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Growth's Imagination: Startups and the Cruel Intimacy of the Internet's Business Model

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Introduction

In September 2014, Sam Altman welcomed a room of Stanford undergraduates to the first session of an advanced computer science course titled *How to Start a Startup* (henceforth, 'Startup School'). At the time, Altman was President of Y Combinator, a startup 'accelerator' with an outsized presence in Silicon Valley's high tech and venture capital communities. Like any good lecturer, Altman immediately established his authority and identified course goals. Only nine years beforehand, he told them, he had also studied computer science at Stanford. After dropping out to found a startup, he sold it and turned to investing. By 2014, Altman and his Y Combinator partners had invested in more than 700 startups. While most of the guidance they offered founders was startup-specific, approximately 30 per cent, Altman estimated, was generally applicable. With Startup School, he and his guest lecturers – each a Y Combinator partner or alumni with experience creating a 'billion dollars-plus' company – would now publicly share that knowledge for the first time. Reproducing the talks given to Y Combinator's own participants, Startup School would impart the formerly privileged practical knowledge needed to appreciate startups as 'the way of the future', and pursue that distinctive entrepreneurial aspiration, 'hyper growth and eventually building a very large company'. Biographically aligning his students' present with his own past, Altman's introduction diagrammed an imaginative pathway towards their own future-saturated futures. It thus provided a taste of the strategic labour in and of entrepreneurial time (see Munn, 1992; Bear, 2014,

2016), which Startup School reveals to be central to venture capitalist–entrepreneur relations.

Despite my husband's occasional hopes, when I watched the video recordings of *How to Start a Startup* in 2017, posted to YouTube in testament to the startup gospel, it was not out of latent entrepreneurial zeal. Rather, as part of an ethnographic study of privacy as it has been taken up as an object of technological intervention in Silicon Valley, I was tracking an increasingly powerful cultural figure of recent origin, understood within tech communities to be implicated in the problem of privacy's future. American law and popular culture have long figured privacy's fate as intertwined with technological progress. Since the 1890s, Americans have regularly responded to new communications technologies, including photography, the telegraph, and the telephone, as potentially 'fatal' privacy threats (Nelson, 2002; Nissenbaum, 2010). Recent decades may have seen a tempering in the public outrage precipitated by privacy violations (Zuboff, 2019, p 20). Even so, since the 1960s, Americans have anxiously catalogued the new forms of public and private surveillance facilitated by computers, digital databases, and the internet (Brin, 1998; Nissenbaum, 2010).

Nonetheless, between 2014 and 2018, as I prepared for and conducted fieldwork among corporate privacy engineers in San Francisco and beyond, my interlocutors consistently cited not technology, but rather something like technology's animating value logic when naming the ultimate cause of privacy's decline. Across blogs, tweets, conference presentations, and interviews, internet engineers and computer scientists professionally engaged in preserving privacy, characterized its ongoing erosion as a structural feature of what they sometimes called 'the internet's business model' (see, for example, Schneier, 2013). Under this logic, if the commercial internet has developed into a system of total surveillance (Masco, 2017), it is neither because of some inherent feature of internet technology, nor because 'Zuckerberg, Brin and Page are scheming, sinister masterminds' (Zuckerman, 2014). Rather it is because the surveillance-based advertising that internet corporations adopt to 'capture' value from the users attracted to their (apparently free) content and services compels them to collect ever-more invasive personal data.

Pioneered by Google following the 2000 dot.com crash (Zuboff, 2019), by 2016, the internet's business model accounted for a preponderance of the annual revenue generated by both Silicon Valley's iconic startups and the web's sprawling long-tail of individual websites. When I arrived in San Francisco in October that year, the privacy engineers I met, and the broader tech communities in which they circulated, had identified the model as the source of the harms they increasingly recognized to flow from the internet. Even as they laboured to build privacy protections into tech products and services, they were largely resigned to the idea that the web as we know

it – as a 'free', universally accessible, global information commons (Berners-Lee et al, 1999) – could no more survive without the model than it could without its underlying physical infrastructure. To secure privacy's future, they said, a new business model had to be found, one capable of replacing surveillance-based ad targeting as the default means of funding the web. At once inevitable doom and potential salvation, the business model concept defined an imaginative limit to Silicon Valley's techno-moral aspirations.

Technology, of course, has never stood alone in the rogues' gallery of American privacy. Privacy's foes include the institutions and logics of American policing (Browne, 2015) and national security (Masco, 2017). The public's supposed moral failings – its embrace of self-disclosure (boyd, 2014) and 'refusal' to take personal responsibility for privacy – continually vex privacy's defenders. In their seminal 1890 call for legal privacy rights in the US, Warren and Brandeis acknowledged that privacy-threatening technologies co-emerge with 'novel business practices'. Even so, the business model's rapid emergence as a culturally legible explanation for privacy's decline marks a historical shift in both American understandings of privacy and theories of corporate malfeasance.[1]

At first pass, business model-based explanations for privacy's decline sidestep the popular American treatment of technology as an autonomous, socially determinative force (Smith, 1994). In so doing, however, they trade one such force for another. Such explanations deflect responsibility for the internet's harms away from its technologies, but also from the entrepreneurs, product managers, engineers, and corporations professionally invested in it as a commercial medium. Business model-based explanations gesture towards an indictment of capitalism, but in highly circumscribed form, limiting critique to a situated competitive strategy pioneered by, and closely associated with, the venture capital-backed corporate form.

Business school professor Shoshana Zuboff argues that a parasitic logic of accumulation has overtaken the commercial internet, inaugurating an increasingly hegemonic economic order, an 'age of surveillance capitalism' (Zuboff, 2019). Zuboff's theory broadly aligns with my interlocutors' analysis of the internet's business model. While business models figure peripherally in her account, Zuboff similarly characterizes internet companies as economically beholden to the ever-intensifying surveillance of human behaviour. Across 700 pages, she considers how technology companies unilaterally claimed human experience as raw materials of capitalist accumulation. Rejecting technological determinism, Zuboff characterizes surveillance capitalism as the product of specific individuals (2019, pp 85–9). She further catalogues a set of political, economic, and technological circumstances, and institutional forms and strategies which, she argues, respectively, cleared the ground for surveillance capitalism and shepherded its emergence.

Less clear, in the partially articulated accounts of Zuboff and privacy engineers, are the institutionally situated affective processes and ethical claims in play. Startups by definition have no history of revenue and, often, no actual products. Investors value them on the basis of narratively elaborated, future-oriented abstractions like 'the felt possible of future … profit' (Sunder Rajan, 2007, p 19). If capitalism is generally defined by actors' systemic orientation towards open if uncertain futures' (Beckert, 2016), this is doubly true of speculative ventures like internet startups. According to Laura Bear (2020), as a form of future-oriented labour, speculation seeks to accumulate capital by intervening in the ethical orders that underwrite economic action. In explaining surveillance capitalism's spread, Zuboff (2019, p 165) cites the 'palpable magnetism' of Google and Facebook's early success. She provides little insight, though, into the institutional structures and interactions through which entrepreneurs become reconciled to surveillance-based business practices as justified, if not required, by some compelling image of the social good.

In this chapter, I attempt to recuperate the moral imaginaries and affective labour obscured in these accounts through an ethnographic study of the business model. In so doing, I take up this volume's call to attend to changing contemporary configurations of surveillance and time. I do this, however, by considering not how people use surveillance technology to manage the rhythms of life, but rather how surveillance emerges from the efforts of entrepreneurs, under venture capitalists' tutelage, to summon flows of speculative capital by managing the contradictory rhythms of technological development, market competition, and government regulation. First, tracing the brief history of the business model concept, I show that management experts have come to valorize business models in general as a vital domain of strategic corporate creativity and determinant of technological success. Despite this, business models are only ambiguously present in the reflexive mythology of startup success narrated in Startup School. Attending to this mythology, I draw out the distinctive figure of exponential corporate growth that investors like Altman promote, in the place of the internet's business model, as both normative ideal and pragmatic technique for achieving startup success. Detailing the 'sociotechnical imaginary' (Jasanoff, 2015) enacted through such veneration, I argue that the pathologies attributed to the internet's business model are better understood as emerging from the way Silicon Valley's socially authoritative stories of growth take the model up, structuring its temporal logic and suturing it to a drive for totalizing accumulation. In the concluding section, I shift focus to the 'unscalable' interpersonal work that Startup School describes as key to startups' distinctive capacity for realizing the future in the present. In so doing, I identify a recurrent cycle of what Berlant (2011) might call cruelly intimate solicitation, seduction, and betrayal as a key temporal experience of

the modern internet, and show how it emerges from entrepreneurs' attempts to mediate the conflicting rhythms of technology, the market, users, and venture capital itself.

'Say it and move on'

For my interlocutors, the internet's business model has become a necessary rubric through which to understand the relationship between privacy, the internet, and technology corporations. It bears observation, therefore, that the business model concept originated only in the mid-1970s. According to scholars of corporate management, engineers and economists first deployed the term to describe the novel use of electronic spreadsheets to model the likely financial effects of business operation changes (Magretta, 2002). In the mid-1990s, when the term entered the public lexicon, it did so alongside the internet's commercialization. Circa 1995–2000, technology entrepreneurs, investors, and journalists used the term heterogeneously as a stand-in for a company's revenue model and to refer to the new transaction and pricing forms introduced by online commerce[2] (Porter, 2001). In his 2000 account of wealth creation in Silicon Valley, journalist Michael Lewis (2000, p 256) thus dismissed the business model as an obfuscatory buzzword of the dot.com bubble: 'it glorified all manner of half-baked plans. All it really meant was how you planned to make money.'

Following the 2000 dot.com crash, when the initial period of internet-related market euphoria concluded, the business model took on the more precise meaning it carries today. Management professors and consultants converged on a definition of business models as simplified, conceptual representations of a corporation's sustaining value logic (Fielt, 2013). Business models, so defined, model how corporations reproduce themselves, first creating and delivering value to users and then capturing part of it as revenue and profit.

Whatever ambiguities still surround the concept, the corporate management literature uniformly insists that business models matter. The literature specifically portrays business models as a vital domain of strategic creativity, one potentially more important than technology itself to startup success (see McGrath, 2010). So valorized, business models have become an object of intense public interest, elaboration, and formalization. Business schools and consultancies teach business model innovation. The internet is rife with advice on business model design and selection.

Given the cultural ferment surrounding them, business models are notably absent from Silicon Valley's quasi-archival materials[3] and reflexive mythology. That is, when one observes entrepreneurs and investors discussing startups, or reviews examples of startup business models, there is little to suggest that they wield the influence over corporate behaviour that some attribute to them.

Consider as illustration the stories told in Startup School about achieving startup success. Across 20 lectures, Startup School dedicated sessions to topics including product development, hiring, company culture, strategy, and management. Business models, however, merited neither their own class nor recognition in Sam Altman's list of the key contributors to startup success ('a great idea, a great product, a great team, and great execution'). Indeed, business models received sustained consideration only twice. In the twelfth lecture, for example, Aaron Levie, co-founder of Box, a file management company, discussed business models as a means of managing technological revolution. Aligning with the corporate management literature, Levie observed that when new enabling technologies disrupt an industry, businesses adapt by innovating not just on their products but also on their business model. Levie separately clarified, however, that startups serving consumers (rather than other businesses) really only have two options. They must either charge directly for their products or 'provide advertising' on them, that is, adopt the internet's business model.

Later, in Lecture 19, Michael Seibel, a Y Combinator partner and former entrepreneur, discussed the role of business models in fundraising. According to Seibel, to secure venture capital, entrepreneurs must always be prepared with a funding pitch no more than two minutes long. Using the simplest language possible, he specified, entrepreneurs should first explain in one sentence 'what your company does'. In a second sentence, entrepreneurs should then describe their target market's size such that investors immediately understand, 'Oh wait, if we're big, if we really blow this company up, it could be worth billions of dollars.' In sentence three, entrepreneurs address 'traction', communicating that they are 'moving fast and that this isn't some long slog'. Only subsequently, after sharing the unique market insight crystallizing 'all the reasons you guys are going to kill the competitors', should entrepreneurs answer – again in one sentence – 'How does your company make money?'.

> You know your business model. I see so many founders run away from this question because they think things like, 'If I say advertising people are going to be like, "Oh, that's stupid."' Just say it! Don't run away. If it's advertising, say advertising … This was a check mark that I just wanted to write: 'And then I am going to monetize it.' Instead I am writing a big question mark. So do the thing that everyone else in your industry does to monetize 95 per cent of the time. Say it and move on.

Seibel's commentary here confirms a role for business models in securing venture capital financing. Like Levie, however, Seibel suggests this role is largely formal. In Seibel's depiction, pitch meetings are opportunities to secure a startup's future by conjuring promissory visions of its potential

(see Sunder Rajan, 2007). To achieve this effect, a pitch must induce what we could consider an epistemic and affective change in investors, an 'Aha! moment' indexing new market insight and palpable fantasies of future wealth. In Seibel's telling, however, no particular burden falls on the business model in narratively conjuring such imaginative pathways towards market control. As he elaborated in a 2016 blog post, unless a startup's product somehow reconfigures its market, founders should be 'honest with themselves' (Seibel, 2016). 'By and large', startups that haven't 'figured it out' during early fundraising are going to 'make money by growing big and turning on advertising'. Founders should just admit they will monetize with advertising 'when clearly that [is] the only answer'. From this perspective, when pitching, the question of the business model speaks less to a startup's money-making potential than to its founder's perceived competencies. Specifically, by claiming the internet's business model, founders acknowledge that the 'monetization problem' (Zuboff, 2019, pp 73–85) has already been 'figured out'. They thereby demonstrate their ability to adhere to the distinctive economy of attention and effort, which as we shall see, venture capitalists promote as a condition of entrepreneurial success.

Exponential growth

I include Seibel's lecture here to foreground the ambiguity, even the hint of disdain, that Silicon Valley gatekeepers attach to the business model concept, but also to draw out the alternative figure they valorize in its stead. Note how just as he diagnoses the internet's business model with a certain negative charisma, Seibel indexes a significant investment in an animating ideal of 'growing big'. Recall that in his introductory remarks Sam Altman similarly identified 'hyper growth' as the aspiration uniting Y Combinator-funded entrepreneurs. One might reasonably assume growth to be the goal of any capitalist enterprise, but growth as mobilized here takes a particular form that is central to Silicon Valley's self-understanding. According to Y Combinator's founder, Paul Graham, as a kind of corporation, startups are in fact distinguished not by producing technology, being newly incorporated, or relying on venture capital, but by being designed from inception for rapid growth. Under Graham's (2012) influential mantra, 'The only essential thing is growth. Everything else we associate with startups follows from growth.'

The organization of high-tech communities around this ideal is evidenced everywhere in Silicon Valley. As Michael Seibel explained, for example, demonstrating growth's emergence ('traction') is necessary to attract initial venture capital interest. It's on growth's basis that investors ultimately bestow stratospheric valuations on businesses with no revenue history (Graham, 2012; Beckert, 2016). Meanwhile, under headlines about the next startup

'unicorn', business and technology journalists feverishly track who has growth and who'll have it next (see, for example, Feldman, 2023).

The growth ideal thus valorized in Y Combinator's orbit is characterized by totalizing ambition. At a 2017 conference for female entrepreneurs, Y Combinator partner Jessica Livingston (2017) observed that one day you start a site for college students, 'and pretty soon you realize you could expand to sign up the whole world if you wanted to'. If Livingston thus posited planetary reach as a possible startup outcome, Sam Altman embraced it as an explicit goal. While most successful startups initially focus on a small market, he lectured, a startup's core idea should be one that can expand in ambition and eventually create 'a path to world domination'. An entrepreneur should be able to say regarding her initial idea, 'Today only this small subset of users are going to use my product, but I'm going to get all of them. And in the future almost everyone is going to use my product.'

The totalizing ambition of growth extends to the dimension of time. As suggested, Y Combinator's partners predicate success not just on growth, but growth that is specifically hyper, rapid, even 'exponential'. Growth in such formulations is sublime, occurring at speeds, which *pace* Altman (2014), exceed human experience and comprehension. As Silicon Valley's critics rightly note, exponential growth thus also necessarily exceeds the regulatory grasp of human institutions (see Zuboff, 2019). But as depicted in Startup School, pursuit of the exponential is keyed not to the temporality of governance, but rather to the temporalities of technology and the market. On the one hand, startups must grow exponentially so entrepreneurs can stay abreast of the 'leading edge' of their technological field.[4] On the other hand, good startup ideas often turn on insights into future market growth. Only through exponential growth can startups keep pace with their target markets as they expand, thereby crowding out potential competitors. In both instances, implicit in the ideal of exponential growth is an understanding of time as a destructive, external obstacle that must be overcome to accumulate and realize value (see Bear, 2014).[5] Reformulated in the conceptual language of this volume, we might say that exponential growth is animated by a belief that only by drawing the distinct rhythms of startup development, technological progress, market competition, and government regulation into certain difficult-to-achieve configurations can entrepreneurs avoid the arrhythmic collapse that awaits the majority of internet startups.

By now, the tendency of high-tech markets to discount present revenue in favour of speculative future profit is widely recognized (Fortun, 2001; Sunder Rajan, 2007; Beckert, 2016, pp 135–53). Observe, however, that Startup School's growth stories systemically orient entrepreneurs towards the future in multiple ways. Such discounting of the present is evident, for example, in the explanation offered for why Silicon Valley's best product ideas often initially appear 'trivial' or 'pointless' (Altman, 2014). According to Altman,

given startups' globalized competitive environment, when entrepreneurs identify a potential product that 'sound[s] really good', that is, addresses an obvious need, they should assume 'Google or Facebook will do it'. The supposed strangeness of Silicon Valley's best ideas thus only appears as such when evaluated according to *present* consumer sensibilities. But, as indicated, the most promising startup ideas are understood to be those that address not today's markets, but markets as they will evolve in the future.

Future bias is further evident in the recommendation that entrepreneurs aspire to 'liv[e] in the future'. In his lecture on 'How to Have Ideas', for example, Paul Graham cautioned that intentionally trying to identify startup ideas at best produces ideas 'that are not only bad, but bad and plausible sounding'. Instead, he advised, entrepreneurs need to turn themselves into the kind of person that has startup ideas 'unconsciously'. Specifically, entrepreneurs should treat startups as an 'ulterior motive to curiosity' by developing domain expertise in some technological field and working on personally compelling problems. Thus figured, entrepreneurship involves the kind of ethical self-formation through the labour of creativity that Boellstorff (2008) calls creationist capitalism. 'If you think of technology', Graham said, 'as something that's spreading like a sort of fractal strain, every point on the edge represents an interesting problem.' To approach technology's leading edge is thus to outmanoeuvre the normal flow of time, effectively 'ratchet[ing]' oneself into the future where 'ideas that seem uncommonly prescient to others will seem obvious to you'.

In his work on the Indian and US biotech industries, Kaushik Sunder Rajan (2007) observes that an atmosphere of theological mystique permeates speculative capital. A hint of this mystique can be gleaned in Startup School's framing of entrepreneurship as a calling. In his lecture on 'Why to Start a Startup', Facebook co-founder Dustin Moskovitz thus described entrepreneurism as a kind of possession. The 'best reason' to start a startup, he argued, is 'basically you can't not do it'. The world needs it done 'and you're the right person to do it'.

Even so, Altman and his colleagues warn that initial startup ideas generally do not address the kind of mass future need required by growth. In Y Combinator's regular startup 'bootcamps', they explained, they thus require participants to draw themselves ever closer to such elusive ideas by using growth itself as a technique. Y Combinator's partners may tell entrepreneurs that revenue is the best metric to use in measuring growth. They recognize, however, that to attract a critical mass of initial users, and as a historical legacy of the form's 'new economy' origins (see Slater, 2000), most internet startups do not charge for products in their early life cycle. Y Combinator thus allows startups to measure growth on the basis of monthly users, or any other 'reasonable proxy' for the revenue they will generate 'whenever [they do] start trying to make money' (Graham, 2012). Startups 'live on growth,'

according to Altman, not because growth (in revenue) directly funds startup development, but in the sense that growth is the best 'indicator of a great product'.[6] As Graham elaborated in his 2012 blog, if a startup's initial idea is 'fairly good', it is often 'adjacent' to even better ideas. By 'optimizing for growth,' entrepreneurs can explore this extended ideational space, following 'the imagination of growth' to 'discover' startup ideas. Constantly modifying a startup's idea 'as necessary to keep hitting, say, 10% weekly growth', Graham wrote, will produce 'a quite different company than you meant to start. But anything that grows consistently at 10% a week is almost certainly a better idea than you started with'.

In its pragmatic form, growth operates as a divinatory key to the future, imposing an economy of attention and effort on entrepreneurs. As one might expect, this encompasses the new economy demand that entrepreneurs pursue goals on a passionate, 24/7 basis (see Thrift, 2001). But it also conditions the acceptable objects of entrepreneurial devotion during the different stages of startup development. In Startup School, Altman repeatedly addressed the optimal allocation of entrepreneurial time. Young entrepreneurs, he chided, frequently make the mistake of 'imitating all the outward forms of starting a startup'. They will 'rent a nice office in SoMa [South of Market]', network at conferences, and argue on social media. Meanwhile, they neglect 'the one thing that is actually essential, which is to make something people want'. Y Combinator thus instructs founders 'to work on their product, talk to users, exercise, eat and sleep, and very little else'.

'Investor storytime'

Thus far I have shown that privacy engineers recently converged on a novel explanation for privacy's decline, which centres on the business model, a potent new cultural figure attributed exceptional, if semi-naturalized, charismatic and causal powers. I then showed, however, that when tech entrepreneurs and investors discuss their vocation, business models largely recede from view. Instead, something of the devotional aura elsewhere attributed to the internet's business model (and business models generally) touches down on exponential growth. As just demonstrated, in its operation as ethics, episteme, and techne (Bear, 2016; 2020), growth conditions entrepreneurial being-in and orientation towards time. Through the stories of growth told by institutional authorities in symbolically potent settings like Startup School and Y Combinator bootcamps, entrepreneurs become attuned to the future as the seat of economic and social value. Under venture capitalists' tutelage in speculation, they train themselves to imaginatively access and realize the future by identifying and 'riding' technological and market 'waves', while deferring all tasks perceived to implicate the mere trappings of the startup form.

As should be clear, investors like Altman include the questions of a startup's business model, and of revenue in general, among such properly deferred distractions. Entrepreneurs who demonstrate revenue too soon risk being dismissed for wasting effort properly spent gobbling up market share. Through its role in organizing entrepreneurs' action in time, growth thus projects a temporal logic on startups. By authorizing, and indeed demanding, deferral of revenue until after a great product has been discovered, growth determines when in a startup's lifecycle the internet's business model becomes salient as an internal institutional concern, and when entrepreneurs must initiate the changes to a startup's systems, processes, and modes of user engagement required to 'turn the model on'. Conversely, the model's amenability to growth's temporal dictates, the perceived ease with which it can be institutionally, legally, and materially appended to a startup according to growth's time-reckoning (Munn, 1992), grounds its persistence as the internet's default. The model's temporal alignment to growth is thus as fundamental to its sociological presence and operation, as is the logic by which it extracts surplus value by surveilling human behaviour.

In this section, I pursue this analysis further, demonstrating that growth laminates onto the internet's business model the totalizing drive, which compels startups' continuous intensification of user surveillance. To this end, I propose we analyse Startup School's stories of growth as defining the contours of a sociotechnical imaginary, a 'collectively held, institutionally stabilized, and publicly performed vision … of desirable futures' (Jasanoff, 2015). Conceptually, sociotechnical imaginaries supplement the national imaginaries theorized by Charles Taylor and others by foregrounding the central roles of science and technology in enabling and sustaining idealized forms of social life. Under the sociotechnical imaginary rehearsed in Startup School, the future is, at once, a storehouse of deferred-yet-realizable value, a perpetually receding horizon of new consumer needs, and, per Graham, a resource to be imaginatively probed for insight into needs' fulfilment. Technology here enables new practical solutions to existing problems. As Aaron Levie described in Lecture 12, though, it also continually emerges from opportunistic entrepreneurial attempts to fill the gaps that technological disruptions open between 'between how things are done and how they can be done'. Startups figure as the 'way of the future,' per Altman, not just because of their proliferation circa 2014, but in the sense of being themselves a technology for actualizing the future in the present. If startups are indeed the optimal social technology for this purpose, it is because venture capital grants them temporal dispensation to cultivate the passionate user love from which mass markets are understood to emerge.

Analysing Startup School's stories of growth as constitutive performances of a sociotechnical imaginary addresses a gap in technologists' theory of the internet's business model. It suggests that for the prospect of a business

practice predicated on surveilling users to exert, per Zuboff, a palpable magnetism over technology entrepreneurs, imaginative work must enmesh it in a situated vision of the collective good (see Jasanoff, 2015, pp 5–8). To access the ethical vision implicated here, let us shift focus from the stories of self-identified Silicon Valley insiders to those of its insider critics. Consider first David Heinemeier Hansson, a Danish programmer and entrepreneur who co-founded the project management company, Basecamp. Hansson is one of a handful of programmer-entrepreneurs to develop a sustained public critique of Silicon Valley's idealization of exponential growth. In a blog post from 2017, he hypothesized that Silicon Valley's valorization of the future over the present justifies the recurrent social 'absolution' granted to internet corporations for their social harms. So long as they continue to demonstrate growth, he wrote, everything they do – every existing form of time-fullness they 'disrupt' – is *ipso facto* right: 'Mistakes may have been made, but tomorrow is an entirely new day, divorced from any of the days that went before it.'

In tidy recursive logic, Hansson traces growth's normative force to venture capital's own business model. Because most startups fail (Beckert, 2016, pp 132–3), this logic holds, venture capital investment funds only produce windfall returns if they include at least one blockbuster success (Graham, 2012; see Zuboff, 2019, p 73). To ensure this outcome, venture capitalists pressure all entrepreneurs to single-mindedly pursue growth regardless of its toll on self-respect, solidarity, or any other civic reason for collective enterprise.[7] Thus described, the felt necessity to pursue growth participates in an ethos of high-stakes gambling, but follows from the 'temporalizing' practices (Munn, 1992), which venture capitalists deploy to symbolically ground the institutionally recognized markers of startup success in the rhythms of venture capital's circulation.

If such temporalization acts as a disciplinary stick, Hansson suggests, it is accompanied by a moral carrot. In his 2017 blog, Hansson documented his decision to reject growth's path. He reports that when he decided to pursue mere profitability rather than growth and trimmed his startup's product portfolio, he was met with 'incredulity, or even anger'. Silicon Valley peers told him that if the eliminated businesses had financial promise, he was 'crazy to turn down growth'. Hansson interprets this response as reflecting the perception that entrepreneurs who refuse growth fail in a moral obligation to the startup community itself, or more precisely, to its collective affective and financial investment in 'all potential, all the time'. More generously, we might observe, the pragmatic use of growth taught in Startup School carries its own positive moral charge. Used as a proxy for a product's ability to fulfil consumer needs, growth appears to entrepreneurs and investors as a good in-itself. Nonetheless, by mobilizing the intellectual tradition, which represents corporate growth as coextensive with human

progress (Buck-Morss, 1995; Fourcade and Healy, 2007), growth forecloses scrutiny of the substantive social interests it ultimately serves. It displaces the speculative intensity, or winner-takes-all ethos, of venture capital with the spectacle of growth itself.

Through the ways they frame the future and link it to the past, sociotechnical imaginaries enable certain ways of thinking about possible worlds while restricting others (Jasanoff, 2015). Consider Maciej Ceglowski, founder of a popular digital archiving service. In a series of presentations at web development conferences since 2013, Ceglowski shared his own experience turning down growth, and established himself as one of Silicon Valley's most prominent critics of the internet's business model. In a 2014 keynote, Ceglowski took aim at the continual failure of this business model to deliver on its own limited promise. By 2014, Ceglowski estimated, the major internet companies had accumulated roughly a decade's worth of data on his browsing, search, and email habits. And yet the ads 'purchased with all this surveillance' remained 'shocking[ly] useless'. Websites continued to regularly target Ceglowski with ads for products that he already owned, or that were obviously intended for women, not men. Pointing to the constant proliferation of increasingly intrusive ad forms, Ceglowski rejected the industry claim that internet users in fact love targeted advertising. Each new historical ad form, he observed, from the banner ad, to pop-ups, and auto-playing videos, 'turn[s] out to be like poison ivy'. People 'click them once' and learn never to touch them again. Maintaining advertising's future promise thus forces it to constantly mutate, 'like the flu'.

In identifying this viral mutation, Ceglowski foregrounds the tension that exists between speculation's infinite promises and the always-inadequate capabilities of present material conditions (see Sunder Rajan, 2007, p 126). Ceglowski insists, however, that this tension, as manifested in targeted advertising's ongoing 'crappiness', does not undermine but rather sustains the internet's business model. Advertising, he explained, involves paying someone to convince a product's users that 'they'll be happy' if they buy it. What sustains startups, though, is not advertising, but a promissory form Ceglowski calls 'investor storytime'. In investor storytime, investors pay entrepreneurs to convince them how rich they will be when their startups finally start selling ads. It works by convincing investors 'that advertising in the future is going to be lucrative in ways it just isn't today'. Under its logic, any failure of advertising is simply grist for more convincing stories: 'It means there's vast room for improvement. So many stories to tell the investors.' To paraphrase Ceglowski: consumers may hate ads now but wait until we have more data to improve our targeting. When targeting does work, just imagine how much more valuable our ads would be if we could only secure more granular data. Silicon Valley chases personal data, from this perspective, 'Not because it's effective now, but because we need it to tell better stories'.

With his depiction of investor storytime, Ceglowski (2014) suggests that the relentlessly intensifying surveillance characteristic of Silicon Valley's internet companies follows not from the internet's business model so much as from how stories of growth take the model up, wedding it to a temporal logic, which renders the speculative promise at its core effectively irrefutable. Investor storytime, in this respect, bears productive comparison to the 'nearly perfect paranoid system' (Masco, 2014, p 20) under which US counterterror experts conjure endless images of existential future danger to justify ever-expanding security capacities.

Doing 'things that don't scale'

In 1998, while still PhD students, Google founders Sergey Brin and Larry Page published 'The Anatomy of a Large-Scale Hypertextual Web Search Engine', an ur-document of Silicon Valley. Anticipating both the web's rapid growth and the technical and institutional challenges this would entail, Brin and Page carefully described the features and applications of what would become Google search. In an appendix notable for its shift in topic and polemical tone, Brin and Page warned that the goals of advertising are irreconcilable with those of providing high-quality search results. They concluded, in a historical irony, that to prevent advertising from introducing inevitable bias into search results, search engines must never become subsumed into the corporate form.

During Startup School, when Y Combinator's lecturers addressed the internet's business model, they treated it as a *fait accompli*. For a professional class trained to build things they perceive to be missing from the world, this sense of inevitability likely contributes to the model's muted Silicon Valley presence. When Michael Seibel discussed business models, however, he suggested that something about the internet's business model specifically embarrasses entrepreneurs, causing them to dissemble and 'run away'. Indeed, many Silicon Valley programmer-entrepreneurs in addition to Brin and Page have historically opposed advertising as inherently hostile to the user experience and thus antithetical to engineering ideals. The list of startups founded by entrepreneurs explicitly opposed to surveillance-based advertising extends beyond Google to companies like Tumblr, WhatsApp, and Instagram. WhatsApp founder Jan Koum, who attributes his support for privacy to his childhood under Soviet surveillance, reportedly kept a handwritten note taped to his desk reading, 'No Ads! No Games! No Gimmicks!'. Nonetheless, under pressure from their new corporate owners, by 2018, each of these companies had implemented the internet's business model, suddenly turning on surveillance-driven revenue and betraying their founding commitments.

In this concluding section, I mobilize growth's imaginary once more to draw out a characteristic subjective experience of the modern commercial

internet, and show how it emerges from venture capitalists' temporalizing practices (see Bear, 2014, p 15). We have already seen how in training entrepreneurs to achieve exponential growth, venture capitalists engage in various forms of time-work (see also Kusk, Chapter 4, this volume), attuning entrepreneurs to the sometimes contradictory rhythms of technology, consumer markets, and venture capital itself. Here, by foregrounding investors' insistence that to build great products entrepreneurs must forge deeply attentive, mutually sympathetic relationships with initial users, I identify a further entanglement in this mix.

Despite Silicon Valley's popular association with efficiency and rationalization, when Startup School's lecturers described how to build a great product, they frequently used language closer to that of courtship than engineering. In the first class, for example, when Sam Altman stressed that entrepreneurs must devote their time to building a great product, he specified that it is better to start with a product a small number of people love than one that inspires moderate enthusiasm from a larger audience. As Startup School progressed, Altman and his guests insisted that to 'make [users] love what you're doing' entrepreneurs must, per Y Combinator's famous mantra, 'do things that don't scale'.

In Silicon Valley, 'scaling' refers to the process of building out a startup's institutional and technical capabilities as its users rapidly explode in number. Scaling involves a dual movement of material and institutional expansion – hiring technical, support, and managerial staff; securing more server capacity – followed by efficiency-achieving rationalization and automation. By contrast, doing things that don't scale means doing things 'by hand', person-to-person. When an entrepreneur stands on Palo Alto's streets, flagging down and convincing individual passers-by to download and try her new app, she is doing something that does not scale. Similarly, when an entrepreneur manually performs a service, which her new product purports to provide through yet-to-be-developed software, she is doing something that does not scale.

Doing things that don't scale may sound simply like doing business, but Silicon Valley abhors perceived inefficiencies as 'unscalable' blockages between entrepreneurs and the market. Individually persuading strangers may be a highly effective means of recruiting users, but one too time-consuming and labour-intensive to sustain exponential growth. Manually setting up webpages may cultivate customer trust, but is no way to tap the mass market demanded by growth's imagination.

Nonetheless, in a lecture on product development, Kevin Hale, a Y Combinator partner, attributed his first startup's success to building a product 'that people wanted to have a relationship with'. Based on this experience, Hale recommended approaching each moment of potential user–product interaction as an opportunity to 'seduce'. It is important to observe that such seduction, and the non-scalable activities it exemplifies, are exercises

in presence and patience, in attempting to enter into a 'mutuality of being' with initial users – a shared intersubjectivity under which what users experience also happens to the entrepreneur – reminiscent of Sahlins' (2013, p 2) definition of kinship. As Hale and his colleagues argued, to cultivate love, entrepreneurs must – for a limited time, but as long as possible – personally seek out initial users and get extremely close to them. Ideally, entrepreneurs should work in users' offices or homes. Barring such access, they should talk to users constantly, send countless emails, and give highly personalized product help. To ensure entrepreneurs remain 'directly exposed to users … and interacting with them in somewhat real time', Hale recommended taking personal responsibility for customer support. As he described it, routing customer calls directly to those building a technology aligns their respective temporal rhythms, forcing entrepreneurs to experience and react to customers' pain as their own. Such vigilant, labour-intensive care – care in the mode of Big Mother, as the editors of this volume might put it – enables entrepreneurs to test the worldly hypothesis represented by their startup idea against the product roadmap in users' minds, thereby refining their product into something a small number of users passionately love.

In doing things that don't scale, entrepreneurs seek to 'cultivate love' by showing a love above-and-beyond that generally thought possible from a corporation. In so doing, entrepreneurs enact startups as the kind of social actor capable of sympathetic fellow feeling, of exhibiting the moral concern and self-restraint otherwise attributed only to individual persons. As Graham acknowledges, this performative cultivation of love works primarily by implicit contrast to the dismal, opaque interactions that characterize the customer service of most 'mature' American companies. According to Graham (2013), Y Combinator has to teach entrepreneurs the importance of engaging on such intimate terms because, 'They've never experienced such attention themselves'. Their understanding of customer service is informed by the anonymous, bureaucratized misery that cable companies, airlines, and insurance companies, for example, routinely inflict on consumers. Against this backdrop, a startup's ability to speak to users through an entrepreneur's human voice carries a kind of magic, which Graham insists confers competitive advantage.

It is in the context of the intimate, temporally attuned relationships which entrepreneurs cultivate in pursuit of growth that the internet's business model ultimately intervenes. For startups that grow, the period of intimate courtship inevitably gives way to the imperatives of scale. As sincere as some entrepreneurs' disinterest in revenue may be, if they avail themselves of venture capital financing to amplify their technology's impact on the world, investors will inevitably demand they 'turn on' the revenue streams specified in their business model. That the potential represented by a rapidly growing user base, accrued under venture

capital's auspices, must inevitably be realized is an open secret of Silicon Valley, one obscured and disavowed by the mythological foregrounding of entrepreneurial curiosity and drive.

The rationalization and automation of person-to-person relations that follow when internet startups scale their operations, and turn on their business model, of course cannot fully purge user–corporate relations of intimacy. Forms of intimacy no doubt persist in the care and concern users exhibit towards internet services, and are powerfully present in the loyalties mediated by internet brands (Foster, 2007; Nakassis, 2013). The open secret of revenue, however, reveals the form of intimacy established by doing things that do not scale to be a cruel one. It is cruel in the sense that it enacts an optimistic vision of the world (Berlant, 2011), in which corporations treat customers as ends in themselves, but it does so under structural conditions which corporate actors know can never persist. It is cruel when cultivated in specific service to the internet's business model because unscalable interactions bind users to a speculative system, which in the course of normal operation will necessarily undermine their privacy, exposing them to targeted advertising's visceral intrusions and systematic attempts at behavioural manipulation.

Notes

[1] For decades, manufacturers suppressed public knowledge of cigarettes' role in millions of annual lung cancer-related deaths without attracting blame to 'the cigarette business model'. As illustrated by Enron's 2001 collapse and the 2015 Volkswagen emissions scandal, public opprobrium for corporate deception has more commonly centred on perceived moral and institutional pathologies, like personal greed and autocratic corporate culture.

[2] Examples include eBay's customer-to-customer auction and Priceline's reverse auction.

[3] Here I adapt for the startup context, Kelty's (2008) term for engineers' tendency to document and analyse their own roles in developing the internet.

[4] In this respect, growth derives social legitimacy and force by implicitly drawing upon the inexorable leaps in computing power that technologists attribute to Moore's Law (see Otsuki, 2016; Bear, 2020). Defined by Intel cofounder Gordon E. Moore in 1965, Moore's Law predicts, based on the regular increase in the number of transistors that can be placed on an integrated circuit, that the speed and capacity of computer CPUs will double every 18 months.

[5] Transhumanists similarly valorize the exponential for its perceived ability to transcend human finitude (Otsuki, 2016).

[6] Growth in these respects can be considered a form of techno-social manifest destiny that unfurls along material, institutional, symbolic, and economic dimensions. For startups that achieve traction, growth as measured in a core metric like monthly users – and as spectacularly staged for investors, using technologies of the imagination (Bear, 2020) like pitch decks and growth charts – necessarily stimulates growth of other kinds: in the numbers of a startup's employees, bureaucratic processes, and technological infrastructures; in its valuation; in the ambition and abstraction of its core idea; and so on.

[7] As Ho (2009) demonstrates, until the 1980s, approximately, US corporations were widely understood to be social institutions with obligations to multiple constituencies (beyond shareholders) and roots in local communities.

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