The Politics of Scale and Scaling
in Contemporary Chinese Governance and Venture Capitalism

by

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ABSTRACT

Drawing on three cumulative years of fieldwork I conducted in China with start-up entrepreneurs, venture capital investors (VCs), and local government officials, this dissertation investigates the intersection between Chinese governance, venture capitalism, and "big data"-driven technologies. Through a parallel study of how scale and scaling feature in China's nation building and the venture capitalist project, I elaborate on the notion of the "weight of scale": the simultaneous duality of scale as a resource and as a burden. I reveal how the impact of data-driven technologies such as artificial intelligence and machine learning extends beyond domain-specific applications, and show how sociotechnical imaginaries influenced and informed by these technologies crucially lend scientific authority to ways of configuring and organizing society. I highlight how "successful models that mostly fail" —– modes of operation involving massive trial-and-error with only a few spectacularly favorable outcomes —– have spread from VC to Chinese political life. Overall, this dissertation tells the story of how American VC domesticated Chinese investors and how China eventually came to domesticate the VC format to govern.

Thesis supervisor: Graham Jones
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Introduction

The Weight of Scale

This dissertation sits at the confluence of three major historical developments: the ascendance of China as a global power, venture capitalism's growing influence and clout, and the digitization of the global economy. Through more than three years of cumulative ethnographic fieldwork in China, I explore the way technologists, entrepreneurs, investors, and governments in China work together to domesticate models of business and finance originating in Silicon Valley. I demonstrate how — and investigate why — scale presents itself as a key analytical concern at a moment when China, venture capitalism (VC), and AI technologies are growing in global influence. Against the backdrop of an ongoing tech war between China and the United States, in which China seeks to achieve "AI supremacy," my research clarifies the role that the market — particularly VC finance — plays in its economic and technological ambitions. I argue that the pursuit and management of scale through converging instrumentalities of national policy, financial models, and technologies fundamentally change social ontologies.

My research's focus on scale has concrete resonance in contemporary China and significant implications for anthropology and social theory writ large. On the one hand, I investigate the implications of the state's claim that the scale of China's population and the volume of data that China can generate will deliver victory in the artificial intelligence (AI) arms race. On the other, I address why scale remains such a long-term conundrum in social sciences. Despite a profusion of

recent research on scale-making practices, the call Frederik Barth issued fifty years ago for a systematic way to qualitatively account for "the causes and consequences of differences in size and numbers in social systems" remains largely unanswered (1978).

A problematic tendency to correlate the scale of a society with its relative primitiveness or sophistication plagued the anthropological project in the early days of the discipline. Much subsequent anthropological research took what Nurit Bird-David calls a "scale-blind perspective" (2017). However, this has directed us away from critical considerations in social analysis. As venture capitalists and entrepreneurs have observed through the course of start-up companies' rapid transformation, working in a team of twenty is not the same as working in a large corporation among thousands of employees (Hoffman and Yeh 2018; Graham 2008). Similarly, being in a society of billions is qualitatively different from a society of hundreds. Scale matters.

Seminal recent work in anthropology has led the way in factoring scale back into anthropological endeavors, notably Carr and Lempert's edited collection *Scale: Discourse and Dimensions of Social Life* (2016). I add to this effort by taking as my central issue not just scale and scaling in ways that pertain to perspectives and acts of contextualization, but as what my interlocutors do and live with. China's scale is often cited as the source of its economic and political heft. In this dissertation, I point to what I call the "weight of scale": the simultaneous duality of the nation's vast scale as an immense resource and a nearly unbearable burden for both the governing and the governed.

This is a parallel study of how scale and scaling feature in both China's nation building and the venture capitalist project. While the social and physical world is not amenable to being scaled up and down in a nested fashion (Tsing 2012), in my work, I observed a nesting quality to how the objects of my study organized themselves. Early-stage start-ups and "scaled-up" tech companies take a trial-and-error approach to developing their products and their business. For VC investors, start-ups are instantiations of a large-scale trial-and-error approach in their investment portfolios. In China, this kind of nested configuration of dependency and risk based on large-scale trial-and-error extends upwards from start-up teams to their investors, to local governments, to the central government — informing both business and policy. The fact the world is not "precision-nested" but nevertheless organized in nested formats generates tension and overspill, and I show how cultural and ritualistic resources are recruited to manage them. The logics of growth, accumulation, and acceleration that are employed to justify such a structure habituate Chinese publics to new configurations of risk and failure, and their dispersion can be traced through specific inscriptive artifacts (cf. Kaiser 2009) such as the "hockey stick" graph I discuss in Chapter 1. I note that quick and pervasive adoption of these logics in China was only possible because of decades, if not more than a century, of preparation.

After being ravaged by radical Maoist ideological dogma, China under Deng was "scientistic in the extreme," as Susan Greenhalgh writes (2008, 77). I show how the Deng regime's exuberant pursuit of Western science and scientific methods, powered by still rippling national

anxieties from the founding traumas of modern China, informed contemporary Chinese notions of progress which border on Occidentalism (cf. Said 1977). I tell the story of how these ideas of what advancement and "civilization" (文明) meant initially hindered Chinese investors' understanding of what the VC exercise entailed. Eventually, though, it facilitated the spread of the data technology imaginaries and probabilistic logics that undergird VC operation to different domains of society and governance.

By investigating the cultural and ritualistic practices that undergird institutions of financialization (Davis and Kim 2015) and assetization (Birch and Muniesa 2020), I also demonstrate how they are crucially influenced by sociotechnical imaginaries (Jasanoff and Kim 2009) informed by data-driven technologies such as machine learning. In doing so, I also explore the distinctively different order — or disorder — that such a data-driven sociotechnical imaginary constitutes compared to the configurations of standardization and control in "authoritarian high modernism" (Scott 1999). Crucially, data-driven tech imaginaries bear on understandings and practices of social time. Attending to my interlocutors' labors in/of time (Bear 2014) and their applications of time as technique (Bear 2016), I ethnographically examine keys ways through which the temporal phenomenon Jane Guyer (2007) highlights are set into place and sustained: whereby the horizons of action in critical domains of society are directed either to the "right now" or towards the faraway future, but never in between.

It is futile to try and gauge the ramifications of a new technology at its moment of impact. It will be years before we begin to understand the consequences and repercussions of the application of "big data"-driven technologies such as generative AI and machine learning. However, this dissertation shows that we can already witness now how these technologies lend crucial scientific authority to ways of organizing society. In part, this dissertation is an investigation into the legacy of the spread of the West's scientific method and its experimental program as a cultural artifact. I look at how reactive approaches to navigating the world are packaged to seem deliberate and provide an illustration of some of their combined effects.

Fieldwork

My Field Sites

Intrigued by the mechanisms of bringing technology to market, especially through the economy of venture capitalism and start-ups, in 2018 I volunteered to be involved in a joint university program between top Chinese and American universities to connect student and alumni start-up teams to Chinese local governments and businesses. I traveled with these start-up teams in China from city to city for two summers and was a teaching assistant one semester for a course that participants in the program took, jointly taught by business school and urban studies faculty. I am indebted to the professors, tutors, and organizers who made my involvement in the program possible, and to the participants who gave me insight into their experiences, challenges, and

thinking in pursuing their start-up businesses. The program was a crash course for me in acclimatizing to the idiom and concepts in venture capitalism. Sitting in on meetings with local government leaders and their business partners was a vital window through which I began to understand the infrastructure for public-private partnerships in China.

In the fall of 2019, I sought to broaden my understanding of the start-up "ecosystem" beyond private public partnerships (PPPs) between local governments and B2G (business-to-government) private companies. I wanted to learn about other start-up companies and the VC investors who make or break them. I found kind hosts in the Shenzhen office of a U.S. venture capital firm, where I was based for a year. In the following pages, I refer to them simply as "the VC Firm." Much of my dissertation focuses on the theme of trust. I am thankful for and indebted to the members of the VC Firm who chose to trust me and include me in their community.

As I elaborate in Chapter 2, trust in China is mostly based on association and prior ties. I have no doubt that my association with MIT played a large role in their initial decision to extend their tentative trust to me. There were, understandably, questions about the nature of my research. I told them my key research questions about the digital economy, scale, and VCs in China. I was also honest about how, as with most fieldworkers still in the field, I didn't know exactly what I was and would be looking at. What I was sure about, however, is what I was not trying to study. I told them that I was not looking to learn any proprietary knowledge or business secrets, but rather about the organizational culture which allows intellectual property to develop and businesses to

grow. I reassured them that I could not publish or otherwise disclose proprietary or strategic knowledge not already publicly available without violating my research protocol and the codes of ethics of my profession.

The VC Firm gave me access to a large open-space office where some of the start-up companies they'd invested in worked. In this relatively informal setting, I was able to casually approach these start-up teams and chat with them, as long as they were willing. To my surprise, it was unexpected aspects of my graduate student experience that helped me bond with my interlocutors, as I soon discovered that there were parallels between investors and start-up founders' endeavors and mine.

For example, I struggled with the task of research grant proposal writing. It was a new genre for me, and my core conundrum was this: how was I supposed to write about what was going to happen and what I was going to learn in the field when I hadn't conducted the fieldwork yet. I could extrapolate from my substantial preliminary fieldwork, to be sure, but the future was ultimately unpredictable. Would trying to get financial support based on things I couldn't yet know but only hope I might find amount to lying?

My academic mentors assured me that grant reviewers would be able to read between the lines. What was crucial was not how accurately I could predict the future, but how well prepared I was for possible scenarios; how well attuned I was to my fieldsite, the scholarly conversations about it, and my research questions of choice; how well I communicated that I knew what was

expected of me; and how well I could articulate how I intend to contribute to my discipline. Thankfully, they were correct. Research for this dissertation was undertaken with the financial support of the Wenner-Gren Foundation and the Social Science Research Council.

When I arrived in "the field" and started looking into what early-stage start-up entrepreneurs do, I discovered similarities. As I detail in Chapter 2, in what is called the "seed-stage," start-up founders are constantly pitching products they have not yet developed, and speaking to markets that may but have not yet materialized. This amounts to a public secret: everybody within the community knows that their pitches are highly speculative; this is part of the cultural conventions of competent performance, and no one would consider highly optimistic pitches to be dishonest (cf. Bauman 1981). Indeed, whether a start-up receives funding is largely based on how attuned and aligned its founders appear to be with the role they are required to perform (Gershon and Prentice 2021), and how their aptitudes portend adaptation to different scales, as the unpredictability of the future may require many pivots.

As young start-up founders or employees at VC firms, many of my interlocutors were relatively new initiates into what I call the "growth ritual" of venture capitalism. They were all trying to figure out, as I was, the relationship between what people thought they did, what they said they did, and what they actually did. Michael Herzfeld describes cultural intimacy as "the recognition of those aspects of a cultural identity that are considered a source of external embarrassment but that nevertheless provide insiders with their assurance of common sociality"

(2016, 7). Just as I ruefully recognized my own groping uncertainties in my interlocutors, they also recognized themselves in me. As I discuss in Chapter 2, the performative rituals of start-up growth were such that it was hard to decipher what was really going on just on paper. Some of the analysts at these VC firms joked to me that they were in the same line of work as me: to conduct due diligence, they had to do what I was doing — fieldwork and interviews.

My interlocutors were quick to poke fun of themselves, VC, and start-up culture. Jokes and laughter, whether bitter, ironic, or joyful, were important signals of shared experience and sensibility when I was in the field. I do not take my interlocutors as unequivocal or unquestioning embodiments of their industry, nor should the reader. When we discussed VC, I found my interlocutors' jokes to be genuine expressions of reflexivity and, at times, even incredulity. The fact that they chose to join the industry did not mean that they endorsed it wholesale. Like those of us who chose a path in academia, the fact that we cling to what it might offer and what we might be able to accomplish through it does not mean that we are unaware of its faults, or that we condone them.

Whether discussing VC or politics at any level (local, national, or global), jokes were, somewhat paradoxically, the medium through which people offered me their most deeply held views and opinions (Souleles 2017). In another setting, perhaps, people might disclose these thoughts with utmost seriousness and gravity — but that's not quite the case in China. The revelation through joking has partially to do with cultural intimacy (Herzfeld 2016). Jokes that

make the group laugh signal common and instinctual recognition, and thus helps my interlocutors discern whether I am part of the group, if I identify with them, and if we share cultural intimacy. Yet, specific to China and other regions where there are "large-scale incongruities between different representations of history and state," indirection — be it through "taking ironic, cynical or embarrassed positions" — is a crucial resource of social navigation (Steinmüller 2011). As one of my interlocutors put it, in a corruption of Tolstoy, "the truth is like the sun, you can't stare at it directly."[1]

In another parallel endeavor, I actively learned from my interlocutors' approach of weaving webs of borrowed credibility to expand my own network of people to talk to and interview. This involved a lot of traveling within China. I traveled with start-up companies I met over the years as they trekked across the country to find and tend to clients and investors. The VC Firm gave me great latitude — I was able to travel whenever I wanted to, but when I was in Shenzhen, I was always welcome at their office and at their community events. I eventually came to realize that there is substantial qualitative difference between VC firms of different sizes and between those of more domestic or international makeup, so I sought to vary my sample to reflect this diversity, sometimes with the help of connections I'd made through the VC Firm. Towards the end of my

[1] The quote I found that most closely approximates my interlocutor's expression is from Anna Karenina: "He stepped down, trying not to look long at her, as if she were the sun, yet he saw her, like the sun, without even looking" (Tolstoy 1877/1992).

fieldwork, as trust and friendship grew, I also traveled alongside the VC Firm's partners and directors on their work trips.

I was and remain acutely aware of the enormous trust and privilege my interlocutors bestowed upon me. I was in settings where I was privy to business plans, government plans, and IP-protected information, the confidentiality of which is the basis of start-up companies' survival. My hosts showed me great hospitality, but there was no doubt that if at any point I abused my privilege and became a liability, my access would be revoked. Unlike employees working for these funds and companies, I managed to negotiate not signing an NDA in order to be able to publish my research. Ultimately, what allowed me to complete my fieldwork was the trust that I built and maintained.

In Chapters 2 and 3, I elaborate on the hedging function of relational ties and networks towards ensuring reliability. In China, the more *guanxi* 关系 (relations) one has, the more trustworthy one is perceived to be, but there is then much more at stake for the individual maintaining these guanxi ties, as these guanxi networks are a form of social leveraging — and one false step would mean the collapse of the whole network. This is but one form of the double-edged quality of the "weight of scale": scale's affordance always comes with a burden to bear. I lived every day in fear, not only for myself and my dissertation, but also of letting down the people who trusted me — for what was at stake was not only my face but also theirs.

My social network became more complex to navigate as it grew. I was constantly vigilant about what I could reveal in front of which party, something that could vary at different times. What start-up companies told me about their challenges, they might not want their investors to know until their next round of funding was secured. What one investor told me about what they'd learnt from their investments, they might not want me to divulge to other investors before they could use that knowledge as leverage. And yet, to ask meaningful questions of each person and to build on what I learnt, I needed to be specific. This was difficult in the earlier stages of my fieldwork, when I was still trying to discern what I could divulge without breaking trust, and what I could ask for without them mistaking me for a vulturine journalist looking to write a hit piece. This was also made more difficult when I could not yet distinguish what kind of behavior and event was more ad-hoc and what was more generalizable (see also Abidin 2020).

What seemed to me a social labyrinth became easier to maneuver as my interlocutors' tacit considerations eventually became more explicit to me. Nonetheless, for most of my fieldwork, all I could do was take one halting step after another and hope I wouldn't accidentally stumble. Looking back, I feel like someone who haphazardly managed to run across a tightrope, and only afterwards when catching their breath, was able to gaze back over careening rocks from dizzying heights.

The VC Firm had lent me social leverage and initial access, through which I was able to seek out different perspectives. Somewhat paradoxically, the greater vantage point they indirectly

afforded me also meant that the focal point of my dissertation moved further away from them. The amount members of the VC firm feature in this dissertation does not correlate with how much I am indebted to them.

Demographics

There are stereotypes about the roles that different urban centers in China play in venture capitalism: Beijing is the source of domestic funds and heartland of stately connections. Shanghai is where foreign money flows in and the port to the world through the many Fortune 500 international companies that reside there. Hangzhou is an ecosystem of software innovation, where start-up companies thrive as satellites that revolve around the tech giant Alibaba. Shenzhen is an internet technologies and hardware powerhouse, a gateway to the factories of the Pearl River Delta, and home to Tencent and Huawei.

I have found these stereotypes to be vaguely true. What was more important to my fieldwork was that all these places are important hubs of start-up and venture capital activity, factoring variously into the kinds of work I was following. Though I was based in Shenzhen, I made frequent quick trips to these different cities in order to understand my interlocutors' work to a fuller extent. Start-up companies traveled between them in search of funding from VC investors. VC investors made frequent work trips to and beyond these major hubs to scout promising start-up companies to invest in and to conduct due diligence before committing to a new or follow-up round of investment. Major hubs such as these were also the settings of special

events, such as start-up competitions or roadshows hosted by local governments or organized by venture capitalists, which attracted the congregation of a great number of start-ups and VC investors and a flurry of courtship.

I occasionally traveled to more rural areas with start-ups in their work with clients or in developing products. Start-ups that work on agricultural technological offerings ("AgTech") may need to test them on rural farmland, for example. Or a start-up might work with a local government as their client. Although the perspectives I relay here are gleaned mainly from fieldwork in China's urban centers (particularly Shenzhen), I write at a moment when China's urban/rural binary is in a state of flux. In chapters 1 and 3, I discuss the extraordinary economic transformation the nation has experienced, and how subsequent urbanization has occasioned incredibly fluid internal migration patterns. This means that urbanites often cited their rural upbringings when offering me their perspectives and explaining their fears, aspirations, and ambitions. This applies not only to commentary around guanxi networks and practices I discuss in Chapter 4. For example, the gender conventions and expectations that people I encountered in the same city or even the same office could be vastly different.

Within the circles of venture capitalism, women are far from absent, but tend to occupy certain spaces and not others. As Chapter 1 shows, some of the most prominent Chinese VCs are recognizable by their English first names, like Hollywood celebrities, and many are female (e.g. Emma and Anna). Women play key roles in running VC firms as leaders, irreplaceable

administrators, and mediators. Notably, though, the founders of start-up companies are less likely to be female.

A large part of this seems to be self-selection. When I asked women who are on the staff of VC firms or start-up companies if they would consider founding their own start-up, many would tell me that is too risky and too big a commitment. Becoming a start-up founder and accelerating the growth of a young company through VC investment often entails months of work with little or no personal income and demands the attention of almost all of one's waking hours. It's not something a current or future family would be likely to tolerate.

This is also a concern for Chinese men. However, the gamble of founding a start-up may be justified to court the possibility of transcending the punishing rat race in China for the sake of family. Statistically speaking, start-ups seldom succeed, and the gamble rarely pays off. From the accounts of serial entrepreneurs who tell me about their divorces, it is not the definitive failure of a start-up but the strain of a prolonged, liminal existence —— the uncertainty of what the future will bring —— which seems to place the most strain on a family. Single men may be the ones most shielded from these pressures, but, as I elaborate in Chapter 1, they were nonetheless likely to be facing the prospects of having to take care of at least their grandparents, and possibly their own parents too (B. Y. Hsu 2019). When they married, this obligation would extend to their parents- and grandparents-in-law too. Just like anywhere, those who succeeded with their start-ups become hot commodities in more ways than one.

Women educated locally or abroad are both likely to contravene prescribed social scripts and "moral careers" (Harris 1989) of full Chinese female personhood: a life of early marriage and at least one child. I noticed, though, that women educated abroad seemed less constrained by traditional Chinese notions of family and their role within it. In contrast, women who were educated locally appeared to be more tormented about deviating from that prescribed path, even when they had no intention of ever doing so. It may be a mistake to attribute this to whether they received their education overseas, which may be a proxy for their family background (家境). Adult female children in wealthy families do not have to worry about how their marital choices affect their family fortunes; those from more modest backgrounds must seriously consider the implications of not bringing another breadwinner into the fold. This is at a time when the functional desire to combine income-sources towards homeownership informs many marital decisions.

Setting aside family background and educational pedigree, there is also the transactional dimension of Chinese personhood. In her ethnography about Shanghainese lesbian women, Kam (2012) notes how those who adhere to wider cultural demands to be recognized as a "socially respectable person" and lead "healthy" (健康) and "sunny" (陽光) lifestyles can afford to stray from prescribed norms. She notes that it is a widespread notion that "being 'correct' in public — being a law-abiding citizen, an economically productive member of society, an obedient daughter and "model" homosexual… will bring about positive recognition by one's family, and eventually

acceptance by the general public" (2012, 90). I have observed that a similar public social accounting of personhood applies also to other women who do not conform to heteronormative marriage careers.

VCs are generally very supportive of female founders they chance upon —— especially those who have a degree from a brand name university or have worked in a prestigious foreign firm (外企) like J.P. Morgan or McKinsey as these are easy markers of their reliability, capability, and rich and expansive networks. Still, some of the most astute women VC leaders or start-up founders that I met in the field did not bear these markers. They were sharp and shrewd in ways that allowed them to penetrate the opaque fog of saturated proxies of brilliance. Whether VC firms actively seek out female start-up founders varies. It more likely depends on individual investors' inclinations. There are networks formed by women for women that offer mentorship and mutual support in every urban hub. What VCs do actively seek out, however, are founders with perspectives from rural regions, as rural markets offer business opportunities with great potential for scaling at a time when urban markets are oversaturated. VCs told me that their challenge was finding founders who understood the rural Chinese market but were not themselves rustic, grounded (踏实不离地) but not bumpkins (土), able to speak local dialects but also command the board room in standard Mandarin and English. Brand-name graduates with rural upbringings therefore held a particular luster in these circles.

In some instances, it may appear that western VCs are more active in tackling demographic inequalities within their industry. For example, some of their websites that list start-ups on their investment portfolios allow results to be filtered to show only companies with black, female, LGBTQ, or disabled founders. This is to signal how they champion underrepresented demographics in the start-up economy, and to give these start-ups more of a platform to attract further investment. At the same time, I heard complaints about how some western VC firms didn't tend to make female employees partners, and about how their international organizational hierarchy formed a pyramid which looked very gender and racially diverse at the bottom but became increasingly white and male at the top. Some western VC firms also undercompensated Chinese employees compared to their counterparts based in a major Western city like New York, London, or Paris — not to mention the privileged digital nomads. How broadly applicable these observations are, I do not know. But this reminds us not to assume from the explicit rhetoric around diversity and gender equality that western VC firms in China always offer better career prospects for Chinese women.

All in all, the answer to questions about gender dynamics in Chinese VC is not straightforward. However, if I may offer a crude generalization: members of VC firm leadership and start-up founders tend to be male, and the few who are female are more likely than not foreign educated.

Naming Conventions

Some of my interlocutors were keen for me to use their real names in my publications, others less so. VC and start-up circles, like academia, feel large and small at the same time. The boundaries are porous, but there are also very close circles with strong centers of gravity. I have sometimes used composite characters. I have also used a mixture of real names and aliases, but I have not indicated clearly which is which. For readers within these circles, it will be evident in some instances who has appeared on these pages under their real name. In other instances, not knowing whether a name is real or an alias helps me obscure the identities of those who wished to remain anonymous.

Although most of the people the reader will encounter are Chinese citizens by birth, some will have Chinese names and others, English names. If my interlocutor used an English name in their day-to-day life in China, I chose to give them an English alias. Notably, these names are not just English but specifically American-sounding. I say this with the perspective of someone who grew up in Hong Kong, where many who harbor high ambitions — or have parents who do — have names that are redolent of great European or Anglo-Saxon heritages. For example, controversial figures from both ends of the political spectrum have Roman names: Junius Ho and Sixtus Leung. Names like Layton, Winston, and Reginald are not out of place in the higher echelons of Hong Kong law and finance. In the decades of British colonial rule, and even those

since, names like these signal a British aristocratic notion of gentlemanly worldliness and suggest access and social belonging among the politically and financially powerful.

On the other hand, in mainland Chinese VC circles, those who adopt English-language names for themselves often opt for simple, American-sounding ones like Jack, William, Emma, and Anna. One common consideration is that the names need to be simple enough for those not fluent in English to recognize and pronounce, so as not to alienate them. Another is that the VC model is a U.S. cultural and financial export to China. Yet another is that the anxiety of lagging behind foreign powers has never dissipated in China since the invasion of the Eight-Nation Alliance in 1900. Thus, at a time when China sees the United States as its prime global competitor and often casts the U.S. as an antagonist, for Chinese VCs, signaling that one knows the ways of the U.S. is important: it means that they might be able to adopt and adapt them for a Chinese setting (see also Henry 2012). Thus the prevalence of American-sounding names in this ethnography is a culturally significant index of the socio-historical and socio-linguistic situatedness of the Chinese tech sector, both locally and global, as well as the strategies of self-making for those seeking to succeed within it.

Disruption of the Pandemic

When I close my eyes and travel through the memories of my fieldwork, I see disjointed flashes of moving between workspaces with pale, dim fluorescent lights, exhibit halls with blinding stage lights, and modern offices with tastefully recessed, indirect lighting hinting at the occupants'

social pedigree (高大上气派). Every day was an olfactory assault. At any moment any combination of odors — of sewage, mouthwatering food, gasoline, construction soot — filled my nose, often all at once. Wherever I traveled, even amidst the lofty mountains of Yunnan, incessant sounds of industry — drilling, engines and other machinery, and pile driving — followed.

Such was the rhythm and activity of China — until the world became still in 2020.

December in Shenzhen was a month of listless industry. It was the end of the business year — a time for the busy submission of annual reports. Most of China does not celebrate Christmas, but the fact that the Spring Festival was just around the corner sapped people's motivations to work. The month had the air of holiday lethargy without a festive atmosphere. It is in this languid setting that I first heard about the SARS-like cases appearing in Wuhan.

Having lived through the SARS epidemic as a child, I went on high alert. I started wearing surgical masks before anyone around me did. As Spring Festival approached, rumors about a SARS-like virus persisted. I grew increasingly worried about 春运 *chunyun* (spring movement) — the Chinese New Year Travel Rush. If there was indeed a respiratory virus spreading in China that was not being explicitly and concertedly addressed, I told my supervisor, Graham, then billions of people traveling across the country for reunions and vacations during the nation's biggest and longest national holiday would certainly turn the epidemic into a pandemic.

Graham suggested that I could take a quick break for Chinese New Year to visit some of my family in London. We hoped that I had overreacted and could resume fieldwork straight after

the holiday. Sadly, that was not the case. From the beginning of 2020, my research went from enforced hiatus to a protracted lockdown in London that lasted until September of that year. This was followed by almost two months of mandatory quarantining, first in Hong Kong and then in Shenzhen.

When I finally returned, I found an even more frantic China.

I can recall the moment that I stepped out of the makeshift quarantine hotel into the streets of Huaqiangbei — my head swirling from sensory overload. I clutched the handle of my luggage to steady myself as I got caught up in a herd of zooming scooters — delivery men rushing to make their orders. The ground shook as the piling machines seemed to be pounding more aggressively than ever. The assertive ticking of green pedestrian lights summoned crowds out of nowhere. I was pushed back and forth and then round and round, caught in a wave of single-minded people as I struggled to hold on to my luggage as though I was clinging to a buoy at sea. The torpid sounds of an erhu played by a nearby busker seated on a tiny plastic chair provided a sardonic soundtrack to the scene.

I voiced to my interlocutors my worry that those months of being under lockdown in London made me delicate and whiny (矫情), but they confirmed to me that I was not just imagining things: they, too, felt that much of China seemed to be making up for the time lost during the nationwide lockdown. Many had to work doubly as hard, having had little or no income for the past months.

As a researcher, the disruption and the strain the pandemic introduced into the lives of my interlocutors made the contours of what I'd been observing before Covid-19 even clearer. It allowed me to lay down the words in the pages that follow with greater conviction, particularly in respect to one of this dissertation's key themes: temporality. For VC investors, the clocks that counted down to when they needed to generate gainful returns for their own investors — to "return the fund" — remained indifferent to a global pandemic. For early-stage start-up entrepreneurs who were already bootstrapped, money became even harder to come by. The strategies of maneuvering and the stark outcomes of success and failure allowed me to elaborate on the considerations behind VCs' investments, the logics behind seemingly erratic start-up pivots, and the broader logics that undergird what I call the "growth ritual" in Chapter 2. Furthermore, the strain that Covid-19 put on small- and medium-sized businesses catalyzed the national conversation around and experimentation with bankruptcy law in China, which I discuss in Chapter 3.

Chapter Summaries and Key Themes

Many factors contributed to the challenge of writing a simple, coherent. and linear story. A global pandemic is one of them, but it would have been difficult even without Covid-19 due to the inherent nature of start-up companies.

By definition, start-up companies' growth is accelerated. But, even in the most ideal circumstances, it still takes years for a fledgling company to accelerate its growth enough to "exit"

at great speed, having achieved a stellar valuation. Furthermore, VC is an example of what I call a "successful model that mostly fails": its success involves massive trial-and-error and is predicated on favorable outcomes for a few. The failure rate of start-ups is therefore incredibly high.

Consequently, the odds were unfavorable for me to follow one singular start-up company from its inception to its billion-dollar valuation. Yet, given the rarity of this "unicorn" event, such a portrait would be unrepresentative of the industry. Instead, interviews with people with years of experience in this milieu also helped me to discern recurrent patterns, and the composite image of many start-up companies at different stages of development and at varying levels of success that I encountered as a fieldworker allowed me to discern the underlying ritualistic logics which determined their success. The ironic truth may be that the global pandemic, in stretching out the distance between the start and end points of my fieldwork observations, helped me gain larger-scale insights into both VC and Chinese governance.

Overall, my dissertation tells a tale of how American VC domesticated Chinese investors, and how China eventually came to domesticate the VC format to govern. Chapter 1 draws on the oral histories of Chinese investors and business owners who tried — and initially failed — to adopt the foreign cultural and financial model of venture capitalism in the 2010s, following Chinese premier Li Keqiang's call for Mass Innovation and Entrepreneurship. I detail how, subsequently, in trying to discern the key lessons their American counterparts offered, Chinese investors and

start-up founders imported metaphors and inscriptions such as "seed" funding, "runways," and "hockey stick" graphs through which they came to understand the shape and time of progress.

Importantly, this, combined with the Chinese state's emphasis on AI supremacy, contributed to the foothold of a data technology imaginary in China: the notion that scalar properties of digital and data technologies could translate directly into scaling logics for businesses. I argue that transformed understandings of "scale," "scaling," and "profit" is nothing less than a paradigm shift among the China's business class.

In the second chapter, I elaborate on the transformed understanding of "profitability" and shed light on what seems to be a paradox in venture capitalism: why so many highly valued companies remain unprofitable. Through the notion of what I call "growth rituals," I show how the "growth" of start-ups is not indexed by profit, but instead hinges on fundraising events, which are tournaments of value (Appadurai 1986) akin to the North American potlatch and contemporary art auctions. I illustrate the ways that, in order to partake in these tournaments, start-up founders and their VC investors engaged in an *art of scaling*: the borrowing and lending of credibility to skillfully assemble a configuration of conditional and leverageable arrangements. I discuss how the successful performance of these growth rituals allow start-up companies to indefinitely extend a state of liminality to keep buying time, with deep implications for what I call temporal personhood and temporal capital. Rather than trying to understand why highly valued companies are unprofitable, I argue that we should focus instead on how companies are only able

to achieve high valuations by forgoing unprofitability. I end by discussing how the whole system of VC resides within a conjured world of relaxed temporal conventions and indefinitely deferred profitability, held together by rituals and trust.

Chapter 3 continues probing the themes of rituals and trust by focusing on a current national moment of liminal transition within Chinese modes of relationality. By highlighting state-driven and market-driven efforts to supplant guanxi-based practices, rituals, and networks as the primary mediators of trust, I show how the so-called "social credit system" reflects a China caught between "trust-based systems" and "system-based trust," and between face and "facelessness" (Hertz 2001). I trace the historical circumstances that led to the high demand for data-driven mediations of trust in China and call attention to the cultural formats they take. Taking a comparative historical perspective with the United States, I argue that social credit systems in China are doubly the product of American imports: first the credit system and then the rating system of the gig and app economy. By offering an ethnography of a burgeoning market of data-driven mediations of trust, I draw attention to how outside commentators' overwhelming focus on how a Chinese "social credit system" portends a totalitarian dystopia obscures the ways it enables the Chinese state to outsource governance to local governments and the market.

Whereas Chapter 3 is about the challenges of enforcing homogeneity in a society of enormous scale, Chapter 4 is about how that same burdensome scale may be leveraged as a motor of heterogeneity to the nation's advantage. This final chapter investigates China's "business-to-

government" (B2G) market. I show how regional governments and startup companies liken the operation of the Chinese state to a machine learning algorithm that solves problems without explicit programming. My interlocutors see themselves as policy-generating nodes within a nationwide machine learning assemblage and understand this computational analogy to be simultaneously a reinterpretation and a seamless continuation of the late paramount leader Deng Xiaoping's philosophy: "It doesn't matter whether a cat is black or white, as long as it catches mice, it is a good cat." Borrowing from their machine learning heuristics, I illustrate how the Chinese state utilizes the nation's size to enable the trial-and-error "crowdsourcing" of a great variety of policies among its various regional governments. Even if not all individual policies are successful, and some even prove wildly eccentric, the central state is nonetheless able to harvest value from their aggregate outcomes.

In doing so, I also dispel a popular misconception about Chinese "collectivism": instead of a bland "copy-and-paste" homogeneity, Chinese governance relies on the constant collective production of an abundance of diversity. Finally, I explore how the lived realities of Chinese citizens are affected and shaped by the way that the Chinese state enlists local governments to in effect form what AI practitioners call generative adversarial networks (GANs).

Some Final Thoughts

I have in mind screenwriter Richard Price's words: "The bigger the issue, the smaller you write… You don't write about the horrors of war…. You write about a kid's burnt socks lying on

the road." I draw from his sage advice in the inverse. Many people have spent hours pouring their lives into my recorder. These are tales of the building and breaking of families, generational suffering, national hope, collective dreams, shared trauma, and individual striving. Yet the textures and ripples of their lives cannot be adequately conveyed and appreciated without further consideration of the larger tides of change in China. In the limited time that I had, I came to see my task as making the most decisive and bold strikes with a chisel, so as best to convey the shape of the world my interlocutors inhabited. This came at the expense of carving out intricate details. I prioritized a higher-level of understanding of why things were the way they were on the ground over depicting them.

Together, these chapters illustrate the circular relationship between why people become dependent on scale, and the dependencies that scale creates. Even if I do not elaborate on all the technical and financial terms of venture capitalism and the minutiae of its legal arrangements and structures, I hope that my readers will walk away with a cultural understanding of venture capitalism that allows them to grasp the implications of expressions such as "exits," "down round," "pivot" and "oversubscribed" when they encounter them elsewhere. I hope that the reader will find considerable explanatory power in the new configurations of analytical resources and ethnographic materials I offer. Finally, I hope that the reader finds that I have teased out profound changes so insidiously subtle that they may otherwise escape notice, while revealing supposedly drastic shifts to be the same old thing dressed up in new garb.

Chapter 1

Defying Profit's Gravity

Emma remembers staring out at what seemed like an endless horizon of corn fields. Years of hard work — studying English in Beijing away from home and cramming for exams — had led her onto a rumbling bus to take her to her college in Bloomington, Illinois. Years later, Emma would recount to me that she knew right then that America would not, ultimately, be for her, but she knew with equal conviction that she needed to be there.

The midwest was a shock to the system. Coming from Beijing, Bloomington felt sparse and empty. The fact it was considered a "city" with just a population of around 70000 tickled her. The spread of the city and the fields that surrounded it made her feel that she was pin dropped into the middle of nowhere. Despite the overwhelming sense of insulation from the world she knew, she further isolated herself. She had no time for the football games, cheering, and the partying and drinking other students occupied themselves with. She was on a mission.

She chuckled as she recollected how she must have reinforced in the minds of many of her American classmates the stereotypes about Chinese students. She often sustained herself with instant ramen and focused her time on optimizing her academic grades and scoring internships. Before she graduated, she applied to Masters programs. When the offers came in, she had a choice between pursuing further studies in economics at Oxford or East Asian studies at Stanford. Her parents thought that she should go to the UK. Emma had just finished an internship at

PricewaterhouseCoopers' Chicago office, and they felt that a Master's degree in economics could help her build a career in finance. "What good will East Asian studies do?" they questioned. But Emma knew better.

Emma needed to be close to Silicon Valley. At Stanford, she joined the Chinese Entrepreneur Organization (CEO), and as a core team member, she helped organize events with high-profile Chinese speakers. She made sure to invite at least one of the three co-founders of New Oriental to give a talk.

The day Bob Xu came to the Stanford campus in 2014 was the day her faith bore fruit. As a teenager in the 2000s, Emma had left her family in Changsha to go to Beijing by herself. There, she joined other high schoolers who made the pilgrimage, and mustered boarding with each other or with relatives at the Chinese capital to learn English at the Beijing New Oriental School (北京新东方学校) for TOEFL and GRE exams. Prior to going to Beijing, Emma was placed in an elite program that comprised the top science students within the province in her year. She surprised even herself by giving her place up when she stumbled upon Bob Xu's essay collection *Xianrenzhilu* (仙人指路), which can roughly translate to "Let Someone who's Transcended to a Higher Plane Guide the Way."

As one of the three co-founders of New Oriental (or *Xindongfang*, lit. new orient), Bob Xu is the basis for one of the main characters the Chinese blockbuster *American Dreams in China* (中国合伙人, lit. Chinese co-founders). Featuring some of the premier actors and most celebrated

A-listers in Chinese cinema today — Huang Xiaoming, Deng Chao, and Tong Dawei, the film chronicles the founding of New Oriental — from the humble beginnings of the founders as English teachers in China to the company's listing on the New York Stock Exchange (NYSE). One of contemporary China's earliest and most famous examples of entrepreneurial success, New Oriental was the first education company from China to be publicly traded in the United States in 2006, and it remains the most comprehensive and largest Chinese private education provider, with over 20 million student enrollments.

Apart from, or perhaps as a part of, being an entrepreneur, Bob Xu is himself a celebrated writer. Among the books Xu authored are *The Philosophy of American Visas* (美国签证哲学) and *Questions Regarding Studying in the United States* (Chinese: 美国留学天问). It was clear that, to Xu, the path towards a *xindongfang* (新东方) — a "new orient" — was through America. Emma recalls how reading Xu's essay collection helped her realize that the Chinese National College Entrance Examination, or *gaokao* (高考), was not her only choice. She could choose to explore the broader world beyond the narrow path gaokao promised — a sentiment perhaps best captured by New Oriental's slogan: "A better you. A bigger world!"

At the event Emma helped organize at Stanford, Bob Xu talked about Zhenfund (真格基金). Since New Oriental's success, two of its co-founders, Bob Xu and Victor Wang, partnered with one of their company's investors, Sequoia Capital, who were instrumental to New Oriental's listing on NYSE, to start a venture capital fund in China. Sequoia, named for the redwood trees

that surround its headquarters in Menlo Park, California, is a storied American venture capital firm that has, since 1972, invested in Apple, Google, Paypal, and Zoom among other global tech giants that now run our lives.

Being in the same room as Xu, Emma remembers the rush of blood coursing through her veins and hearing her pulse in her eardrums. It was a quietly momentous occasion for her. The way Emma described how she felt reminded me of a tuning fork. It was as if standing at the back of the room, she was vibrating from the resonances of cosmic frequencies coming together.

To further the notion in her mind that there were cosmic forces at work, she stumbled upon a wallet when she stayed behind after the talk to tidy and lock up the venue. It turned out to be Bob Xu's. It was already late at night. Emma rushed in the shroud of darkness to the AirBnb that Xu and his team was staying at. There, Emma found Xu chatting with the CEO of Zhenfund, Anna.

To this day, Emma refers to Bob Xu as Xu Xiaoping *laoshi* (徐小平老师, lit. teacher Xu Xiaoping). That night, before this man who's been a mentor figure almost her whole life, Emma formally asked to be his student in the ways of venture capitalism.

Today, Emma is managing director and a partner at Zhenfund, one of the largest angel investors in China. When we spoke in 2021, she was looking forward to earning her first 100 million yuan ("第一个亿"; ~ 14.5 million USD).

Introduction

China's place amongst the world's venture capital (VC) powerhouses has been cemented by the ascendance of companies like ByteDance (owner of TikTok) and Alibaba — now some of the most valuable businesses in the world. Though now a hotbed of start-up activity, the path Chinese business people took to learn how to take part in "venture capitalism" (风险投资) was tumultuous. In this chapter, I detail the way many of the participants in Chinese venture capitalism today, like Emma, see "venture capitalism" as an American cultural and financial "import" they must "learn." Through oral histories I gathered from those who have been entrepreneurs and investors in China in the 2010s, I illustrate what my interlocutors believed was at stake in participating in venture capitalism, what were the costs of failure, and what they in retrospect saw as the key lessons their American counterparts offered.

I argue that, in the process of adopting the VC model, a new paradigm took hold in China. Crucially informed by imaginaries surrounding recent development in data technologies, this paradigm promotes a particular interpretation of "profit" that was by and large introduced to the Chinese masses in the 1990s through the Shanghai Stock Exchange (Hertz 1998), but became even further and more pervasively integrated into Chinese society as more people came to the "realization" of how to be and do "VC" (做風投).

To better demonstrate the turbulent processes of Chinese investors and businesses' adoption of the VC model, I first draw on the experiences of what some of my interlocutors call

the "first wave" (第一波) of domestic investors and start-up founders who tried to take part in venture capitalism after Li Keqiang's call for Mass Entrepreneurship and Innovation (MEI) in 2014. I detail how my interlocutors characterize that "wave" as having largely fallen into what they refer to as "involution" (Geertz 1963a). Now looking back, they point to their own actions as betraying confusion and ignorance about what they now understand "venture capitalism" to be.

Amidst the costly collective trial-and-error involved in making the VC model work in China, I highlight the divide within Chinese VC between returnees who have received Western education (接受過西方教育) and those who haven't, and how the aforementioned returnees or *haigui*[2] such as Emma participate in the ambiguous and complex collective Chinese relationship with Americans and the notion of the United States — at once a foe, a collaborator, the key object of emulation, and a competitor — in a China where the Maoist slogan "surpass Great Britain and catch up with America" (超英赶美) remains resonant.

This chapter begins to consider the ways in which the repercussions and effects of the Maoist era continue to ripple in China. For example, in Chapter 3, we will explore how the project to build a Social Credit System can be traced back to the Cultural Revolution, which tore the very fabric of Chinese society asunder. In this chapter, we start exploring what mass mobilization looks like in a post-Mao China. Contemporary Chinese leaders like Li Keqiang would have lived through Mao Zedong's mass mobilization campaigns in their formative years and witnessed the destruction

[2] Wordplay with homophones 海归, lit. return from overseas, and 海龟, sea turtles.

the Giant Leap Forward wrought, which led the whole nation to the brink of collapse and the death of millions. Yet as we look back at Li's tenure as Chinese Premier from 2013 to 2023, his many calls to collective action suggests that the destruction China saw in the 1960s and 1970s did not dim his faith in the collective power of the common people (大众/老百姓). This is illustrated, for example, more recently in his controversial call for a populist revival of a "street vendor economy" to counter Covid-19's grave impact on the Chinese economy at the height of the pandemic (Xiangwei Wang 2020).

However, as I elaborate further in Chapter 4, the way the Chinese state taps into the wellspring of the masses today bears a crucial difference to Mao's approach: no longer are members of the public individually tasked with prescribed roles and responsibilities. Rather, a common vision or destination is invoked, and it is for the people to come up with the path to the destination. This has been described to me as a form of "crowdsourcing" (群众外包 or 众包, lit. crowd outsourcing) both in terms of planning and execution. One entrepreneur I interviewed analogized this approach as akin to setting off a million ships — grand vessels and little dinghies alike — towards the discovery of a new continent (新大陆). This is a recurrent maritime and colonial imagery that takes on multiple layers of significance as we shall see in later chapters. More broadly, this chapter begins to explore the crucial function of analogies in scaling and maintaining scaled organizations.

The Chorus of East Wind

"要借改革创新的"东风"，推动中国经济科学发展，在 960 万平方公里土地上掀起"大众创业""草根创业"的新浪潮，形成"万众创新""人人创新"的新态势"。

We need to sail with the "east wind" of reform and innovation, to drive China's economic and scientific development, to give rise a new wave of "mass entrepreneurship" and "grassroots innovation" on our vast land of 9.6 million square kilometers, to realize a new reality of "mass innovation" and "innovation by all."[3]

—— Li Keqiang at the Annual Meeting of New Leaders,

World Economy Forum (世界经济论坛 2014 年新领军者年会) in Tianjin City,

10 September 2014

[3] Here "east wind" is polysemous. It refers at once to the coming of spring, to the triumph of the east over the west to occasion a new climate, and to the one crucial ingredient for an elaborate game changing scheme. The latter is from a famous quote attributed to the genius military strategist Zhuge Liang (诸葛亮, courtesy name Kong Ming 孔明), who is depicted to have predicted in the Three Kingdoms period with incredible accuracy of the onset of easterly winds that was key to his army's strategy to set chains of enemy ships on fire, which brought the joint factions of Shu and Wu a key naval victory against the northern warlord Cao Cao in the Battle of the Red Cliffs. 《礼记·月令》: "［孟春之月］东风解冻，蛰虫始振，鱼上冰"; 郭沫若《新华颂》: "东风压倒西风";《三国演义》: 万事俱备只欠东风。

When Li Keqiang issued this call for Mass Entrepreneurship and Innovation, Zhu was a bank manager in the China Merchant's Bank. He has harbored aspirations to run his own business since boyhood. He grew up in Foshan, Guangdong province — a rural childhood amidst bamboo groves, farm animals, and "lots and lots of dogs" that his mother endlessly doted on. It is in this setting that he recalls how his ambition sprouted like the bamboo — swiftly, quickly towering.

The China he grew up in saw breakneck development. The double-digit annual GDP growth materially manifested in rapid urbanization — of which the nearby city of Shenzhen is exemplary. When it was designated the first special economic zone in China by the late paramount leader Deng Xiaoping in the 80s, this southernmost region of the nation consisted only of a smattering of villages with less than 30,000 inhabitants. As Shenzhen became the frontier of the great "reforming and opening up" (改革开放) of China overnight, it quickly saw high-rise buildings and skyscrapers erected out of its verdant fields and wetlands. Within a mere 20 years, it had become one of the largest metropolises in the nation, trumped only by Shanghai and Beijing.

It is in this environment that, even before Xi Jinping articulated it, the "Chinese Dream" of national revival and unseen possibilities swelled in Zhu's chest. Zhu knew he was not born with the "conditions" (条件) — privileges and opportunities — that some others were blessed with, but he made up for that with incredible industry. During college, he started a side business. In the claustrophobically thick damp air near the southern Chinese coastline, Zhu would knock on the doors of his fellow students and offer to install air-conditioners he had at the ready in his van for

a subscription fee. Often, the students, especially those from the drier and cooler northern regions, were wiping off beading sweat from their faces when they answered the door and couldn't "say yes fast enough" for the sweet relief of cool air. By the end of the summer, Zhu would return to uninstall and collect the air conditioners from the windows of the student dormitories, only to offer them to a new cast of paying students when warmer weather comes.

He also hoarded bottled beverages to offer for sale in graduation season, when flustered graduates, taking photos as they perspired under their unbreathable polyester caps and gowns in the scorching sun, could not refuse even with high markups. When other students started to catch up with Zhu's business and started hawking drinks too, Zhu doubled down. He hoarded even more beverages and dry snacks, bought cooler boxes to offer the drinks iced, hired temporary employees, and expanded his business to more campuses at lower prices. Even if the margins were slim, no one chased them harder than he. "No one around me worked as hard as I did, no one was as entrepreneurial as I was," Zhu told me definitively.

But when Zhu was entertaining the idea of starting his own company in 2014, he did not have a clear idea of what it would be. Many others who wanted to create start-up companies at the same time recall not being entirely sure either. Frankly, many of them weren't even sure what a "start-up" company was. In Chinese, it merely meant "begin" and "create" (初创). But they were galvanized to take part in "Mass Entrepreneurship and Innovation" out of both excitement and anxiety.

In the past 40 years, Chinese policies lifted more than 700 million people out of extreme poverty (The World Bank 2022). Millions more sailed the wave of "reform and opening up" and "emerged from poverty into great wealth" (脱贫致富). Many of the people I spoke with who were start-up founders around 2014 had been excited for what unforetold resources governments both on the local and national level would offer. At the same time, they were also anxious to position themselves at the right place and at the right time.

Even as the staggering growth of China in the past decades has objectively improved the general living standard of its citizens, many nonetheless felt left behind in an exhausting state of perpetual peddling in a metaphor sea of endless waves, struggling to keep their heads above water (see also Xiang 2020 and Xiang 2021). Many labor to "reach the shore" (上岸), hoping to find a modicum of economic stability by buying a property (买房上岸) or taking the exams to become a civil servant (考公上岸). However, it is well-recognized that those who manage are in the enviable minority.

At a time that state leaders signaled another historic movement of pivotal change in China, many placed faith in Lei Jun's "flying pig theory." Lei, the founder of the consumer electronics company Xiaomi, once offered an analogy: "the goal of an entrepreneur is to become a pig that stands in front of a gale. If one is at the right place, even pigs can fly" (创业，就是要做一头站在风口上的猪，风口站对了，猪也可以飞起来). Aiming to be a "flying pig" was not only a matter of desiring windfall gains overnight — the stakes were existential and generational. It was

also patriotic. Like those who had gotten rich venturing into entrepreneurship (colloquially, "下海", lit. going to sea) to ride the waves of China's "reform and opening up," it was a chance to partake in the great project of national development — a form of "entrepreneurial citizen" that is at once self-serving and civically-minded (see also Irani 2019).

In this environment, the aimless insurgence of entrepreneurship was met with a tsunami of funds from domestic investors. As millions heeded the call for "mass entrepreneurship and innovation," domestic investors were also anxious about missing out on the opportunities created by this burst of entrepreneurial activity. Zhu and his first investor came together in no small part due to their mutual, frenzied fear of being left behind.

Soon after Li Keqiang's call, a close friend from high school told Zhu that he had chanced upon a "big shot" investor who was launching a venture capital fund. Pressed to make the most out of this connection, Zhu drew on his job at the bank to assemble a PowerPoint deck to pitch a financial technology platform for buying and selling stocks and other financial instruments. A whirlwind of wining and dining ensued, and one night, in between drunken proclamations of brotherhood (see also Osburg 2013; Uretsky 2016), Zhu and his childhood friend found out that they had a deal.

Now looking back, Zhu marveled at the free-handedness of the investors he had met back then: "people seemed to be doling out huge sums left and right." Accordingly, Zhu and the co-founder of his new company were liberal with their own spending. They got a flashy new office

and hired a staff of twenty to work on their new financial platform. Neither of them had any experience developing software or platforms. They relied on the technical expertise of hired engineers, and they spared no expense to get the best, outmatching the high salaries that tech giants in the surrounding Big Bay Area like Tencent, DJI, or Huawei offered.

However, the convivial relationship between Zhu's startup and their investor quickly soured. At first, the investors told the young men to "do what they had to do, spend what they had to spend." Within a year, however, he started to obsess over when Zhu's company would become profitable. The investor had other wealthy friends pool money into his fund, and as time wore on, the investor came under pressure to return the money, with gains, to the backers. As the investor started to panic, he intervened more and more in the operations of Zhu's company. There were occasions when staff would rush up the stairs to warn the whole office when they saw the investor waiting for the lift in the lobby. "We went from patting each other on the shoulders like brothers to shouting matches about whose company it really was, and whose money we were spending," Zhu sighed.

As his anxiety grew, the investor's behavior became increasingly erratic, and his instructions contradictory. When Zhu's startup was about to release their platform to the public, the investor forced Zhu to fire most of his staff to save costs. A few days later, he accused them of not doing enough, forcing them to spend money they did not have on a marketing campaign. "He was acting like a trapped animal. Towards the end, he started accusing us of making him 'lose

face' in front of his other wealthy friends," Zhu said. "It's not like it's not painful for us too, our friends and family also banked on our success and invested hard-earned savings in our company." Despite Zhu and his friend's best efforts to eke out the life of the company as it spiraled out of control, what started with a bang ended with a whimper.

Zhu's ruinous fallout with his investor was a common experience among Chinese entrepreneurs. Unlike Zhu, Tengfei did not grow up dreaming of starting his own business, but coming out of a Masters program at the prestigious Tsinghua University, Tengfei wanted to bring a medical device he was working on with his professor to market. Investors "flocked" to him because of his academic credentials, and Tengfei, with an abundance of choices, went with the one who offered his company the most money — an investor who had made his wealth during the internet boom of the 2000s. Tengfei shook his head when recounting his experience with this investor. "Not all money is the same," he told me. It's far more important to get the right money from the right people than to get the largest amount (see also Zelizer 1989).

The investor did not seem to understand that the metrics for software companies did not work for medical startups, which went through a very different "life cycle" (周期). Typically, for the first few years, medical startups are unlikely to make any money. Rather, they would be preoccupied with making prototypes, doing clinical trials with hospitals, and getting certification and safety approvals before going to market. "But [the investor] seemed to expect us to get clients and double them within a few months like he had with his internet company," Tengfei said. After

a growingly contentious back and forth, Tengfei decided to cut his losses — he bought back shares of his company from the investor at a loss and cut ties.

Why were these investors so impatient? Since I began visiting China for my research in 2017, Zhu and Tengfei are but two of the many people who embarked on entrepreneurship around the mid-2010s and complained about this. When I probed further, entrepreneurs were often quick to clarify that they're mostly referring to Chinese investors — those who were born and bred domestically.

Entrepreneurs thought that these investors' prior experience seemed to have shaped their expectations and their behavior accordingly. Zhu complained that Chinese investors took for granted the accelerated speed at which they accumulated wealth in the recent past. Most of those who became rich in the 1990s and the early 2000s did so overnight (过夜暴富). Zhu admitted that he initially shared this expectation, "When I was wearing my fancy suit lording over Tsinghua and Fudan graduates toiling away for my company, I naively thought that I was an overnight success, too."

The other perspective, offered by Tengfei, is that the investors, either informed by the dotcom boom that gave rise to internet companies in the late 90s and early 00s like Alibaba and Tencent, or from assumptions shaped by technological hype, expected everything to be scalable in the manner of software (see also Tsing 2012): almost immediate and at near zero marginal cost (Rifkin 2014).

The investors' impatience did not serve them well. By the late 2010s, I started to witness for myself the strained dynamics between some domestic investors and entrepreneurs.

After at an event where start-up teams pitched their ideas, a woman in a suit jacket, jeans, and kitten heels with a notebook in her hands emerged from the crowd to approach a team of Chinese college students. She gave them her business card and told them that she represented a VC firm. She asked them a few questions about their background and their product, jotted their answers down on a notebook, and told them that she'd be in touch as she walked away.

Yongliang, a battleworn entrepreneur and an alumnus of the students' university, witnessed this exchange. He walked over to the young men as they were giving each other high fives. Yongliang had just successfully raised the first round of funds, and he kindly advised his excitable young friends to be cautious in their optimism. He was speaking from his own prior experience of serial disappointment. He had met with literally hundreds of investors if not more before he found one willing to back him.

Many entrepreneurs like Yongliang have put everything on the line and their lives on hold. As a legacy of the One Child Policy, many Chinese people live with a highly skewed dynamic with their families (Fong 2004). On the one hand they may be treated like "Little Emperors" and "Little Empresses," doted on by their parents and grandparents (万千宠爱于一身). On the other, most

young people do not come from generational wealth,[4] and live with the heavy responsibility of caring for their family elders (Fong 2004). Fathers like Yongliang have lamented to me not only about their own burdens, but the even heavier obligation their children will inherit. As single children of single children, many young people may have to financially support six people — their parents and each of their own parents. Invoking the graphical representation of a family tree, they analogize these children as singular "stress points" (压力点) of "inverted triangles" (倒三角). The pressure only grows when these children start families of their own.

In this fraught environment, Yongliang told his family to place their trust on him even if there were many private moments when he lost faith in himself. As his bank accounts were slowly depleted by family and business expenses without any money coming in, Yongliang went through a taxing journey and a rollercoaster of emotions before finally chancing upon an investor willing to back him. Most of the other investors he had met were merely doing their job for show: "they were only looking to report back to their bosses, who could then make futile reports to try to appease their backers who had put money into their funds." Even after much fanfare, the likelihood that an investment was forthcoming was low. The truth was that these funds were running dry, and their "war chests" were almost empty.

[4] In part, the communist struggle sessions and denunciation rallies in Maoist China played a role in severing many lineages of family wealth.

Investors and employees working at these Chinese venture capital funds at the time corroborated Yongliang's description: Chinese investors' impatience had been formalized into temporal structures they inadvertently entrapped themselves in.

The Entrapment of Willing Oxen

Mr. Liu was a man who had made his first "pot of gold" (第一桶金) through setting up factories in the Pearl River Delta area considered himself a "kaihuangniu" (开荒牛). Kaihuangniu — or a "pioneering ox" — draws on the imagery of cattle and oxen that cultivated the fields around Shenzhen when it was still an underdeveloped and remote part of China. The term is used to describe people or companies that bore the brunt of hardships in developing new enterprises and businesses where there were none. It is symbolic of the trailblazing and industrious spirit of Shenzhen, and immortalized in 1983 with a sculpture by the celebrated Pan He (潘鹤) which now stands at the entrance of the CPC (Communist Party of China) Shenzhen Municipal Committee compound in Huaqiangbei.

While the sculpture is often referred to as the "pioneering ox" (*kaihuangniu* 开荒牛 or *tahuangniu* 拓荒牛), Pan engraved the words *ruziniu* (孺子牛, officially translated as the "willing ox") under it, taking inspiration from the famous words of Lu Xun: 横眉冷对千夫指，俯首甘为孺子牛 — which may be translated as "with a stern brow, I defiantly face down the accusing fingers of a thousand foes; with my head bowed, I offer myself resolutely, an ox to bear the child's woes."

Figure 1: The "pioneering ox" or the "willful ox" in front of the compound of the Shenzhen Municipal Committee.

Though Lu's words were from more than a century ago, they continue to aptly encapsulate the national spirit as pushed forward by the CPC. The poet, who Mao considered the bard of the progressive New Culture and May Fourth Movements, wrote in the spirit of national independence and emancipation in the aftermath of the fall of Qing, China's last imperial dynasty, in 1912. Amidst the tortured collective grappling with China's rapid downfall at the hands of Western and Japanese forces, a Chinese nationalism arose out of the ashes of the first World War that the CPC continues to fan till this day.

In this way, for those who identify with the ox, entrepreneurial ethics and success are not understood within a Northern European Protestant teleology (Weber 2002), but a teleology inflected with Chinese national ambitions. Under late paramount leader Deng Xiaoping's direction to transform China from a centrally planned economy to a more market-oriented one, businessmen interpreted their entrepreneurial success as confirmation of their contribution to the

national project. Through the labor they put into their business ventures, they were the metaphorical "ox" that carried the "child" — at once the young modern Chinese nation and their descendants (子子孙孙) — and were rewarded for it as such.

By the mid-2010s, Chinese leaders had repeatedly marked China's arrival at a new stage of development. Even before Li Keqiang rallied the masses towards "entrepreneurship" and "innovation," president Xi Jinping had announced on 10 May 2014 during a visit to Hubei that China has entered a "new normal" (新常态), a notion that he invokes again during the APEC Economic Leaders' Meeting in November.

The timing is telling. In 2014, China's GDP growth rate was 7.3%, a six-year low — sparking downbeat speculation domestically and globally about China's economic future. In introducing the idea of a "new normal", Xi responded to the collective anxiety and sought to preempt instability that may have been coming as the growth of the nation began to slow. In the aftermath of the events of June 1989, the party further staked its mandate to rule on economic development and the uplift of the living standards of the Chinese people through such policies as "opening up and reform." In face of a nation that had become accustomed to expecting double-digit increases in GDP since Deng's reforms, Xi's "new normal" tried to reframe the shock of seeing single-digit growth rates by suggesting that it is a sign of triumph, implying that the CPC's program to lift the masses out of poverty has been a staggering success, achieved within incredible

speed, and marking China's emergence as a "strong country" (强国) that is no longer merely "catching up" but growing in the single digits alongside other global powers like the United States.

In conjunction with this rhetorical move to secure the CPC's place in power, premier Li Keqiang suggested that as China entered a new stage of its development, national strategy would also need to pivot accordingly. Li introduced a series of alliterations of which the slogan *shuangchuang* 双创 ("Mass Entrepreneurship and Innovation") was but one. In a "special speech" (特别致辞) the World Economic Forum in Davos, Switzerland in January 2015, Li put forward the notions *shuang yinqing* 双引擎 ("dual engines") and *shuang zhonggao* 双中高 ("dual medium-high.")

In China's "new normal," Li declared that China's "gear of growth is shifting from high speed to medium-high speed (中高速)." And after decades of being the world's factory, China would seek to ascend from the lower rungs of the technological value chain to "medium-high" (中高端). To do that, China would need to fire up the "dual engines" — a "new" one of "mass entrepreneurship and innovation" alongside the existing engine of "traditional" industries and infrastructure.

An infographic offered by official Chinese government website (中国政府网) to clarify Li's concepts laid bare the government's concerted effort to placate worries. It candidly recognized China's economic difficulties but tried to highlight experts' confirmation of Li's assessment and proposed strategy to navigate the nation's challenges (央广网 2016). As another explicit attempt

at mollification, the infographic featured an economist who was a member of the National Committee of the Chinese People's Political Consultative Conference (全国政协委员), who emphasized that in the "new normal" the "train" of China's economy is "slowing down" or "easing up" (放缓) but not "losing speed" (失速).

Days before his "special speech" at Davos, Li Keqiang presided over a meeting to launch the Chinese government's 40 billion renminbi (approximately 6.5 billion USD) venture capital fund (国家新兴产业创业投资引导基金) pooled from both private and public money — i.e. a fund of funds (FoF) — to incubate "early- to mid-stage… start-up" companies (国务院办公厅 2015).

It would be years until it would become clearer how this "National Sunrise Industry Entrepreneurship Investment Guidance Fund" would be operationalized (more on this in the Conclusion chapter). But at that moment, for swaths of businesspeople like Mr. Liu, the cascading messaging from the Chinese government, while manifold, was also resolutely clear. If it were "oxen" like him who helped cultivate an underdeveloped China and delivered it to the middle of the value-chain, then the time had now arrived for him to become an "engine" to keep driving China's economy by becoming an investor.

The relationship between the Chinese government and the investment sector has had a checkered history. Since the establishment of the People's Republic of China's first stock exchange in Shanghai in 1990, the CPC has shown caution and weariness towards the institution. The government's history of repeated intervention in the Shanghai and Shenzhen stock exchanges

signify its unease with this instrument of mass participation even as it sees the need to unleash the economic forces of the masses to drive the Chinese economy when the party has staked its survival on it. A consequence of this tension is the pendulum of policies over the years and a constant calibration of checks and balances towards what the economic anthropologist Ellen Hertz describes as the "overall political, ideological and extractive interests of the state" (1998, 86).

In this manner, the past three decades have seen the Chinese state take a cautious approach that is far from maximalist, but instead prizes stability and control to inadvertently mixed results. For example, after 1996 saw the Shanghai index rise 86%, the party mouthpiece People's Daily ran an editorial in December that year warning against "excessive speculation" as regulators introduced a limit for daily share price movement to up to 10%, which would be in place for decades to come.[5] These signals set into place a two-and-a-half year prolonged drop in market prices (*Reuters* 2010). In 2000, the Shanghai exchange outperformed its peers globally after it was up 51%. In the midst of historical highs for the index, the Chinese government announced plans in June to sell state shares valued at an estimated $200 billion USD to fund its fledgling and struggling welfare system (Wade 2001a; Sito 2001) that would lead to a "four-year market slump in which the index [lost] half its value" (*Reuters* 2010) despite attempts to revive the market by banning state share sales

[5] This policy was partially relaxed in April 2023, when a new trading rule removed the 10-percent limit on share price movement during the first 5 days of trading for newly debuted companies on the exchanges (IPOs) and would come into force from the 6th day onwards (H. Zhang 2023).

(Wade 2001b) in October and loosening the rules to allow pension funds to invest in the stock market (Kazer 2001) in December.

More examples of intervention abound throughout the histories of the Shanghai and Shenzhen exchanges, such as manipulating the levers of trading tax, foreign investors' access to the brokerage sector (Reuters Staff 2007), or the flow of IPOs to boost or dampen trading. Even in the early days of these markets' inception in the early 1990s, Hertz notes the CPC's struggle with control over the stupendous market forces of the Chinese masses. Despite taking anticipatory safety measures in attempt to maintain shareholder majority by the state and public-sector "legal persons," the state's attempt at maintaining control quickly faltered due to the sheer magnitude of scattered "small" investors, who dominated the market and led to tsunami-like rises and falls (1998). As journalist Chao Deng characterized: "In the two years after China opened its stock markets, shares soared 1200% and twice fell by half" (D. Chao 2015).

More than two decades later, it is nonetheless amidst the multiple swinging pendulums of the market and never-ending policy reforms that the state's concerted vision of bringing forth the "dual engines" in China's "new normal" was articulated. In conjunction with the suggestive speeches and publicized meeting agendas, Chinese regulators thawed the freeze on IPOs (Ranasinghe 2014) and signed off on allowing insurance companies to invest in venture capital funds (Mitchell 2015).

Before I met Mr. Liu in 2017, I visited Dafen Village in Shenzhen — famously the wholesale producer of most of the world's replicas of masterpieces, with "assembly-line" painters drawing more than five million paintings a year (Wong 2013). There were walls showcasing their bestselling paintings, and amidst portraits of patriotic reverence — of Sun Yat-sen, Xi Jinping, Deng Xiaoping — were those of David Beckham and Warren Buffett. I asked the painters about them and about why people order portraits of these specific white men. They told me that Beckham and Buffett are embodiments of Chinese aspiration — one unattainable and one attainable, and asked me to guess which is which. I struggled. "What confidence your clients possess!" I jokingly bantered, "neither of them feels within reach to me!" The painters at the shop laughed, and one chimed in, "we could reincarnate ten times, and likely not once will we be as handsome as Beckham, but if we are lucky this lifetime, we might become successful in investment like Buffett, the 'god of stocks' (股神巴菲特)."

Figure 2: Portraits at Dafen Village. Photography by author.

Later I sat in Mr. Liu's office. It is decorated with Chinese calligraphy and ink wash paintings, and touches of marble and gold under fluorescent light. The paintings included one of a powerful-looking ox — most likely representing the kaihuangniu, but I now realize that it could be meant as an auspicious mascot for a bull market. Though I did not find a portrait of Buffett, I would realize later that the "god of stocks" nonetheless had a phantom presence.

Mr. Liu was introduced to me by a friend, who highlighted Mr. Liu's business achievements by telling me that he was owner of the coveted special license plates (粤港车牌) that allowed him to traverse between the border of mainland China and Hong Kong without

having to go through security like everyone else. This privilege meant that he paid at the very least a million RMB in annual taxes.

Mr. Liu was delighted to have a keen ear to hear about his business exploits and feats over the decades. As we spoke, he made Chinese tea in delicate and intricate *zisha* (紫砂) teaware. These handcrafted vessels are made only with Yixing clay (宜兴泥) that is mined in Jiangsu, which requires a notoriously lengthy and complicated process of preparation. The teaware are left unglazed and have a sandy texture that gives it its name — *zisha*, or "purple sand." The porous surface of the pots absorbs traces of each of the teas prepared in it to develop a more complex and sophisticated flavor over the years. It is said that a well-loved zisha pot used across generations can brew, just with plain hot water and no leaves, a tea that is decades or centuries in the making just with the sediments cultivated within the pot. One must therefore take care to never wash the teaware with detergent and be selective or even exclusive with the kinds and even subvariety of teas they use it for. Though my palate for Chinese tea is not well-honed, I could recognize the teaware as a mark of tea connoisseurship — a patient art that involves at every step subtle and mindful cultivation.

In between sips of tea and quick drags on his cigarette, Mr. Liu told me how his factories grew, in numbers and in what they manufactured. Over the years, he and his workers rushed to meet demands, first as China established itself as the world's factory, and then to cater the rapidly growing consumer class and developing infrastructure of an explosively expanding Chinese

economy. His factories have manufactured consumer goods, machine parts, and construction materials, and now the time had come for yet another expansion — venture capital investment.

I asked him if that was something he was familiar with. He lit another cigarette, poured me more tea and said, "I knew nothing about manufacturing before setting up my first factory in the middle of the desolate countryside. I learned then, and I will learn again now." He told me that he had just started a fund, and his *xiongdi* (兄弟, brothers; see also Osburg 2013; Uretsky 2016) — willing oxen like him — were already on-board.

I wondered aloud if the turbulent history of the government's interference in the investment sector worried him. "But there are now good signs," he countered, citing the thawing of the IPO freeze and the new policy that allows insurance companies to invest in venture capital funds. Even "princelings" like former Chinese president Jiang Zemin's grandson or former premier Wen Jiabao's son have joined the ranks of venture capitalists (see also Mitchell 2015), he said. Surely, they have privileged knowledge, he averred.

"You know the 'god of stock' Buffett?" he asked me. I said that I did. "As businessmen, who isn't used to a bit of weather, whether it be from the global market or from the government?" he mused. "Buffett once said, 'If you aren't willing to own a stock for 10 years, don't even think about owning it for 10 minutes.' In fact, Buffett's preferred duration for holding a good stock is 'forever.' Good investors are not fazed by short-term turbulence. I believe in the stock that is the country (国家), I'm going 'long' on the Chinese nation."

It was years later, in 2020, that I thought about Mr. Liu again. I heard his name in conversation with Meng in Shanghai, a woman trained as a lawyer who worked in a venture capital firm run by an Ivy-league educated haigui. Meng was surprised that I knew Mr. Liu and probed further on my relationship with him. Satisfied that I was not still in contact with him, she told me that man is now "socially dead" (*shesi* 社死, short for *shehui xing siwang* 社会性死亡).

Prior to getting her job with the current VC fund she worked for, Meng had worked as a legal advisor in the orbits of Mr. Liu's circles. She wanted to join the VC industry but did not know much about venture capitalism then, so she thought that she could learn through proximity, first by working for people in the industry as a lawyer. She recalled that when Mr. Liu started pooling money from family, friends, and other wealthy individuals for his fund, there was great resistance for its duration or "lifespan" to be ten years, which was typical globally for a VC fund.

Investors who contribute money but will not run the day-to-day management of the fund are generally called limited partners or LPs. Mr. Liu's prospective LPs queried why they should lock their money in the pot for such a long time. The contention was not only that they were almost guaranteed to grow the money manifold should they invest it elsewhere. What also made them uneasy was precisely the political and policy turbulence that I had mentioned to Mr. Liu. Shouldn't they take it easy first by dipping their toes gently into the water before they dived straight in with such a long-term commitment?

As appeasement to the LPs and what Meng thought was stubbornness and hubris, Mr. Liu, as the general partner (or GP) who would manage the fund, decided that five years was enough. He has seen and taken part in China's growth in "Shenzhen speed" (深圳速度, see also Kirksey 2021) — the rate at which Shenzhen emerged from nothing and gained the ability to access or manufacture most things under the sun. Mr. Liu decided that he would once again work as hard as an ox and make the VC fund work with that drastically shorter duration, and then with its success as proof, raise another round of funds from the LPs — larger and for a longer lifespan.

Looking back, Meng thinks even in the inception of his fund, Mr. Liu betrayed a fundamental misunderstanding of how VC funds work. It usually takes a few years to source deals and find promising start-up companies to invest in, and a few more for them to grow to a point that enables a profitable "exit" (see also Valentine 2012). This "exit" is a "liquidity event" that allows VC investors to sell their shares in a company, hopefully, at a profit over the price they've acquired them, such as through an initial public offering (IPO) or merger and acquisition (M&A). To then think that one could construct a great investment portfolio filled with excellent start-up companies within the first two years, and then expect them to "grow" to the point of M&A or being traded on a major stock exchange within another two in time for an "exit" before the end of the fund's lifetime was beyond the power of Mr. Liu's will or his bull-headed work ethic. It was a pipe dream.

Zhu was thus only partially correct when he said that these investors were spoiled by the speed at which they came to their substantial wealth in the Deng period. It was also fear and anxiety that led them to become entrapment in a temporal structure they cannot beat.

Mr. Liu was far from the only one who took this misguided approach. Nuanced and differentiated statistics on VC funds lifespans in China are hard to come by, as that requires reliable and accurate self-reporting by the venture capital firms to disclose details of the contracts between the GPs and the LPs. One Thomson Reuters overview report on VC investment in China states that the average lifespan of VC funds in China was "about six to eight years" (J. Y. Wang n.d. Accessed 04-17-2023). However, while it was not something that most start-up entrepreneurs I spoke to said they knew to ask about at first, by around 2018, many of them noted quite a clear distinction: VC funds founded and run by Chinese born-and-bred GPs averaged around five years — sometimes even three, whereas Western funds or funds run by "westernized" partners, often with names like Anna and William, have lifespans of ten or more years.

In fact, a program director at the Chinese office of a large U.S. fund pointed out to me the fallacy of limiting our understanding of funds like hers based on their official timespans. She mentioned how they were operating multiple different funds of different "vintages" — and if one of their funds was reaching the end of its "life" but some of the companies in their investment portfolios needed more time before an "exit" could happen, they would simply move those

companies into a "fund" of a younger vintage with more lifespan left. "It's as easy as passing something over from your left hand to your right," she analogized.

On the other hand, the VC funds of many Chinese investors like Mr. Liu seemed to have both their left and right hands tied. Having convinced his long-term business partners and his closest friends and family to pool money into his fund for a shorter amount of time, he went on a spree of investment in the quickly proliferating start-up companies out of excitement and nervousness as he raced towards the tight deadline he set for himself.

Before long, he would have come to the realization that he had used up most of the funds his friends and family had staked, and his "war chest" was close to, or actually was, empty. He wagered his reputation and credibility — the lifeblood of his social existence in China (see also Chapter 3) — on this endeavor. It is at this point that many Chinese entrepreneurs like Zhu told me about the whiplash from what had up to that point been their generous and supportive xiongdi — men who were not only their investors, but also their brothers-in-arms, their fictive kin.

Trapped in a net of their own making, these investors quickly realized that the chance that they could lean on their social networks to raise another round of funds after this first endeavor was quickly dimming. With little in their coffers, these investors looked to what they have in hand — the companies they have invested in — and started "whipping" them like they would "horses" (快马加鞭) to make money. This sadly, as many of my interlocutors point out in retrospect, only

betrayed another ignorance: the truth is that successful VC investors don't directly profit from revenue that their portfolio companies earn, but from buying and selling their stock.

What Zhu described as the conduct of "trapped animals," Meng regards as the desperation of the "socially dead" — with at once nothing to live for and everything to die for. Their plight has rippling consequences across society.

Neijuan: The Blameless By-product of Scale?

Marble. Glass. Steel. Jing admired the high-end decor as the clacking of heels reverberated through the hallway, heralding the investors' arrival. As he was ushered into the conference room, he recalled being momentarily stunned by the view of the plunging skyline behind the wall of glass. These folks must be doing really well, he thought to himself. The men and women who sat across the negotiating table from him wore crisp, tailored suits and tasteful blouses. At first, he was thrilled to learn that this Chinese venture capital firm was willing to write him a sizable cheque to fund his start-up company in exchange for some of his company's shares. But there was a catch. A partner told him that, if Jing's startup could not meet what appeared to him a wildly unreasonable revenue target within six months, Jing would have to return all of that money to the VC firm and pay a steep penalty.

Later, Jing would learn that many other startups on the brink of bankruptcy would agree to these egregious terms as a last resort, and then be caught up in endless cycles of debt until they collapsed entirely. Recalling the meeting, his fury was palpable: "I didn't realize that they call loan

sharks (高利貸) 'investors' now. How can you call yourself a venture capitalist when there is no risk involved (没有风险怎么可以叫风险投资)?"

Despite their flashy and dressed up appearance, many of these VC funds were desperate. Hope was lost on making good returns for their LPs, and all they could do was to try to at least make some of their money back through what was, as Jing described, effectively loan shark behavior — at their worst a legal form of blackmail that preys on desperate start-up companies. Some others chose to passively accept their fate and live a zombie-like existence: knowing that there is little chance to revive themselves financially and socially, salaried employees at the funds would keep "scouting" deals, with full knowledge that they don't have the cash to make offers, only to write futile reports to their LPs as they wait for the sweet release of the formal "death" at the end of the funds' lifespan.

In conversations about this phenomenon, there was a lot of anger, and a lot of blame thrown around. But at further probing with my interlocutors, most found it hard to determine who was *ultimately* at fault. Was it the fault of the investors who had envisioned themselves taking part in a great moment of transition in modern China, to at once ride and assist the "east wind" of reform? Was it the fault of the first-timers who heeded Li's call to become entrepreneurs? Surely, it was not the state's fault. Leaders may have signaled for the need of grassroot participation, but how could they have anticipated the spiraling consequences of the feverish uptake?

The other half of *shuangchuang* 双创 — "innovation" — also saw a trajectory of explosive proliferation and collapse similar to this collective first attempt at VC and start-up entrepreneurship. Though Li Keqiang's invocation for Mass Entrepreneurship and Innovation was not prescriptive in the manner of Mao, he did present suggestions of what that proposed reality could look like. In the careful choreography of the former Chinese premier's rare public appearances, Li visited Chaihuo (柴火, lit. firewood) in 2015, the first makerspace in Shenzhen, which the Chinese leader held up as exemplary of grassroots innovation. The State Council would soon follow by releasing a "guidance opinion" (指导意见) document to officially endorse the proliferation of makerspaces or *zhongchuangkongjian* (众创空间, lit. mass innovation spaces) to help facilitate the nation's technological ascent (国务院办公厅 2015).

As ethnographer Silvia Lindtner notes (2020), Premier Li's promotion of the maker movement's role as one of the nation's great engines for growth came as a surprise. She highlights the inherent paradoxical tension of this "socialist pitch": between Li's collectivist and nationalist call with the open-source and egalitarian ideals in maker culture that verge on the anarchistic — maker communities articulated making as a movement to take back control from the powers that be and return it to "the people" through "democratizing peer production, open sharing, and co-ownership of resources and knowledge" (Lindtner 2020, 12). In the years that followed Lindtner's fieldwork, I observed the incompatibility of maker culture with the commercialization that is necessary to turn "grassroots innovation" into the engine of growth Li Keqiang envisioned. Many

within the community find meaning and joy in creations they have come up with themselves, often for their own particular needs and desires rather than those of the many. The Do-It-Yourself (DIY) spirit of maker culture attaches special value to Marxian inalienation that could be imperiled through mass production at scale.[6]

Maker culture's role in Li's grand vision did not materialize, and makerspaces like Chaihuo did not end up being the tinder for the flames of innovation that would spread through the land. A year from Li Keqiang's endorsement, political entities and journalists alike noted not only the proliferation, but also oversaturation, of maker and co-working spaces that cropped up in China (袁莉 2016). In a piece openly addressed to the Central Government, the China Association for Promoting Democracy — one of the eight legally recognized minor political parties subservient to the Chinese Communist Party — highlighted key issues that had arose from the multiplying mass innovation spaces. They noted that many of them are of dubious quality, and that surveys showed that in many regions, more than 70% of start-up teams leave these "incubators" (孵化器) within three months, and less than 10% of these teams become actual businesses, and of those, most are working on "low threshold" (低门槛) technologies. They also highlighted that, though

[6] To nuance this observation: while maker culture does not lend well to products that are scalable, the "building blocks" to "make" are. As an example, one of the biggest commercial successes that has come out of the maker community in China is a Chinese company based out of Shenzhen that produces actuators, motors, electronic modules, etc. for consumers to take part in making — with a US$367 million valuation in 2018. Notably, this company, illustratively named Makeblock, got its initial funds ("seed capital") from SOSV, an American VC fund, and now also counts Sequoia China as its major investors.

many local governments had enthusiastically introduced policies in response to Li's call, these policies primarily consisted of rent subsidies and tax benefits, and did not offer actual guidance or help teams seek investment and otherwise develop as businesses.

This evaluation bears out in what I saw in the field. In my many visits to government subsidized "incubators" (孵化器) across the country, I heard similar comments, whether in Shanghai or Yunnan. For example, a man who had recently graduated from university told me that like most of the other people based at these incubators, he has some engineering training in university and some experiences with "making" but has no idea how to create a business out of the things he makes. He told me frankly that most of them there saw these subsidized incubators as "cheap landlords" (廉价房东).

It may be true, as my interlocutors say, that it was impossible for the government to anticipate these developments, but all of us also recognize the element of déjà vu. The Chinese nation has seen many instances of feverish behavior among the masses — stock fever 股票热 and Mao Zedong fever 毛泽东热 being just two of many in contemporary historical memory. In recent years, however, the chaotic spiraling of collective behavior has found new expression in the term *neijuan,* a direct translation of anthropological lexicon "involution."

As journalist and writer Yi-ling Liu notes, "neijuan" is often used in China in reference to "feelings of burnout, ennui, and despair" (2021). Literally, the term neijuan — or "inward" and "spiral" — refer to the conditions that inspire those emotions. Most sources in Chinese (e.g. 刘

世定 and 邱泽奇 2004) trace the term "involution" to Clifford Geertz's 1963 book, *Agricultural Involution: Processes of Ecological Change in Indonesia* (1963a), where the anthropologist used the term to refer to a kind of "change without progress" (1991).

In his case study, Geertz detailed how Dutch colonialists unsettled traditional practices of horticulture that maintained a delicate balance between the productive capacities of the ecological system and the population being maintained. As the Dutch colonists and mercantilists (the East India Company) sought to exploit the Indonesian islands for exports to sell on world markets, they "superimposed" their colonial economy without "changing fundamentally the structure of the indigenous [subsistence] economy" (1963a, 47). As commercial crops like "sugar, indigo, coffee, tobacco" took up more and more land while the domestic Indonesian population continued to grow, "tremendous populations [came to be] absorbed on minuscule rice farms" (1963a, 80).

The result: the Javanese peasantry had no choice but to drive their terraces and all their agricultural resources harder by "working them more carefully" (1963a, 79). The notion of "involution" then refers to what Geertz sees as a "self-defeating process" (1963a, 80) — despite more labor working the rice terraces more intensely, food consumption never rose above minimum levels of subsistence. Drawing inspiration from fellow anthropologist Alexander Goldenweiser, Geertz had in mind an imagery of art like Maori carvings or Gothic architecture, which after reaching appears to be a "definitive form" does not "stabilize or transform," but instead becomes more complex, more elaborate, and more intricate –"overdriving of an

established form in such a way that it becomes rigid through an inward overelaboration of detail" (Geertz 1963a, 81–82).

Geertz hints that the Javanese peasantry need not have toiled harder for no improvement in their lives. But such is the consequence of the Dutch's exploitation of Indonesian land and population for their own economic gain, their intentional effort to "keep the natives native," and the rivalry between European colonial powers (1963a, 48). Geertz writes, "the real tragedy of colonial history in Java after 1830 is not that the peasantry suffered… [but that] it suffered for nothing" (1963a, 143).

In this concept used to damningly highlight the effects of Dutch colonial exploitation that live on in foreign corporate interests on the Indonesian archipelago, many in China today recognize features of their own existence. *Neijuan* became a way for Chinese citizens to articulate the exhaustive and exhausting competition they experience in different domains of their lives with no seeming end to its escalation. Employees can work "996" — be at the office from 9am to 9pm six days a week. But even that can't ensure that they can fend off younger replacements who are willing to work harder and even more hours. Parents fret about sending their children to good schools, anxiously signing them up for youth classes at National Academies for music, arts, and sports and groom them to win various regional and national trophies. But that doesn't necessarily mean that when applying to primary school, they would have a fighting chance against competitors with

Fudan University graduates as parents armed with a 15-page resume by the time they're only five years of age (Sohu 2018).

They lead lives that involve growing intensification of labor, which does not guarantee positive development, but simply that they don't fall too far behind. An ox can till the land harder, but better yield may not be forthcoming. In these vicious cycles of competition, many are trapped in an exhausting existence of "treading water" (Geertz 1963a, 78) or as the Chinese anthropologist Xiang Biao famously characterized, in perpetual *xuánfú* 悬浮 (suspension), conjuring the image of a hummingbird with nowhere to land, flapping furious only to stay statically in the air (Xiang 2021, 234).

There is discussion in China over whether the term has been misinterpreted since its translation to Chinese (章舜粤 2020) — perhaps an inescapable fate for all concepts that go into wide circulation, like a giant game of "telephone." However, widespread invocation of neijuan itself is telling. So is the difference it bears from how Geertz had employed "involution."

In late 2020, a tragicomic image of a student at the prestigious Tsinghua University working on the laptop propped up on the handlebars while he cycles went viral. A national conversation ensued on the sad state of neijuan in the education sector. A student at Renmin University gives an illustration: a teacher may assign an assignment of 5000 words. But in hopes of getting better grades, many students chose to write 8000 to 10000 words, or even more. At the end, everyone

did more work, exceeding what was expected of them, but because of grading by the curve, the number of students getting good grades remained the same (China Youth Daily 2020).

Internet users pointed out that all involved are pitiable (可怜 *kělián*) — even the teacher, who had all that much more grading to do. But this is what it means to live in China. In a land of immense population and immense competition, everyone's efforts and achievements count less. Faced with the unending and gross "inflation" of not just their wages but their hard work in different forms, there appears, from day-to-day and internet discourses, to be three paths to choose from for those who are caught in the spiral of involution: (1.) to join the rat race and be in the simultaneous mindset of endless "self-flagellation" for not doing enough (Xiang in Q. Wang and Ge 2020) while constantly questioning if one is, like the Javanese peasantry in Geertz' account, "suffering for nothing" (1963a, 143); (2.) to find a 套路 *taolu* — a shortcut, a cheat code: play the system or be played, to taolu or to be taolu-ed; (3.) to 躺平 *tangping* — lie down and give up.

As such, those who became entrepreneurs and VC investor out of the worry that they cannot afford to be left out (cf. Humphrey 2020) and feed into a spiraling collapse are retrospectively understood as part of neijuan. Those who game the system and take advantage of subsidized incubators as "cheap landlords" are part of neijuan. Those who were spurned by unreasonable investors and ultimately give up their start-up enterprises are also part of neijuan.

While the effects of neijuan, like the phenomenon of "loan-shark" investors, or those taolu incubator users, are contemptible to some, neijuan itself and its consequences is often regarded as

similar to that of a natural weather event — blameless and inevitable. Like a tornado, neijuan is the product of the confluence of environmental conditions: a natural consequence of China's vast population, and the process of the nation's climb towards being *gaodashang* (高大上, lit. high-end, big, upscale), i.e. competitive and admired globally. Whereas Geertz sees the Dutch as responsible for confluence of factors that resulted in the "agricultural involution" in Indonesia, neijuan seems to be widely understood to be a pitiable but ultimately blameless byproduct of scale and scaling in China.

An irony, then, is that under a government that has consistently warned against "speculative excess," in the anxiety-ridden "self-flagellating" (Xiang in Q. Wang and Ge 2020) environment of mass involution, all its people could do was speculate. Looking back, whether in earnest or in the spirit of taolu, the proliferation of VC funds, start-up companies, and makerspaces that are now defunct can only be written off as the consequences of excessive speculation and self-defeating involutive intensification. Yet despite these pervasive signs of neijuan in the domains of VC investment, entrepreneurship, and innovation, China has nonetheless emerged as a VC and start-up powerhouse in the years after 2014. Why? How?

From Rupture to Rapture:

Profiting from Unprofitable Companies

Having witnessed the neijuan of many Chinese VCs into "loan shark" investors and then getting to work at a VC fund run by Ivy-leaguers with long lifespans, Meng wonders at one point

if one of the main lessons Chinese VC investors have to learn from their American counterparts is to "take time." Meng no longer thinks this, but it was something in speaking to my interlocutors, more than a few mused about: perhaps as China's raised to the level of other strong nations (强国), it entails, as leaders suggest, a "new normal" at a slower pace.

At the same time as many local VCs and start-up companies faltered, "westernized" (西化 *xīhuà*) funds were thriving. This prompted many to take seriously the task of importing what they consider an American cultural and financial model to China. The notion in China that VC comes from America is not only shaped by the fact that many of the tech giants that have become household names globally came out of Silicon Valley, but also informed by the roster of the most celebrated VC entities in the nation.

As of early 2020s, almost all of the best-known Chinese VC firms — Qiming, Sequoia China, GGV China, 5Y (formerly Morningside), ZhenFund, Hillhouse, etc. — are either American (e.g. Sequoia, GGV), or have some form of U.S. connection or background. Qiming, for example, has an American co-founder: Gary Rieschel studied at Harvard Business School, and served as senior executive at Intel and Cisco. Hillhouse Capital Group was founded with seed capital from the Yale University's endowment fund.

People like Emma — who have come into her work with a prestigious western education, working amongst other haigui returnees, in a VC organization with "western" (西化) savvy — are hard-pressed to say how they operate differently to the first wave of MEI-inspired Chinese VC

funds. They scout for great start-up teams, invest in them, try to help them grow as businesses — much of this seems self-evident.

When asked about why do so many Chinese funds fail, many of them would say that the variation in the performance of different funds may be attributed to a number of things: the leadership and whether or not they have "vision"; whether or not those working in the fund have the generalist acumen and exposure to be able to understand or to pick-up quickly what businesses in different industries involve and how to help them grow; and whether or not people in the fund have a strong network to scout talent and good deals. The incentive and decision-making structure of the fund could also play a role: for example, whether deals are put to a vote involving the whole VC team, or just decided on by the partners; and whether the large bulk of compensation ("carried interest," or the "carry") is only given to those who make gainful deals, inciting competition or shared by all, fostering collaboration.

However, those like Meng, who spent time in the liminal edges of both worlds, believe that these are second-order variables and ultimately incidental factors. There was something simpler but more fundamental that could make or break funds: how do they understand what profit is?

The account of Jing, the entrepreneur who encountered the "loan shark" VCs in their glass and marble den, illustrates this well.

Jing left his job as a civil servant in a state-owned electric power company. On paper, it was a good job—good perks, a stable career track—but he was bored out of his mind. He shared a cubicle with his supervisor, a dour man who moved through the office at a glacial pace and took lengthy lunch breaks. Though the supervisor was only in his thirties, he had the demeanor of someone decades older. Jing held him in contempt: he could not bear the thought of such a monotonous fate, shirking work and leeching off the system until retirement. So one day, in a fit of rage, he quit.

He set up a workshop in his parents' place in Dongguan, a satellite factory town around Shenzhen. As an electronics engineering major at university, Jing enjoyed spending his free time tinkering and building his own gadgets. He wasn't entirely sure what his little reconfigurable robots could be used for and thought maybe they could become educational tools for children.

A friend connected him to a group of *laowai* (老外 foreigners) who he vouched for as "proper" (正当) investors. Jing harbored suspicion when he found that the investors' office was located at Huaqiangbei — the world's largest electronics market that houses a multi-complex maze of disaffected vendors hawking an endless assortment of electronic components and "copycat" (山寨 shānzhài) devices.[7] It was not the high-end and upscale (高大上) address he was expecting.

On the day of the meeting, Jing's suspicion only grew. After a chaotic dash to find the right entrance and elevator at the markets, Jing arrived at doors that opened to a tunnel, manufactured

[7] For more on 山寨 shānzhài see Silvia Lindtner's work (e.g. Lindtner 2015; Lindtner, Greenspan, and Li 2015).

from the husk of a shipping container. The scrappy, industrial aesthetics belied Jing's mental image of a successful VC investors' workplace.[8] Still huffing and puffing as he arrived at the meeting room, Jing carefully passed the modular gadgets he had been holding onto to investors seated across from him. He explained what they were, how he developed them, and how he wanted to grow a business selling them to teach students engineering and programming. The partner, a foreigner in a frayed shirt, sat silently in the middle, his gaze inquisitive, while a friendly female member of staff asked questions and translated between them. The meeting was quick and to the point, shorter than the van journey Jing took from Dongguan to come to Shenzhen. In the weeks that followed, as memories of the meeting faded, Jing found himself wondering if it was all a fever dream. That is, until he got a phone call from the venture capital firm telling him that they would like to invest in his company and inviting him to join their "Seed Accelerator Program."

He recalled being flummoxed that the VC firm would decide to invest in his fledgling hardware start-up. Not only did they give him a chunk of cash and free office space for him and his staff, but the VC's in-house engineers worked long hours alongside them, often pulling all-nighters, helping his company develop prototypes and products. He learned that this seemingly unbounded generosity was the norm: when another start-up team was on the verge of collapse, the VC firm's partners offered to give them more money to smooth things out. When yet another

[8] The office manager and I would later chuckle over the fact that even after the VC fund moved to a new office — the industrial aesthetics remained, and recurrent delivery people would comment on why they never completed the renovations.

startup actually failed, they didn't retaliate, instead offering them more money to venture another start-up business. "At one point, I was worried that these laowai were pulling some kind of elaborate fraud that I couldn't parse. Surely, this kind of charity is untenable in business! Eventually, I concluded that they were generous idiots who were being hoodwinked by opportunistic entrepreneurs. I even tried to warn them. I thought these poor, naive foreigners would be scammed left and right in China, and their business endeavors would fail spectacularly."

But the reality was the opposite. As one of the first American VCs to set up business in China, the VC Firm was one of the top 5% of global funds that managed to make a multifold return and raised multiple "oversubscribed" funds to further their venture capital investments. So how did they make profit if they seemed to act as Jing described, like, "generous idiots"?

There are two inscriptions that have traveled from the United States and now circulate within China that may shed some light on this phenomenon (cf. Latour 1986; 1987; 1990; Kaiser 2005). The first I will refer to as "the formula" and the second is the imagery of "the hockey stick."

The "formula" has been described as the "venture math" to "return the fund" (Harlem Capital 2020). As illustration, here's a version of it similar to the one Jing's VC investors presented to the start-up companies they have invested in to explain to them the "backend" workings of successful venture capital funds: 95% of the world's venture funds are not profitable. Considering the risk, fees, and illiquidity that comes with investing in a venture fund, it would only make sense for LPs if the fund they put money into could bring in 12% annual return, or $1.12^{10} = 3.1\times$ returns

by the end of a 10-year fund. In order for GPs who manage the fund to achieve this, it would not suffice if all of the companies they invest in (or "portfolio companies") to do just fairly well. Rather, it makes more statistical sense, if 80% of their portfolio companies failed, but 20% of them do extraordinarily well. For illustration, let's imagine a scenario where a 10-year fund has raised 100 million dollars. Its GPs invest in 10 companies, owning 25% of each. They'll need to bring in 3x returns, i.e. 300 million, by the end of their 10th year. Here are three scenarios: Let's say all of these 10 companies are sold ("exited") at 50 million each, and the fund owns 25% in each of them. That would bring in 50×10×25% = 125 million. Though all the startup founders involved will have become overnight millionaires, this is not good enough for VCs hoping to secure a follow-up fund from their own investors (LPs). If 5 companies exited at 100 million and the rest exited at 50 million, they would generate it would not be good enough with (5×10×25%) + (5×50×25%) = 187.5 million return. But what if, 9 out of 10 companies exited at 50 million, but 1 became a "unicorn" valued at 1 billion? That would bring (9×50×25%) + (1×1000×25%) = 362.5 million. Jackpot!

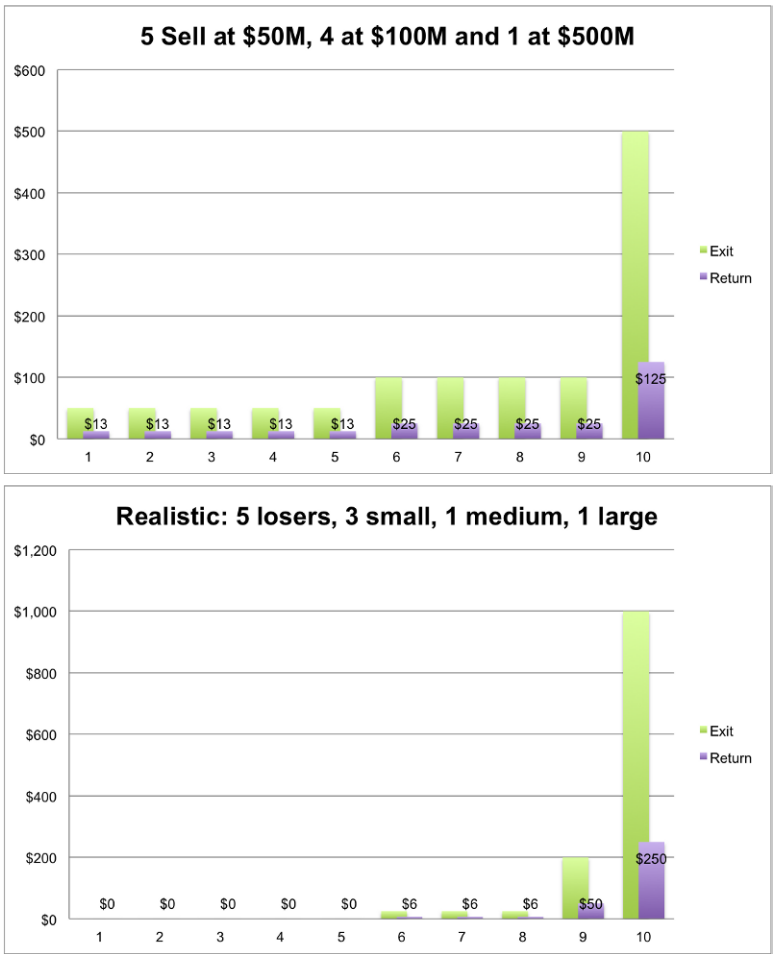

Figure 3: Illustrations of different "exit" scenarios for VC funds to argue that the formula to return a VC fund is to bet riskily in moonshots (Dean 2017).

Variations of this formula have circulated to convey one notion: that the lion's share of returns for a fund come from a small number of their investments. This idea shapes the entire operation of VC firms that adhere to it.

For VC firms like Jing's U.S.-Chinese VC investors, which I will call the Venture Firm from this point onwards, this is the particular challenge. Their task is not to make sure that all of their investments are thriving but strive to have within their investment portfolio a few spectacular successes. Marc Andreesen of the storied Silicon Valley venture capital firm Andreesen Horowitz characterizes it thus, "The venture capital business is a 100% game of outliers — it's extreme

exceptions."[9] Like hitting home runs in baseball games, whale hunting (Nicholas 2019), and many other low likelihood but highly rewarding activities: having talent, and skill, and the right equipment are integral, but even then, success of individual endeavors cannot be certain. The key is not to attempt it once or twice, but many times — or "at scale" (规模化).

As such, many venture firms place an implicit faith placed in probability theory and the "law of large numbers" to bring them to the point of "returning the fund" well (cf. Hacking 1990; Porter 1996). While the default 10-years lifespan of U.S. funds may seem temporally lavish compared to many post-MEI Chinese funds, considering the task at hand, what these VCs need to do within that time is nonetheless an incredibly tall order. It is in this light that the notions of being "incubators" or "accelerators" become significant in this enterprise.

In the mad dash to create a reality whereby at least a few of their portfolio companies' shares can be sold at astronomical valuations by the end of the line, venture firms are in a time crunch to "scale" the investment portfolio by populating it with good bets. With the expectation that most of them will not succeed in a way that they find meaningful, these venture firms try to hasten the process of large-scale trial-and-error.

There are arguably subtle differences between "acceleration" and "incubation", but in practice, they involve many of the same processes. Drawing from imagery in agriculture (cf.

[9] A quote from Lecture 9 of Stanford's CS183B course *How to Start a Startup.*

Lépinay 2007; Tarde 1902), incubation refers to the attempt at generating a favorable environment that at once shields the incubatee from environmental dangers and risks (of the market) and accelerates its growth. Being a "cheap landlord" could be part of it. The help of the in-house engineers and other supporting staff are also all part of the Venture Firm's effort to incubate and accelerate the business that may come out of Jing's enterprise.

One of the key elements of this process, however, is acceleration through money. Not only are the funds help to kickstart processes of hiring, developing the product, etc., as one of the first transactions for the fledgling company's shares, it helps set the "market" share price and in turn, the company's own "market price." For example, a start-up company that is given USD $200,000 for 20% of its shares will "achieve" the valuation of USD $1,000,000. If start-up companies need to reach valuations that are amenable to allowing GPs to "return the fund" in a "meaningful" way (Gil 2017) within the set timeframe, then they need to keep growing in their valuation in the manner of the "hockey stick." A familiar sight in business school classrooms and start-up pitches, the "hockey stick" on a graph signals the desired upward growth trajectory of a start-up company — first gently and then drastically. At the VC Firm and many others like it, a set of practices are set in place to chase "hockey stick growth" ("曲棍"式增长).

As the VC Firm's in-house staff help start-up companies like Jing's operate like a "team of thirty" with just a "team of three" (in their words), other aspects of the start-up companies' businesses are expected to grow beyond their own capacity as well. This is often achieved by

"burning" the money that VC investors have given them — to develop products, to market, to grow their client or user base by offering their products at enticingly low prices or even for free in ways they wouldn't otherwise be able to afford without their VC investors' help.

By indicating to other potential investors what the business could become by operating *as if* it were already at "economies of scale," start-up companies convince their existing investors and new ones to keep buying their shares at higher and higher prices. According to this "roadmap" (cf. P. Miller and O'Leary 2007), as start-ups go through different rounds of funding — from "seed round" to "series A," "series B," and so on — they accumulate higher and higher valuations to attain and sculpt (营造 yíngzào) the "hockey stick" like upward inflection of their valuation.

All of this is part of the concerted effort to create the conditions for a lucrative "exit" (cf. Valentine 2012), so that everyone with shares in the company, including founders and all of their investors, profit from the company being sold to at a much high valuation to corporations on the "private market" through Mergers and Acquisitions (M&A), or through being traded on stock exchanges by getting listed on the "public market."

In their language, within what VCs call the start-up "ecology," fledgling companies get "seed" money, which acts as their "runway." Start-up companies burn through their funds (the speed of which is referred to as "burn rate") like a vehicle would fuel. Before they approach the end of their "runway," start-up teams are expected to raise another round of funding to "extend" their "runway," until they finally "take off" or otherwise crash and burn.

These mishmash of aviation, maritime, astrodynamic, and agricultural analogies are staples as VC and start-up lingo. They are all part of a bricolage to reach at a prescribed composite image. The image paints a reality where start-up companies can "grow" in value without being bogged down by the issue of whether or not they make more money than they can spend, where VC investors and founders may in effect profit from unprofitable companies (cf. Olson 2018 on the function of analogies). In this world of mixed metaphors, the periodic injection of money fuel propels start-up companies like a rocket upwards towards the stratosphere, defying "profit's" gravity to reach "astronomical" valuation as "profitability" lies just on the horizon (cf. Petryna 2022).

In the practices that these analogies naturalize (cf. Mirowski 1994), American and haigui VCs simultaneously "take more time" as some of my Chinese interlocutors imagined a higher level of national "advancement" entails, and "compressing" or "accelerating" time that demonstrates an unprecedented level of impatience.

In simulating how start-up businesses could be if they operated "at scale," not only are VC investors looking to see early indications of which ones may succeed, but also which ones will fail. If the latter, then better to hasten their demise — to enact a form of economic Darwinism on steroids. On the flip side, the VC Firm's decision to offer a failed start-up team they've invested in more money to start another venture is not the act of a "generous idiot," but part of the Firm's process of speeding up its large-scale trial-and-error.

The Venture Firm's occasional practice of taking another chance with some of the failed companies in their portfolios has elicited many different reactions from my Chinese interlocutors. To some, like Jing, this seemed unadvisedly munificent. Others see this as a reflection of the superiority of western(ized) investors' cultural "quality" (素质) compared to their Chinese counterparts. One entrepreneur told me that this shows that it's not just a monetary transaction or relationship between them and the Venture Firm as their investors. This is not his first attempt at a start-up. He said, "There is a Chinese saying, 失败乃成功之母 (lit. failure is the mother of success), but we do not practise what we preach! To the previous Chinese investors of my last enterprise, I was fungible. The sense they gave me was: either you have it or you don't. It's not the same with the [Firm]. There are feelings and ties of comradeship (情义) here." This has inspired a sense of loyalty in him for the Firm.

However, we should take into account another factor in the Firm's benevolence towards failure. The temporal and business customs around start-up and VCs I'm describing here were not widely and explicitly known in China at the time of my research or my writing — some of Chinese entrepreneurs like the ones I've described here frustratedly describe these logics as 不成文規定 (unwritten rules) when they eventually learn about them years after they've already started enterprises and failed. As one of the staff members of the Firm puts it: for the Firm, it is better to invest in teams that have already been initiated into the conventions of VC and know what is expected of them to lower what they call "communication cost" (降低沟通成本). What needs to

be communicated, and what is demanded from many aspiring Chinese start-up entrepreneurs is no less than a paradigmatic shift from one "profit regime" to another (Levy 2014).

Unlike the business that Zhu ran as a student with air-conditioners, snacks and beverages, or Mr. Liu's factories, the start-up enterprises that manage to grow like the fabled "hockey stick" do not make profit from generating a positive balance of their income and outflow, their revenue and their costs. As economic historian Jonathan Levy points out, the definition of profit remains open to reinterpretation and redefinition because "temporality in economic life is so often subject to contestation" (2014, 175). Through the socialities and ideational forms around American VC, the notion of start-up companies actually achieving gross profit margin from the products and services they offer is repeatedly, and possibly infinitely, deferred. Consider the many start-up companies that have grown into household name tech giants — like Uber with its near USD $60 billion valuation as of April 2023 — that remain unprofitable.

Importantly, to borrow from anthropologist Jane Guyer writing on monetarism, the "temporal evacuation" of the "present" in favor of a future on a possibly infinite horizon does not simply happen on its own (2007). The "VC returns formula" and the "hockey stick" as fetishized cultural artifacts are not intended to describe reality with any mathematical precision. Rather, they indirectly and directly "roadmap" the "meaningful" trajectory of exponential growth for VC funds

and start-up companies.[10] In doing so, they become instruments that "mediate between distinct domains and actors," and "frame and stabilize the interrelations among the multitude of components" (P. Miller and O'Leary 2007) that make up the VC and start-up "ecosystem."

Thus, Meng, as she settled in her role within a haigui VC and saw the frantic pace at which their portfolio start-up companies sought to "grow," realized that her prior perception that Americanized VCs "take more time" just from the longer durations of their lifespans compared to Chinese ones was a superficial one.

What traveled with the "VC returns formula" and "hockey stick" are sets of "temporal philosophies" that were "ideologically marked and made culturally plausible and available" (Guyer 2007). When Alfred Marshall first introduced the conceptual division of economic time into the long and short run in 1890 (2009), it was not apparent that it would become an entrenched economic concept. Marshall's own student John Maynard Keynes famously dismissed it with an adage: "in the long run we're all dead." Marshall didn't disagree. He admitted that his notion of the "long run" may be more "hypothetical rather than empirical" (Guyer 2007, 412), as, he writes, "the tendencies which are being described [in Marshall's *Principles of Economics*] (often) will not have a sufficiently 'long run' in which to work themselves out fully" (Marshall cited in Guyer 2007).

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[10] Case in point, the growth depicted by the hockey stick is more dramatic than actual "exponential growth." For example, 3% growth year over year is "exponential." Hockey stick growth, however, is more like 3% growth for a few years and then 50% growth or even more. "Exponential" has become an imprecise cultural expression of rapid and drastic increase.

It is impossible to ignore the indelible mark the World Wars have left in the field of modern economics. The issue of economic time is intricately tied to the polarizing responses to the notion of institutional power. "Government intervention," in particular, became a flashpoint and remains one to this day. In one instance, this polarization is encapsulated in the contrasting ideas of the Jewish Austro-Hungarian brothers, Karl and Michael Polanyi — both eminent scholars influential beyond their own generation.

The younger brother Michael's experience with the National Socialist government in Germany — among them being discriminated as a non-Aryan scientist in Berlin, being named on the the Nazi's Special Search List, and arrested after Germany's attack on Great Britain and interrogated by the gestapo — served as "crucial foundation" in his influential later writing against the universal status of scientific knowledge (Nye 2011). His fundamental objection to institutional power also found expression in his economic writing of a "spontaneous order" in opposition to forms of government-led central planning (Jacobs 1999). On the other hand, his brother Karl's philosophy may be drawn from his treatise *The Great Transformation*. Through highlighting the way economies are embedded in human relations and ties and society, Karl Polanyi writes against the abstract economic models that promoted what are to him the "myth" of the "self-regulating" market, arguing for the need of "countermovements" through the establishment of social protection like tariffs and labor laws against the artificially sustained "market economy." One could read in Karl Polanyi's writing a repudiation of dehumanizing abstract forces that subordinate

society with broad-stroke directives and theories — be it from the Weimar Republic or the Austrian school of economics.

The radically different responses in grappling with the staggering violence and domino effects of destruction of the World Wars are also exemplified in the "clash" between John Maynard Keynes and Friedrich Hayek that arguably "defined modern economics" (Wapshott 2011). Keynes saw employment as the main way to ensure that people, with their basic needs met, are independent in "thought and action," which is in turn crucial to working towards the possibility of a "true democracy" (Wapshott 2011, 150–51). On the other hand, Hayek saw the state's participation in Keynes's proposal to achieve higher if not full employment a threat to liberty. It is clear that the horrors of the Nazis loomed large in Hayek's mind, and that he sees any form of government role in the "market" as a dangerous slippery slope that courts political tyranny and oppression. "It is Germany whose fate we are in some danger of repeating," he writes in what would become a (neo)libertarian scripture: *The Road to Serfdom*. In this climactic clash of ideas Alfred Marshall's division of economic time into "long-" and "short-run" took on new significance.

Hayek writes:

> It was men's submission to the impersonal forces of the market that in the past made possible the growth of a civilization . . . it is by thus submitting that we are every day helping to build something that is greater than any one of us can fully comprehend. It does not matter whether men in the past did submit from beliefs

> which some now regard as superstitious… The crucial point is that it is infinitely more difficult rationally to comprehend the necessity of submitting to forces whose operation we cannot follow in detail than to do so out of the humble awe which religion, or even the respect for the doctrines of economics, did inspire (Hayek 2001, 210).

In advocating for society and "markets" to be free from state intervention, Hayek argues for faith in the "spontaneous order" that Michael Polanyi coined and first explicated (Jacobs 2000) In doing so, he espouses a view whereby in order to "preserve our freedom in the long run" (Hayek 2001, 211), and for the sake of the "progress" and "growth" of humanity, we must submit to the market, in effect taking everything in the "short run" (the interim between the present and the foretold distant future) to be, as Alfred Marshall characterized, "passing events" that a "fitful," "short lived" and bound to be "irregular" (2009; cited in Guyer 2007). By imposing the view that everything that one is experiencing is bound to be ephemeral, Hayek (and subsequently Milton Friedman and economists of the Chicago School) implicitly and explicitly promotes an evangelical orientation in macroeconomics (Guyer 2007).

Thus, in the seismic ripples from the manmade traumas of the Great Wars, economic time was fractured. As smaller ruptures cascade — spreading in time and in geography, they occasioned a major shift. Once, a teleological orientation of religious "predestination" provided impetus for a feedback loop that kindled the nascency of capitalism (Weber 2002). Here, a teleology ruptured

the common understanding of economic time and made plausible the notion of economic rapture on the distant horizon. In other words, a secularized Weberian idealism made predestination temporal, rather than spiritual.

The conceptual separation between the "long-term" and "short-term" made possible the "temporal arbitrage" (Guyer 2007) that VCs take part in. For if "growth" and "progress" are enfolded into a faith in the imminence of "something that is greater than any one of us can fully comprehend" (Hayek cited in Guyer 2007, 415), and the only thing left to do in the liminal interim is to submit to the "impersonal forces of the market," then why not speed up the search for "signs" (Weber 2002) to the preconceived destination? As VC investors work towards making exponential returns within the lifespan of their funds, they are in effect asking: how might we accelerate the coming of economic reckoning such that it is not in such a distant horizon in the "long-run" that we might all be dead? What if it could be within our lifetimes or even in the course of, say, around a decade?

Consider the imagery of the hockey stick once more (see Figure 4). Note the varied Y-axis and their labels — "e.g. revenue/customers," "no. of users," "success," "data being monitored," "profits," "sales" — or the lack thereof in many instances. Not only is "profit" unsettled as the main indication of "growth" — here we see the hints of the role technology plays in this current paradigm. The frequent appearance of "users" or "data being monitored" in these hockey stick charts reveal what the scalar imaginaries (Summerson Carr and Lempert 2016) they propound lean

on. The notion that "users" may grow exponentially, and that "data" can be closely monitored hinge on the affordance of digital and internet technologies, such that large swaths of users regardless of domestic or international geography may be accessible, and replicating the same service or product for them may come at low or even near "zero-marginal cost" (Rifkin 2014), and that "data" of their usage can be easily and legibly monitored or surveilled.

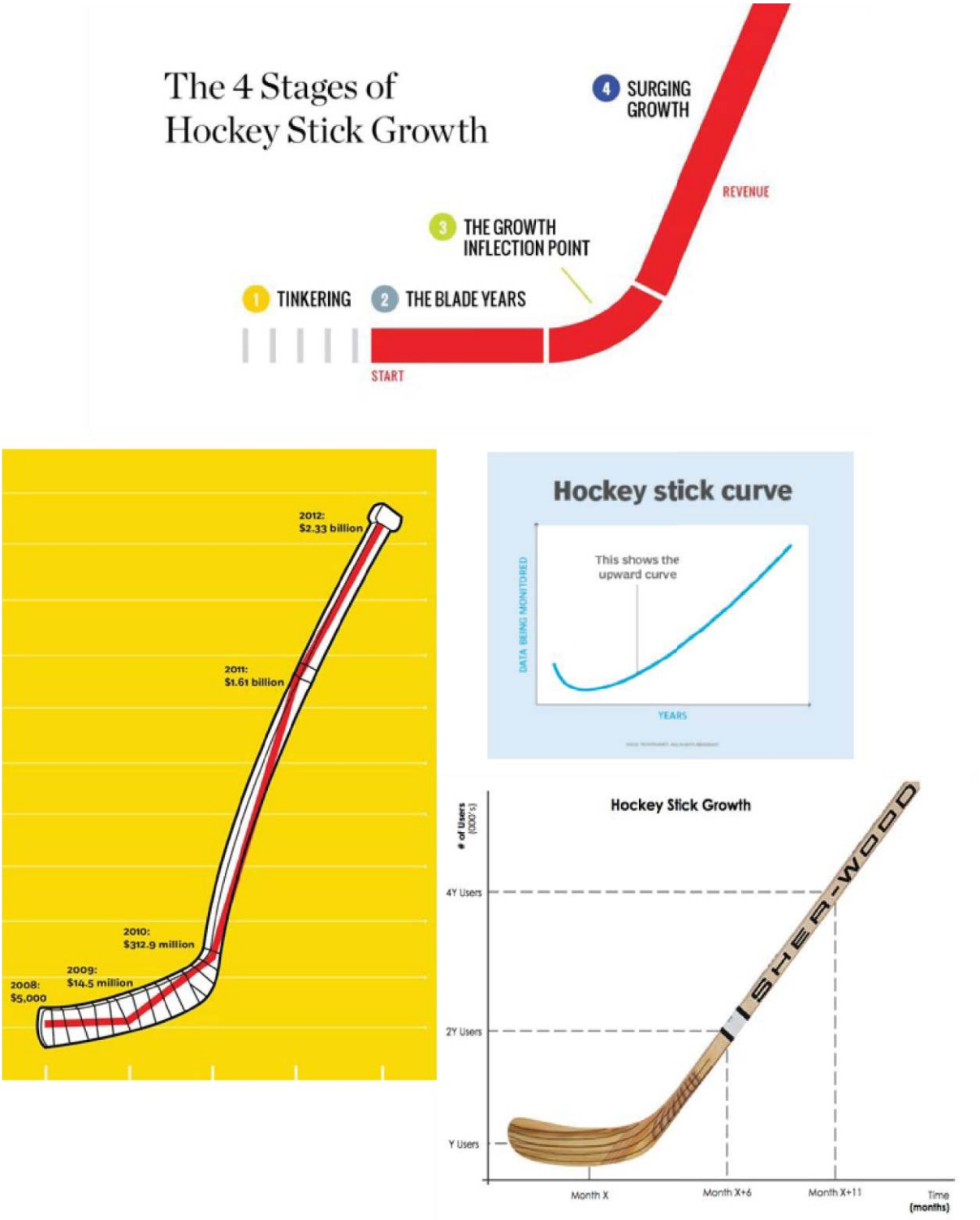

Figure 4: Confusing and confused hockey sticks.

The way Meng and many others who work in the VC "ecosystem" understand digital and data technology to work and the processes and temporality of scaling have a mutually reinforcing

coherence. While VC investors invest in an array of different industries, there is always a lot of hype around the latest technologies that promise to be "game changing." The cutting-edge technology in the current global epoch — as is well-recognised by the Chinese nationstate's many policy statements — are digital and data-driven techniques like "AI" and "big data." These techniques involve developing predictive or automated models through training with large sets of data and through massive amounts of trial-and-error. The hope is that there will be a point of drastic inflection when an invisible threshold is met, and the models that are trained become exponentially more accurate and are able to scale in use. Many of these VCs know from working with data-driven start-up companies that often, during the gathering the data and in training the models, there is a liminal period — a form of "living in the parenthesis" of prophetic time (Robbins 2004, 159) — of waiting for a point of drastic inflection that may or may not come.

Through these analogies, the scaling logics of these systems thus nest within each other like "russian dolls" — neatly and precisely (cf. Tsing 2012). From the strata of the LPs, to the GPs, and then the start-up companies they invest in, their modus operandi involves collectively and conceptually casting the moment of truth into a distant future, and submitting to the uncertainty and the prescribed processes in the meantime towards ends that are "greater than any of us can comprehend" (Hayek 2001, 210). Through the confluence of finance, technology, religion, and history, the "formula" brews in a cauldron of faith.

Thus, to defy the gravity of what was the conventional understanding of "profit" so as to escape its gravity and propel towards one or even multiple rapturous "exits," (Valentine 2012), "growth" became untethered. In "profit"'s place are varied flexible proxies that are constantly negotiated and renegotiated — with an eye to chase a temporality that is "punctuated rather than enduring: of fateful moments and turning points, the date as event rather than as position in a sequence or a cycle, dates as qualitatively different rather than quantitatively cumulative" (Guyer 2007, 416).

Thus, herein lies what to my interlocutors see as the key lesson the United States as the object of emulation offers. Years after the answering the call to innovation and entrepreneurship, many participants are only now catching on to the substance and format ("内容," lit. contents) of the financial and cultural model they mean to import from the United States, expressed to me in the language of "sparking qualitative change through quantitative change" (由量变到质变 or 以量变求质变). Through the invocation of Aristotelian categories of "quantitative change" (量变) and "qualitative change" (质变) (in Physics Book 2 Chapter 8 and On Generation and Corruption), a whole host of natural causal analogies are mobilized (cf. Mirowski 1994), actively or latently, to convey the cumulative process of incremental and gradual quantitative changes until a critical turning point is reached that leads to a qualitative, categorical, and transformative change.[11] Within

[11] There is an inherent tension here with Chinese philosophy in the dialectical traditions of Confucianism or Taoism, where the notion of quantitative change sparking qualitative change exists, but with a crucial difference to this "Western" Aristotelian one: the process of change is understood as a circular one. As Fung Yu-lan characterizes, "To

this schema, the notions embedded within the "formula" and the "hockey stick" become as natural-seeming as how water that is continually heated turns into steam when it reaches boiling point. As my interlocutors tell me how this new imported logic works, they draw across domains to illustrate. They cite analogous natural phenomena such as how wood tinder turns into ash and fire when gradually heated, as well as how "big data" technologies are developed, even how the "scientific" idea of "flattening the curve" during the Covid-19 pandemic implies a threshold that portends a drastic inflection. In this way, an exponential ontology is conveyed to be at once natural, but also the "next level" (升级), "higher-end" (更高大上), and "more scientific" (更科学) way through which to see and act in the world.

Though "scarred and bruised" ("伤痕累累"), and beset with many burdens that came with the failure of their earlier enterprises, many 1st-wave MEI entrepreneurs have expressed to me renewed faith in a realization that this exponential ontology is the way through which American VC operates: if qualitative change can only be induced and set off by quantity (量), then this is an operation that relies on the "law of large numbers," and there is no better place on earth for that than China.

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them, qualitative changes are not a leap to a higher stage but a return to a former state" (Fung 1952, 107). Consider the following expressions that convey the idea that "going to the extreme will lead to reversal": "物极必反" which can be traced to the Han dynasty in 《吕氏春秋·博志》, or "否极泰来"/" 泰极否来" from the *I Ching* (《易经》)/ *Book of Changes*.

Conclusion: Reverence, Resentment, and the (Re)organization of Time

I'd like to return to: (1.) how there are stakes to how we perceive and organize ourselves around time, (2.) what confluence of historical strands allows for a structure of the conjecture in China that receives these temporal ideas so enthusiastically, (3.) how VC may be construed as the child of two longtails of political trauma.

In the years since Li Keqiang's first invocation of MEI, Chinese start-up entrepreneurs have had to navigate a venture capital environment populated with different types of investor "players" (cf. Hertz 1998). Though many of the post-MEI Chinese funds have succumbed to neijuan to become "loan-shark" zombie funds — not dead but not quite alive, there are some others that manage to survive. To keep their heads above water, these funds nonetheless operate in a frenzied, "gyroscopic" (Xiang 2020) rhythm — they come in one round and seek to sell and leave the next. Compared to the U.S. or haigui VCs that operate at with a longer time horizon — sowing seeds that they may reap years in the future, the way that these Chinese VCs think about their own role as a more transient one — like a relay (接力) player doing their part for their portion of the race.[12]

Justin, an ivy-league educated Chinese entrepreneur who has received investments from both U.S. and Chinese VCs, has learnt to navigate these tricky temporal waters. While it is exhausting to always be staring down the end of his company's "runway," whether backed by U.S.-

[12] Another common expression is 交盘子 (*jiaopanzi*) — to pass one's tray or tablet to one's successor.

haigui or Chinese VCs, he points out that he needs to be constantly seeking more investment in next rounds of fundraising to grow the valuation of his company anyways.

He tells me that he thinks about the different styles of VCs through the analogy of "taking small but frequent steps" (小步快跑) versus "taking big strides" (大步走). Though the rhythm might be different, either could be valid ways to get ahead. For example, one might consider that in the VC circles, U.S. investors take bigger strides, and Chinese investors sprint with smaller steps. However, in terms of governance, the opposite may be true.

Think about the seesawing of power between the Democratic and Republican Parties, he prompts, each pushing for their own agenda. It often seems to him that from the perspective of either party, the nation is moving in increments every day — a few steps here, a few steps there, a few steps forward, a few steps back. On the other hand, the CPC seems to operate on a longer timescale, taking bold strides through ambitious directives and 5-year plans. If nations do not progress in a straight line, but in a "zigzag" manner like how Barack Obama describes, who's to say whether bigger or smaller zigzags are ultimately better? He wonders, can we really tell without historical distance?

In this dissertation, this chapter begins to consider the labor and cost that is involved on individual and societal levels in China, as Chinese leaders since Mao aspired to learn Western technoscience from the U.S. in order to surpass it. The defeat and subjugation of the Qing dynasty and the Republic of China at the hands of foreign powers sparked a collective nationalist obsession

that still informs policies and national behavior in every strata of society today. China's "century of humiliation" (百年国耻) remains fresh in the collective memory, which is revived each year not only through political rhetoric, but through the core curriculum every Chinese student learns. The way its legacy manifests is manifold. For example, the carving up and dividing of China by Japan and the Western powers during that period means that anything that can be remotely construed as threatening the "sovereignty and integrity of the [Chinese] territory" today demands a strong and forceful response from the CPC, if only to maintain legitimacy in front of its domestic and arguably most important audience. Here, I explore another indirect legacy.

Many of my Chinese interlocutors consider that, by most measures, their nation has already "surpassed Great Britain." "Catching up with America" is not yet achieved, but in recent years, it is no longer considered a pipedream, but a goal that is in the realm of possibility. As the world's foremost economic and technological power, the U.S. looms large in China's collective imagination as both bane and boon. The project and identity of the Chinese nation cannot yet be disentangled from the United States, in its actual form or its pervasive phantom presence as imagined in China. Especially for the many who have never traveled to the United States, the realization that "profit" is not understood in the same manner and that Americans are possibly playing a "long game" incites a worry that, as one interlocutor borrowed from the U.S. President Barack Obama to convey, is analogous to the realization that they've been arming themselves with "horses and bayonets" when the nature of the military has changed (Zengerle 2012).

The notions of what amounts to "scientific" (科学) or "high-end and sophisticated" (高大上) that are invoked by my Chinese interlocutors on a day-to-day basis cannot be understood without thought to how they are refracted through imaginations of a Western technoscience that radiates from the the United States as the epicenter. Is it possible that there are parts of China's own economic history and practices that may inform how venture capitalism operates in the region today? Certainly, and that is something that we will consider in the next chapter. However, it is important to recognize how locals in Chinese perceive the VC model, what it signifies to them, and how that consequently affects the way they organize themselves and operate.

Any economic format that bears elements of diversification and shared risk for the possibility of multiples in return may be considered a relation or a precursor to venture capitalism. It can be whaling (Nicholas 2019), the Dutch East India Company, the stock market (Hertz 1998), or even rotating credit and savings associations (Geertz 1962; Ardener 1964). However, what I want to reflect upon here is the "structure of the conjecture" (Sahlins 2013a) — the confluence of historical strains to a crucible such that at the discovery that "profit" is construed differently among American or American-influenced investors, my Chinese interlocutors come to view that it is a failing on the Chinese investors' part to elevate themselves to a higher plane of operation.

It is important to bear in mind that definitions of "profit" have also changed in the U.S., broadly from the commercial balance of income and outgo, to an operating ratio, to ROIs. Jonathan Levy summarizes this history concisely: "When the profit rate exhibited a tendency to

decline… capitalists redefined what profit was" (2014, 173). In this way, changing denotations of the term "profit" don't necessarily suggest evolution or advancement, but merely that capitalists have gained and maintained the power to set the economic agenda in the United States for much of its history. The way my interlocutors interpret the difference in their understanding of what profit is and should be to that of their American or American-trained counterparts as a failing is therefore instructive.

Echoes of the New Culture and the May Fourth Movements in the early 20th century continue to resonate as we enter the 21st century (Mitter 2005). Then, the Chinese government's political and territorial concessions to Japan and Western powers after the First World War inflamed its population. It incited an upsurge of Chinese nationalists, who in their disillusionment of Chinese establishments and institutions, saw the path to reverse the ruinous fate of their nation to be through embracing Western ideals and a rejection of traditional Chinese culture. In other words, to replace "Mr. Confucius" with "Mr. Science" (赛先生; sài xiānsheng) and "Mr. Democracy" (德先生; dé xiānsheng).

While Mr. Democracy may not have endured under the CPC, Mr. Science certainly has — even if what is considered suitably scientific in China has been in flux in the past decades (e.g. Ghosh 2020). The Chinese uptake of venture capitalism and the ideologies and cultures around it in recent years must be understood as part of an assemblage in the technoscientific imagination. The rhetorics of "exponential" powers of "scaling" around "big data," "artificial intelligence" and

"venture capitalism" are mutually reinforcing. Together, they fuel not only the excitement of the technological affordances that they might bring, but also the anxiety over possibilities of a repeat of paradigmatic technological distance between China and a Western hegemony in ways that could once again portend existential danger for the nation. This anxiety was only amplified when two years after MEI the Oval Office saw a new occupant in President Donald Trump, whose public aggression towards China was a main contributor to triggering the U.S.-China Tech and Trade Wars.

Almost exactly a century since the New Culture Movements, CPC claims its role at the helm as custodian and orchestrator of another project of China's great self-renewal or, in the Xi's words, "伟大民族复兴" (*weida minzu fuxing*). This grand national project of rejuvenation and revival conjures, in part, the Renaissance 文艺复兴 (*weiyi fuxing*) and subsequently a very Western-centric notion of Enlightenment. Despite China's communist legacy, the CPC is in many ways shaped under an American hegemony, and "the American view that communism was incompatible with civilization" (Herzfeld 2002, 904). The Party has for most of its existence and its most formative years been responding to threats from the West, real and perceived. In this manner, China came to share features with nations that have not been formally colonized, like Japan, Greece, and Thailand, but nonetheless anxiously live at risk of its survival and at the threat of marginalization under Western hegemony (Herzfeld 2002). Self-subordination and subjection to "imported models" became a tactic to preserve freedom and sovereignty. At the same time, in the

nonetheless colonizing influence of the West's "absent presence," survivalism also manifests in these nations' "aggressive promotion of their claims to civilizational superiority or antiquity" as they seek to "respond to that hierarchy by deploying a world-dominating discourse about 'culture' in defense of their perceived national interests and specificity" (2002, 903).

Caught in this "double bind" (Herzfeld 2002, 920), even as the Chinese nation state seeks to emulate the West, one can find oft expressed "resentment" in its government and among its people towards the "elite emulation of Western models" and "opposition to Western and materialist morals and models" (ibid., 907). It is in the "aftermath of survivalism" (ibid., 909) that we make sense of the Chinese nation state's implicit and explicit calls to "return to cultural leadership" and "catch up with the West" (ibid., 921). In the visions Xi Jinping and Li Keqiang articulated for China's future to ascend from the lower rungs of the technological and economic value chain to "medium-high" (中高端), modern China's complicated status as a simultaneous participant, product, and critic of Western, or more specifically American, technoscientific and capitalist enterprise is further entrenched. It is in this environment that adopting and excelling in data-driven technologies and venture capitalism became a matter of national "advancement" and any alternative outcome to be considered failure.

The brief oral history I present in this chapter of Chinese VC since the MEI has been characterized in my conversations with interlocutors as "K-shaped." In 2020, as nations across the globe grapple with trying to contain and live with the Covid-19 pandemic, economic speculation

abound on how severe a global economic "recession" will be and when "recovery" might be possible. Soon, the viral imagery of a "K-shaped recovery" encapsulated how economic recovery would not be an "inclusive" one. As my interlocutors and I reflect on the "involution" among Chinese VCs then, we recognize that Chinese VC *tout court* has not seen a "recession." Rather, this was also a "K-shaped" development where American or westernized VCs have grown and thrived as local attempts at VC have largely struggled and spiraled downwards. This broader trend further established in collective minds the imported U.S. financial model and the ideas and practices around it as a higher plane of operation.

With the Chinese public's complicated infatuation and resentment towards the United States in mind, let's consider again the suggestive title of Bob Xu's essay collection that initially led Emma to embark on her path to America: 仙人指路 (*xianren zhi lu*), which I provisionally translated as "Let Someone Who's Transcended to a Higher Plane Guide the Way." 仙人 (*xianren*) in the religiously syncretic culture and context of modern China is a Taoist immortal, up on metaphorical mountains above the clouds, celestial and yet worldly, who has transcended the rat race of Buddhist reincarnation into a higher plane. It is telling that path he points to in his "divine guidance" (another possible translate for 仙人指路) to transcend the karmic and economic "involution" is towards America.

China's recent history has engendered particular configurations of uncertainty and faith. As we have seen, aspirations, financial speculation and faith in the Chinese nation state became

co-mingled — and for some, as in the case of Mr. Liu, mediated by an American "god" that is Warren Buffett. Chinese patriotism that came out of this context demands its citizens to bet again and again in the nation state. In the grand striving of national revival to beat Americans in their own game cultivated a faith in numbers (cf. Porter 1996) and Western technoscience that made possible for the societal tolerance and receptiveness in China not only to tease out but also stomach convoluted philosophies about scale and time attached to American VC ideologies.

In this chapter, we began considering the many forms "mass mobilizations" can take, and the varying politics and synergy between the various formats. From Mao's Great Leap Forward, to Li's summoning of the "east wind," and the U.S. imported model of venture capitalism — we have seen different ways of thinking about and leveraging great numbers. The impact of the events and ideas from the tumultuous development of modern China and the People's Republic continue to ripple, just as the tides of the political trauma of WWII (Hayek 2001) continue to unfurl across the globe. As waves of political traumas meet, new complex patterns emerge, of which venture capitalism is but one.

In the next chapter, I turn our attention to the question: what happens when business growth is no longer pegged to the notion of "profit" as conventionally understood as revenue's surplus over cost? In other words, I will discuss the cultural and social dimensions of "scale" and "scaling," and elaborate on investors' and startup founders' coordinate labor to generate "hockey sticks" and the returns that are predestined in the "formula." We will continue to examine how

the fabric of social and economic time is incisively torn, in what particular patterns they are subsequently weaved together, and to what ends. We will ask how and who gets to arbitrage and hack time. And, we will further ponder upon the analogy Justin introduced to ask: if U.S. VC and China share the commonality of "taking big strides" (大步走), what can we learn about each one from the other?

Chapter 2

Ritual Masters, Merchants of Time

Introduction: Seeds and How to Grow Them

In the bustling district of Huaqiangbei, "seeds" — incubated within a glass and steel structure for favorable conditions to grow — work around the clock to adapt and transform. The structure is an office building, and the "seeds" are start-up tech companies.

When prominent VCs publicly speak on the futures that new technologies like generative AI make possible, they rhetorically highlight their own crucial role, for better or worse, in transforming society by making investments in companies that offer and leverage these tech services and products (Andreessen 2023). Undoubtedly, digital technologies have allowed many tech businesses to enjoy lower marginal cost, faster business iteration, quicker expansion, and more diverse modes of monetization (e.g. Rifkin 2014). However, I argue in this chapter that explaining growth by technology alone may obscure vital underlying social and ritualistic processes without which these companies cannot exist — let alone capitalize on these technologies — in the first place, and this puts us at risk of falling collectively into a technological deterministic fallacy and fatalism in accepting the political economy of venture capitalism itself as a product of technology.

In the very early stages of a "start-up" company's career, their first round of fundraising is called the "seed round" (种子轮融资), and venture funds that invest in "seed"-stage start-ups are called "seed funds" (种子基金). This chapter addresses why, in the environs of industry, amidst

endless rhetoric about the seismic changes new technologies will herald, it is seemingly bucolic terms such as "seeds" and "incubation" that define the early-stage "start-up" for participants of venture capitalism. Drawing on French sociologist Gabriel Tarde's own botanical analogies with the germinating seed and the cotyledon leaf, I highlight the distinction between the adaptive and transformative processes of "seed scaling" in the more germinal stages of a company's development and the kind of scaling that happens afterwards.

More than a century ago, Tarde (1902) made an important distinction within the economic category of *capital*. Consider the seed-bearing plant, he prompts. The germinal seed brims with the potential of new life, of transformation. Within the seed is the embryonic leaf — the cotyledon, which are the first leaves to sprout from a germinating seed, heralding more of its like. Translating this botanical imagery to the realm of economics, Tarde points out the necessity of considering, within the crude category of "capital," the crucial distinction between resemblances to either germinating seed or the cotyledon. "The economists who saw capital as consisting solely in the saving and accumulation of earlier products are like botanists who would view a seed as being entirely made up of cotyledons," he writes (1902; cited in Latour and Lépinay 2010, 50). Drawing on this metaphor, Tarde differentiates between what he deems *auxiliary* and *essential* capital. Cotyledons may be very useful, he points out, but they "are not indispensable; there are plants that reproduce without them" (ibid.). On the other hand, the germ is vital, pivotal — "the germ survives only by its versatility and its ability not to be frozen in a static formula but rather to explore new

connections… by constantly adapting" (ibid., 56). On its own, "cotyledon-capital" is unable to drive the economy. For that, "germ-capital" is necessary. "Germ-capital" — with its "potentiality of differentiation" (Lépinay 2007, 257) — makes possible "invention," or, the darling motif of venture capitalists, "innovation" (Tarde 1902).

Crucially, the operation of "capital" is not the "accumulation" of more of the same. Without "germ-capital," there would be nothing to be repeated or copied. "Cotyledon-capital" is a force that is beset by "an inertia… incapable of effecting differences in its own movement," (ibid., 56) and can only aid repetition unto exhaustion. In line with many VC's proclamations of their own roles in "changing the world" (Jurvetson 2021), in Tarde's schema, it is "germ-capital" — of which VC "seed money" is one form — that enlivens or animate the economy. But how do "seeds" germinate? In the actual realm of start-up economy, how do "seed" companies "explore new connections," "constantly adapt," or in VC vernacular, "pivot"? And how does "seed money" play an "essential" rather than "auxiliary" role in the process?

In the last chapter, I illustrated Chinese investors' tumultuous path in adopting the imported culture and financial model of venture capitalism. I highlighted the paradigmatic shift that many domestic investors had to adapt to: rather than chasing quick profits, becoming venture capitalists required them to decouple notions of growth and returns from profit. However, given the divorce between profit and returns, a question arises: if profit is no longer the index of growth

and success of a company, how do investors gauge whether companies are growing — and how do they make that growth legible to others to whom they are accountable?

In what follows, I delineate the processes I call "growth rituals" — the backbone of the entire venture capital enterprise in the form of "tournaments of values" (Appadurai 1986).[13] Like any ritual, there are broadly three stages: the rites of separation, liminal transformation, and, if successful, reincorporation. Accordingly, I show how, in order to germinate seed-stage start-up companies, VCs first take them into a parallel private market; second, transform them into commodities through a liminal transition period; and third, reincorporate them back into the main market through "exits" — IPOs or M&A. In particular, I describe a form of risky temporal play, or what Ringel might call strategies of "time-tricking" (2016), in discussing an art of scaling,[14] the way that these VCs and startup founders use to dilate the liminal phase of the process in order to generate germ capital.

Though this research is conducted primarily in China, by studying how a VC and start-up economy takes root in a new market, I gleaned some of what my interlocutors deemed in their own processes of induction the most distinctive aspects of venture capitalism as a practice — and indeed a ritual. This art of scaling, which involves borrowing and lending credibility to skillfully

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[13] In Brian Moeran's (2010) addendum to Appadurai's notion (1986), Moeran points out that more often than not these tournaments involve more than one value — thus he propounds "tournaments of values" (plural) rather than "tournaments of value" (singular).

[14] I am echoing here Mayfair Yang's notion of an art of "guanxixue" (1994), paving the way to discuss guanxi as a form of social leverage in Chapter 3.

assemble a configuration of provisional, but still leverageable, arrangements has become conventionalized in VC circles worldwide. I conclude by discussing the societal implications of these collective and high-profile rituals, particularly in terms of what I call temporal capital and temporal personhood.

Pricing the Pie

Late night has set in. Even the usually restless plaza in Huaqiangbei has died down. Perched above the slumbering electronic markets, I was enveloped in the pitch darkness beyond the floor-length windows, as fluorescent lights flooded the office with a pale, lonely glow. Low thuds reverberated through the structure of the building; hollow sounds traveled from the bellies of Shenzhen. Somewhere in the city, possibly underground, construction work continued. Here in the relative quiet of the office, another form of construction was taking place.

Most of the staff have left the VC Firm's open workspace at this late hour. Those who remain were mostly founders of start-up companies the Firm had invested in. The two closest to me were Jianguo and Shun. One sat at his desk staring with folded arms in deep concentration into the middle distance, while the other paced around him. The two men were fretting over the finances of the company they founded together.

Months ago, they received hundreds of thousands in USD from the VC Firm in exchange for some of their fledgling company's shares. The money was meant to be "seed funding," serving to help them kick start their business when they could not yet generate income. These VC funds,

also referred to as "runway," were meant to keep their start-up company running before it can "take off" on its own. Now months later, what had seemed then a generous amount was dwindling — spent on making prototypes, hiring staff, banqueting suppliers and potential clients — and the men were staring down at the end of their "runway" and the very real prospects of "crashing" and "burning."

They had to find new investment and raise funds again, not only to keep their company going, but simultaneously to determine its new valuation. What was important was not only the absolute amount they could get, but the price investors would be willing to pay per share. Should the price go up, their company's valuation would increase, and it would have "grown." Anything else would signal to investors that the company was faltering, and a "down round" in fundraising had been a death knell to many a start-up company before them.

Shun and Jianguo had been knocking, metaphorically and literally, on the doors of all the VC investors they knew to little avail, but time and money were running out. Pausing a moment from anxiously pacing up and down the aisle, Shun mocked a moment of eureka and joked, "You know what? I could just call my mother and ask her to invest 10000 RMB (~1400 USD) to buy 0.01% of our company's shares. That way, the company will immediately be valued at 100 million RMB (~14 million USD)." "Very funny," retorted Jianguo, his face passive like a Mo'ai statue before it toppled into his palms before his laptop with a groan.

But why shouldn't it work? That is the way a company is valued: the price someone is willing to pay for one slice determines, proportionately, the value of the whole pie. To understand why, let us take a step back to reconsider what VC investors are tasked to do and why they can't do so without what I call "growth rituals."

Growth Rituals

The people whom we often refer to as VC investors or just "VCs" are, technically speaking, "general partners" or other staff members at VC firms. Together, they manage funds pooled from *their* own investors, or "limited partners" (LPs) — such as university endowments, pension funds, large corporations, family offices, and high-net-worth individuals ("HNWI") — who do not run the day-to-day operations of the funds.

In return for being entrusted with these funds and a cut of the gains,[15] general partners work to generate a high return on investment (or ROI) within the "lifespan" of the fund, which may be anything from around four to more than ten years. To do this, VC general partners invest in start-up teams so that they may sell the shares of the companies at a higher price than they bought them at in the future. Whether the general partners succeed will determine their prospects of raising another round of funds to manage in the future.

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[15] Venture firms' income is usually derived from a configuration of management fees and a cut of the gains, if any. Which staff members get a cut of the gains ("carried interest," or just "carry") is determined by the leadership and varies from firm to firm.

While venture capitalism works on the seemingly basic principle of "buy low, sell high," VCs are bound to fail if they simply leave the whole operation to chance. This is because of a simple truth: the vast majority of companies do not grow from nothing into entities that are worth millions or billions within a mere few years.[16] Most fail. To ensure that some don't, VCs need to summon ritualistic resources — specifically, what I call "growth rituals." Like all rituals, growth rituals entail three basic stages: separation, liminality, and incorporation (van Gennep 1960, vii). To illustrate: in a heteronormative, Anglo-Christian wedding, bride and groom are symbolically separated from society in the sacred space of the church and kept apart right before the event; during the ceremony, they are in a state of liminality until they exchange rings and a priest declares them married; after this, they march out of the church as husband and wife. Other examples include a doctoral dissertation defense/presentation.

When a fledgling company takes on VC investment, it becomes a "start-up," recruited into VC managers' undertakings to generate ROI for their funds within the short timeframe they've been allotted. Knowingly or unknowingly, start-up founders have subscribed to VC managers' project of "accelerating" (加速) fledgling companies' growth through "incubation" (孵化). The first injection of VC investment money initiates the ritual — starting with the rites of separation from the main market. This money serves not only to signal the valuation of the company, but

[16] Venture funds do not make all of their investments in the first years since the fund begins — it takes time and effort to scout promising start-up teams. So the time pressure only grows as the lifetime of the fund dwindles.

also helps "incubate" (孵化) it, shielding them, to a large degree, from the uncertainty and volatility of market forces by subsidizing the operation and establishment of a portfolio company. The money keeps them under favorable conditions for development in an "accelerated" (加速) fashion, so that they do not need to wait until they can make a profit — not only to sustain themselves, but also to operate and develop in the manner of a much larger corporation. In the words of my VC interlocutors, the "seed funds" allow young companies in their investment portfolios to "hit the ground running."

Whether a start-up company is flush with cash or eking out an existence from the funds they receive from their VC investors, they are neither successes nor failures at this early stage.

Rather, they are liminal.

Without profits to sustain themselves, "seed"-stage companies periodically fundraise from VC investors to replenish their operating funds and determine their companies' value. If investors are willing to pay a higher price than the last round for the company's share, then the company will have grown. Otherwise, a "down round" can be the death knell for many a start-up company. Each fundraising event serves to prolong the start-up companies' liminality as they work to develop their "commodity candidacy" (Appadurai 1986).

If the growth ritual is successful, which is not at all guaranteed, a company will transition back into the main market as a highly valued commodity. The reincorporation will happen through what is called an "exit" event. As the name suggests, the event provides the opportunity for existing

shareholders of the company, investors and founders alike, the chance to "exit" — to sell their shares. Whether they actually do so is immaterial. Many founders only sell part of their shares, for example, and remain part-owners of the company. Regardless, the significance is that an "exit" formally re-incorporates a company back into the everyday logic of The Market (Carrier 1997), listed to be traded on a public stock exchange (the New York Stock Exchange, for example), or acquired by a larger corporation through processes of M&A (Mergers and Acquisitions).

Tournaments of Value

> "Participation in [tournaments of value] is … both a privilege for those in power and an instrument of status contests between them. The currency of such tournaments is also … set apart through well understood cultural diacritics."
>
> Arjun Appadurai (1986, 21)

The director of a VC fund once complained to me that many of his peers were obsessed with buying fine art paintings (买画), and it was often all they could talk about in social gatherings. I couldn't help but wonder if the affinity had something to do with the profound similarities between start-up fundraising and art auctions.

There are many forms of "ritual tournaments" (Appadurai 1986; cf. Anand and Watson 2004), from the kula ring and potlatch to book fairs, the Grammys, and art auctions. As anthropologist Arjun Appadurai explains, these "tournaments of value" are "complex periodic

events that are removed in some culturally well-defined way from the routine of everyday economic life" (1986, 21). In the case of art auctions — as sociologist Jean Baudrillard points out — although art collectors are ostensibly engaged in relationships of "economic rivalry" (1981, 121), in actuality, they are co-constitutively and "reciprocally agents of each other's value definition" (Munn 1983, 283).

The valuation of the artwork does not articulate the piece's use value, but rather is reciprocally determined by the art collectors' desire to possess it. By seeking to acquire art, wealthy connoisseurs simultaneously reproduce and reify the sociocultural conditions in which the art object has value as a marker of hierarchical prestige. Through bidding and competing over the same artwork, art collectors "seal their *parity* (which has nothing to do with the formal equality of economic competition) … and thus their collective caste privilege with respect to all others" (Baudrillard 1981, 117). At the same time, with each bid, each purchase, each exchange, they establish their own "aristocratic measurement of value." As Baudrillard writes, "for caste members the only real values are those produced and exchanged within the caste." So although the art auction is ostensibly open to everyone, in effect, it constitutes its own "parallel private market."

This explains why Shun's mother, who is not part of the VC "caste," cannot just buy a slice of the company and establish the valuation of the whole company at $100 million. However, a prominent VC investor certainly could.

Philosopher J. L. Austin reminds us that, to do anything with words, the speech act needs to be felicitous. To fulfill felicity conditions for declarations, a speech act must follow the convention of a procedure, involve the appropriate participants and circumstances, and do so completely — without errors or interruptions. Felicity conditions are why toddlers can't legally adopt their best friends in the playground on behalf of their parents; a judge can sentence someone in court but not on the street; and a couple whose wedding was halted by the objection of an ex-lover remains unmarried. In this case, the reason why Shun's mom cannot declare the value of a start-up company through the purchase of part of its shares is because it's not "appropriate." What is "proper" entirely depends on socially established conventions — made up and but nonetheless real at the same time.[17]

There are parallels to the relationship between art collectors and artists, and VC investors and start-up founders: They are mutually dependent, and the candidacy and valuation of the commodity (the artwork, the start-up) rest, to a large extent, on the artists' or founders' poetic dexterity. By poetic dexterity, I mean the artful manipulation of form, which focuses "on the messaging for its own sake" (Jakobson 1960). It is the reference to conventions through deliberate violations, the virtuosic allusion to and construction of myriad connections — a "stylistic

[17] Here, Tom Boellstorff's discussion in his digital ethnography about the virtual world Second Life (2015) is instructive. As he elaborates, the "virtual" may be opposed to the "actual," but not the "real." While the virtual world may not exist in the "actual" world — not in the physically tangible domain where the keyboard and mouse we use to navigate the "virtual" world reside — both "virtual" and "actual" can have very "real" effects and consequences, and thus can be equally "real."

transfiguration," done with "flair" (Herzfeld 1988, 16) — as I will now demonstrate through the example of a ritual initiate, Junyi.

Growth hacking: Scaling Social Boulders through Wabuwabu

Junyi did not set out to become an entrepreneur. It all started when he was working on a robotics project for class while in college in the United States, and one of his classmates and best friends applied for a school-wide startup competition on behalf of the group. Having glimpsed the world of VC through these programs and spurred on by the promise of growing exciting businesses out of the robots they made, Junyi and his classmate began making robot prototypes for automated cleaning and sweeping to pitch to investors who could fund their business.

Over the course of a summer break while back home in China, Junyi finally caught the attention of one VC firm. It was one of the first crops of VC funds in China, established before 2010 and managed by U.S. firms. Though an offer of investment was good news, Junyi still had some residual anxiety. Since President Trump's inauguration, U.S.–China relations have soured. Given this, Junyi did not know if it was advisable to take money from an American investor. What if his company, along with his U.S. investors, were boycotted as tensions continued to escalate? That would spell the end of a nascent business like his. As he conducted further research, he found that this prospective investor collaborated with various regional governments in China, including the one in his hometown. Local governments' willingness to work with any investor was a signal of trust and confidence from Chinese officialdom. Though not completely assured, Junyi thought

that was sufficient indication that the VC firm was politically sanctioned to work with and decided to take a chance with them.

After taking the VC firm's investment, Junyi realized that these signals of "reliability" (靠谱) were not incidental. Many of the personnel at the VC firm laboriously cultivated these relations, and for some staff, it was their entire job description. He was not the only one who was surprised. As some of his friends joined VC firms after graduation, they remarked that their work seemed mostly to consist of holding public events and building relations (打关系). One joked that they felt as though they had accidentally joined a PR firm. While all businesses engage in some form of public relations, what surprised these initiates to the Chinese VC community was the sheer amount of resources and labor poured into public facing events and public ties. Precarious ties had to be painstakingly maintained even if costly. Its advantages, however, eventually became clear to Junyi as he benefited from his VC investors' efforts to maintain and grow their reputation and credibility as an asset (Helm, Liehr-Gobbers, and Storck 2011).

Junyi and his cofounder received what they felt to be a significant amount of money for a small stake in a startup company that did not yet have a saleable product. However, they soon became alarmed at the realization that they could only last for a few more months at their current "burn rate": the speed at which they were using up their liquidity as they hired new employees and prototyped iteration after iteration of their product to resemble more closely what they hoped to eventually sell. They turned to their VC investors for advice. VC investors hope for the companies

they invest in to attract more investors who are willing to pay a higher price than they themselves did for a company's stock. This raises the value of stock held by the original investors, bringing them closer to the ultimate goal of any VC: making a profitable "exit" by selling their shares through acquisitions or on the stock market as part of a public offering. With this in mind, and as Junyi's company was running out of time, Junyi's investors referred them to some potential investors and clients.

One of these potential clients was a "tech giant" — one of the biggest technology companies in the world. Junyi secured a meeting with the head of the company's VC arm, Ben, who was intrigued at the kind of robot that Junyi's team was trying to engineer. He invited them to "demo" a unit at their corporate campus at an agreed date and time. Ben specified what the unit ought to be able to do at that point: effectively clear debris, sort out different types of rubbish, operate via remote control, avoid obstacles, and cope with uneven ground and steps. Excited by the prospect of being able to work with a globally renowned company, Junyi eagerly ("拍心口") said yes.

The truth was that Junyi's team had no idea whether this was something they could achieve before meeting with Ben. Nonetheless, Junyi immediately got to work. He was also meeting other prospective clients at the same time. Many of these clients were inundated with offers to "demo" products from fledgling companies hoping to score a big contract, but they agreed to meet with Junyi because of his investors, whose global reputation and local ties with domestic governments

signaled that Junyi should also be reliable (靠谱). Although they had agreed to meet, they were unsure about actually working with Junyi until they heard about the tech giant's interest in Junyi's robot. At that point, Junyi could not yet secure contracts with these potential clients, but he did manage to extract "letters of intent" (LOIs) from these meetings. These stated that, should Junyi secure expressed intent from the tech giant to use Junyi's robots, these clients would also be willing to use them too. As such, leveraging their investors' credibility, and the fame of the Tech Giant, Junyi managed to establish a number of conditional, "weak" ties (Granovetter 1973).

As the date of the "demo" drew near, Junyi's team hit a snag in developing their new prototype. "It was exactly as people say. It is not the big things but the little things that kill you," he mused. We recalled how an up-and-coming "eco-conscious" fashion startup we both knew almost collapsed recently. Having overcome the arduous challenges of figuring out how to manufacture textiles from all sorts of recycled materials, they were held up by the humble zipper — their supplier was paralyzed by the pandemic. Even with the rest of their supply chain completely intact, the company did not have products they could sell, putting them financially deep "in the red." Junyi shook his head: "Even the great Achilles died of a mere arrow to his heel," he said.

Junyi's own Achilles heel was signal interference. Having engineered the rest of his robot to a satisfactory standard, Junyi's team was stumped by a problem with remote controlling the robot. The robot included a GPS sensor and a Wi-Fi receiver, which was necessary for the robot

and its user to know its location, as well as for the user to control the robot remotely. For some reason, the signals seemed to interfere with each other, and Junyi's team couldn't figure out why. They were so frustrated that they were reduced to what Junyi called "primitive behavior" —— whacking the robot in exasperation. Adding further to their bewilderment was that, "for some reason, it sometimes worked!"

Junyi's startup spent more and more money on the problem, buying different models of the components to see if they could resolve the issue. By doing so, he dramatically accelerated their "burn rate." At one point, to counter the surging costs, he offered the whole office unpaid vacation time. "I told them that I know that we were all exhausted (大家辛苦了), that we all needed the time off. But the truth is, the company's funds were drying up."

On the actual day of the demo, Junyi and his team brought the robot to the campus. They had not resolved the issue, and they did not know what to do. It was just past lunch time, and, knowing that there was a demo scheduled for that day, the "tech giant's" employees began to stream out of the canteen and crowd around Junyi's team. As Junyi and his engineers fiddled with the unit, Junyi caught Ben's face in the crowd. Junyi recalled sweat dripping from his brow as he and one of his engineers stared at each other in utter panic. As a last resort, they huddled around the robot, shielding it from view. The engineer gave it a hearty thump. Miraculously, this worked: the robot operated perfectly for the few minutes of the demo. By the time the crowd started applauding, Junyi could no longer see Ben in the sea of faces. And when the team tried to restart

the robot again, it no longer functioned. Junyi had never been religious, but for the miracle of those short few minutes when the robot worked, he thanked every deity he could think of.

Shortly after, Junyi received a letter of intent from Ben stating, on behalf of the "tech giant," their willingness to station a number of their robots on their campus for an extended period of time. The letter also detailed that if the robots were able to fulfill a set of requirements within the stated timeline, they would be keen to make a larger order. The time to harness the "strength of weak ties" had come (Granovetter 1973). With this letter of intent, and all the other letters of intent that were predicated on it, Junyi and his cofounder immediately started knocking on VC investors' doors. Given this "surge" in interested users (a proxy for "demand"), Junyi's team secured another round of VC funding. Not only did Junyi's company narrowly avoid implosion, it actually shot up in value, as Junyi's team was able to convince investors to pay more for the company's shares.

When Junyi retold his story to his investors and fellow founders, they would applaud his gambit, which paid off. To them, it was not only an instance of great luck, but also an artful display of the poetic dexterity required for "growth hacking" for his startup company. As with other forms of "hacking," they considered it to be a craft in which virtuosic displays of craftiness in pursuit of justifiable ends were worthy of celebration (Coleman 2014; 2012). Even though Junyi was not technologically capable of producing the robot with the specifications that he promised on the day of the demo, to the community of investors and founders he belonged to, Junyi was not a con

man. He was artfully managing social relationships to strategically postpone the day he would become technologically accountable, pushing it toward the horizon of an imminent yet unknown future.

A key ingredient in Junyi's successful execution of this temporal strategy was the way he was initially able to leverage his investors' reputation and credibility. Guanxi, as social capital, is among the critical resources that startup companies must leverage to keep up with the "gyroscopic" temporal rhythm (Xiang 2020) that participation in the VC model requires. His investors' constant cultivation and costly maintenance of guanxi relations with other investors, local governments, and potential clients thus paid off. Although it might be easy to mistake the role of the investor as merely providing funds, the social labor that VCs put in to propel the growth of the startup companies in their investment portfolios, while indirect, should not be overlooked.

There are parallels between Junyi's gambit and what Reo Fortune describes as a "sharp trade practice" among the Dobu Islanders in Papua New Guinea. Fortune illustrates this practice — wabuwabu — through the account of one trader:

> Suppose I, Kisian of Tewara go [north] to the Trobriands and secure a [famous, prestigious] arm-shell called Monitor Lizard. Then I go [south] to Sanaroa and in four different places secure four different armshells promising each man who gives me a shell necklace Monitor Lizard in return, later. I, Kisian, do not have to be very specific in my promise. It will be conveyed by implication and assumption for

> the most part. Later, when four men appear at my home at Tewara, each expecting Monitor Lizard, only one will get it. The other three are not defrauded permanently however. They are furious, it is true, and their exchange is blocked for a year. Next year, when I, Kisian, go again to the Trobriands, I shall represent that I have four necklaces at home waiting for those who will give me four armshells. I obtain more armshells than I did previously, and pay my debts a year later… I have become a great man by enlarging my exchanges at the expense of blocking [the exchanges of others] for a year. I cannot afford to block their exchanges for too long, or my exchanges will never be trusted again. I am honest in the final issue (Fortune 1932, 515–20).

Kisian's demonstration of a "technical mastery of time" (Gell 2000, 262) puts the temporal technique I have described among Chinese startup entrepreneurs into stark sociohistorical relief: these temporal strategies are not new or unique to the tech industry or venture capitalism, nor are they inherently tied to the digital technologies they are used to foster.

VC folklore bears this out. One day over lunch during my fieldwork, I listened as startup founders shared tales of their recent (mis)adventures in "sharp" temporal practices. One, who had come to Shenzhen from America, commented that this reminded him of a chain email he received as a teenager. It goes something like this:

A father tells his son to marry a girl of his choice. The son refuses, but the father tells him that the girl is Bill Gates' daughter. Hearing this, the son says, "in that case, okay!" The father then goes to Bill Gates and tells him that he wants Bill Gates' daughter to marry his son. Bill Gates initially rejects him, but the father tells him that his son is the CEO of the world's largest bank. Hearing this, Bill Gates says, "in that case, okay!" The father then goes to the president of the world's largest bank and tells him to appoint his son as the CEO of the bank. The president says no, but the father tells him that his son is the son-in-law of Bill Gates. Hearing this, the president says, "in that case, okay!"

"The email ends with 'And that's how you do business,'" the founder said. Everybody at the table laughed, recognizing themselves in the joke.

Keynesian beauty contests

Documented by Fortune as an age old "sharp trade practice" in the Trobriand Islands and encapsulated in a chain email in the days of the early internet, Junyi's maneuver through leveraging is not new, and certainly not the exclusive affordance of digital or other forms of new technology. Junyi's example demonstrates the underlying process every "seed" start-up must go through to "scale." As I point out in my introduction, the processes of "seed" scaling are adaptive and involve frequent changes. At this early stage, crucial elements of "scaling" involved in growing start-up companies resemble less so "digital" analogies of copy-and-paste replication and zooming in and

out (Tsing 2012), or even mechanical metaphors of factory (re)production (Geertz 1963b). Rather, these VCs and early-stage startup founders have conventionalized a set of practices to borrow and lend credibility and skillfully assemble a configuration of provisional arrangements that they can leverage. Among them, "scaling" instead resembles the scaling of boulders — whereby points of contact momentarily serve to leverage the climber upward.

Yet in other ways, it's not necessarily very representative of what other "seed" start-ups go through. Seasoned VC investors may decide that a medical technology startup may better index their promise and growth not with LOIs, but instead by presenting the progress of the clinical trials they're conducting with reputable hospitals and universities, and how they're getting along with securing the necessary certification for their devices. However, it remains the fact that standards and indexes of growth are not pre-set but fluid and subjective. What is regular, however, is that at each moment, what counts as a good growth index is often set through processes of what may be referred to as the Keynesian beauty contest.

As economist John Maynard Keynes points out, not only is there is no exact science in evaluating the future yield and corresponding valuation of companies at each moment, the frequent revaluations of investments to inform investors' commitment is an exercise in absurdity: "It is as though a farmer, having tapped his barometer after breakfast, could decide to remove his capital from the farming business between 10 and 11 in the morning and reconsider whether he should return to it later in the week" (2013, 151). Despite the incongruity of the culture around

valuation, Keynes notes that "in practice [investors] have tacitly agreed, as a rule, to fall back on what is, in truth, a *convention*." Investors don't need to believe that the "existing state of affairs will continue indefinitely" but act as if they expect them to be and can keep operating the same way "so long as [they] can rely on the maintenance of the convention" (2013, 152). In this way, growth rituals hinge on a form of intentional "collective misrecognition" (Bourdieu 1977a).

This whole enterprise appears even more peculiar when we consider how most owners (stockholders) of the businesses in question do not participate in their day-to-day management, and only have an abstract idea about the way it operates. Accordingly, most investors are only primarily concerned with "what the market will value [the business], under the influence of mass psychology" in the short-term future (Keynes 2013, 155). The "social game" (Bourdieu 1977a) involved "does not even require gulls amongst the public to feed the maws of the professional," "nor is it necessary that anyone should keep his simple faith in the conventional basis of valuation having any genuine longterm validity" (Keynes 2013, 155). Keynes elaborates:

> …professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom

> are looking at the problem from the same point of view. It is not a case of choosing those which, to the best of one's judgment, are really the prettiest, nor even those whose average opinion genuinely thinks the prettiest. We have reached the third degree where we devote our intelligence to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practise the fourth, fifth and higher degrees.

Within the tournament of value that is growth ritual, the fluid indexes of growth are at each moment determined not by what investors themselves deem best, but processes of anticipatory deferral to what they imagine other investors would value (Derrida 1982; 1992). Accordingly, the often-invoked notion of "pivoting" in start-up communities is often not so much reactive tactics to trial-and-error market responses, but rather flexible wabuwabu practices to adapt to the Derridean shifting sands of VC valuation.

As a dramatic example, the implosion of Theranos — the infamous biotech start-up company founded by Elizabeth Holmes — sent shockwaves across the globe from Californian shores. The biotech start-up company once promised the "disruption" of the healthcare industry through new affordable technology that could run hundreds of blood tests — ranging from genetic analysis to cholesterol levels — from just a pinprick of blood. At the exposure of its massive fraud and deception of their investors, the company, having raised more than US $700 billion and

reaching a valuation of US $10 billion, collapsed overnight in 2016 and became officially defunct in 2018.

A world away in China, many investors with every prior intention to make follow-up investments in their own domestic biotech startup companies became unsure — not because they themselves lacked faith in these start-ups. Rather, working against the dwindling time remaining to return their funds, they anticipated that biotech startups would have trouble securing the next round of funding. In a recursive manner of thinking: VCs worried whether other VCs would be worried that other VCs were spooked.

Anticipating the same, many founders in the field preemptively pivoted. In their retelling, many founders conveyed the trauma of their experience: barely getting by with already dwindling funds, they had to spend money they didn't have to develop new products and prototypes, discarding the ones they'd been working on for months if not years. Some bore a feeble hope that they may be able to revive these old projects at a later date — but that was immaterial in the moment of the pivot. What mattered was survival.

Much of the work they'd put into building their "commodity candidacy" did not translate into the new business they wanted to build, but they needed to raise another round of funding quickly as their "runway" was drying out. There needed to be a more persuasive reason than "VC money for biotech is shrinking" to convince investors that their pivot made sense. They had to

rush a condensed wabuwabu — hurriedly brokering interlocking and staggered provisional agreements as they struggled against time to build a presentable prototype.

Often, start-up teams are bootstrapping in the earlier stages of their development.[18] To attract talent to join their teams, start-up founders highlight how, with the talent joining the team as a co-founder or among the first employees and offering their critical expertise, together the team can make an "outsized" impact — by solving key problems that industries face or offering a service that many people would want, and while the start-up cannot match the high wages some other employers, such as big tech companies, can offer, the talent can be given shares in the start-up company that may (albeit against tall odds) one day become highly valuable. For example, as a start-up embarks on a pivot, co-founders and early employees may have already worked for months, and in some instances years, at much lower wages than they can command elsewhere before their market-specific expertise and experience were made redundant. And if the start-up moves into a different market, what these early members of the team were promised were indefinitely delayed if not entirely dashed. Their role in the company also became ambiguous —

[18] There are instances of start-up companies flush with cash from an abundance of VC investment right out of the gate. They are usually founded by serial entrepreneurs with a track record of success, high-profile ex-employees of dominant companies in their respective industries (e.g. an ex-executive of HSBC, Alibaba, or Google), or combination of co-founders from august institutions (e.g. a Harvard MBA as the Chief Executive Officer and a Chief Technology Officer with PhD training from Cambridge University or Peking University). However, they are rare in the grand scheme of things.

in fact, it may no longer be clear whether there was a place for them in it. These are common causes of strife during pivots.

During this period of post-Theranos turmoil, there was also considerable friction within VC firms. Investment decisions at a VC firm may come at the discretion of the leadership, involve all-hands meetings before leadership makes up their minds, or put to a vote. Many VC firms that had originally intended to "follow-up" their investment in biotech companies became unsure.[19] From what my interlocutors recount to me, many members of the firm started to disagree on whether that should remain the course of action.

There were those among the ranks of many venture firms who thought their firm should play it safe and entertain the possibility of letting the biotech companies in the investment portfolio perish to cut their losses. Others thought that they should help along with the efforts of some of their cash-strapped start-up teams looking to pivot with "convertible notes" — loans that would not be repaid in cash but in equity later on. Some others stood by start-ups who wanted to keep at their existing project despite the environment of recursive uncertainty.

Many VCs had personally helped start-up companies broker arrangements of collaboration with universities and hospitals and find trustworthy contract manufacturing companies to produce prototypes. They felt that they knew intimately what the start-up was doing and knew the industry

[19] This would involve them taking part, either by themselves or with other co-investors, in infusing the start-up company in their investment portfolios with a fresh injection of cash in a fundraising round to increase or maintain their stakes in it.

well enough to know that what the start-ups they were working with was not hollow (虚) but of actual substance (实) — and certainly not another Theranos. Their knowledge could be expressed in a Chinese character — 懂 (*dong*): composed of the radical *xin* (忄/心, heart) and *dong* (董, to direct) — i.e. acting in accordance with deep understanding from the heart, mind, and soul, a deep comprehension beyond the superficial. Some of them personally vouched for the start-ups they advocated for, mobilizing the risky capital of individual accountability.

In recalling how some of their investors championed for themselves within their firm, some start-up founders would take the opportunity to articulate to me how not all money is the same (Zelizer 1989), and how it's important to "get the right money" ("拿对的钱") from "an investor who truly understands you" ("懂你的投资人"). I giggled when I first heard this. "What ardent love!" I joked. What the founders emphasized was not that the investors understood the technology involved in their business (懂科技 or 懂技術), but *dong ni* (understands you). To my ears, the expression sounded like a confession of love — I get you ("我懂你"). Or fitting when uttered at a wedding reception — I imagined a bride in white sobbing happy tears into the microphone, "he truly understands me" ("他真的懂我") — but it was not what I was expecting in a commercial setting.

It was the founders' turn to tease me: how are the stakes of finding a good investor less than that of a good marriage? In putting their lives on hold to work on their own start-ups, many founders had wagered the trust and the welfare of those who depend on them — their parents,

their spouses, their children — on positive black swan events. The success of start-up companies is highly improbable and unpredictable. As VCs work against time within the temporal structure of their fund lifespans, founders must grow their business at a breakneck speed while juggling complex wabuwabu gambits. Given turbulent "market environments" exemplified by the ripples of Theranos's collapse, the successful performance of the entire ritual — to grow a start-up into a highly valuable commodity and exit — are statistically rare events that can carry entire funds. Yet, these founders still found it a worthwhile gamble: if they succeed, then their entire families can "climb ashore" (上岸). No longer will they be wage laborers that barely eke out an existence, paying most of their hard-earned money on rent and necessities, paddling endlessly in a sea of competition just to stay afloat, suspended in life (悬浮) like a hummingbird flapping incessantly just to stay up in the air (Xiang 2021).

Mr. Wang, founder of a men's sexual health wearable start-up, scoffed at the rhetoric from Silicon Valley about the value of failures, where famous founders disclose the many catastrophes they've had to overcome in their narratives of defiant resilience. The truth is that not everyone can afford to flaunt their failures as assets, especially in China. "Unless you have a scintillating persona (人设)[20] of, say, a PhD graduate from Tsinghua who'd been a high-level employee at a large corporation, you're lucky that a VC has taken a chance on you in the first place. You can't assume

[20] 人设 (*renshe*) is short for 人物设定 (*renwu she ding*) — avatar customization in video games, which is now a slang that means the public facing configuration of one's persona.

you'll have a second chance when there are countless others like you out there (千千万万个你)." With only one shot, and the lives of so many lives on the line — their own, their families', their employees' — founders try to be as selective as possible about whom they go with as their investors.

Speaking with great indebtedness to investors who had gone to bat for his company during difficult times, fighting their own colleagues to secure last minute funding for Mr. Wang's start-up from within their venture firms, Mr. Wang said, "Is it not important that an investor understands you for your dreams and aspirations, your limitations and ambitions? Who understands what you want to do, and why? Who believes as you do the good that can come out of the business if we manage to pull it off? Who knows truly that you are doing what it takes?" Despite the centrality of the growth ritual, entrepreneurs want investors who do not only see them in the abstract — just as a face in the great Keynesian beauty contest — but also see beyond the formality of the ritual, understand what it takes to grow a certain business in a certain industry, and be willing to fight for their beliefs.

A cynic would say that in championing pet start-ups, VCs are ultimately motivated by their own gains — especially when some may have been allocated "carry" (carried interest), a percentage of the gains should the venture firm ever be able to "exit" and sell their shares at a profit. Perhaps. But in an environment of recursive uncertainty, it was also unclear at any moment that defending any biotech start-up team's decision to soldier on despite, in one investor's colorful language, "biotech's current radioactivity" was the best course of action for the VC's interest. Furthermore,

their self-interest is not mutually exclusive with the fact that many of these investors are also idealistic young people. Some of them have themselves come from training or backgrounds in healthcare services before joining the ranks of VCs, thinking that they'd be able to contribute to the healthcare domain by helping scale start-ups that may actually make a difference in people's lives.

Amidst dramatic spats and disquieting silences, battles of will in conference rooms and angry tears behind closed doors, this was not the first, nor was it the last time start-ups and VCs had to weather uncertainty. Crucially, what this episode illustrated was how pivots were often not responses to The Market. Rather they are oriented towards the Keynesian beauty contest — what investors think other investors think other investors will do. Looking back, many commented on the wastefulness (浪费) of the situation. As our conversation reflected on all the work and progress in trials, scientific experimentation, and product development that was ultimately forsaken worldwide because of the waves Elizabeth Holmes caused, one GP deplored, "all it took was one bad actor."

Entrapped by growth rituals, a whole industry became compromised by a "bad actor." This is a telling glimpse into the binding cultural framework and social system that lies at the center of venture capitalism, which reveals the contours of its limits. The GP's comment about bad actors points to the uncomfortable boundary that Theranos clarifies as an edge case: among Theranos' alleged deceptions was that the device they promised they had developed did not work as claimed.

There seems to be a troubling similarity with my own example, above, of Junyi's fickle robotic prototype. The uneasy reality is that the difference between the start-ups I write about and Theranos is not one of kind but of degree, but the start-up community appears to draw a real and meaningful distinction between them.

During my time in the field, I came to realize that the harrowing story Junyi told me was an instance of a common trope: the glitch-prone prototype that defied its troubled history to step up at the critical "demo" moment. In time I saw that this was no doubt to some degree a product of survivor bias: we do not get to hear from those demised start-up teams whose device did not rise to the occasion. The revelation is not something secretive or shameful but is sanctioned to discuss publicly among the start-up community, as I discovered at town hall meetings with investors in the audience.

A member of the VC Firm told me what often happens: when in talks with a start-up team about investing in their business, the team will give investors the impression that all is well, but once the term sheet is signed,[21] VCs will hear a cascading list of things the start-up needs help with to troubleshoot their business (the prototype being a key part of it) even before the ink dries. This happens so often that I have seen VCs speed the process along by saying something like, "okay then. Now that we have formalized our investment, tell us about all the things that are going wrong." And yet, these start-ups are not accused by their investors of behaving fraudulently.

[21] A term sheet is a legal document that outlines the terms and conditions of the acquisition of shares.

From the point of view of investors and other members of the start-up community, a key difference between companies like Junyi's and frauds like Theranos may be described by the relationship and tension between ritual and sincerity. Seligman and colleagues (2008) posit that ritual and sincerity are counterposed. For how can we know if someone is sincere if they're acting through rituals — when their actions are performative, conventionalized, repetitive, and operates in its own subjunctive world? In this view, what is "sincere," then, is not the subjection of the self to "externally given categories of order" for the sake of publicity and "mere convention," but actions that reflect genuine conviction to bridge the gap between reality and what is expressed through the ritual. Generative and transformative power comes from the interpenetration between ritual and sincerity — between acting "as if" and acting "as is."

To those who are sincere, rituals are a means to an end; to the insincere, rituals are the end. Accordingly, when "growth hacking" goes on indefinitely, a start-up founder becomes purely a "hack." For ritual tournaments do not create profit but legitimacy (Baudrillard 1981), and legitimacy — socially conferred — cannot incur unmet challenges indefinitely.

Between ritual and sincerity:

Navigating liminality in the Growth Ritual

The gap between ritual and reality — more specifically, the possibility that they may be bridged — is what gives rituals their potentially transformative power. Going back to Junyi's example, even if the desired result cannot be reliably reproduced, the fact that his device worked

at least once is meaningful to investors. This "proof of concept" (PoC) suggests that a start-up company may be able to transition and "grow" quickly in the short future — crucially, in time to help return the fund. For, to recall the suggestive agricultural metaphors of Gabriel Tarde, the germinal seed stage is for adaptive transformation (i.e. "the growth ritual"), but once the embryonic leaf emerges (when the start-up "exits"), then the transition into "cotyledon" scaling (the replication and accumulation of more of the same) can happen. This provides the baseline conditions that allow VC investors to help "accelerate," by recruiting resources through their network of people that can offer expertise, manufacturing capabilities, and opportunities to trial and "pilot" the product with corporate or consumer clients.

The existence of the gap between ritual and reality and its vital quality to the whole operation amounts to a public secret (Jones 2014) that is the beating heart of venture capitalism. Accordingly, a lot of work in the early stages of start-up development revolves around it. As founders work to first build and then bridge the gap, on the VC end, a substantial amount of labor is devoted to gauging what is actually the case ("as is") from what start-ups act "as if" were the case. Since 2017 when I first began preliminary fieldwork, I witnessed many top Chinese students from prestigious universities at home or abroad, who had their choice of jobs upon graduation, buck tradition to join the ranks of VC instead of Wall Street banks and management consulting firms (cf. Chong 2018). To them, VC had the additional luster of "making impact" and "creating change" in addition to the prestige working for a firm like JP Morgan may bring. Yet as these

"academic overlords" (学霸) join VC firms, often first as interns or analysts, many become confused. Even more baffled are those who have switched over from investment banking to VC. Given the lack of consistency across early-stage start-ups' growth metrics, what purpose are the models they've been trained to use? Ultimately, to conduct due diligence for investment, an analyst complained, "I needed to do what you do, Jamie." They had to resort to interviewing the start-up teams' clients whether the start-up's product or service worked as claimed, or in fact, even existed; doing field research at start-ups' offices and shadowing them to observe their pilot projects.

Thus, even as VCs depend on the start-up teams they invest in to perform poetic dexterity for growth rituals, they spend substantial effort and labor to gauge what lies underneath the ritualistic poetics — what is "as is." Though VCs are often summarily branded *jīnzhǔ bàba* 金主爸爸 (Daddy Moneybags) in China, there are nonetheless discrepant power dynamics between different firms despite their mutual dependence in the co-production of "caste privilege" (Baudrillard 1981). This has cascading implications on the political economy of knowledge within VC including individual VC's ability to tell ritual apart from reality, and how to balance growth ritual with actual limits of current technology. In turn, the politics around being an "investor that understands you" (懂你的投资人) shapes the day-to-day work of VC investors. In the competition to snag up-and-coming start-ups, as start-up companies pitch their value proposition in the form of the product or services they want to work on, VC investors may also offer their own value proposition. Though one of the key ways VCs "accelerate" the growth of start-up

companies is through injecting money and subsidizing their development financially, money may not be the most decisive element at particular points of a start-up's development. VC investors may differentiate themselves through the "resources" (资源) they can offer, often in the form of wealth in people (Guyer and Belinga 1995).

Much of this is encapsulated in a conversation I had with a young VC investor. Jack is an associate at a domestic Chinese VC firm that is well-regarded within the industry. With a team of just twenty, the firm manages funds of billions of renminbi. Meeting over coffee one day, I asked Jack how he draws on his training as an engineer at the prestigious Peking University in his work. Jack nodded quickly as he sipped his coffee signaling that he understood what I was asking but was slow to offer an answer. "My technical background helps, of course… to an extent," Jack said after some deliberation. "Sometimes I can draw on my training to gauge whether or not a project is *kaopu* (靠谱, reliable), if it is technically feasible. But more often than not, we are looking at markets and tech that I have never encountered before, so there is a limit to how helpful my university training is."

I considered how to tread carefully, and settled on asking, "Do you and your firm specialize in investing in certain kinds of companies?"

Jack stroked an imaginary beard on his clean-shaven face, "We do. Kind of. But not by way of planning. It's simply the consequences of having invested in particular companies in the

first place, and having learnt about the tech and the market through them as they grow and as they bump into obstacles."

"Even if it's not planned, it seems to work out. Your firm seems to be doing quite well," I offered.

Jack laughed, "I suppose we are. But we're such a small player!"

Despite managing what would seem to most laymen an obscene amount of money, they are dwarfed by the leaders in the industry, most of them American. I mused, "It's interesting, what you said about learning through investing in companies. I remember talking to someone who works at [the Chinese branch of behemoth American VC firm] the other day. He said that if they weren't sure about investing in a start-up, they'd invest in a later-stage company in that industry. That way they can learn the ins-and-outs of that market to inform their decision."

"Exactly!" Jack responded, "It's not like we can afford to conduct 'research' like that. So, we don't 'specialize' by choice, right? It's not great to only invest in fledgling companies, and it's not great to only invest in a certain market. That's not the way to diversify risks, but at the same time we can't afford to do otherwise easily. We do try, of course."

"How?" I nudged.

"Well, I sometimes go back to my professors in Peking, but they are good with the tech, but not so good with their applications beyond labs. More often, we do go to these big VC players you mentioned. Get a beer with someone from Sequoia, for example, and tell them about this

company we're considering, and ask what they think — if what the start-up has pitched is in fact feasible in real-life applications."

"Wouldn't that be risky?" I asked, a bit shocked, "They are your competitors after all."

"That's true," he conceded, "but it's not like we have many other options. They have a much bigger range in their investment portfolio than us, so their exposure to different markets and tech is also broader."

"Has it ever been the case that you consult a VC friend about a startup you're considering investing in, only for them to snag them up before you?" I ventured.

"It has! A few times actually," Jack laughed dryly, "but there was no other choice. At least you get some insights at the end of the day that could help inform your investment decisions later on. And sometimes, it's not the case that they completely snag the opportunity away from us. Sometimes we co-invest. It's not always a zero-sum game in investment."

I nodded.

A silence befell us. Jack took another sip of his coffee and contemplated, "I don't know if 'friends' in the VC world are ever just 'friends.' We are constantly at work even if we pretend to be socializing. Of course, this is not an accusation. I do exactly the same. Sometimes we get a piece of the pie in a hot start-up just because their leading investors are our friends and bring (带) us on as co-investors. The best startups are highly sought after, and they never seek us out. They go for the bigger names instead. Many people think that we are hounded by start-ups, and that is kind of

true. But in terms of really promising, top-tier start-ups, we chase them rather than the other way round."

"How do big players decide who to co-invest with?" I wondered aloud.

Jack tilted his head, thought for a moment, and said, "Well, big players don't invest alone because they can't boost up the value of the startup by themselves. They would also want to share the risk, which necessitates that they also share potential reward. There are always a few spots for co-investment, and after they bring a few of us on, it's for the co-founders to decide. So, we fight for the coveted spots to become the startups' backers."

"What do you do to give yourself the edge?" I asked.

"We offer resources (资源)," he answered.

"What kind of resources, other than money?" I probed further.

"If, say, they're in need of a good CTO (Chief Technology Officer), we could tell them that we know someone who would be perfect and can make an introduction. If they're looking to expand overseas, we might already have good supply chain networks to help them achieve that. Recently, a healthcare start-up was going to expand their clinical trials to develop their products further, and we were able to introduce them to the head doctors of many hospitals that we got to know from a previous medical start-up we invested in," Jack elaborated.

"Are the 'resources' always social in nature? In the form of connections?" I asked.

Jack reflected for a moment. "I guess they are!" he said with a chuckle. "In some occasions," he continued to answer my earlier question, "Who gets to invest comes down to who the founders 'vibe' (感觉) with better. So, we pitch ourselves, telling them how much we believe in their projects, how we understand (懂) what they are trying to do, and the impact we are going to make together. We show that we are invested, not just with our money, but with our actions too in the change they are trying to make." Seeing the surprised look on my face, he nodded with a wry smile, "I know. I found myself handwriting a letter in the dead of the night not too long ago saying exactly that to try to court a founder." Chuckling again, he drained the last drops of his coffee, "So much for the gilded life of a VC, huh?"

Conclusion: Temporal Capital and Temporal Personhood

In a cool and spartan conference room on a day of stifling heat in the Shenzhen summer, a young startup founder was pitching his company to a Chinese partner of the VC Firm. This was a coveted opportunity, and he was determined not to squander it. The partner, wearing a black t-shirt and meticulously groomed stubble, nodded along to the slide deck, his expression unreadable. The founder reached the crux of his presentation. In his nascent market sector, he noted with pride, no company but his was turning a profit. He then explained how he intended to keep it that way. At this, the partner frowned. There were other reasons why he eventually chose not to invest in this company, the partner later told me, but the founder's preoccupation with profitability raised a particular red flag.

But shouldn't profitability be an attractive quality in a fledgling company, and the pursuit of profit an admirable trait in a founder? When I first entered the field, this preoccupied my mind: a question that encapsulates one of the most befuddling economic paradoxes of our time. Think of any so-called startup that has become a household name. Despite their ubiquitous presence in people's everyday lives, many of them have never turned a profit. As of May 2023, fourteen years after its founding, Uber has not had a single profitable quarter, yet it is still valued in billions. How can a company be valuable if it never makes a profit, and how do VCs produce that value by opting to invest in unprofitable — rather than profitable — businesses?

Through the lens of growth rituals, we can now recognize why, in emphasizing profitability, what the start-up founder inadvertently demonstrated was his lack of key ritual literacies required to succeed in a growth ritual.[22] As we now know, at the seed-stage of a start-up's development, profitability is not key to achieving commodity candidacy. While it is a "good-to-have" in the germinal stage, it is not a "must-have." In fact, focusing on profitability in lieu of other aspects of building commodity candidacy may be detrimental to the chances of a start-up successfully performing the growth ritual. This founder exemplified one of the ways neophytes betray their ignorance of the ritual process, one that would, as my VC interlocutors tell me, incur

[22] Uninitiated investors may also betray their ritual illiteracy by asking for too large a portion of shares in a fledgling start-up company -- leaving very little shares for the start-up team to scale their company: to use shares to attract talent in a competitive marketplace, and to use shares to wabuwabu their way into higher company valuation.

"communication cost" (沟通成本) to correct — in this particular case, the VC decided that it would not be worth it.

A form of unequal but nonetheless mutual dependency is the social contract VCs offer, even if none of the term sheets and documents explicitly state it. To reiterate: VCs depend on start-ups that could reach astronomical valuations within a short period of time to "return the fund" and possibly make gains that would allow VCs to raise further rounds of funds to invest in start-ups. In exchange for taking part in this endeavor, start-up teams get help in "accelerating" their business growth through rounds of fundraising for subsidies through investment. A start-up company successfully performing the growth ritual in time within a few years to "exit" (for founders and investors to sell their shares as highly-valued commodities) is a statistically improbable event. However, a VC fund just needs a few successful rituals within their entire portfolio to make multiples in return-on-investment (ROI) and be worthwhile for their own investors (limited partners).[23] In a recursive manner, the VC model involves setting up a nesting doll structure of fundraising consisting of nested tournaments of value — parallel gambits stacked upon each other for "outsized" returns within compressed time (Harvey 1991; Bear 2016). The offer for start-ups within this layered ritual thus boils down to this: take on substantial risk for "acceleration."

[23] Furthermore, even failed companies are part of the trial-and-error processes that help VCs gain insight into an industry.

We can now understand why in the world of venture capitalism, companies that focus on profitability and self-sustainability from the get-go are definitionally not considered start-ups, but rather traditional small and medium-sized enterprises (SMEs). At its essence, VC is a *rite d'institution*: "a process by which those who endure it are transformed not so much in relation to who they were before they participated in the ritual as in relation to those who cannot participate and are deprived of the title that it alone is empowered to attribute" (Hertz in Riles 2010; Bourdieu 1982).

As only a precious few start-ups in VCs' investment portfolios manage to complete the growth ritual and become highly-valued companies, what happens to the other start-ups in the portfolios? Most falter after they run out of funds, having failed to keep extending their runway. Some others that also couldn't raise further funds become serendipitous by-products of the process as they manage to pivot their business model to become self-sustainable. Even though these "happy, mid-sized companies" have formally failed their own growth rituals and do nothing to contribute to the ROI of the funds, I know that some of them are secretly the most darling achievements in the minds of some VCs in terms of what they've helped bring into the world.

Appadurai writes, "[T]hough such tournaments of value occur in special times and places, their forms and outcomes are always consequential for the more mundane realities of power and value in ordinary life" (1986, 21). "What is at issue … is not just status, rank, fame, or reputation of actors, but the disposition of the central tokens of value in the society in question" (ibid.).

Crucially, the "central token of value" in the VC growth ritual is not money, not valuation — but time.

Entrepreneurs are themselves often vexed by a seeming paradox: there isn't always a clear correlation between the quality of a startup's offering and its ultimate survival and success. Many start-up businesses failed over the years not because of inadequate technology or poor market fit, but because they "ran out of time." As VCs and founders fixate over the valuation of start-up businesses, the collective act of growing a start-up undoubtedly involves a kind of Marxian meta-fetishization "where not only does the commodity become a substitute for the social relations that lie behind it, but the movement of prices becomes an autonomous substitute for the flow of the commodities themselves" (Appadurai 1986, 50). However, the more fundamental determinant of a start-up's fate is whether it can afford time.

The bulk of my fieldwork was conducted during Donald Trump's time in the Oval Office. The man is a point of fascination among many of my Chinese interlocutors. He was at once an exotic spectacle from the lands of America and a specimen of the pinnacle of power. Like other forms of American success, he became an object of study, something to decipher, an embodiment of a knowledge they don't yet understand, and they don't know if they can afford not to.[24]

A conversation about Trump over beers led one entrepreneur to take out his phone to show me a clip that I later identified was from the 2003 documentary *Born Rich* (Johnson 2003). It

[24] Note the echo of themes in Chapter 1.

was of first daughter Ivanka Trump recalling a moment in her childhood when she and her father were walking down Fifth Avenue in New York. To convey to his young daughter the extreme debt he was in at that point, the future president of the United States pointed at a homeless person sitting outside Trump Tower and told her, "You know, that guy has 8 billion dollars more than me." The lesson the entrepreneur took from this was that money is secondary, the deeper truth is that one needs to be able to afford time.

What does it mean to be able to afford time? Recall the scintillating, fictional persona Mr. Wang conjured that is the opposite of himself: one with a halo (光环) of pedigree that others will take chances on again and again. Some VCs think that there are those who abuse their privilege, and disparagingly call those founders "lifestyle entrepreneurs." By this, they mean that these founders have taken entrepreneurship to be a kind of lifestyle: through acts of poetic dexterity, they manage to start one flashy start-up after another, deftly turning their failures into indexes of hard-earned insights and further ritual literacy, perpetually living a subsidized life on VC's funding, moving from one suspended state of liminality to another.

What is curious about a system devised to hack growth and time is that it leaves itself vulnerable to be hacked. Unlike the practices of loan-shark "investors" we've discussed in Chapter 1 that my Chinese interlocutors see as a symptom of involution, the growth ritual is ultimately a system of trust. It is commonly invoked in daily conversation that in the higher echelons of U.S. VCs, term sheets — the legal document that outlines the terms and conditions of the deal between

VC investors and the start-up teams — are simple, and not more than a few pages long. It is celebrated as an expression of trust, and sometimes in China, controversially as a sign of Western civilization's (文明) superiority. Eventually, I came to realize that it is also a concession that there is nothing the VCs can do if the start-up they signed the term sheet with reveals themselves not to be sincere. It's rare to pursue legal action. Unlike actual financial fraud, ritualistic insincerity is hard to prove. But more importantly, for the sake of the big picture of making ROI for the fund, it makes more sense to just let it go, cut the losses, and direct renewed effort to scouting promising and hopefully more sincere start-up teams. To hark back to Jing's first impression from Chapter 1, part of the great gamble of venture capitalism is that it does leave VCs vulnerable to becoming "generous idiots" from time to time.

I recall how in illustrating the poetics of social interaction and poetics of manhood on the Greek island of Crete, Herzfeld writes, "In Glendiot idiom, there is less focus on 'being a good man' than on 'being good at being a man" (1988, 16). But can we ever know whether a man is sincerely a good man or just very good at being a man? As Seligsman et al. remind us, ultimately, we can't. But sincerity is not the core issue here. Instead, what is key is the consequences of stressing "performative excellence," poetics that draw attention to the "*acceleration or stylistic transfiguration* of action" (Herzfeld 1988; emphasis in original) — or what I have called poetic dexterity here.

There are risks to leaning heavily on rituals (Howe 2000), a performance of any act "risks its [own] effects" (Strathern 1988, 192). As a perverse consequence of growth hacking, there are a great number of companies, who after processes of VC "acceleration" remain dependent on subsidies from investment, unable to become profitable even years after "successful exits" and valuations in the tune of billions. Uber is but one of them. The great ritual tournaments of value that is venture capitalism tests core cultural values at stake, and their successful performance serves to continually renew and demonstrate temporal liminality as a key indication of cultural capital, not just a "lifestyle" but an aspirational way of life.

My interlocutors say that every C-suite at a start-up business needs a "hustler."[25] Tellingly, though the hustler's most spectacular successes are demonstrated by how much money they bring in, their more fundamental function lies in how consistently they're able to buy time to tide the company over when it comes to it. Investors might offer funds for a very small slice of the pie — and thus augment valuation greatly, but that does not mean that the funds are enough to tide them over to the next round of fundraising. They've all learnt to see a start-up's life force through how much time they've been afforded through terms like "runway" and "burn rate." They see "have" and "have nots" not in terms of money, but in terms of time — more specifically the ability to prolong liminality. The entrepreneur Jing featured in Chapter 1 called it a form of "extra-sensory

[25] The highest-ranking staff in an organization, e.g., chief executive officer, chief technology officer, chief operating officer, etc.

perception" (特异功能): the trained ability for businessmen and entrepreneurs to see everything in the world in terms of what enables their survival and thriving. As social analysts, we might call it habitus (Bourdieu 1977b) — "the way society becomes deposited in persons in the form of lasting dispositions, or trained capacities and structured propensities to think, feel and act in determinant ways, which then guide them" (Wacquant 2005). Through their lens of time, much of the mass global inequality we have seen in past decades and continue to witness is not so much a financial crisis as a crisis of time (Desmond 2016; 2012; Sahlins 2013b), or more specifically, it is more fundamentally a crisis of time that leads to financial outcomes.

In this chapter, my goal was to identify one of the key rituals that underlie the modern economy in ever more pervasive ways. I have specified the kinds of labor in/of time (Bear 2016) VCs and start-ups entrepreneurs partake in, the structures in which they're performed, how those structures came to be, and how they're renewed and sustained by rituals. The rituals inform a form of temporal capital and a temporal personhood that hinges on the ability to enter the prolonged state of liminality that Donald Trump must have mustered to survive being eight billion dollars in debt and eventually climb to the Everest of American and global political power.[26]

Taking a step back, there is something admirable and perhaps instructive about the accomplishment of venture capitalism: collectively, participants have harnessed the transformative

[26] The way my interlocutors talk about the ability of entering prolonged temporal liminality as their key concern bypasses various thorny issues in the anthropology of time, i.e., whether time is duration, linear, cyclical, and if time is quantitatively cumulative.

powers of rituals to relax the constraints of temporal conventions and make possible a conjured world where profit does not realm supreme. In the process, they've subsidized a substantial portion of our economic lives across the globe. Now if only someone can make that world sincere.

Chapter 3

Scaling Trust, Automating Guanxi

Introduction

It was the summer of 2018. Against the backdrop of a colossal wall of screens, Jingfei and Zhaohui's voices boomed through the speakers in one of Hangzhou's expansive exhibition halls. Its air-conditioning sheltered us from the sweltering heat. The lulling rhythm of cicadas' symphony was barely audible beyond the heavy doors.

"There is a crisis of trust (诚信) in China," Zhaohui addressed the government and business delegates in the audience. Concerned about "tofu-dreg" projects (豆腐渣工程) — shoddy construction work which caused building collapses and deaths across China — Jingfei and Zhaohui's startup team, Skill-link, envisioned a platform which would host profiles for construction workers, helping employers to gauge their reliability (靠谱).

As they showed through slides, these profiles would draw from workers' certifications and job histories to provide individual ratings. These would continue to evolve as the workers accrued more work experience and training, and as employers provided testimonies or complaints. Jingfei analogized their start-up Skill-link's offering as a "Linkedin for construction workers," or, to bring it closer to home, a platform like Dazhong Dianping (大众点评) — which translates directly to "public ratings" — a popular Chinese counterpart to Yelp, for the construction industry.

Through investigating early-stage start-up companies looking for product-market fit in China that could kickstart and sustain their business, I shed light on the burgeoning industry of data-driven mediations of trust, and the historical circumstances that led to what is domestically referred to as the "credibility crisis" (诚信危机) and the high demand for private "credibility" services in China. In a way, the "credibility crisis" today is the fruit of seeds sowed during the Mao era. The social fragmentation in the "ten years of chaos" (十年浩劫) elevated the importance of practices of so-called guanxi (关系) — reciprocal relationships exemplified by gift exchanges — as the cultural basis of trust. The violence inflicted on the social body during this period resulted in millions of lacerations, which were stitched back together over time with endless threads of guanxi. Yet the social organ, having scarred over, now tears when stretched. It is at this political and historical moment that I reflect on guanxi relations' status as the cultural basis of trust in a rapidly developing and urbanizing China.

As a start-up company that expressly intended to tackle the credibility crisis, Skill-link's "value proposition" is one that aligns with calls for a Social Credit System (社会诚信机制) articulated by the Chinese State Council in 2014. The SCS, as invoked by the State Council and as imagined and trialed by local governments, simultaneously accounts for social and financial behavior in evaluating moral conduct. A massive credit scoring system is a justified cause for concern. Highly centralized systems are dangerous and liable to be misused and abused — consider, for example, the 2008 financial crisis. The Western perception that the Chinese state's proposed

credit system is particularly backwards and barbaric seems to be informed, at least in part, by its violation of modernist purification, a false separation of interconnected domains (Latour 2012). The notion of a credit system that combines vaguely-defined "social" and financial evaluations is one of the key sources of alarm in Western commentary and the reason why SCS is often cited as a gateway to a dystopian future. In this chapter, I point out that this combined evaluation of social and financial morals can only be fully understood when we take into account the system of accountability it is meant to supplant: guanxi networks.

Importantly, as I elaborate in this chapter and the next, the state-driven form of the Social Credit System has not yet fully materialized. It exists as a government initiative only in fragmented and disparate local policies. It does not feature in most people's lives as a centralized state-driven system. Rather, they experience it through spurts of localized pilot projects among many transient others. It is important to clarify that the state has never explicitly stated the intention to individually compute numerical social credit scores for each of its citizens. This misconception is the result of conflating local government experiments with the central government's will. This is amplified in the West by public figures like former American vice president Mike Pence and the financier George Soros (Z. Yang 2022).

The local government trials that fed into this mistaken perception include one at Rongcheng, a small county-level city in the prefecture level city of Weihai in Shandong province. A brainchild of its city hall staff (Mistreanu 2018), the system assigns up to 1000 points to each of

the 740,000 adult residents that may rise or fall depending on their conduct according to a scoring system: heroic acts, charitable donations, and volunteer work will score points, serious offenses like drunk driving will dock entire grade levels. Another similar experiment was trialed in Suining in Jiangsu province. However, these government-run projects to score individuals through a comprehensive schema are few and far between, and there is no indication that these models will be adopted throughout the nation. Through mechanisms I elaborate on in the next chapter, it is up to local governments to decide how they interpret and execute the central state's vaguely worded mandate. Examples of some other pilot projects that have been carried out in the provincial and city levels include trials to monitor Baijiu producing companies for compliance with regulations in Luzhou, Sichuan, or to monitor student cheating and plagiarism in Wuhan, Hubei (Ohlberg, Ahmed, and Lang 2017).

This is not to say that the central state has never involved itself in the development of a social credit system in contemporary China. Around the time of the publication of the white paper on a Social Credit System in 2014, China's central bank, the People's Bank of China, relaxed rules around private credit scoring and issued licenses to eight tech companies including Alibaba's Ant Finance and Tencent to develop pilot projects that were meant to coalesce into compendious individual scores for the SCS. Yet only a year later in 2015, owing to concern over potential conflict of interest, the PBoC stopped renewing the licenses. Nonetheless, this endeavor and what remains of it is revealing. It is important to bear in mind that modern China has never had a credit scoring

system comparable to the FICO score in the United States — an absence that is only now being addressed by Ant Finance's Zhima (Sesame) Credit after the People's Bank of China gave them permission as one of the eight companies to develop a private credit scoring program.

As I discuss, the "credit system" is an American invention, and the factors that contributed to its appearance in the United States in the 1830-40s are similar to those in post-Mao China: geographic expanse, an undeveloped banking system, and a rapidly growing and increasingly itinerant population. In fact, there are also common elements to the infamous Rongcheng social credit project and the operation of the precursor to modern credit bureaus — Lewis Tappan's Mercantile Agency. In particular, a striking similarity is the reliance on the manual labor of a network of "information gatherers" (Gan 2019b) in Rongcheng and "agency correspondents" for the Mercantile Agency (Lauer 2017).

Given U.S. commentators' criticism of the Chinese Social Credit System's putatively totalitarian forms of surveillance, it is ironic that the United States' own historical response to a similar confluence of factors led to the development of a system of mass surveillance — arguably a precursor to the NSA (Jeong 2016). In highlighting this, rather than crude whataboutism, my aim is to prompt us to consider the United States' continued influence on the credit systems in contemporary China. In particular, I will draw on ethnographic material to show how the cultural imports of digital apps and the gig economy from the United States acclimatized many Chinese

citizens to the idea and practices of giving and seeing ratings at this critical juncture, which has fed into the fragmented, market-driven response to China's challenge in scaling trust.

To be sure, although the notion of a centralized state-driven Social Credit System does not factor very much into the lives of the Chinese public (Gan 2019a), market-driven social credit is constantly on their minds. Since beginning my PhD research in 2016, I witnessed my Chinese interlocutors interact with Ant Finance's Sesame Credit over the years and have seen it turn from an amorphous beta product into a hybrid between a loyalty rewards program and a conventional FICO-like score for Alibaba's own platforms (see also Z. Yang 2022). As journalist Simina Mistreanu reports, "Zhima Credit's technology director controversially told the Chinese magazine Caixin in 2015 that buying diapers, for example, would be considered 'responsible' behavior, while playing video games for hours could be counted against you." Yet, "Hu Tao, Zhima Credit's general manager, paints a different picture now. She says the app doesn't monitor social media posts 'nor does it attempt to measure qualitative characteristics like character, honesty, or moral value.' Zhima Credit is not a pilot for the social credit system and doesn't share data with the government without users' consent, she says" (Mistreanu 2018). Yet, even though a central state-driven SCS has not materialized, and a financial credit system is taking shape, I have encountered numerous business endeavors, like Skill-link, to develop products and services that facilitate accountability and social credibility.

The main driver of this burgeoning market is a desire for social legibility. It is important to bear in mind that "face" (面子) or "name" (名) in the anthropological sense of social personhood — the fetishized object of the "tournaments of value" (Appadurai 1986) that is guanxi practices and the rituals of gift exchange — are primary mediators of trust and accountability. Moral legibility is often tied to one's face and name. As a shopkeeper in Rongcheng, Liu Huayang, tells a reporter, "My face is the best credit. The government's rating is merely a gesture on paper" (Gan 2019b). Through my ethnography, I highlight how in scenarios where guanxi practices were the norm, there is demand for solutions to reinforce face as an immutable mobile, of which any government-led effort is but one. Suffused through Chinese society is a tension between *trust-based systems* and *system-based trust*. In China's intense urbanization and economic expansion, the trust-based systems of guanxi networks become strained in fulfilling their function. And yet, there is a lack of system-based trust: a consequence of "a legal system in need of refinement" (法治不完善) in a large-scale society and a rapidly developing economy where enforcement is challenging and regulators are constantly playing catch up.

According to the State Council's initial white paper, the Social Credit System was meant to be in operation by 2020. The fact that a centralized social credit system has not appeared does not mean that the initiative was a failure. Today, there is not one social credit system, but many. In showing how Chinese social credit systems, much maligned by Western commentators, are crucially influenced by U.S. cultural and financial imports, I highlight the irony that China's very

endeavor to "catch up" with the U.S. and "the West" at large has invited scorn from its very objects of emulation.

The idea of social credit and the vocabulary of trust (诚信 *chengxin*), credit (信用 *xinyong*), reliability (靠谱 *kaopu*), and others that form its idiom hold great sway in Chinese society, and are important conduits to understanding Chinese people's daily concerns. In particular, I elaborate on the notion of being reliable (靠谱 *kaopu*) and the means to enforce reliability — whether through trust-based systems or systems of trust — in contemporary China. I also discuss how the means adopted in the past few decades has informed a noted divergence in public sentiments towards large organizations in China and in the United States. By probing what animates Chinese social credit systems in their market- and state-driven forms, I shed light on the cause of the Chinese nation's thorny relationship with Personal Bankruptcy Laws, which has lately been further complicated by the economic challenges brought on by the Covid-19 pandemic.

Nets and Meshes[27]

Zhaohui told me that he struggles to recall the Changsha of his childhood. Dating back to the Zhou dynasty in 256 B.C., the city in Hunan province is said to have been named for its long stretches of sand — a name it has maintained over millennia. When Zhaohui was a young boy, the

[27] The Chinese networks and meshes invoked here are not exactly in the manner of Latour or Ingold. While there are elements about actors and networks, and complex interlacing of codevelopment and codependence, what I wish to highlight within Chinese cosmology is the differentiation between ties that are thick and thin, meshes that are dense or lax.

third-tier city, "now bordering on the second-," was changing so rapidly that he now has trouble forming a stable and coherent mental snapshot of it. He felt like he was living on shifting sand: "The only constant was the sound of incessant construction." Since leaving the city for his education and work, each time he revisited his 老家 (*liaojia*, lit. old home) as an adult, a fresh wave of alienation washes over him. It became habitual for his mother to walk him through all the unfamiliar environs of their neighborhood. They gawked together at the new shiny structures that now flanked the Xiang river.

I met Zhaohui in Boston, where he was a graduate student in Urban Planning. In one of our first meetings, he exasperatedly recounted a recent conversation he had with his fellow students. Zhaohui had told them about *tianwang* ("天网"), the Chinese state's facial recognition system. His Americans peers had responded with incredulity about China's surveillance, but also found irony that it is dubbed 'Skynet,' sharing a name with the genocidal antagonist in the American film franchise The Terminator: a pervasive A.I. neural network that gains self-awareness and seeks to wipe out humanity. Zhaohui complained, "What these foreigners (老外) don't understand is that when we hear the words tian wang, we do not associate it with the 'tian wang' ('Skynet') in the Terminator films, but with 天网恢恢，疏而不漏 (*tian wang hui hui, shu er bu lou*)." The proverb credited to ancient philosopher Lao Zi literally translates to "the pervasive net of heaven has large meshes, but it lets nothing through."

Zhaohui was invoking a form of karmic justice that will catch up with culprits who seem to currently be evading more earthly forms of punishment: heaven's vengeance is slow but sure. This was an appealing sentiment given the rancor he felt over the prevalence of trust-breaching (失信)[28] behavior in China. Zhaohui came to see that the evanescence of material forms that he experienced in Changsha extended beyond his hometown, pervading other aspects of Chinese life: just as the built environment was rapidly changing, so was the vast nation's population increasingly transient. For Zhaohui, increasing anonymity emboldened immoral behavior. We discussed the periodic scandals in food safety, of which the latest then was a national milk scandal: dairy products were found to be tainted by the toxic industrial compound melamine and had caused kidney damage to hundreds of thousands of Chinese infants, of whom six died.

He was keen to help address this prevalent social ill in China and found kindred spirits in other Chinese students in Boston. Together, given their backgrounds in architecture and urban planning, their group of four friends decided to tackle a persistent problem in their chosen field of work: shoddy construction. The team of four formed the startup Skill-link in November 2017 with the intention to provide a service in China through an online platform for matching migrant (流动 *liudong*, "floating") construction workers and real estate developers. The hope was to both

[28] 失信 (shīxìn) — made up of the characters "lose" and "trust" — is bidirectional, and simultaneously implies that not only the trust-breacher loses trust from others, but that their behavior causes others to lose trust in people in general, i.e. erosion of public trust.

help migrant laborers find work and assist developers in recruiting trustworthy individuals to take part in their construction projects.

Through an "innovation connector" initiative at one of their universities, they were introduced to real estate developers in China to whom they pitched their idea. There was widespread fear over 豆腐渣工程 ("tofu dreg" projects): jerry-built construction work with the structural integrity of leftover pieces of tofu. Given this, Skill-link thought developers searching for 靠谱 kaopu (reliable) workers would enthusiastically welcome their proposed platform, with its features of skill rating and job history. However, they discovered that developers, especially the larger and more reputable ones that they were in contact with, didn't hire workers directly, but rather hired subcontractors or recruited construction workers through agencies. Moreover, as someone in senior management told them, developers generally didn't care about the credentials or specific skills of the individual workers so much as whether or not the whole team of workers worked well together, since, from their experience, the latter had a larger bearing on quality and safety.

Given that developers didn't make direct hiring decisions, Skill-link thought instead to pivot their services towards the middlemen, i.e. contractors and agents. Yet, Skill-link found once again that the contractors and agents also didn't really care specifically what skill sets and certification the workers possessed, but rather were interested in whether they could vet the workers. As one contractor reportedly put it, "some of these workers could massively muck up

and suffer no consequences because they can just flee (溜). When they turn up in another city for another job, no one would know about their previous negligence or ineptitude." In such situations, Jingfei, another co-founder of Skill-link, would respond, "that's exactly what our platform hopes to help you with, by showing their work history, certifications, and ratings so that you know who is *kaopu*." To which contractors would invariably parry, "I don't have any relation (*guanxi*) with you (但我跟您没关系), how do I know that I could trust you or the information you provide?" Jingfei would counter that while her team might be the ones who gather the information about the workers at first, eventually, when more people adopt their services, the work history and ratings would be crowdsourced. "Yeah, but I don't know those people either, do I?" would be the reply.

Contractors still preferred to work with their 老乡(*laoxiang*), people from their same natal villages or regions, if possible. This practice could still be an effective deterrent for trust breaching or compromising behavior since other laoxiang within the guanxi network would keep account of moral infractions. The trust-breachers would be left '无面见乡亲父老' (*wu mian jian xiangqin fulao*) — an old saying that means that one has lost face symbolically such that they won't be able to face village elders and is (self-)exiled.

Pivoting again, Skill-link then ventured to provide a service to reveal untapped guanxi connections. Given the diverse migratory patterns in China, Skill-link hypothesized that slightly extended or even primary guanxi relations are fairly spread out and dispersed. We could help you find them, Skill-link pitched to a contractor. Through a mockup, Jingfei presented an alternative

model of their platform, which could reveal people who, for example, you were in the same village primary school with, who happened to have worked with a worker you are considering hiring and might be able to vouch for the person. In other words, the platform would harvest data to find existing, but latent, guanxi bonds that one might not have realized can be utilized in a particular instance.

In attempting to tackle what they had called the "crisis of trust" (*chengxin wenti* 诚信问题) in the construction industry, Skill-link thus came to see a solution in providing technological means to supplement or augment — not to replace — more traditional practice by locating untapped strands of guanxi to reinforce the moral fabric weaved from primary guanxi, currently perceived to be stretched too thin. While they might seem to be on the path of reinforcing preexisting operations of guanxi, in our own conversations, the Skill-link team still spoke of how, though their intended customers currently seem ambivalent, when they have sufficiently filled their database with data generated from trying to reinforce guanxi, they could provide an aggregate rating service for construction workers, like those seen on the crowd-sourced review platform Yelp, Dazhong Dianping (大众点评), or on product pages of online retailers such as Amazon and JD (京东). This is, of course, in line with considerations of scaling the business, but it could also be a more immediate way to gauge whether an individual is kaopu.

Indeed, the contractors' preference for reinforcing guanxi practices is not one that is reflected everywhere. In this regard, my observations correlate with that of Chengdu entrepreneurs

in Osburg's research, who saw "the relative importance of guanxi and practices used for guanxi cultivation as varying more by industry than by region. In areas such as construction, real estate, and mining they are essential, while in fields such as advertising and information technology (IT) arguably less so" (2013, 19). I have often encountered tech-savvy urbanites bemoan the lack of an authoritative credit bureau like Equifax in China, a lacuna that Sesame Credit, Alipay's crediting scoring system, is beginning to fill.

Guanxi and its Discontents

Though the notion of guanxi can be traced through millennia, Mayfair Yang reminds us that we must, nonetheless, not mistake it as an "innate timeless given of Chinese culture," but one that is always historically situated (2002, 469). In Yang's telling, the particular "art of guanxi" or guanxixue (关系学) that I focus on in this chapter emerged in the "midst and aftermath of the Cultural Revolution" (ibid.).

In the searching years following waves of foreign invasion, land grabs, and massacres, Chinese political and intellectual elites saw traditional Chinese ideas, conventions, and knowledge as signs of "backwardness" (落后), and key culprits in their great national humiliation and suffering. In line with this thinking, Chairman Mao Zedong sought to unsettle the traditional Confucian clan and family as the central institution of Chinese culture and society. To chip away at its influence, Mao mandated that peasants eat in community dining rooms, making kitchens in the family home redundant. Children were raised in collective childcare facilities rather than by family members.

Family records and ancestral halls were destroyed to curb ancestral worship. As Mao's political and ideological movement grew more militant and violent, the Red Guards, a student-led paramilitary group, held "struggle sessions." These were public spectacles of verbal and physical abuse against enemies of the state: "class enemies," capitalists, and elitists. Zealous children denounced their parents and teachers for criticizing Mao and for being counter-revolutionaries, leading many to their execution.

Guanxi emerged as a "repertoire of cultural patterns and resources" (M. M. Yang 2002, 399) that, following "state fragmentation of social bonds" during the Cultural Revolution, could be used to "create a fabric for reconstructing civil society" (ibid., 475) according to "very different principles of personal relations rather than political evaluations"' (ibid., 469). Guanxi became, in practice, a reciprocal system of collaborative survival, which found formal expression in ritualistic gift-giving. An illustration comes from Yan Yunxiang's ethnography of a village in the Heilongjiang province conducted in 1990: "In a close-knit village society, personal networks are, in many cases, more valuable than goods or money, and the demand for mutual assistance reinforces one's guanxi network" (1996, 16). The farmers in his study rely on bonds of obligation among relatives and friends for voluntary farm hands to cope with "crucial labor-intensive periods during agricultural busy seasons" of planting and harvesting (1996, 15). Moreover, unable to access bank loans, the villagers depend on each other for financial support through networks of reciprocal moral debt.

Reciprocity is the basis on which they co-constitute social relations in the form of a guanxi network, and personal identity in the form of "face" — *mianzi* (面子). Failure to conform to guanxi conventions would place one's status as a moral and social being at risk, consequently jeopardizing survival. In the moral cosmos of the village, survival hinges predominantly on social capital, and the "cultural construction of personhood" (Yan 1996, 22) is based on interpersonal accreditation.

While guanxi practices facilitated a morally accountable and reciprocal model of collaborative survival in small intimate village settings, its effects are more complicated in larger-scale, more transient settings. As Yan writes, "moral obligations, together with the mutual indebtedness resulting from previous social exchanges, created a highly reliable mechanism" (ibid., 18) that served as a "system of social support" within the village (ibid., 16). However, as China underwent economic reform and urbanization in the decades following the Cultural Revolution, millions left their rural hometowns to seek work in China's growing urban centers. As a result of migration, a vast populace was uprooted from their localized "primary" kinship networks (ibid., 23).

Beyond the intimate settings of villages, long-term reciprocal relationships are hard to cultivate and maintain. Yan observes that even as Xiajia villagers increasingly came in contact with outsiders beyond the local system of social support, they nonetheless "tend to resort to what they know best — that is, guanxi networks — but this often entails the cultivation of new short-term and instrumental personal connections" (ibid., 23). In a China that rippled with uncertainties — a

"floating" population and a torrent of policy changes during the decades of "Reform of Opening Up" since the late 1970s — the pursuit of short-term instrumental connections became paramount to staying afloat. For many, social life became a series of gambits, social rituals to achieve fictive kinship escalated, and social obligations became an onerous duty.

In a vivid portrait of the toll of networking practices "essential for establishing and maintaining the personalistic guanxi relations that are necessary for political and economic success in post-Mao China" (Uretsky 2016, 2), Uretsky documents how businessmen and government officials in Ruili, Yunnan hedging the social and (sexual) health risks as they engage in ritualized forms of male-centered entertainment (应酬 *yingchou*) at banquets and in karaoke parlors. These men do not consider the banqueting, excessive eating and drinking, smoking, and sexual entertainment that they engage in to be recreational, but rather a professional burden that comes with their work — i.e. an occupational hazard. They have no choice but to jeopardize their health and well-being for their careers. Osburg similarly notes the strain of "emotional labor" Chengdu businessmen performed as they "competed and labored to cultivate their own privileged networks by courting government officials through gifts, banquets, and group carousing" (2018, S153). There is no doubt that yingchou rituals remain a key means of advancing up the career ladder or gaining access to state-owned resources. Many businessmen and officials are compelled to partake in guanxi practices, even as the demands of such volatile relationality exact a heavy physical and mental toll on them. Osburg writes, "Several explained to me that successful wealthy individuals

in particular are forced to 'live for others' (为别人生活) rather than for themselves. Many in fact wished they could just give a bribe or a kickback to cement a deal" (ibid., S156).

While guanxi practices can be a way to advance professionally and socially, it can also be a means of exclusion. In the aftermath of the anti-corruption campaign launched by the Chinese Communist Party (CCP) in early 2013, networks once permeable through yingchou practices have, paradoxically, become even more exclusive (Osburg 2018). If the transclass and transregional cultivation of guanxi was once a strategy for upward social mobility, "new practices and venues for guanxi cultivation have emerged that are inaccessible to those not "in the know" or "possessing the right family background" (ibid., S156). Rather than "banqueting, karaoke, drinking, and patronizing saunas and brothels," the settings of guanxi cultivation are increasingly at such private venues as golf clubs and auto clubs as "lines separating China's emerging social classes become more well defined" (ibid.).

In this way, guanxi networks and practices were an aspiration, a necessity, and a bane in the lives of many. In my own fieldwork, interlocutors from diverse backgrounds complained that there was simultaneously "too much" and "not enough" guanxi in their lives: too much taxing labor and costs involved in cultivating and maintaining them, but never having enough guanxi to feel secure. This pertains not only to their personal lives, but to their perception and experience of society at large. In discussing national scandals like melamine-tainted milk products and "tofu-dreg" projects, the recurrent refrain of my interlocutors was that people could "do bad things" (做

坏事) in the absence of thick personal networks, a problem they attribute to China's scale. The proliferation and abuse of particularistic relations in certain privileged spaces, and their palpable absence in others, engenders an atmosphere of suspicion and mistrust, often articulated with the notion of a "credibility crisis" (誠信危機).

Between Face and Facelessness

The breakdown of trust in China's rapidly scaling society has a precedent. Consider the American origins of the format of a "credit system." In the 1830s, amidst rapid westward expansion, the United States was beset by conditions similar to those faced by China in the past few decades: geographic expanse, an undeveloped banking system, and a rapidly growing and increasingly itinerant population. As historian Joshua Lauer writes, "As urban concentration on the seaboard swelled and migration brought growing numbers inland, American society began to exhibit telltale signs of… a breakdown of social trust within the commercial sphere" (2017, 28). He elaborates:

> Though neighborly credit relationships remain unchanged, those who traded regionally or nationally found it increasingly difficult to gauge the trustworthiness of trade partners who were unknown to them and about whom little could be learned from provincial contracts. This was a major problem for city merchants, especially importers, manufacturers, wholesalers, and jobbers who sold to country retailers and tradespeople each spring and fall. During these biannual selling

> seasons, out-of-town buyers converged on New York and other coastal hubs to buy supplies for their home communities. Merchants and shopkeepers purchased new inventory, and tradespeople, farmers, and others acquired raw materials and equipment. Much of the merchandise was sold through credit arrangements. With so much business at stake, there was considerable pressure to trust people of unknown and unverifiable reputation (ibid., 29).

Many intertwined factors contributed to the Panic of 1837 — among them erratic banking policy, falling cotton prices, and a real estate bubble. Though the cause of the resultant cascading debt defaults was systemic, the difference meant little to creditors who were left holding "worthless promissory notes," many of which belonged to distant strangers (ibid.). The breakdown of social trust compounded.

In response, Lewis Tappan, a merchant and a noted abolitionist, created the first credit reporting service in America after he was bankrupted by uncollectable debts. Tappan established the Mercantile Agency in New York in 1841. Though not exactly the first of its kind, this agency is a key precursor to modern commercial credit bureaus like Equifax and would become synonymous with commercial credit reporting in its time. Tappan himself said that the agency was established "for the purpose of procuring by resident and special agents, information respecting the standing, responsibility, [etc.] of country merchants." The agency gathered information through a network of hundreds of correspondents, whose primary task was to "convey the local

standing of individuals in situ" (ibid., 32). A mid-nineteenth century writer described, "the main object with the agency is, to furnish THE HOME STANDING of the merchant obtained from intelligent and reliable sources… only there, can [w]e learn whether he owns property, and is a man of good character — whether he does a legitimate or a speculative business — and whether he is competent, steady, and attentive, or otherwise" (ibid., 32). So pervasive was this network of credit reporting, that "[b]y the 1840s American-style borrowing was recognized by its own citizens as a de facto economic reality, plainly dubbed the 'credit system.'" (ibid., 28).

In this light, we can recognize similarities in how contractors in contemporary China preferred to work with laoxiang — people from their same natal regions. At the core of the issue is one of immutable mobility in the face of scale (Latour 1990). Converting "home standing" into formal centralized records or putting jobbers' "home standing" or "face" at home at risk, are stopgap solutions to the problem of social illegibility. The issue is not just that people who are illegible and faceless are necessarily untrustworthy,[29] but that there are no reliable systems of accountability beyond the periphery of the "home." Upon hearing of the pushback Skill-link received from developers and contractors, other entrepreneurs protested that it was not entirely migrant workers' fault that the buildings were subpar, tofu dreg constructions. The developers were also invested in having them be "faceless," they pointed out, since they could cut corners (偷

[29] By "facelessness," I do not mean 无名 *wuming* or 匿名 *niming,* but rather the state of "being part of a crowd in which one can neither have nor lose face because one's personal relation to the community is not at issue" (Hertz 2001:279-80).

工减料) and outsource the blame to the contractors, who then can outsource the blame to "faceless" migrant workers. Thus, blame could be outsourced into an abyss. In this environment, many preferred a society of faces over a sea of facelessness, but how to achieve that was a complex sociotechnical challenge.

Being Kaopu

"小姐姐，给我个五星好评好吗?" ("Miss, can you give me a five-star rating?")

My friend Juan and I fetched our lunch from the delivery man (快递小哥), and assured him that we would rate him highly. He nodded his thanks before dashing off in his yellow livery. He tended to his phone as he ran, which was already demanding his attention, calling out repeatedly, "a new order has arrived!" (又有新單了!) He stabbed the lift button repeatedly when he reached the elevator shaft, and fidgeted as he turned his gaze back to his phone. His head jolted in indecision over which orders to accept — to swipe left or swipe right.

Invocations of "five-star ratings" (五星好评) bombarded my senses during my fieldwork in China. I was prompted after paying for meals, at receiving deliveries, after making a purchase online, after getting a haircut. Once, at a hair salon, when the hair stylist saw that I was struggling to navigate the user interface to give him a five-star rating, he took my phone out of my hand and did it himself, even typing in a remark as me on how pleased I was with the job he did.

The prompts for a five-star rating were almost always preceded by terms of endearment. One is 小姐姐 xiaojiejie (lit. "little elder sister"), which originated as a cutesy way of addressing

girls in ACG (Anime, Comics, Games) subculture. It can also be how Chinese children call female children a few years older than themselves. With overuse, however, the term has largely lost any meaning: any youngish, female stranger can be a xiaojiejie. Another common term of endearment is 親 *qin*, which means "dear," but is also often an indicator of familial relations; for example, 親人 *qinren*: a relative by blood or marriage, or 親生父母 *qinsheng fumu*: biological parents. Both terms when used with strangers are vague gestures toward fictive kinship. An oft-derogatory term to describe the overuse of these terms is 套近乎 (*taojinhu*) or 拉近乎 (*lajinhu*), which means to impose close relations with people we're not familiar with through expressions of intimacy (to "rope in" guanxi, 拉拢关系).

The synthesis of familial address and rating systems reflects the Frankensteinian stitching together of two models of accountability, which I call trust-based systems and system-based trust. There is no shortage of attempts to introduce a comprehensive mechanism to replace long-term reciprocal guanxi's place as a system of moral accountability, though none has succeeded. Crucially, there has not been a comprehensive financial credit scoring system such as Experian or Equifax in post-Mao China. Just as the credibility crisis beset China, the American-imported gig economy also mushroomed in size, acclimating its citizens to the use of aggregate peers' and customers' ratings.

Juan, a computer programmer from Hubei, told me that she does online microlending to earn extra money. It would be great for her to know whether the strangers whom she lends money

to are, in fact, kaopu and have the ability (or intent) to repay their loans eventually: "if we can see the ratings of the people who we hire on apps to clean our houses, why shouldn't we see the ratings of people we lend money to?"

Kaopu means "reliable" — e.g. a kaopu boyfriend, a kaopu corporation, a kaopu student. Literally, kaopu means to follow the script; the English expression "by the book" can be considered a close cousin. The script being referred to is a social one. It is not an immutable mobile, but a living document that is shaped by society at any moment. Guanxi practices, as Yang and Yan show us, can be a way to ensure that people follow a social script. In the setting of long-term reciprocal guanxi networks, Hertz highlights the Durkheimian quality of "face" in China: the discourse of face works simultaneously to apply "community standards" and call into being the very community whose standards it is supposed to apply (2001, 277).

In lieu of these long-term reciprocal guanxi networks, there have been attempts to extend or automate away guanxi. Skill-link tried to do both. Their first proposal was to automate away guanxi practices through aggregate ratings, and the second was to extend guanxi connections and face (*mianzi*) beyond geographical constraints. Their endeavor is but one of many. For example, public trust in food safety and food security in China remains weak (e.g. Fihl 2019; Yan 2012). During my fieldwork, I encountered numerous start-up companies working with the technology *du jour* to offer the automated ability to trace, monitor, and ensure best practices and reliable supply

food chains: blockchain chicken farms (Xiaowei Wang 2020) and computer vision monitored pigsties are only a few among many.

Many start-ups I encountered, foreign and domestic, were also looking to develop automated monitoring systems in factories. One was developing an AI-assisted camera system that can be installed within factory machinery to monitor that the procedure was accurate and precise — in mass manufacturing, even a slight misalignment can cause costly batches of rejects. I have also met more than one start-up company working on vibration sensor systems to be placed on machinery in factories and railway systems. As some of the founders explained to me, when machinery is not operating correctly, or is in need of maintenance and repair from imbalanced, worn, loose, or misaligned parts, the frequencies of vibrations change. Their systems, they analogize, are like the ears of a discerning conductor, who can point to those machine parts like orchestral parts that are out of tune.

Though these systems are meant primarily for predictive maintenance to reduce costly downtime and repairs for large corporations, many others were excited for their deployment. During a start-up community event in Shenzhen, a shy, bespectacled Chinese start-up founder recruited my translational help to tell members of a French start-up team how excited he was for their factory sensors. He wanted to tell them that he was thrilled for the possibility to do away with the need to yingchou endlessly in hopes that his contracted manufacturer (CM) would pay extra care and special attention to his order. He had paid dearly otherwise in defective or subpar orders.

Just as I was conveying the message in English, another Chinese entrepreneur swooped in with a beer in hand, placed his arms around the shoulders of the Frenchman, and told him the very same. In public events, VC investors also celebrated a future where one might replace laboriously maintained tendrils of guanxi with waveform lines on screens. They advertised how, not only would factory monitoring systems like this have the potential to save corporations millions, but they would also help countless foreign start-ups unfamiliar with Chinese guanxi and yingchou conventions make use of the cheaper, speedier, and more comprehensive manufacturing resources in China even at their early stages, which was and remains a major challenge for them.

Conclusion

In China, tragic stories of heavily indebted people proliferate online and in the news, providing ample fodder for conversation after meals and over tea (茶余饭后). Almost inevitably, these stories mention the indebted person in relation to their family. Sometimes, the debt is accrued by a single working mother who had fallen deathly ill from cancer, or an honest man who was a good provider for his family but was unlucky or swindled in business. Another theme that often appears is 父债子偿 (*fuzhaizichang*), a Chinese saying that denotes the social expectation that children bear their parents' debts. For example, a story in Zhejiang News (浙江新闻 2015) begins thus:

> On tomb-sweeping day (Qingming festival), Zhou Lifeng and Zhou Limei traveled with their mother from Guangzhou to their laojia in Shuikou and visited their

father's tomb. Zhou Limei fell to her knees before the plaque and wept, "Father, we finally fulfilled your promise, all your debt has been repaid. Please rest in peace!"

After years of hard work, the sisters cleared the 1.04 million RMB debt their father Zhou Xiaoquan accrued in life. Zhou Limei turned to her mother and her sister, and said, "We can now stand tall, it's time for us to see our relatives and see our home" (现在我们可以挺起腰杆回家，也该走走亲戚看看家乡).

The story went on to detail how Zhou Xiaoquan ran a relatively successful textile business in his native Shuikou. However, when the financial crisis of 1997 came, he was unable to collect payments and loans from his clients, and was unable to pay off his own debts, which ballooned to more than 1 million. Zhou Xiaoquan was overcome with shame. He left his children with relatives and left home with his wife to try to earn a living elsewhere. His children also eventually left the town for work. When Zhou Xiaoquan died suddenly, Zhou Limei was convinced that the pressure from the debt had gotten to her father, who was engrossed with repaying the debt so that he might again hold his head high before laoxiang at home.

The piece ends with:

In the past two years, the story of how the Zhou sisters paid off their late father's debt spread around their hometown with approbation. Zhang Mingxiang, the village director of Guzhu Village, told our reporter, "What concerns the common folk today is the issue of trust (chengxin wenti). There are those who borrow

money from friends and family who act like filial "grandsons" when they ask for it, but deadbeat dodgers after they've gotten it, sometimes they'd even go "MIA" to avoid repaying their debt. When compared to the Zhou sisters, the difference in their moral characters is like night and day." On the path of trust, who cannot do without those who light the way. The story of the Zhou sisters repaying their father's debt is a shining beacon.[30]

In discussions online or at the dining table, there was little disagreement over whether the protagonists in these stories deserved sympathy, but there were heated debates over whether there is anything to be done about it. To some, the fact that the debtors were 诚信而不幸 (trustworthy but unlucky) was justification enough that a personal bankruptcy law should exist in China — which has yet to happen. Others pushed back ferociously, arguing that this would be a mistake, and that the introduction of such a law would encourage cheaters and scammers, who would face no consequences.

Having grown up in Hong Kong, where personal bankruptcy laws have long been in place, I remember being surprised in the mid-2010s that it was such a point of controversy across the border. In time, I came to understand that if guanxi — formalized mutual indebtedness — was,

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[30] 两年多来，二姐妹的事迹在家乡成为美谈。顾渚村村主任张明祥对记者说："当前，老百姓最担心的就是诚信问题，一些亲戚朋友之间的借债行为，借钱时装'孙子'，借到钱后当'老赖'，有的还玩'失踪'，和周家二姐妹比一比，这之间的思想境界相差十万八千里。"诚信的路上，不能少了燃灯者。周家姐妹替父还债的故事，又是一盏灯。

for so much of Chinese modern history, the foundation of accountability and credibility, then a system that lets people unilaterally achieve *tabula rasa* — a clean slate to clear all their debts — threatened to undermine the very pillars of society.

When the pandemic unfolded in the early months of 2020, businesspeople across the nation suffered and accrued snowballing debt day by day as China cut itself off from the world and the entire population went under lockdown. Yet, even as state-backed developers exempted rent, and local governments encouraged and subsidized private landlords in offering temporary rate abatement and additional rent-free periods, the introduction of personal bankruptcy laws remains a controversial topic.

Though the oft-invoked complaint that society was suffused simultaneously with too much and not enough guanxi, it is clear from the above that guanxi remains resilient. As Mayfair Yang notes, guanxi as a "repertoire of cultural patterns and resources" have "continuously transformed in [its] adaptation to, as well as shaping of, new social institutions and structures, and by the particular Chinese experience with globalization" (2002). Even as guanxi adapted through the data-driven and algorithmically mediated formats, it is often still considered the pu to kao — the ledger to depend on. Yet, there is palpable tension as some desire to move away from guanxi even when much of society is still reliant on it.

In May 2020, Shenzhen was designated the first pilot area to draft and trial the nation's first personal bankruptcy laws. Some of my interlocutors think that this is a moment of transition.

For example, Kenny, a start-up entrepreneur based in Guangzhou City, commended it as a step in the path towards building a comprehensive and coherent legal system in China (法治更完整的表现), and a more reasonable society (社会发展更完善). "There seems to be many people who think that Personal Bankruptcy Laws will breed many scoundrels (破产法会养成很多无赖). They seem to think that people don't mind the social stigma that comes with being bankrupt, and that they will just be swindling money left and right and then declare bankruptcy. When in reality, it is probably going to be a huge deterrence, just like the public blacklist (黑名单) and the public list of trustbreaching persons (失信人名单) now. Look at Luo Yonghao (罗永浩)," he prompted. An entrepreneur and an internet celebrity, Luo was beset by hundreds of million yuan of debt after his smartphone company failed, but was commended for hustling all kinds of work — including turning to live commerce (带货) — to pay the money back. Kenny continued to say, "look at how hard he works his way out of it... The Personal Bankruptcy Law is not the Pandora's box people imagine. It is better to have clearer lines (条线画得更清) than to live every day in a murky entanglement of indebtedness to others and from others. More like how things work elsewhere."

But what does it mean to have "clearer lines," and to operate more like "how things work elsewhere"? As we have seen in the previous chapter, the cultures and practices of venture capitalism adapted from the United States are a masterclass in liminality — a recursive collective exercise of living with blurred lines — and hugely dependent on relations, interpersonal trust, and faith. As an operation, VC relies more on trust-based systems rather than system-based trust. While

post-Mao guanxi practices are one particular permutation of "relations" mediated by ritualized reciprocal acts, other trust-based systems may be similarly suffused with murky boundaries that require constant, vigilant navigation. China today also presents similarly to the United States of the 1830s to 1840s: geographically expansive and with a large, itinerant population. These conditions birthed the US Mercantile Agency. Social credit systems that are in place and are in development in China are doubly the consequence of American imports: first the credit system, then the rating system of the gig and app economy.

However, Kenny isn't necessarily wrong about China being different from other regions. Just as in cooking, the sequence and timing of steps are consequential, even if ingredients are similar. The fact that China has not had a credit scoring system until the past decade is not trivial, nor is the fact that the general reliance so far has been on trust-based systems rather than system-based trust. One implication of this is the divergent attitudes towards large entities held by Chinese and American publics. As Yan Yunxiang notes of China, in the interwoven web of relationships, the "cultural construction of personhood" (1996, 22) or the basis of personhood conferment is based on interpersonal accreditation. The more guanxi relations one has and the larger one's guanxi network suggests that one is better versed in guanxixue, but it also implies correspondingly more interpersonal accreditation. Because of the relative dearth of system-based trust in China, large brands and organizations appear more trustworthy because of the many more tendrils of guanxi they must be maintaining, which, in the aggregate, serves in lieu of viable alternatives as the best

social insurance. Whereas in the United States, system-based trust offers a veneer of objectivity and a centralized institutional impartiality that serves as arbiter. When it is discovered that behind system-based trust lies the operations of trust-based systems, people become deeply distrustful of and disillusioned with the system. The truth is that any scaling or scaled entity is never strictly one or the other. I expand on this in the concluding chapter.

In saying that the legal system in China needs to be more comprehensive and coherent, Kenny is also suggesting that it is not yet those things in its current form. There is no shortage of rules and regulations in China. The challenge is in enforcing them. In describing the period preceding China's gradual transition to a society based more on rule of law, he notes that there are two concepts that need differentiating: 違規 (rule-breaking) and 犯法 (law breaking). Law breaking is more black-and-white, and something that you should never risk. At this point in our conversation, Kenny's business partner Ben interjected, "however, before, for people who broke rules, all they needed to do was deal with the person who discovered them."[31]

Despite Kenny and Ben's keenness for comprehensive clarity, currently, it is a challenge to cultivate nationwide system-based trust in China. An oft-cited reason is that China is too large in both population and landmass to micromanage, and even when rules and regulations are drawn up, enforcement poses considerable difficulty. As anthropologist of China Fei Xiaotong writes, the office of the magistrate "was as high as the sky — so high, indeed, that no ordinary person

[31] This was expressed to me in Cantonese: "以前嘅話, 違規嘅話淨係要解决發現你違規嘅人."

could reach up to it" (1953, 80). The sentiment is reflected in the common expression "天高皇帝远" (Hamilton, Jai, and Lu 1989)[32]: heaven is high and the emperor is far away. This points to the perception of insurmountable distance to the enforcement of justice by the heavens or by the bureaucratic system.

This sentiment, which may be summarized as "if only they knew," reflects another important aspect of what I described above in terms of public attitudes of trust in China. Much of the rhetoric internationally about the Social Credit System in China speaks to fears of a totalitarian dystopia engendered by its full operationalization. However, as I show in this chapter, while there are many local government experiments with their own social credit systems, and many ad hoc city-level trials that pertain to traffic and food safety, etc., a state-driven monopolizing Social Credit System has yet to materialize. Instead, many market-driven social credit systems abound. In being transfixed by how a state-driven Social Credit System portends China's totalitarian control, we risk overlooking the ways in which market-driven and local government social credit systems are a way for the central state to outsource governance. In other words, to put the onus on individuals and the market to monitor each other and uphold morally upstanding behavior. The sentiment that "if only they knew" means "they" cannot be faulted, because "they" didn't know.

[32] There is also the variant, "山高皇帝远" — mountains are high and the emperor is far away. The imagery here is slightly different — that the speaker is remote, high up on the mountains and unreachable by imperial power. Nonetheless, the expression points to a similar sentiment.

In the next chapter, I continue to probe the affordances and burdens that China's scale brings, and in turn the Chinese state and Chinese society's ways of coping with and leveraging China's scale. In this chapter, we have begun to consider how, in drastic contrast to a commonly-held notion that China is the land of conformity and homogeneity — that everything is the same everywhere in China — the reality is more the opposite. As the challenges and public mistrust of construction and food safety reflect, homogeneity is hard to enforce. The obsession with sameness and conformity should not be mistaken for evidence of their presence, but rather of their lack. As my interlocutors often express: China is too large and too fragmented to micromanage. This translates to other aspects of Chinese governance, as I'll explore in the next chapter through public-private partnerships, especially between start-up companies and local governments. While Chapter 3 has been about the challenges of enforcing homogeneity in a society of enormous scale, Chapter 4 is about how that same burdensome scale may be leveraged as a motor of heterogeneity to the nation's advantage.

Chapter 4

Crowdsourced Cats

The Machine Learning Logics of Chinese Governance

It doesn't matter whether a cat is black or white. If it catches mice, it is a good cat.

不管黑猫白猫，捉到老鼠就是好猫

— Late paramount leader of the People's Republic of China, Deng Xiaoping

China as a "Machine Learning" Nation

As the Chinese state seeks to become the world leader in "artificial intelligence" and achieve "AI supremacy," its enormous population is often cited —— by researchers, commentators, and the state itself —— as a potent and vast reserve of data that will guarantee its victory. In the words of computer scientist and venture capitalist Kai-Fu Lee, "If data is the new oil, then China is the new Saudi Arabia" (T. Friedman 2018).

Many scholars have rightly challenged the straightforward assumption that equates data with money, oil, or another other form of capital (Birch, Cochrane, and Ward 2021; Sadowski 2019). The frictions and challenges of assetizing and capitalizing data aside (Birch and Muniesa

2020),[33] the massive amounts of data generated by digital technologies and platforms have prompted technology commentators like Chris Anderson to famously pronounce that "The End of Theory" (Anderson 2008) is upon us. Their argument goes: with enough data, correlations and patterns will emerge. Look at how Google runs a massively lucrative targeted advertising business just by amassing data on their users. Why try to determine relations of causality when discerning patterns of correlation seems enough to act upon the world (Mayer-Schönberger and Cukier 2013)? Why bother conjuring theories and hypotheses when no singular model can coherently capture the realities of the world in their entirety, especially when your ability to act is not constrained by lack of a model?

More than a decade after Chris Anderson's pronouncement, this vision has, in many ways, become reality. In 2016, DeepMind Technologies' AlphaGo became the first computer program to defeat a human world champion in Go, a strategy board game considered by many to be the most complex devised by humans. AI algorithms have also found use in a broad spectrum of domains such as insurance, policing, and hiring, and in many ways have perpetuated problematic biases, discrimination, and forms of inequality which are not easy to audit or detect (e.g. O'Neil 2017; Noble 2018). These are all "black box" algorithms (Pasquale 2015). For example, the human computer programmers that created AlphaGo cannot explain why it plays so well, or why it made

[33] See also my discussion in the Conclusion chapter on the roles materiality and temporality play in spurring the "data imperative" (Fourcade and Healy 2017).

a certain move. In essence, these programs are products of extensive trial and error. The version of AlphaGo that defeated eighteen-time world champion Lee Sedol trained on data from more than a hundred thousand human games and more than 30 million simulated games over a period of only several months (Burgess 2017). Opacity is often the price of speed —— in this case, in developing an algorithm with the experience of having played more games that most if not any one human can play in one lifetime.

In this chapter, I consider how the Chinese state is similarly leveraging the nation's scale in conducting trial-and-error experiments to generate policy at great speed. Drawing on my fieldwork with local-level government officials and the tech start-up companies they work with to fulfill national Smart City mandates, I illustrate how these actors liken the operation of the Chinese state to a machine learning algorithm which solves problems by parsing large data sets without explicit programming; and how they see themselves as policy-generating nodes within a nationwide machine learning assemblage.

As such, I focus not on machine learning or other data-driven technologies and their application per se, but on machine learning as a conceptual metaphor —— a way of understanding and thinking about how a nation generates policies. In doing so, I provide insight on two qualities of Chinese policy that long vexed foreign observers: its erraticness and vagueness. While these qualities are commonly attributed to the secretive workings of a totalitarian state, I reframe them instead in this lens of "machine learning" analogous policymaking and show how vagueness

performs a function in crowdsourcing policy, and erraticness is the consequence of what I call the "machine learning" culture of Chinese governance.

Building on the anthropologist and STS scholar Susan Greenhalgh's work, I argue that the machine learning-inflected heuristics adopted by local officials and businessmen serve to justify and naturalize certain forms of experimental governance. Just as Greenhalgh shows how cybernetics' scientific clout lent credibility to the one-child policy in the 1970s and 80s, I demonstrate how the hype and excitement surrounding machine learning legitimizes the risky trial-and-error of policies in local governments. Beyond their validating function, I argue that these machine learning analogies offer significant analytical value in understanding how the Chinese government operates and generates policy.

By focusing on how machine learning analogies feature as heuristic resources for my interlocutors, I hope to extend the way we evaluate the socio-political impact of data-driven technologies beyond their technical application, and their associated issues such as privacy, surveillance, and opaque bias. Following the anthropologist Marilyn Strathern, I understand "culture" to consist in part "in the way people draw analogies between different domains in their worlds" (1992, 47). By focusing on how my interlocutors draw analogies between machine learning and China's way of generating policies, I also show how they underscore predominant policy and civic epistemologies in China. They allow us to probe at the culturally constituted reasonings that serve as the basis to justify patterns of policymaking. In particular, I wish to highlight a pattern of

policymaking I call *rule by correction*, a strategy that is risky to the state and costly to the people. Through probing these policy and civic epistemologies, I follow Sheila Jasanoff in inquiring how the relationship between (data) science, state, and society informed a broader political culture, and how they in turn affect the implicit social contract in a society, and "the role and meaning of citizenship itself" (2011, 247).

In a discussion of what she calls China's "rule of mandates," political scientist Mayling Birney describes how China's local officials face mandates from the central government of various priority classifications. As she writes, "Mandates are pre-set, often by formula, and cover only a limited number of items that are hierarchically ranked against each other" (Birney 2014, 56). The policy targets with the highest priority are those with "veto power" (一票否决). They usually reflect the most important national priorities such as "economic development, social stability, and the birth control policy," and are measured through metrics like "income per capita, incidences of collective protests, and the population growth rate" (ibid.). If these targets are not met, all of a cadre's other achievements and successes that year will be disregarded. As such, there is little deviation from what is prescribed in these high priority targets in each locale.

However, beneath these top levels of targets are much murkier waters. While high priority items are quantitatively measured, lower priority targets are not tied to any apparent outcome. Furthermore, cadres are given great latitude to "adjust the implementation of lower priority laws and policies to better meet higher priority targets" (Birney 2014, 56). It is this large mass of local

policymaking beneath the surface in China that this chapter focuses on. More specifically, here, I study the substantial Chinese B2G (business-to-government) market to fulfill smart city (智慧城市) mandates. During my fieldwork over the course of three years, I have witnessed a broad range of issues —— such as an aging population, policing, water and air pollution, animal husbandry, and food safety —— get subsumed under the umbrella of "smart cities." There is little under the sun not covered by its shade. As Birney points out, projects and targets related to infrastructure enjoy particular discretion and thus harbor a large amount of deviation (2014, 64).

In describing the expansive latitude local government officials enjoy amidst this opacity, Birney offers that the concept of a "rule of mandates" possibly explains "why there is party discipline in achieving high priority goals alongside enormous difficulty in identifying and fighting corruption" (ibid.). Birney's main concern is the "major puzzle" of how, in China, "development has proceeded so rapidly in recent decades even as the state has been characterized as extensively corrupt" (ibid.). Without refuting Birney's argument, I offer an alternative perspective: that the tolerance of opacity contributes to China's rapid development.

I argue that, like the programmers of machine learning algorithms like AlphaGo, the Central Government has demonstrated its willingness to tolerate opacity in exchange for speed in development through large-scale trial-and-error of local policies. I highlight how, instead of a bland "copy-and-paste" homogeneity, Chinese governance relies on the constant collective generation of an abundance of diversity, in effect recruiting local governments into Generative Adversarial

Networks (GANs): machine learning models which pit neural networks against one another to generate desired outcomes. I offer that networks of policy-generating nodes are established by the party just like how GANs are established by programmers, and the outcomes that these networks generate cannot be predicted by the party-qua-programmer, who needs to periodically reassess the outputs and correct for better outcomes through curating inputs (or mandates).

In putting forward what I call the "machine learning" logics of Chinese governance, I am informed by other characterizations of Chinese governance —— for example, that it is adaptive (Heilmann and Perry 2011) or evolutionary (S. Hsu, Tsai, and Chang 2021). As these scholars point out, and as I will elaborate, the experimental quality of Chinese governance is not new. It extends back to before the Chinese Communist Party took power (Heilmann 2008a). The decentralized and exemplary elements of governance may even be traced further back to imperial China (Hamilton, Jai, and Lu 1989).

The setting of Smart City initiatives offers an ideal vantage for appreciating the cultural confluence of sociopolitical practices of governance and sociotechnical practices of computation. By focusing on heuristic resources that my interlocutors themselves use in structuring these sites of conjuncture, I am also looking to better understand, not just models of Chinese governance, but the consequences, and the day-to-day experiences of living under such a regime. In part, this involves reassessing the notion that China's governance is without "ideology" after the Cultural

Revolution and the late paramount leader Deng Xiaoping's Reform and Opening Up (FlorCruz 1994).

Though debunked by scholars (e.g. Holbig 2013; Misra 1998), the idea that Chinese governance is not guided by ideology or theory —— at different times expressed to me as 思想 (thought)/意识形态 (formalism)/主义 ("-isms") —— is a notion that my interlocutors in the field often alluded to. On many levels, this claim seems absurd, especially against the backdrop of President Xi Jinping's growing personality cult (S. Chen and Lau 2021) and the state's push for "Xi Jinping Thought," which is now enshrined in the constitution of the Chinese Communist Party (*Reuters* 2018) and incorporated into the Chinese school curriculum (Stanway 2021). If "ideology" did in fact ebb during the Deng era, some proclaim that we are witnessing its resurgence in Xi's China in a manner reminiscent of Mao (Phillips 2017).

Yet even this viewpoint contains a problematic presumption. As scholars have pointed out, the Party's failure during the Deng era to mobilize scholars to generate a new ideological consensus after the Cultural Revolution may have played a role in the widespread cynicism and apathy subsequently observed (Misra 1998). However, the fact that there is no coherent ideology should not obscure the significant amount of "ideological work" the state invests in legitimizing China's authoritarian rule. As Heike Holbig writes, this often involves a "highly fluid framing process, where Marxist–Leninist and other traditional tenets of socialist ideology are constantly recombined

with new political concepts such as nationalism, populism, the revitalization of traditional culture" (2013, 64).

Despite these convincing rebuttals, I contend that it is nonetheless important to consider seriously why my interlocutors would posit that China is governed without theory. One important conjecture on the impact of "Big Data" and techniques like machine learning is that the large scale of available and gatherable data may make the scientific method, which is built around testable hypotheses and models, "obsolete" (Anderson 2008). Drawing on fieldwork among local governments and start-up companies working towards local implementation of national smart city mandates, I reconsider the specific, but potent, way in which my interlocutors' analogies of machine learning and comments about the lack of what they call "ideology" are valid —– that some forms of policy generation in China are not animated by a predetermined set of beliefs or precepts.

In considering the lived realities under a policy regime with "machine learning" characteristics, I also seek to dispel a popular misconception about so-called Chinese "collectivism." It is a longstanding but controversial notion that Chinese collectivism manifests as top-down command chains which impose totalizing homogeneity on subjects. Scholars have challenged this univocal picture which equates collectivism with hegemony and conformity by exploring themes of resistance (e.g. Weller 1994) and an informal "second society" that operates beyond the state (e.g. M. M. Yang 1989). In this chapter, I offer local perspectives on how Chinese citizens live with

the constant policy corrections that come with large-scale policy trial-and-error. Rather than blind conformity, I show how the value of "collectivism" is often performed by the individual through living with and enduring the turmoil of state intervention.

Chinese B2G Start-ups as Modern-Day Wandering Scholars

I shifted uncomfortably in my seat on a rumbling bus, drifting in and out of consciousness. A man, face shiny with perspiration in the summer heat, hovered awkwardly over me, trying to reach the overhead compartment. He extracted a garment bag from his duffle bag and unzipped it to check on the dress shirt he meant to wear for his pitch later that day. We had just finished one meeting and were being ferried to another. In front of me, another young man with glasses sat hunched over his laptop, conferring with his female co-founder on last-minute changes to their PowerPoint slides. "You mean Hangzhou! Not Guangzhou!" she admonished in a hushed voice, jabbing at his screen. Having traveled so much over the past few weeks, the young man had lost track of where we were. "Ah, yes yes yes (对对对)," he nodded vigorously, struggling to aim his cursor as we careened over uneven roads.

My entry into my fieldwork was as part of a joint program between two top-ranking US and Chinese universities. It aimed to connect start-up companies founded by their students and alumni with local Chinese governments and businesses looking to fulfill national Smart City mandates, which call for the integration of digital and data-driven technologies to optimize (優化) city operations and improve urban standards of living. We traveled with these start-ups from city

to city in China and had the opportunity to sit in on some meetings with officials to see if the start-ups' products and services towards Smart City (智慧城市) solutions fit local government needs.

There is a sizable B2G —— business-to-government —— market in China. While the global business world is familiar with the more common terms B2C (business-to-consumer) and B2B (business-to-business), what many beyond China are less acquainted with is the notion of B2G. A B2C company like Apple or Huawei has a consumer-facing business selling electronic devices. On top of their B2C business in e-commerce, Amazon's subsidiary cloud computing platform, Amazon Web Services (AWS), can be considered B2B in that it primarily provides cloud computing, storage, and hosting services to businesses. Amazon is also B2G in securing government contracts to provide cloud computing services (Butler and Butler 2022) and facial recognition technology (Asaro et al. 2018).

The B2G market in China is notable for its size and accessibility as government officials and businesspeople opportunistically collaborate to fulfill national mandates. Although charged with addressing policy targets that range from water pollution to energy conservation, government officials often are not equipped with the knowledge and expertise to do so, and therefore need to seek out public-private partnerships to fulfill their policy goals.

These officials could be from various levels of local government, from large to small: provincial, municipal, or even the township level. For an official, ascending the bureaucratic ladder involves being promoted from smaller localities to larger and more important regions, and finally

to the central government in Beijing. Explaining this process, one Chinese startup founder in the joint program offered a U.S. analogy to his American peers, "Imagine starting out as a leader at, say, a small town in Idaho. As you demonstrate your capability, the federal government will promote you to Portland. You might do very well there too, and so the Feds assign you to Chicago, and eventually to a big state like Michigan or California before finally arriving in the national halls of power in Washington D.C." To do so, these government leaders need to, at the very least, achieve good key performance indicators (KPI) in high priority policy targets, the most important of which is the region's gross domestic product (GDP). But to stand out among the many bureaucrats with a good "report card" (成绩表), one must take initiative.

As part of anti-corruption policy, many local government officials are part of a rotational system and are not stationed in the same locality for more than four years or so (J. Zhang and Gao 2008). This prevents them from developing and benefiting from strong local ties. Given this arrangement, and the limited time for them to demonstrate leadership capabilities, an official who arrives at a new station prioritizes surveying and assembling the resources required to implement national mandates.

One cadre pointed out to me that there are similarities between these local leaders now and the lords of the fragmented Warring States prior to China's unification under the Qin dynasty in 221 BC. Then, scholars like Confucius traveled from state to state to offer kings and other influential persons advice. The scholars who were deemed useful received patronage and were

retained. For example, the powerful Four Lords of the Warring States were renowned for their talents and the size of their retinues. According to Sima Qian's Records of the Grand Historian, the Lord Mengchang was a patron to more than three thousand people in his retinue (Qian 1995). Both then and now, a leader's ability to attract talents (招揽人才) signifies personal charisma and resourcefulness and speaks to their influence and effectiveness as a leader.

For this reason, officials are keen to engage with start-ups that come from reputable universities. At each new city we visited, we were received by an eager entourage, who enthusiastically greeted us as they displayed the names of the schools in large white font on red banners or on video wall displays. Being associated with brand name universities lent these officials clout and social capital, and, most importantly, gave their initiatives credibility. Furthermore, not all localities had the resources to work with giant conglomerates, who demanded high fees.

Startup companies which are just starting out often need endorsement for their products (see Chapter 2) and are therefore willing to taking a smaller fee (or none at all) in exchange for an opportunity (or a "scenario" 场景) to "pilot" and trial their products for real-world application. At an early stage of their business, they are often more willing to customize their product to their clients' needs. At least one large conglomerate company had devised a model to work with local governments big and small by recruiting an array of different start-ups with different offerings. They then allowed government clients to select from a "menu" (菜单) the combination of technologies which best suited their needs and budgets.

In the context of the Chinese B2G market, I observed a telling disparity between startup pitches by U.S. and Chinese teams during "roadshows" where startup companies showcased themselves to guests from local government and businesses. As I show below, Americans teams, familiar with the B2C model, tended to start small —— focusing on individual users or a singular problem —— and only then expanding on how their products could cater to a broad market and grow into a large business. By contrast, Chinese teams began with a grand picture of the "national situation" (国情), and slowly zoomed into the role they could play and the specific solutions they could offer at a local level. This disparity partially stems from the different goals of these start-ups: U.S. start-ups are looking to court investment in their businesses, and the Chinese start-ups are courting governments as clients to seek government contracts. Yet, more significantly, it reveals their different understanding of rhetorical strategies and discursive possibilities, and points to an established convention for businesses in China to court governments by offering to help them generate policy solutions. These startup presentations also perform "genre work" (Gershon and Prentice 2021): the proficient performance of a genre to signal broader attunement and savviness towards B2G arrangements and opportunities, which helps them court Chinese investors and potential business partners.

Here is an illustration. At a meetup with government and business representatives in Zhengzhou, the founders of an American startup launched into a "has this happened to you?" spiel. Like a slick infomercial, they ran through a series of scenarios which captured the frustrations

of not having a stable internet connection. They explained the challenges of managing many siloed access points, and how their distributed network solution provided a better alternative that could scale easily. In keeping with business school training, they visualized the projected "total addressable market" (TAM) of their product. They ended with a call for the audience to join them in what sounded like a campaign for world domination.

By contrast, the Chinese team that followed them began with a quote from President Xi Jinping's 2017 Spring Festival Greetings Message (新年贺词) about implementing the "River Chief System" nationally. This was a policy idea that invited local officials to take responsibility and cooperate with each other to ensure water quality in rivers. That was followed by screenshots of a 2016 paper published by the State Council entitled "Suggestions about the nationwide implication of the River Chief System" (关于全面推行河长制的意见). The presenters then showed a slide titled "The national situation of my country" (我国的国情), providing graphical analysis of the economic, environment, and health costs from water river pollution in China. These young Chinese men had been working on automating high-level visual analysis as graduate students. When used in real-time and combined with drones deployed to collect video and digital images of rivers, their computer vision technology could help local governments monitor rivers to analyze sources of river pollution and water quality and detect illegal sand mining on riverbanks, as well as the illicit release of toxic waste at night.

At this meeting, the representative of the startup then said, "Before we came to Zhengzhou, we did some research on Zhengzhou's water quality and realized that it is already very good. So, we are also offering to help with another national mandate."

"Even if it's already very good, surely it can still be better (再好也可以更好吧)!" said the local leader, Zhou. Her once stoic expression gave way to a wide grin, betraying her enthusiasm.

"Certainly, certainly," the young man beamed, "but there are more ways to apply our computer vision technology." He pressed the clicker to show their next slide: a video demonstration of traffic analysis and vehicular recognition and identification using drone footage. Zhou looked impressed and twisted around in her seat to face the audience behind her.

"Mr. Chen (陈总)?" she called out to one of the businessmen, who sat up straighter at the sound of his name. He nodded enthusiastically, and called out to the young man, "I'll be in touch." Mr. Chen, it turned out, was a local partner for the government for cameras and drones. By going through vetted, pre-existing contractors, local governments were able to bypass strict budgetary time cycles (周期) and engage with newer, private partners. It also helped local officials minimize risk — a way to test new collaborators out before making a further commitment.

What the Chinese start-up demonstrated was an understanding of the local political ecology in ways that their American counterparts lacked. They realized that in order to sell an opportunity to invest in a business, or even a particular piece of technology that might be help address local problems, they had to offer party cadres a political expedient for advancing their

careers. In rhetorically signaling the complementarity between national policy mandates and their technological services, the Chinese start-up showed that they know the social script (谱), were ritualistically literate, and thus were reliable (靠谱 *kaopu*).

Chinese Collectivism Through Collective Trial-And-Error

The flowery and provocative visions depicted in central government directives on topics such as AI and industrial development have long vexed Western media and observers with their vagueness. However, in this B2G context, this vagueness serves a purpose: to encourage creative readings and interpretations by local government leaders to arrive at the invoked goals. Given the lack of metrics and subjective nature of what counts as good implementation and integration of innovative solutions, local leaders tend to favor very flashy plans to attract attention. If things go well for an official like Zhou, her plan might be made exemplary for emulation throughout the nation. As government leaders would say to the start-ups I was traveling with: if we can make it work here, we could scale (推, lit. push) the solution to the whole nation.

This particular configuration explains the disparate and sometimes somewhat eccentric programs which were generated by small local governments as local leaders tried to engage with mercurial governmental trends, or "winds" (Hathaway 2013). As these (governmental) "winds" can suddenly change directions, rise and ebb, officials are constantly trying to sense them and adapt to them, and, with their limited resources, greenlight or actively pursue projects which they hope

will gain momentum when the "winds" blow. As Hathaway argues, the "art of engagement" in China is far richer and more eclectic than simply resistance or conformity.

A participant in the joint program I described earlier, Brian is the founder of a startup that provides property managers tech solutions for better energy efficiency. When I asked for his views on how a startup should be run, he articulated a form of collective outcome-oriented trial-and-error:

> I think there is a difference between the Chinese and people in the West…To use an analogy: I think the Chinese method of producing a knowledge body is like machine learning. It's like using joint probability distribution to draw out patterns from examples. We don't know why it works, or how it works; but we know that doing things a certain way is more likely to work. Whereas in the West, there seems to be less willingness to accept this kind of decision making in the style of machine learning. They tend to want to be more methodological, to summarize a universal logic, so that they can then do rule-based decision making…but prescriptive models are usually overfitting[34] to a specific situation.

[34] "Overfitting" is a machine learning term that describes the situation when an algorithm has been trained too specifically on one set of training data, which makes it only useful to this initial data set. Its predictive power or ability to work with any other data sets is compromised.

I commented that this was an interesting observation, because it seems to turn a common assumption on its head: that China tends towards a one-size-fits-all, prescriptive, top-down approach.

Brian responded:

> No. I think from the age of Deng Xiaoping, the common practice in China, whether in business, politics, or innovation, has not been to start out from a single, prescribed, common execution. Rather, there is a joint effort of trying out different things to figure out what works [as a collective].

I then quoted Deng to ask, "It doesn't matter whether a cat is black or white; as long as it catches mice, it is a good cat?" Brian nodded.

This exchange clarifies some features of so-called Chinese collectivism, which is often associated with conformity and top-down prescribed homogeneity. Algorithms are a series of instructions, and computer algorithms have traditionally been a computer-implemented series of "if-this-then-that" logics. The significance of the development of machine learning is that it deviates from the long-standing rule-based logic of traditional computer algorithms.

While traditional computer programming consists of explicit instructions, machine learning's methodology primarily involves using trial-and-error to seek patterns in large sets of data. While the fundamental technique of trial-and-error is not groundbreaking, machine learning's computational application did not meaningfully progress until digital information storage capacity

exponentially expanded and the interfaces developed to access them matured. This allowed data scientists to gather and retain information with "volume, velocity, and variety" —— widely referred to as big data's "3 Vs" (Mayer-Schönberger and Cukier 2013). Only with a large, continuous stream of diverse data are machines able to engage in sufficient trial-and-error to achieve workable accuracy. In other words, machine learning would not have been able to work without a certain scale.

Similarly, in considering Brian's comparison of Chinese business and policy making processes to machine learning, China's sheer size appears to enable a kind of large-scale trial and error amongst its various regional governments and vast population. What results is not a bland homogeneity that comes from a top-down, prescribed, "copy-and-paste" model. Rather, this form of "crowdsourcing" (众筹) involves collective experiments through trial-and-error, which produces a profusion of policy variety.

The machine learning logic of the B2G model, has broader cultural implications for the way that Chinese entrepreneurs approach their work. The venture capitalists I studied in Shenzhen found this overabundant trial-and-error vexing in the start-up companies they've invested in. At an induction meeting hosted by a U.S. VC firm that specializes in hardware companies, a general partner (GP) was prepping their new incoming cohort of start-up founders. These start-ups had applied and gone through a selective process to receive USD$100,000 in investment to fund their early-stage businesses and to work with the firm's in-house engineers and industrial designers in

Shenzhen to develop their products. Surfing through a PowerPoint deck with information about machinery in the in-house workshop and nearby factories that these new inductees might find helpful, the GP stopped at a slide with a comically unwieldy Swiss Army knife with uncountable implements. The attendees laughed. The GP said, "I know this looks ridiculous, but don't laugh. This is an actual product that you can buy, but this isn't the kind of product you want to build. That's not what your customers want from you. We have seen teams fall into this trap. This is not the kind of product people want to buy. Remember, you don't need have every feature. You don't have to pivot all the time. Don't feel like you have to do everything."

Among the VC firm's staff, there was a clear sense that some teams needed to heed his advice more than others. The firm invests in teams from all over the world, and around a third of them are from China. There was a consensus among the staff that Chinese teams are uniquely overzealous and erratic with their pivoting. Engineers and industrial designers are wary, for it meant that they could be in midst of helping a start-up team design a circuit board or their products' form factor when the entrepreneurs would suddenly add more features or change the product entirely. "We keep telling them that they can't keep changing things up. They're wasting money and time, but they just won't listen," complained an exasperated senior industrial designer. When I asked the Chinese start-up founders about this, a common retort was, "How else would I be able to catch the wind?"

The VC firm sits right above Huaqiangbei, the largest electronics market in the world. From time to time, I visited the stalls expecting to be dazzled, and I have yet to be disappointed. Amidst the endless rows of stalls selling electronic components, cables, and phone cases were an astonishing array of unexpected gadgets. At one of these stalls, I bought a fidget spinner which also moonlighted as a Bluetooth-enabled radio speaker with LED lights. At another, one could find a drone equipped with a LED-lined blades that created a hologram image when spun. Seeing my gaze linger as I walked by, shopkeepers would shout out prices that would go lower and lower as I walked further away. These heaps and piles of gadgets were rejects. Looking at their frankly bizarre designs, it was not hard to imagine that they might be rejected products of erroneous trials generated by pattern-seeking algorithms. Strolling through Huaqiangbei, one bears witness to a slice of the massive material unfolding of the machine learning process in China.

Running China like a Machine, But Which Kind?

These sights in Huaqiangbei highlight the generative trial-and-error processes of the market. One might ask how the machine learning logics of governance I described differs from the market. Or, framed another way: what is the role of the market in the machine learning processes of Chinese governance?

Before we turn to this important question, it is worth noting that this is not the first time computation technology has influenced Chinese governance. In *Just One Child*, Susan Greenhalgh details how cybernetics and missile science informed the formulation and strict implementation of

China's One Child Policy. As she writes, "Leader influences — the traditional preoccupation of China political science — largely determined whether and when China's population would be subject to management by the state, but science shaped how it would be governed" (Greenhalgh 2008, 47).

The development of mathematics and computers during and after World War II fueled the rise of cybernetics. Tracing how the noted Chinese missile scientist and cyberneticist Song Jian formulated and campaigned for the adoption of the One Child Policy, Greenhalgh highlights the influence of cybernetic science in China's efforts at demographic governance. The approach is in the name: as mathematician Nobert Wiener, who coined the term, writes, "cybernetics" is formed out of the Greek word for steersman (χυβερνήτης) (2019, 18). Song's approach to population governance is accordingly also one of steerage to control, maintain, and optimize. He adapted the cybernetic techniques of optimal control from his work developing missile guidance systems to formulate the One Child Policy, generating simulations on computational devices he had unique access to as a defense scientist. As Greenhalgh writes, "Although different parameters (missile velocity, position and thrust as opposed to population density, death rate and migration rate) produced somewhat different models, the mathematics of partial differential equations used in the two cases was virtually identical" (Greenhalgh 2008, 266).

Song was not only informed by his training in Western science but had also borrowed ideas from the Club of Rome —— a group of Western researchers who, in the early 1970s, published

their computer simulated projections of the limits of the world system in *The Limits to Growth* (Meadows et al. 1972). At this juncture, the Chinese state was publicly rejecting Western neo-Malthusian claims of a "population explosion" in Asia, Africa, and Latin America, pointing out how these assertions overlooked the crucial role of Western imperial aggression and exploitation in their endemic poverty of these regions (Greenhalgh 2008, 72). Yet, against the grain of the central government's political stance, Song was able to draw on his prestige as a defense scientist and reflexive boundary work in framing his science as "not-ideology" and "not-politics" (Greenhalgh 2008, 214). In doing so, he was not only able to stay above the dangerous political fray, but also present his diagnosis of "rapid one-childization (一胎化) country-wide" as the "best and only scientific solution to the problem" of overpopulation in China (Greenhalgh 2005, 267). Ultimately, Greenhalgh demonstrates that, although the way Western discourse and media presented the "One Child Policy" construed China as the "totalitarian Other" and the foil to the "democratic West," the formulation of the policy itself was in fact deeply shaped by Western science and Western developmental rhetorics of modernity (Greenhalgh 2003a; 2003b).

As a defining policy of modern China, the One Child Policy could not be more different from the mode of divergent and adaptive governance that is the collective trial-and-error I was discussing above. Yet, it is not the case that China has recently transitioned from a cybernetics model of governance to one that adheres to machine learning logics. As the political scientist Sebastian Heilmann argues, the experimental approach China takes in its governance may be traced

back to the 1920s, before the Chinese Communist Party came into power, and before the founding of the People's Republic of China (PRC) in 1949. At a time when the Communist Party was facing "military threats and shaky political support" externally and its leadership was "internally divided and insecure about concrete ways to make revolution in the countryside" (Heilmann 2008b, 5), decentralized policy experimentation enabled survival and offered a path out of a logjam (cf. Y. Chen 2021).

Subsequently, after the Communist Party took power, a more formalized model of "point-to-surface" (由点到面) policy generation emerged. Through trials in "experimental points" or "experimental zones" —— the Special Economic Zone of Shenzhen during Deng's reform era being a prominent example —— the state was able to conduct experimentation that was controlled and decentralized, allowing for the "progressive refinement of policies" before scaling them nationwide (Heilmann 2008a, 5). As Heilmann writes, "This policy process, in which central policymakers encourage local officials to try out new ways of problem-solving and then feed the local experiences back into national policy formulation, has been a pervasive feature in China's economic transformation" (2008a, 1).

In the field, my interlocutors frequently invoked the experimental logics which Heilmann traced back to the pre-PRC Communist Party. They often highlighted two features of machine learning: that it is non-prescriptive and that it involves a proliferation of diverse outputs. At a banquet dinner, an honored guest from the local government toasted the "growth" of the "trees"

through the combined efforts of local governments and start-ups. In doing so, he quoted Yifu Lin, the former Chief Economist and Senior Vice President of the World Bank, and a member of the expert planning committee for the China's 13th Five Year Plan, who stated that "the government plans on the forest level, while trees compete to survive and thrive within it" (规划森林, 让树木自由生长). Another cited a famous Deng era slogan, saying that the nation needed to "wade through the river by feeling the way" (摸著石頭過河). Just as Western science and epochal rhetorics shaped the One Child Policy (Greenhalgh 2008), Western science and Western teleological notions of process and development —— this time not cybernetics, but machine learning —— remains important in legitimizing and galvanizing Chinese governmental modalities. In another event that showcased different applications of "machine learning" for businesses and governments, a government leader noted: "what is our nation but a machine that is learning (在学习的机器)?" —— playing on the Chinese characters for "machine learning" (机器学习).

For the past few decades, approaches analogous to cybernetics (imposed optimization) and machine learning (trial-and-error) have coexisted within the Chinese state's repertoire of ruling technologies. Interestingly, the phrase "wade through the river by feeling the way" is espoused in official commentary as a scientific method of policymaking and a scientific approach to the world (Li 2013). The juxtaposition of, and dramatic contrast between, the cybernetic formulation of the One Child Policy and the machine learning logics of collective trial-and-error once again reveals science to be, not only historically conditional, but also politically and contextually contingent

(Latour and Woolgar 2013; Latour 1987). Here, "science" (科学) and "scientific" governance is understood at the same time as a product of modeling —— through Song Jian's computational simulations —— and a methodology that forgoes modeling, theory, or prescribed instructions.

From a computer scientist's point of view, there is no contradiction: there is no good reason to limit oneself to programming and solving problems with just rule-based algorithms or generative machine learning approaches; they are simply different tools within the toolbox. However, from a governance point of view, what is striking about the machine learning analogy is the way it challenges the notion of modern —— or indeed "high modernist" (Scott 1999) —— governance as one of Foucauldian governmentality: one that renders the governed as an object of scientific discourse (Foucault 2001), a thing to manipulate; or, to invoke cybernetics once more, to *steer*.

This recalls the discussion at the beginning of this chapter on the prophecies of what "Big Data" will bring about. What enables machine learning is "scale": the multitude of generated outputs increasing the chance of at least one succeeding makes the need to formulate step-by-step instructions redundant. Hence, the assertions of government officials and B2B businessmen I encountered during my fieldwork that China is governed "without ideology." This rhetoric propounds that China practices a "scientific" form of governance (Greenhalgh 2008), in the age of machine learning understood as one without a "model" and without an animating "theory." Here, I return to the question posed earlier on: what is the role of the market in the machine

learning processes of Chinese governance? Markets across the globe spew out millions of experiments, most of which fail. However, it is China's B2G market which embodies a machine learning modality of governance, in its active recruitment of B2G businesses to experiment and generate policies through trial-and-error.

The Social Contract in a Generative Adversarial Nation

Why aren't other nations with vibrant markets also engaged in machine learning governance? One factor is the involvement of the state in the process and the control it retains. As Heilmann writes, high level policymakers in China play a central part "in granting local experiments a go-ahead through nonintervention, informal patronage, or public advocacy" (Heilmann 2008b, 11). These policies are thus not *out*sourced, but *crowd*sourced. They are products of, and reinforce, a form of governance that exercises control without offering guidance. It is precisely these high-level policymakers that Heilmann credits for the success of the system. He writes, "[t]hough hands-on experimentation is delegated to local officials, China's central government plays an indispensable role in scaling up and generalizing local innovations, thereby providing coordination to the reform process." This, he writes, is why China is able to transform "many pilot projects into full-scaled operational programs" (Heilmann 2008b, 5).

More importantly, I want to highlight the role of China's immense scale in facilitating its machine learning mode of governance. Development in other nations also entails experimentation. In fact, "corpses of pilot projects…litter the development field" (Pyle 2017, 123). China is no

different in this regard. What is different, however, is not less failure, but its greater *tolerance for failure*. As I discussed in Chapter 3, much of the Social Credit System that was so scandalized in Western media and discourse in the mid-2010s is thriving as a fragmented, market-driven response to the problem of scaling trust in a rapidly urbanizing, post-Mao China with a substantial "floating population" (流动人口). What often gets picked up by foreign media outlets are local government initiatives through public-private partnerships (Bloomberg News 2019; Cheng 2019). They report on pilot programs that factor students' misbehavior in the classroom or misconduct such as jaywalking into calculations of "social credit" scores; a sufficiently low score can be penalized with throttled internet speeds or public shaming (Canales 2021; Ohlberg, Ahmed, and Lang 2017; Ma 2018). These alarming developments have generally failed to capture the attention of the Chinese public. Their disinterest may be attributed to cultural differences in attitudes towards privacy, or to the desire for improved accountability in society (Kostka 2019), as I elaborated on in Chapter 3. But, just as importantly, it also reveals how ordinary citizens cope and engage with the realities of living in a "machine learning" nation.

In a way that is not unlike political scientist Elizabeth Perry's description of non-state actors imitating the Chinese Communist Party's structure (Perry 2015), workers at technology giants Tencent and Alibaba told me that, not only had their employers structured themselves to emulate the Chinese Communist Party with bodies of political commissars (政委) (G. Chen, Lui, and Chen 2018), they also assigned the same tasks to different teams without direct instruction.

These teams competed against each other to come up with the best solutions. Although this meant that much of their output would be discarded, such processes were not considered wasteful, but instead essential to generating good strategies and solutions. As entrenched as these methodologies are in different institutions in Chinese society, unused "outputs" —— be they policies or commercial strategies —— are as uninteresting to many Chinese citizens as the fidget spinner/bluetooth radio speaker/LED light I bought at Huaqiangbei.

The news about the country's various social credit initiatives incited a discussion over a casual meal in Shenzhen. I asked those present if they were alarmed. One start-up employee voiced a common sentiment: "What's the point? What is being experimented with locally does not have a high likelihood of ending up as national policy anyway." Years later, many of the social credit initiatives which appalled Western commentators no longer exist, let alone have become national policy. The political environment of China has not only acclimatized businesspeople and officials to catch the "wind" (Hathaway 2013), but also habituated Chinese citizens to live through hurricanes.

As machine learning practitioners know, generative machine learning techniques such as GANs (generative adversarial networks) generate a plethora of "weird" and "bizarre" outputs. A GAN is adversarial in the sense that, in training to become proficient at a task, it pits two neural networks, a generator and a discriminator, against each other. In simplified terms, the generator will keep generating outputs to feed into the discriminator. The GAN is only considered successful

when the discriminator finds that the generator has fed it an output which is indistinguishable from the results it asked for. During this developmental process, much of what a GAN produces is odd, unpredictable, and ultimately unusable, and the GAN itself is periodically in need of intervention and correction.

In China, sudden crackdowns are common. Early on in my fieldwork in 2018, my interlocutors in China speculated about the implications of facial recognition technology in the classroom as reports of its use spread nationwide. Among the start-up workers was a mother whose child was about to enter primary school from kindergarten. She referenced particularly successful use-cases in Hangzhou, especially in alerting teachers when students were looking at their cellphones in class (Chan 2018). Another woman, who was childless, mused about the pros and cons of the technology. It might help prevent cheating in class, she said, but as a teenager, she had always daydreamed during mathematics lessons. Imagine if the facial recognition software informed her in-class "participation" (参与) and her grades, "I might not have graduated high school!" she joked. These conversations became moot by September 2019, as the Director of Science and Technology at China's Ministry of Education announced the state's intention to curb facial recognition technology in schools (*BBC News* 2019).

While the consequences of this crackdown simply exhausted one of the countless "melon-eating" (吃瓜) topics office workers gossip about during idle moments, for some of the start-ups I studied, the impact of other crackdowns could be seismic. The year 2021 witnessed the Chinese

government widespread crackdowns on the gaming, finance, real estate, and education sectors. For the early-stage start-up companies working on products in those domains, their entire business model could implode overnight.

One founder, Bojing, had been working on a form of education software that incorporated various elements of "gamification" to increase its appeal to young learners, informed by his research as a graduate student on pedagogy. After the crackdowns on the gaming and education industries, investors were spooked by the uncertainty of his company's future and would not commit to investing in his next round of fundraising. In between deep draws from his cigarette ––– a habit he developed to cope with the stresses of running a start-up company ––– Bojing was ostensibly speaking to me, but mostly talking himself through different ways he could salvage his early-stage start-up company ––– the likes of which, as I discussed in Chapter 2, rely almost entirely on investors' funds. He was weighing up two options: to fire the staff who had been working on his business with him since the beginning, or to beg for loans from friends and family. He reflected on the difficult situation he was going to have to put his wife through, and lamented how, since their marriage, he had not been able to buy a property or provide her with a stable home. On another occasion, he mentioned that both their parents had been pressurizing him about this.

Despite the extreme stresses on him created by government crackdowns and their ripple effects, he never complained about the crackdowns themselves. When asked about it, he said he considered it necessary for the country's development. The modern Chinese nation is young, he

told me. There are many things that the nation is trying out (尝试), and sometimes drastic course corrections are necessary. "There really are businesses out there that are not providing much value, but simply adding to the burdens of miserable school children and to the anxieties of their poor parents," he said, alluding to the State Council's stated intent of alleviating children's homework and extracurricular burdens (新华社 2021). "The private education sector is truly too involuted (太卷了)," [35] he said, referring to the increasingly individually and socially counterproductive competition amongst students. But there was nothing specifically wrong with what his business was doing, I protested. "But I can't just think about myself, can I," he countered. "The country must do what the national situation (国情) calls for," he reiterated.

As productive as GAN-like technologies of rule are, there will be many casualties of the intermittent but drastic interventions they demand. Certainly, not everyone is as assenting as Bojing, and this does not automatically justify all forms of central state intervention as rightful correction. However, I want to draw attention to what living in a generative adversarial nation calls for. If Chinese collectivism is collective trial-and-error, being a good team player (站好队) and a good citizen also means that one can contribute by enduring its consequences. In living with the unpredictable realities of diverse proliferation and sporadic intervention, interlocutors often demonstrated a form of political hedging couched in humor, like the woman who was joking about failing school if facial recognition software is adopted in the classroom. Or, they engaged in a form

[35] See Chapter 1 on a discussion of the Chinese colloquial notion of "involution" (内卷).

of political divination as a strategy for coping with the uncertainty and the knowledge that crackdowns will come, be it for "common prosperity" or for reinforcing Party rule. It is just a matter of time. One can only hope to escape becoming a victim when the knife falls (砍下来).

As we can see from these crackdowns, it is undoubtedly true that despite the considerable latitude local governments enjoy, the "weight of hierarchy and ad hoc central interference" still remains (Heilmann 2008b, 11). However, recent policies show that, after extraordinary circumstances when the central state has to intervene directly, heterogeneity quickly returns.

In January 2020, the Chinese Premier Li Keqiang's arrival in Wuhan to "[take] charge" signaled to the nation the severity of the novel coronavirus, and that the "foremost priority" (高度重视) on the national agenda was its containment (Xinhua Net 2020). Though provincial governments "demonstrated a pattern of policy convergence" in these early months, Oxford researchers showed that their responses diversified thereafter (Y. Zhang et al. 2021).

People traveling within China since the outbreak of COVID-19 know that there is a centrally defined tiered-risk system, and all provinces give residents color-coded QR "health codes" (健康码) to signify their risk and prescribe their mobility. However, each locale has its own rules —— its own health code apps, its own formula to determine how long to self-quarantine after arrival, and so on. In fact, from my own experiences in Shenzhen, arrangements for quarantine, such as whether an individual could do part of their quarantine at home rather than at a hotel, could differ between "street-level" (街道) and subdistrict governments.

Over the course of studying B2G markets in China, I saw start-ups work with governments to use sewage sensors to monitor population health, use AI to help optimize electricity efficiency, and use aerial computer vision to monitor river pollution. I have also seen governments in charcoal-dependent regions engage start-ups who work on kite technology to harness wind power or propose to burn manure to generate electricity. The scope is enormous, and the solutions can be eclectic. Only time will tell whether any of them become "model experiments" that trigger "veritable policy tourism…from outside delegations" (Heilmann 2008b, 11), ultimately becoming national policy. Otherwise, they join the corpses in the graveyard of pilot projects.

Conclusion: A Feature, Not A Bug?

As the Chinese state pursues what it regards as its historical place as the world's foremost economic and technological power (Wu and Yan 2012), its attempts at applying Western scientific methodology to domestic governance —– perhaps most notably the One Child Policy was (Greenhalgh 2008) —– have been criticized by Western media and commentators as barbaric.

A longstanding concern in the social sciences is the "causes and consequences of differences in size and numbers in social systems" (Barth 1978, 9; see also Bird-David 2017). The heuristic of machine learning governance helps us discern the unique affordances and burdens of "scale" in a way that enhances our understanding beyond analytics of power (Wolf 1990; Foucault 1982). In this chapter, I have taken Chinese government officials' and their business partners' own analogies of machine learning as heuristic resources to highlight how China's scale has lent its

government the ability to conduct large-scale policy trial-and-error, while also enabling it to tolerate the cost of failure in the pursuit of speedy national development. At the same time, its citizens must endure the tribulations of this machine learning-like operation —– a dimension of Chinese governance that I describe as rule by correction (cf. Hamilton, Jai, and Lu 1989, 162), examples of which abound in many of China's crackdowns.

This helps us understand better the unrest in China late 2022 around the now controversial "zero Covid" policies: rather than frustration towards one singular set of draconian rules, a major part of the protesters' grievance stemmed from the turbulence of erratic, divergent, and increasingly extreme tactics local governments come up with as they struggle to comply with the central government's "zero Covid" mandate. Given the frequency of China's many crackdowns and policy corrections, many foreign commentators and China observers expressed doubt that this state of affairs could continue indefinitely. However, through the lens of my interlocutors' machine learning analogy, we can see that crackdowns and protests are not necessarily signs of a system at the verge of collapse. Rather, these corrections are part of the policymaking system's design, signs of its customary operation.

As Sheila Jasanoff writes, the relationship between "science, state and society" informs a society's social contract and the meaning of citizenship (2011, 248). As I have sought to highlight, the policy and civic epistemology that is reflected by these machine learning and crowdsourcing

analogies imply that being a citizen and a good team member means enduring hurricanes that come with rule by correction.

Over the past decades, China has developed at breakneck speed and scale, in no small part thanks to the way the state takes an experimental and adaptive approach to policymaking. Yet China's experimental and adaptive governance had progressed. The nationwide trial and error of policies I've depicted forgoes the bounded, careful progression of "point to surface" experiments in favor of a plethora of experimental policies throughout the nation. As we have seen from the controversies around local "zero-Covid" policies, such a configuration can be risky for the state and costly for the people, and the unrest signals that not everyone buys into the social contract this governance configuration offers.

Over the years, spectacular demonstrations of power in enforcing top-down rule have distracted many foreign observers from the more "adaptive" qualities (Heilmann and Perry 2011) of this totalitarian regime. Cybernetic and machine learning modes of governance co-exist in China in interminable tension. It is a mistake to assume homogeneity from the Chinese state's intermittent, sensational demonstrations of hegemonic control and regulation. Instead, these demonstrations reflect what the state sees as a persistent need to tame unruly differences in a large nation; they are often periodic attempts to manage the overabundance of variation that is part and parcel of China's experimental model of policy-generation.

While many have attributed the ambiguity of Chinese Central State mandates to the opaque workings of a totalitarian government, my fieldwork offers an additional perspective, which is that ambiguity serves an important purpose. In Chinese machine learning governance, ambiguous policy statements are a feature of the great crowdsourcing of policies, not a bug. Yet, this machine learning feature of Chinese governance does come with plenty of bugs.

To draw once more on the technological analogies my interlocutors employ for our analytical purposes: is it so far-fetched to compare the policy landscape of China to the images machine learning algorithms in-development generate (Figure 5)? Are the daily experiences of living under such a regime so dissimilar from this image of a machine learning system's attempt to depict reality (Figure 6)?

Living in Chinese society demands widespread risk tolerance. As Heilmann writes, "One striking feature of the legislation-centered policy process in liberal democracies is that the potential impact of policies under deliberation must be largely assessed beforehand, without first being able to refine novel policies through implementation in experimental sites" (2008b, 9). Harnessing China's scale as a motor of heterogeneity for policy forgoes this feature. In the next chapter, I conclude my dissertation by identifying further similarities between the venture capital model, data-driven science, and machine learning governance in China, all of which are what I call "successful models that mostly fail." Based on what we have observed to be these models' societal effects in China, I explore the implications of their further convergence in China as local

governments manage their own VC funds, and as their machine learning logics continue to become further entrenched in the rest of the world.

Figure 5: Samples provided by Google's research laboratory DeepMind of images generated by machine learning techniques. Images on the right are by a GAN, and the ones on the left are generated with a technique called Variational AutoEncoder (VAE), a potential successor to GANs (SYNCED 2019).

Figure 6 Artist Trevor Paglen fed a machine learning (linear classifier) model shark images until it could reliably recognize sharks. He then asked the system to produce images of what it thinks a shark looks like (Paglen 2018).

Conclusion

Governing through Venture Capitalism

One day, over a meal at KFC, I was lending a sympathetic ear to two start-up founders telling me about their struggles with dwindling funds. I told them that I was sorry fundraising was going so poorly for them. To my surprise, they told me that it wasn't. I feigned outrage: "What? Why am I buying you lunch then?" I asked why they were bootstrapping if fundraising was going well. They told me that they were fending off other investors and waiting to hear back from a big local government VC fund.

In my own field site, the VC Firm came to an arrangement to co-manage a newly set up VC fund with a state-owned venture capital company affiliated with a local government. The new fund counted a municipal government-established "guidance" fund and a Japanese conglomerate among its limited partners. Though the VC Firm was an American company, many of the staff at the Shenzhen office were Chinese and they expected seamless collaboration with their counterparts in the government fund. They were therefore surprised to find that a cultural gap nonetheless existed.

I asked after a VC director one morning when she didn't look very well rested, and she told me about her unexpectedly increased workload since the Firm started working with the government guidance fund. Conventionally, VC funds write investment memoranda to inform their LPs about a new investment decision and the start-up companies they invest in. They usually

include some background information about the companies' founders, what kind of products or services they're working on, and what markets they're trying to tackle, etc.

Whereas these memos are usually just a few pages long, the local government fund expected something much longer, with more substantial due diligence research. Everything had to be verified, such as the education a start-up company's founder purportedly received and their claims to what value their company could bring. The document required to justify an investment would amount to a tome of around two hundred pages.

I was told that local government VC funds, especially ones of large and prestigious cities, take a long time to conduct due diligence before a term sheet can be signed. This was the reason my start-up friends at KFC were still bootstrapping. They have been fending off interest from other VCs. They did not want to dilute their shares in case the government fund ultimately decided to invest in them. Their rationale was guided by their longer-term development goals: having a big local government VC as an investor in their company was a great endorsement. It showed that the start-up was trustworthy and credible, not only because of the extensive due diligence the guidance fund would have conducted prior to investing, but also an implicit common understanding that "only a fool would try to scam the government." They believed this would ultimately garner even more and higher profile VC interest and help them achieve a higher valuation more quickly (cf. Huang, Zhang, and Zong 2023).

Gambling Towards the Truth

VC "government guidance funds" (GGF) now proliferate throughout the country. As Wei et al. describe, these are "funds established by central and local governments partnering with private venture capital to invest in state-selected priority sectors" (2023), or as I encounter in the field: "戰略性" (strategic) domains. That they exist — and in my field site, are co-managed with an American VC firm and partially funded by a Japanese conglomerate — speaks to the stunning change China has seen in the past few decades. This dissertation bears witness to these historic transformations in Chinese political economy, which unfold against a cultural backdrop of a China's fraught patterns of engaging with Western technoscience as a medium of nation-building.

In the 1950s, Mao Zedong's government issued a wholesale repudiation of Anglo-American statistical thought and practice. Historian Arunabh Ghosh (2020, 4) summarizes the case they laid out in an influential essay:

> Bourgeois statistics exist to strengthen the exploitation of workers, in order to serve the interests of capitalists; it uses unscientific, formalist mathematical doctrine to conceal the economic dangers of capitalism, whitewash class conflict, and deceive people. The viewpoints and methods of such statistical theory cannot meet the needs of national construction work and will directly endanger its progress.

Probabilistic methods not only served capitalists' pursuit of profit and furthered their exploitation of laborers; Maoist statisticians were also concerned about probabilistic issues of representativeness (代表性) (ibid., 268). Measures of central tendency also presented problems of bias and weights, and obscured inequality. For example, Jin Guobao, a professor of statistics and the director of the Accounting Department of the Central Bank of China, cited Karl Marx's own writings to demonstrate how calculations of average wage hikes could distort class distinctions (ibid., 113).

The Maoist "socialist" model emphasized direct, personal, individual, and practical experience over formal abstractions, technical knowledge, and ideological fervor (Ghosh 2020, 28). During a time that saw the global rise of probabilistic methods and thinking, Maoist China eschewed probability for exhaustive enumeration as a means of achieving total or comprehensive information (ibid., 15). Maoist "mass science" did not only aspire to mass participation in statistics but also to be a science of the masses. As such, the Maoist Chinese government would leave no one behind and nothing to chance: China's national development was not a capitalist gamble.

The nation's embroilment in the "Mao fever" or "Mao Craze" would become a source of shame for many in the aftermath of the disastrous Great Leap Forward campaign. Maoism itself became associated with a notion of "backwardness" (落后) (E. Chao 1999; Hertz 1998, 79). As part of the attempt to transition China from an agrarian economy into an industrial powerhouse, the Great Leap Forward's explicitly aimed to transform China into a top producer of steel globally.

The Maoist government mass mobilized peasants to produce steel out of scrap metal in small backyard steel furnaces (土法炼钢). Workers were redirected towards iron production from schools, factories, hospitals, and perhaps most importantly, agriculture. Not only was most of the output brittle pig iron of negligible industrial utility and paltry economic worth, but the campaign also contributed to the Great Chinese Famine — one of the largest man-made disasters and deadliest famines in human history, with a death toll in the tens of millions.

This was followed by a period described in the People's Republic of China as 拨乱反正 (*Boluan Fanzheng*) "Eliminating Chaos and Returning to Normal" under the leadership of Deng Xiaoping.[36] But what is "returning to normal" to a young nation that has never experienced normality since its inception? This question came to a head in the late 1980s, which may be illustrated through a television show.

In 1988, the state-run Chinese Central Television (CCTV) broadcasted River Elegy (河殇), a six-part series by Wang Luxiang and Su Xiaokang. The documentary traces the source of modern China's great defeat and suffering back to the "sea ban" (海禁). Introduced by the first emperor of the Ming dynasty in 1371, the policy sought to enable state monopolization of trade and control over inflation, and national defense against pirates and remnants of the deposed Northern Yuan

[36] The term comes from Deng Xiaoping's own usage in describing China's task at hand in 1977, and may be traced to the Spring and Autumn Annals <<春秋>>, composed in the 5 century BC.

dynasty. A modified form of the policy remained in place during the Qing dynasty, until the British challenged it during the Opium War.

Citing Karl August Wittfogel's notion of the "hydraulic empire" (1959), Wang and Su contend that the sea ban turned the Chinese nation inwards. It became an isolationist and conservative land-based civilization, leading to its defeat by maritime civilizations such as Britain and Japan, which were backed by modern science. Though the Yellow River has long been understood as a source of great nourishment, the cradle of Chinese civilization, and a symbol of China's long heritage and history, the documentary suggests that, under the nation's sea ban and general isolationism, the river dried up. It analogizes Confucian traditions to the river's dried up silt and sludge — impediments all to China's progress. "For survival" (为了生存), the only way forward for China, the writers contend, is for the river to flow towards the ocean, to embrace openness and exploration. The documentary proved incredibly popular and had a viewership of two hundred to three hundred million. The public demanded a re-run. It was rebroadcast — but with substantial revisions and censorship.

Under the oversight of the Ministry of Radio, Film and Television, content removed by CCTV included the series' supportive stance towards the 1986 student demonstrations and its criticism of CCP's policies and misgovernance. After the unspeakable events of 1989, Hong Minsheng, the deputy director of CCTV, denounced River Elegy as "a propaganda coup for

bourgeois liberalization," and claimed that its broadcast "provided theoretical and emotional preparation for the recent turmoil and rebellion" (Kristof 1989).

The journalist Nicholas Kristof succinctly commented that:

> The attacks on "River Elegy" represent the latest front in the century-old debate about whether traditional Chinese culture should be glorified or scorned, whether the nation's poverty is best diagnosed as the result of foreign imperialism or of a rotting indigenous civilization. Oddly, the Communist authorities are firmly on the side of ancient tradition, the defenders of the honor of the "old China" that they rebelled against in seizing power 40 years ago.

The controversy over the River Elegy once more brings to the fore the crux of the May Fourth Movement after China's isolation was wantonly violated by foreign imperial powers after the late Qing period. As political scientist Harry Harding notes, "'River Elegy' crystallizes in the 1980's an issue that's been around China since the 1880's... and that is the degree to which Chinese culture provides the basis for modernization, or conversely, the extent to which Western culture provides that basis" (ibid.).

In examining how venture capitalism came to take hold in the Chinese market, I've had to return to this fundamental question, for the Chinese adoption of this foreign cultural model cannot be understood apart from contemporary Chinese notions of what progress and modernization mean, how they can be achieved, and what role Western culture plays in it. No one has had a larger

role than Deng in leading national engagement with this question. So where does he stand on this issue? The military crackdown Deng personally ordered in 1989 made evident his refusal towards a wholesale Westernization of the nation. However, what he had adopted from the West to China may be crucially discerned from an earlier time in his career.

Deng's "cat theory" — "It doesn't matter whether a cat is black or white; as long as it catches mice, it is a good cat" — was first articulated in 1962 in a talk and in a published piece about "How to restore agricultural production" (怎樣恢復農業生產).[37] In the violent chaos of the Cultural Revolution, Mao and his allies cited Deng's "cat theory" as one of Deng's "Ten Crimes." Mao criticized, "This man does not grasp class struggle, he has never referred to its core idea. With this 'white cat, black cat' talk, Deng makes no distinction between imperialism and Marxism."[38]

After having been twice purged during the Cultural Revolution, Deng's image was rehabilitated after Mao's death in 1976 and some of his posts were reinstated in 1977. However, Mao's designated successor, Hua Guofeng, dominated the Party, upholding the policy of "Two

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[37] He attributes the quote to a proverb in his native Sichuan. However, the quote may actually be traced earlier to the Qing dynasty (清代《聊齋志異》蒲松齡著，卷四《秀才驅怪》：「異史氏曰：『黃狸黑狸，得鼠者雄』。此非空言也。」) Deng's original quote also referred to a yellow cat rather than a white cat (黃貓、黑貓，只要能捉住老鼠就是好貓), this detail was lost in circulation, and eventually Deng himself also referred to black and white cats.

[38] "他这个人是不抓阶级斗争的，历来不提这个纲。还是'白猫、黑猫'啊，不管是帝国主义还是马克思主义。" (http://cpc.people.com.cn/GB/85037/8530953.html; Chin 1976)

Whatevers" (两个凡是): "whatever policies Mao had made should be resolutely defended, whatever instructions Mao had given should be steadily abided by" (Fontana 1982).

The way that Deng Xiaoping's faction challenged this would become known as the Truth Criterion Debate (真理标准大讨论). Their most decisive blow came in the form of a publication by an associate professor of Philosophy at Nanking University, Hu Fuming 胡福明, entitled "Practice is the sole criterion of testing truth" (實踐是檢驗真理的唯一標準). In it, Hu argues that Mao, like Marx, considered that the veracity of theory, whether it reflects objective reality and the truth, can only be tested through social practice: this is how dialectic materialism achieves objective truth — something that was distorted and obscured through the destructive propaganda of extremist Maoist zealots. Hu elaborates that "matters of fact in the history of science fully illustrate this point." He writes:

> Mendeleev devised the periodic table of elements based on the variations in atomic weight, which was heavily debated at the time. The periodic table was confirmed to be true only after scientists discovered new elements based on it, and the chemical characteristics of the elements precisely matched the table's predictions. Copernicus' heliocentric theory remained a hypothesis for three hundred years, until Leverrier not only calculated the existence of an unknown planet but also deduced its position in space by drawing on the data Copernicus provided. When

Galle discovered the planet Neptune in 1846, Copernicus' heliocentric theory was confirmed and became accepted truth.

Hu argues, "[similarly] it is through the long-term testing and verification by the practice of millions that Marxism is now accepted as true... the correctness of a line of action must be similarly tested by practice" (Hu 1978).

Deng Xiaoping defended the "truth criterion" at an All-Army Conference on Political Work on 2 June 1978, stressing how Mao himself emphasized the primacy of practice by citing Mao's slogan "seeking truth from facts" (实事求是), an idiomatic expression which originated from the History of Former Han (前漢書) (111AD). At this conference, Deng made explicit what was at stake: the debate about the "truth criterion" was "really a debate about the ideological line, about politics, about the future and the destiny of the party and nation" (Deng 1984, 65; F. Chen 1995, 42). The sole criterion of reaching truth through testing and validating would become a cornerstone of Deng Xiaoping's Boluan Fanzheng campaign, which he announced in the same month.

Although Deng tried to highlight his continuation of Mao's 实事求是 "seeking truth from facts," their methods of seeking truth were significantly different: for Mao, it was exhaustive enumeration, for Deng, it was experimental trial and error. The way Deng and Mao diverged echoes some of the themes of Robert Boyle and Thomas Hobbes' consequential debate in 1660s England. Shapin and Schaffer reviewed this debate to investigate the origins of the experimental

method; asking "why does one conduct experiments to arrive at scientific truth" (2011, 3). Though experimentation as a way to generate scientific fact may seem "self-evident" today, Shapin and Schaffer point out that its validity was far from certain when Robert Boyle introduced it by way of his experiments with air-pumps to study pneumatics. One of his chief critics, Thomas Hobbes, took issue with Boyle's probabilistic approach to producing scientific knowledge. Not only were the terms Boyle used such as "pressure" and "spring" vaguely defined (ibid., 54), Boyle was also explicitly indifferent to the cause of the outcome of his experiments (ibid., 121), offering only "probable" causes (ibid., 67).

In Hobbes's mind, scientific knowledge ought to exemplify absolute certainty, with the definitional clarity of geometry and the causal precision of logic — neither of which Boyle's experiments exhibited. In an England just emerging from a vicious Civil War, Hobbes was worried about the implications of experimentation for social and political stability. For him, the danger of Boyle's "probabilistic and fallibilistic" method was that (ibid., 23), by making the production of scientific knowledge a game of interpretation, probability, and belief, the experimental program would open the floodgates of dissent, leading to yet another civil war. As Shapin and Schaffer describe Hobbes's stance: "show men what knowledge is and you will show them the grounds of assent and social order" (ibid., 100).

In advocating for a specific methodology for producing knowledge, Mao and Deng both knew, as Hobbes did, that "solutions to the problem of knowledge are embedded within practical

solutions to the problem of social order, and that different practical solutions to the problem of social order encapsulate contrasting practical solutions to the problem of knowledge" (Shapin and Schaffer 2011, 15). If Boyle's probabilistic enterprise allows controlled dissent, Hobbes's dogmatic absolutist philosophy allowed none at all — in this, there is a parallel with Deng and Mao. Boyle and Deng prevailed.

Deng and his allies saw — as Boyle and his did — that the move away from dogmatic absolutism was not "a regrettable retreat from more ambitious goals; it was celebrated as a wise rejection of a failed project" (ibid., 24). For Deng in the 1960s, experimentation (or "practice") offered a path forward from the stalemate within the Party on matters political and economic, and, to this day, this tenet continues to guide China's policies (e.g. Heilmann 2011; 2008b; Brandt and Rawski 2008). Hobbes's criticism remains salient today as we consider contemporary forms derived from Boyle's experimental program — venture capitalism, big data, and artificial intelligence. These techniques and technologies are probabilistic rather than absolute, indifferent to precise understandings of cause and effect, tolerant of the fallibilistic nature of practice, and manage dissent in a controlled manner rather than absolutely. All these are features of the style of governance I describe in Chapter 4.

I argue that the enthusiastic embrace of experimentalism has fundamentally shaped how Chinese society at large understands what "science" is. Hu Fuming argues that Marxism is scientific because it has gone through "long-term testing and verification by the practice of millions;" for

the same reason, my interlocutors tell me that Chinese fortune telling, Chinese medicine, and astrology fulfil requirements to be considered as Western science, because they have gone through centuries of "A/B testing." And, although Deng's "opening up and reform" is mostly considered an economic policy, I want to highlight that the Market is merely a type to the token of the experimental program he endorses, which involves massive trial-and-error.[39]

One significance of embracing Deng's experimentalist notion of science is how readily China is receptive to what I call "successful models that mostly fail," of which the market is but one instantiation. While Deng himself did not encounter techniques such as machine learning, he pushed for China's adoption of what was then considered the pinnacle of Western science and technology such as cybernetics and electronic computers. However, as I elaborated in Chapter 4, my interlocutors recognized A.I. and big data's alignment with Deng's experimentalist philosophy. While Western technologies of Deng's day followed an if-this-then-that logic, arguably it is "big data"-driven forms of mass trial-and-error that better accords with his approach. I discussed in Chapter 1, how data technology imaginaries undergird the operation of venture capitalism, which also adhere to the notion that, with a large enough number of trials (here of start-up enterprises in one's investment portfolio), even if most of the attempts will fail, the model will be successful

[39] My capitalization of the word "Market" follows the distinction James Carrier between Market and market (1997). I understand a market to be "constituted through social relationships and contextually defined values" (Gudeman 2001, 1), whereas a Market is an abstraction of markets that aims to be both description and prescriptive at the same time. See also Daniel Miller's notion of "virtualism" (1998).

overall. A similar logic applies to the machine learning imaginaries of governance described in Chapter 4.

When discussing the Venture Firm's collaboration with Shenzhen's VC government guidance fund, the director who appeared at the beginning of this chapter mentioned that the partnership was a way to convey their confidence in Shenzhen, to bet on Shenzhen's success. This recalls the businessman Mr. Liu in Chapter 1, whose betting again and again on the nation-state was an expression of patriotism. It is in this light that we can recognize that beyond the laboratory, trial-and-error is *gambling*, and only in a gambling nation, does betting amount to an expression of patriotism. Thus, within a generation, China transformed a nation that "rejects chance" under Mao (Ghosh 2020), to one that bets on the probabilistic theory of the Law of Large Numbers — all in the name of chasing progress and Western science.

The Mangle of Modernity

My dissertation shows that what China has come to understand as "advanced" (先进) and "backwards" (落后) — and what it means to be "civilized" (文明) and "modernized" (现代化) — has far-reaching and often unexpected consequences. For example, in China's great fear of "falling behind" (落后), the Party has suppressed what it calls "feudal superstition" (封建迷信) to cultivate "scientific culture" (科学文化) (Su n.d. Accessed 27 July 2023) and scientific "rationality" in its populace (Steinmüller 2013). In this way, the state's rendering of progress in part echoes theories of unilineal evolution or classic social evolution: the notion that Western

science and culture is at the forefront of a singular path of social evolution that moves from primitive to civilized.[40] Yet, as anthropologist Martin Holbraad reminds us, divination is the inverse of gambling: "in gambling anything can be used to guess something, while in divination something is used to guess anything"[41] (2010). As I show in Chapter 4, those living under the opaque workings of a "machine learning nation" grapple with great uncertainty, and members of local governments and citizens alike try to make life decisions while anticipating the "winds" of policy (Hathaway 2013). Thus, through the lens of the longer durée, the pursuit of Western science and rationality in China has inadvertently led to the largest nation on earth becoming an oracle state filled with diviner citizens: a stark illustration that "we have never been modern" (Latour 2012).

In probing the extent to which Western cultures and technologies are adopted and adapted by China to catalyze its development, this dissertation is also partially about "the West." For

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[40] This notion is now mostly obsolete in anthropology and sociology. For example, David Graeber and David Wengrow's book *The Dawn of Everything* (2021) debunks it by taking apart the idea of historical determinism and highlighting the many different viable paths of development societies around the world have historically offered and could have taken. Nonetheless, unilineal evolution's hold on lay understandings of history remains particularly strong in China, which stems from what my interlocutors characterize as China's 文化不自信 "lack of cultural confidence" after the world wars. The pride many Chinese people have for the historical achievements of the Chinese civilization feeds into the collective urge to rectify "The Great Divergence," which describes the "gap" between China and Europe after China's technological progress "failed to" achieve that of the Industrial Revolution. This perspective reinforces the presumption of unilinear evolution, that there is only one "赛道" ("race track").

[41] In other words: gambling is betting on an occurrence that is one instance of an undergirding order. For example, when you roll a die, every singular result seems random on its own, but the aggregate of many instances will show regularity and equal distribution of outcomes. On the other hand, divination is taking one random instance and inferring the broader undergirding logic behind it.

example, I demonstrate how the fallacy of modernist purification pervades both the West and China (often through Western imports). In Chapter 3, I show that although the idea of a "social credit system" is an American invention, Western critics of China's "social credit system" deem its combination of vaguely defined "social" and financial forms of evaluation as backwards and barbaric. This betrays a false separation in the U.S.: when Andrew Tappan introduced it in the 1880s, his Mercantile Agency did the very same, and current American scoring systems such as Equifax certainly continue the practice through proxies.

Here I elaborate upon another important example of a fallacy of modernist purification: one around trust-based systems and system-based trust. I discussed in Chapter 3 how my interlocutors expressed a desire for "clearer lines" (条线画得更清) mediated by systems backed by institutions of law or finance over living in a murky entanglement of mutual indebtedness. They think that this is how China can become more developed (i.e. "社会发展更完善、法治更完整的表现"). This correlates with their notion that working with system-based trust is how advanced nations operate, and is the more "文明" ("civilized") approach, which is how many of them imagine "现代西方国家" ("modern Western nations") function. Yet, as I point out, the workings of VC — a Western import — is a recursive collective exercise of living with blurred lines, and, like the trust-based guanxi systems, are reliant on rituals, interpersonal trust, and faith. There is extensive overlap between VC and guanxi practices, both being great games of social leveraging.

The truth is, no large-scale organization — be it a nation, or a corporation, or any other kind of collective — is just one kind of system or another: any large human-constituted entity involves mutually constitutive, complementary, and dependent configurations of trust-based systems and system-based trust. Take a hypothetical successful start-up company as a crude example: system-based trust can't happen without being seeded from trust-based systems of venture capitalism, and after the company is scaled through system-based trust of the stock market, at the core of its operation lies trust-based systems through which the individuals that comprise the system work together informally and flexibility to navigate rigid rules and conflicting demands (cf. Reed-Danahay 1993). Here, we might think with Nick Seaver's excellent observation about algorithmic systems, "If you cannot see a human in the loop, you just need to look for a bigger loop" (2018). The structures that comprise trust-based systems and system-based trust can be conceptualized in a similar way.

As I highlight at the end of Chapter 3, the misrecognition that large-scale organizations are binarily trust-based systems or entities of system-based trust can create problems and complications. Here, I would like to introduce another layer of interpretation of the oral history that I offered in Chapter 1: the associations of trust-based system and system-based trust with notions of backwardness and advancement in China played a role in Chinese businessmen's troubles recognizing the similarities between the American-imported VC practices and already-

established guanxi practices. Initially, this hindered their ability to recognize the VC paradigm of deferred profit and social leveraging.[42]

That large-scaled organizations consist of interlocking configurations of trust-based systems and system-based trust factors into what might be described as social time dilation. The coordination between various components of trust-based systems and system-based trust takes time, as it involves interpretation and imperfect communication. Consider again my interlocutors' notion of "communication cost" (沟通成本). It involves laboriously managing mutable mobiles, working with and against various forms of mangling (Pickering 1993) and torquing (Bowker and Star 2000), often through recruiting ritualistic resources, a perspective that I developed empirically in Chapters 2 and 3. Though a large-scale entity may be slow to respond, because of the considerable resources at its disposal, the effects of its interventions can be forceful and swift, as we have seen in Chapter 4. This bears on the notion of temporal capital I introduced in Chapter 2. Further research on the sociotemporally distortive effects of scale can deepen our understanding of the relationship between scale and power.

[42] Considering how VC is largely a trust-based system, an interesting question is whether VC could work if it incorporated more features of system-based trust, if it became less exclusive and more formalized. My current inclination is that it would not.

"Why do they run their companies like how we run our country?"

In 2017, I was invited to a banquet in Shenzhen with a motley crew of strangers. We were brought together by an entrepreneur with whom we had varying levels of familiarity. Our host introduced each of us. We sounded vaguely impressive, even if I was quite sure no one could discern what the other guests really did. I remember keeping relatively quiet, still wide-eyed, and new to my field site, and mostly listened on as others conversed. Among the guests were some foreigners who came Shenzhen to develop hardware products. There was an American man who enthusiastically offered his social commentary on China. It was unflattering and mostly based on stereotypes, which did not endear him to anyone present. The host's attempts to steer the conversation elsewhere were futile, and our visible discomfort seemed to do nothing but egg the man on. A Chinese man suddenly spoke up: "If Americans look down on us, why do they run their companies like how we run our country?"[43]

I have never met anyone in that group since and have lost touch with them, but the Chinese man's words have stayed with me uneasily all these years. As I write my dissertation now, I find the comparison valid of both China and America. It is not a coincidence that my description in Chapter 4 of China's governance mechanisms shares the spirit of the Milton Friedman's proposal to require public and private schools to compete against each other in a marketplace through a

[43] Notably, when the man immediately reiterated the sentiment in Chinese, the specific verb he used with regards to the running of the Chinese nation was 经营 *jingying*, which relates more often than not to the running of a business.

school voucher system (M. Friedman and Friedman 1990; M. Friedman 1975; 1955). As I discussed in Chapter 1, the coming together of the long-tails of China and U.S.'s political trauma means that China has come to be "more American than America" (比美国更美国) in some regards, vividly put to me once as the "neoliberal's wet dream."

The fact that the point of comparison is not between the Chinese and the American state but between the Chinese state and the American corporation is telling of both the Chinese and the American nation. While the U.S. government is less centralized than the Chinese state, American corporations are often just as centralized. In studying Chinese governance and quickly scaling start-ups, I observe a salient parallel in scaling and managing scale, where there is an explicit lack of desire to have total control, and general acceptance that micromanaging at a broad scale is impossible. The solution is outsourcing and devolution, which creates dependencies. Ultimately, what these scaled or scaling entities desire are favorable configurations of dependencies. The Chinese state and American corporation are authoritarian, not totalitarian. They contain fragmented and outsourced components but can unilaterally intervene to change course at any point. As such, American corporations and Chinese states both rule by correction.

Temporality plays a pivotal role here, for the perceived paucity of time lends itself to generating favorable conditions for dependencies. In Chinese governance, it justifies a way of policy making that is analogous to machine learning and the interventionist rule by correction. It

allows the Chinese state to rule without governing. In the market, it compels most fledgling companies to obtain VC funding to accelerate their growth lest they be outpaced.

But how does the paucity of time come to be? In Chapter 1, I described how data technology imaginaries influence temporal expectations in venture capitalism and contribute to an assumption that the scalar properties of digital and data technologies can translate into the scaling of businesses. Through the example of medical start-ups, I showed how this expectation is often incongruent with reality. However, I have witnessed many instances where even software and data-driven start-ups struggle.

When I was about to leave the field, I caught up with some of the start-up teams I first encountered in the earlier stages of my research. One among them worked on "health tech." When I first met them, they were in Shenzhen to develop a wearable device that used sensor technology and big data analytics to continuously help users track their health markers. Their mission, like many others, was to empower their users to practice preventative care or aid them in rehabilitative journeys (see also Schüll 2016; Ruckenstein and Schüll 2017). When I met them again two years later, the company had begun developing pilot products to help banks determine whether to give out loans to those who ask for them. The idea was that the bank could offer favorable interest rates to those who integrate their health data information with the bank's app. However, suppose a user exhibits signs suggesting that they might develop dementia in the future, which may hinder

their ability to hold down a job, then it might not be a good idea for the bank to give them a long-term mortgage.

I highlighted to the founder that this seemed to be the opposite of his initial intention (初心): rather than empowering users to work towards better health, this proposal would penalize users when they are most in need. He responded that such a scheme could still incentivize people to exercise for the favorable interest rate. I drew our attention back to how some people are genetically predisposed to contracting certain diseases, which no amount of exercising could prevent. He conceded my point but reiterated that this was just a pilot; hopefully, they would be able to pivot back to something that resembles what he originally had in mind.

Our conversation quickly shifted to his hiring challenges. When two tech behemoths Tencent and Huawei are based in Shenzhen, it's difficult to match the wages they offer when recruiting. It was already hard enough to find the money to pay his current employees, he said, as we both gazed out of his glass office door to the people busying over their cubicle desks just outside. The usual way to incentivize talent to join his company was by giving them equity, of course, he continued, but what value is equity if his company wasn't getting any VC funding? I asked after his fundraising efforts. He said it was looking up since he started this new pilot. Though he was able to start his company from seed VC money, he had trouble raising subsequent rounds of funding, as the business plan from his original pitch wasn't progressing quickly enough to fit the VC's timetables (时间表) to return the fund. He was just trying to stay afloat. "Do you

understand?" he asked. I glanced down at the young family staring out from the wallpaper of his phone and told him that I did.

This pattern of early idealism giving way to cynical compromise, reminded me of yet another start-up company. They were working on "artificial intelligence enhanced driving safety" when I first met them, but later pivoted their pitch to using their data to feed into dynamic premium calculation systems for insurance companies. I have come to see them as two examples of a genre of start-up: after years of subsidized scaling up, they face pressures to generate profit, and sell their data to banks and insurance companies for "risk evaluation" in decisions to deny loans or raise insurance premiums. For similar reasons, I have also seen hardware start-up companies introduce sensors to their hardware products to generate data that holds vaguely promissory financial and analytical value. Ultimately, a data technology imaginary that expects start-up companies to be able to scale like software merely works towards prescribing a temporal rhythm and regime that aligns with the VC timetable. But, as we saw in Chapter 1, that timetable can be changed as second wave domestic VCs establish funds with longer lifespans.

The cascading effects of arbitrarily set VC timetables demonstrate a kind of social technology (cf. Shapin and Schaffer 2011) which used conventions as a resource to materialize "successful models that mostly fail." There is no reason why VC fund lifespans need to be of a specific length. New initiates and old hands in VC all tell me that there are no complex and precise forms of mathematical reasoning that determine a fund's duration, other than the vague notion

that nothing shorter than ten years is required to grow and exit companies in a way that can generate three times in returns on investment (ROI) for LPs to be "worth their while." And, to recall what a VC director told us in Chapter 1, if a large VC firm requires more time before sufficient "exits" could happen, they could simply move their investments into another of their funds of a younger vintage with more lifespan left as easily as "passing something over from your left hand to your right."

Not only are these time frames arbitrary, but there seems to be an irony too in the recursive way that these data technology imaginaries beget data collection out of teleological faith. The mere chance that they could is reason enough within a "successful model that mostly fails" to adopt a "data imperative" (Fourcade and Healy 2017). As Fourcade and Healy write, "It does not matter that the amounts collected may vastly exceed a firm's imaginative reach or analytic grasp. The assumption is that it will eventually be useful, i.e. valuable" (ibid., 13). But that assumption often remains just that: an assumption. It also did not appear that the limited partners cared very much how they come to their ROI. As my VC interlocutors tell me, some LPs ask for updates on what start-up companies in their portfolios are working on, especially those corporations who are looking to be informed about the latest trends and potential "disruptive" changes in their industries. However, LPs' direct involvement ultimately remains limited, as should be the case for *limited* partners. Ultimately, the pension funds or university endowment funds who are LPs are not demanding that start-up companies gather data to generate ROI. Rather, it is the outcome of the

Derridian recursivity of growth rituals under the VC model's temporal regime, which I described in Chapter 2. We can therefore recognize data imperative and consequently surveillance capitalism (Zuboff 2019) as in no small part a collateral outcome of the arbitrary "timetables" of VC.

Before I left Shenzhen, I confided to the entrepreneur Jing, who appeared in Chapter 1, the sadness I felt seeing the way some of the start-up companies I had met seem to have pivoted to the point where they're no longer recognizable to their own founders. My sadness stemmed from what I saw of some of the founders' own sadness, or, more specifically, the dejected resignation (无奈), of seeing this outcome. Jing told me that indeed it was an easy trap to fall into, and he had to consciously steer himself away from it.

Jing told me that once he had hired a business manager, and "oh my, that man was just talking out of his ass!" They went to all these meetings with potential business partners and investments, and the business manager said yes to every fleeting idea that was floated at these meetings, or otherwise made things up about what the company could do, in order to dispel any uncertainty about the company's prospects to whomever they were talking to. Afterwards, Jing would go home horrified and filled with shame. He didn't know if his company could in fact do those things. Eventually, he came to recognize his strong emotions as stemming from the fact that he actively *didn't want* the things his business manager was promising. All he was, he told me, was a geek (科技宅). The gadgets he was developing were modular components that could be combined every which way to fashion something that could fit customized needs. Not only were

they popular among DIY enthusiasts, other early-stage start-up entrepreneurs also appreciated them for how they were incredibly handy for prototyping (cf. Lindtner 2020). This brought Jing joy: to be able to help and connect with people who were like him.

He decided that this was what was important to him. Within a short period of time, he fired the business manager. "Never forget the original intention" (不忘初心) became his personal motto. Yet his steadfast mission came at the cost of his company's growth. At a meeting with a local government VC fund, he was told that, because he was stubborn and his company was not pivoting agilely enough, they would not invest. They definitionally disqualified his company as a start-up. "Well, maybe they're right, maybe they're not," Jing shrugged. His company was operating well enough to sustain their business with their own profits.

My VC interlocutors have expressed to me their moral anxieties over the impact of their "scale or bust" approach. When an Indian VC analyst was about to leave his post in Shenzhen, he mused to me, "What happened to happy medium-sized companies?" He certainly knew, as I did, that they do exist. What he was questioning was the VC model's inability and unwillingness to accommodate them, and in turn, VC's raison d'être.

Time and Scale

In one of my last interviews in the field, I spoke with a young Chinese VC analyst who had recently graduated from university in California. He had set his sights on joining the VC industry, having interned in a high-profile VC firm while still in school and joined another one right after

graduation. Our conversation turned to the topic of SoftBank's Vision Fund. Founded in 2017, the Vision Fund remains the largest technology-focused investment fund in the world, having raised more than $100 billion USD with its charismatic CEO Masayoshi Son at the helm. However, as I was just about to leave China in the summer of 2020, investor confidence in the Vision Fund started to waver following the spectacular failure of its portfolio company WeWork and the general poor performance of many of the other start-up companies it was funding. In May 2020, the Vision Fund posted a $18 billion loss and had to lay off 500 staff members, amounting to 15% of its work force.

When I brought up the Vision Fund, the analyst told me that he believed that the Vision Fund was misunderstood, and that its losses were, in fact, congruent with the trajectory of the hockey stick diagram I discussed in Chapter 1. He asked rhetorically: considering how much larger the Vision Fund was than its peers, how could we use the timescale we are used to in evaluating its performance? The analyst was suggesting that the imaginary hockey stick growth should correlate to its larger size, and thus the Vision Fund was still moving along the "blade" of the hockey stick, and the upward inflection when it transitions from "blade" to "shaft" was imminent. "The Vision Fund's critics betray their own small-mindedness (格局不够大)," he told me.

Masayoshi Son famously said in 2017 that the Vision Fund was intended as a vehicle for growth over the span of 300 years. When commentators were surprised at its "hodgepodge" investments, of which much, if not most, were unrelated to SoftBank's core telecommunications

business, Son prompted them to think about the diversity instead as the casting a wide net. He said, "The Vision Fund is the linchpin of our 'fleet strategy'" (Sugimoto 2017).

The first Vision Fund has a lifespan of 10 years. SoftBank fell well short of its fundraising goal of $108 billion for Vision Fund 2 in 2020, as it struggled to secure external investment and ended up financing it mostly by itself. Only time will tell whether the Vision Fund's 300-year plan will bear out. I know, however, that the young analyst is not alone in his faith in the Vision Fund. Even into the summer of 2020, *ruanyin* (軟銀) — the Chinese name for SoftBank — still had considerable luster in VC circles on Mainland China. I witnessed that a start-up company's revelation at a public event that it counts *ruanyin* as one of their investors still elicited reverent murmurings of awe from the audience. VC investors still proudly touted that their portfolio companies count *ruanyin* as investors, suggesting that their co-investment with SoftBank was still an effective way of demonstrating their own efficacy, credibility, and considerable social capital.

I wondered if living in China contributed to what seemed to be a tacit understanding among my Chinese interlocutors about SoftBank. Recalling Chapter 1, there is considerable conceptual overlap in the way Masayoshi Son talks about Vision Fund's "fleet strategy" and how the Chinese state and people talk about Mass Entrepreneurship and Innovation: the metaphorical setting off of a million ships (下海). The term the young analyst used point to the small-mindedness of Vision Fund's critics was 格局 *geju*. Literally, it means "structure, pattern" and "layout." The terms denote a comprehension of the relationship between time, space, and social

relations. One with a big geju (格局大) is a person who sees the big picture; someone with a small geju (格局小) is small-minded.

Not everything in the world is "amenable to precision-nested scales" (Tsing 2012). As I have shown, hardware start-up companies and their products do not easily fulfill the scaling expectations of data technology imaginaries. But what happens when humans organize themselves in nested structures? In what was intended as a dissertation about venture capitalism in China, I observed how nested structures pervade geju both big and small. From start-ups to their VC investors, to VC investors' own investors, to local governments, and the Chinese state, I saw a mode of operation that sees the way to leverage scale as through the probabilistic theory of the Law of Large Numbers, whereby a successful long-term result is guaranteed by a sufficiently large number of attempts. If one does something enough, then what one does is no longer considered random or gambling.

Yet, for something that is supposedly not gambling, their endeavors certainly involve high risk tolerance. In Chapter 1, I described how one of the cultural artefacts that informs VC investments is a "formula" which suggests that the lion's share of returns for a successful VC fund comes from a small number of their investments. However, we must bear in mind that this "formula" is geared towards generating multiples in return-on-investment, such that it could entice limited partners to put money into the fund. Just as I elaborated in Chapter 4 regarding the way of generating policy that is analogous to machine learning, these are risky tools of speed. There is

nothing inherent in the idea of the Law of Large Numbers — and it is an idea in these instances, and not a natural phenomenon that appears without human intervention — that prescribes or describes such high-risk enterprises. Successful models that mostly fail are a social technology.

There is a landmark in Shenzhen which I pass by every time I take the ferry from the port in Shekou to Hong Kong. According to state media (凤凰网专稿 2008), on the eve of Deng Xiaoping's inspection visit of Shehou in Shenzhen in 1984, Yuan Gang, a "pioneering ox" (开荒牛) who established on the behalf of the Party then-state-owned enterprises like Ping An Insurance and China Merchants Bank, put up a large sign with the words "Time is money, efficiency is life" (时间就是金钱，效率就是生命) at a junction he knew Deng Xiaoping would be sure to pass by (Figure 7). Deng would cite it at a national meeting a month later, making it one of Reform and Opening Up's most memorable slogans.

The slogan offers another formula. If "time is money, efficiency is life" (时间就是金钱, 效率就是生命, an alternative understanding would be "to exchange money for time; to exchange life for efficiency" (用金钱换取时间, 用生命换取效率). In this dissertation, I have shown how and why this formula is realized through the lives of my Chinese interlocutors: because VC funds and the Chinese nation reckon in centuries and millennia but are consistently short on time. To adopt the methods of the experimental program into other domains of life beyond a controlled environment is to subject society and nature to the abysmal ratio of success and failure of the laboratory. To let the growth rituals of venture capitalism take ever larger foothold in the world is

to make us all live in a perpetual extension of liminality. And so, the structure of the conjecture manifests a world where the geju is endlessly expanded, but never to the point of solving problems that plague the globe. Human timescales of action can be made more and more compressed, but never so quickly that we can respond to the ticking clock of nature.

Figure 7: Large sign placed by the entrepreneur Yuan Gang at the junction of Nanhai Boulevard, Taizi Road, and Gongye 1st Road in Shekou, Shenzhen (Photograph by Winnie Won Yin Wong, uploaded on her website; url: https://www.ooonzen.com/Time-is-Money-Efficiency-is-Life)

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