use," Computers in Human Behavior 63 (October 2016): 509–16, https://doi.org/10.1016/j.chb.2016.05.079.
- <sup>53</sup>. Nina Haferkamp and Nicole C. Krämer, "Social Comparison 2.0: Examining the Effects of Online Profiles on Social-Networking Sites," Cyberpsychology, Behavior and Social Networking 14, no. 5 (2011): 309–14, <a href="https://doi.org/10.1089/cyber.2010.0120">https://doi.org/10.1089/cyber.2010.0120</a>. See also Helmut Appel, Alexander L. Gerlach, and Jan Crusius, "The Interplay Between Facebook Use, Social Comparison, Envy, and Depression," Current Opinion in Psychology 9 (June 2016): 44–49, <a href="https://doi.org/10.1016/j.copsyc.2015.10.006">https://doi.org/10.1016/j.copsyc.2015.10.006</a>.
- <sup>54.</sup> Ethan Kross et al., "Facebook Use Predicts Declines in Subjective Well-Being in Young Adults," PLoS ONE 8, no. 8 (2013): e69841, <a href="https://doi.org/10.1371/journal.pone.0069841">https://doi.org/10.1371/journal.pone.0069841</a>.
- <sup>55.</sup> Hanna Krasnova et al., "Envy on Facebook: A Hidden Threat to Users' Life Satisfaction?" Wirtschaftsinformatik Proceedings 2013 92 (January 1, 2013),
- http://aisel.aisnet.org/wi2013/92; Christina Sagioglou and Tobias Greitemeyer, "Facebook's Emotional Consequences: Why Facebook Causes a Decrease in Mood and Why People Still Use It," Computers in Human Behavior 35 (June 2014): 359–63, https://doi.org/10.1016/j.chb.2014.03.003.
- <sup>56.</sup> Edson C. Tandoc Jr., Patrick Ferruci, and Margaret Duffy, "Facebook Use, Envy, and Depression Among College Students: Is Facebooking Depressing?" Computers in Human Behavior 43 (February 2015): 139–46.
- <sup>57.</sup> Adriana M. Manago et al., "Facebook Involvement, Objectified Body Consciousness, Body Shame, and Sexual Assertiveness in College Women and Men," Springer 72, nos. 1–2 (2014): 1–14, https://doi.org/10.1007/s11199-014-0441-1.
- <sup>58.</sup> Jan-Erik Lönnqvist and Fenne große Deters, "Facebook Friends, Subjective Well-Being, Social Support, and Personality," Computers in Human Behavior 55 (February 2016): 113–20, https://doi.org/10.1016/j.chb.2015.09.002; Daniel C. Feiler and Adam M. Kleinbaum, "Popularity, Similarity, and the Network Extraversion Bias," Psychological Science 26, no. 5 (2015): 593–603, https://doi.org/10.1177/0956797615569580.

- <sup>59.</sup> Brian A. Primack et al., "Social Media Use and Perceived Social Isolation Among Young Adults in the U.S.," American Journal of Preventive Medicine 53, no. 1 (2017): 1–8, https://doi.org/10.1016/j.amepre.2017.01.010; Taylor Argo and Lisa Lowery, "The Effects of Social Media on Adolescent Health and Well-Being," Journal of Adolescent Health 60, no. 2 (2017): S75–76, https://doi.org/10.1016/j.jadohealth.2016.10.331; Elizabeth M Seabrook, Margaret L. Kern, and Nikki S. Rickard, "Social Networking Sites, Depression, and Anxiety: A Systematic Review," JMIR Mental Health 3, no. 4 (2016): e50, https://doi.org/10.2196/mental.5842.
- <sup>60.</sup> Holly B. Shakya and Nicholas A. Christakis, "Association of Facebook Use with Compromised Well-Being: A Longitudinal Study," American Journal of Epidemiology, January 16, 2017, https://doi.org/10.1093/aje/kww189.
- <sup>61.</sup> Bernd Heinrich, The Homing Instinct (Boston: Houghton Mifflin Harcourt, 2014), 298–99.
- <sup>62.</sup> Erving Goffman, The Presentation of Self in Everyday Life (New York: Anchor, 1959), 112–32.
- <sup>63.</sup> There is an extensive literature on this topic, but two articles that specifically reference "chilling effects" in social media are Sauvik Das and Adam Kramer, "Self-Censorship on Facebook," in Proceedings of the Seventh International AAAI Conference on Weblogs and Social Media, 2013; Alice E. Marwick and danah boyd, "I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, Collapse, and the Imagined Audience," New Media & Society 13, no. 1 (2011): 114–33.
- <sup>64.</sup> Shoshana Zuboff, file note, November 9, 2017, Queen's University, Kingston, Ontario.
- <sup>65</sup>. Ben Marder, Adam Joinson, Avi Shankar, and David Houghton, "The Extended 'Chilling' Effect of Facebook: The Cold Reality of Ubiquitous Social Networking," Computers in Human Behavior 60 (July 1, 2016): 582–92, https://doi.org/10.1016/j.chb.2016.02.097.
- <sup>66.</sup> Stanley Milgram and Thomas Blass, The Individual in a Social World: Essays and Experiments, 3rd ed. (London: Pinter & Martin, 2010), xxi–xxiii.