Making futures? Technology start-ups in Singapore

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INTRODUCTION

This dissertation is an ethnographic study of the many ways in which future plays a role in the present. I examine this topic by studying the practices of early-stage web technology start-ups in Singapore.

On January 26, 2012, just a week after the start of the Lunar New Year, a start-up accelerator program called 'The Accelerator' started its first run. Wei and Oscar, the two entrepreneurs running it, had invited technology enthusiasts from around the world to apply and develop "Asian technology for Asia". According to them, Asia was the opportunity, and Singapore was the centre from where to capitalise on it. Through The Accelerator, Wei and Oscar wanted to facilitate the emergence of a new culture of innovation-based entrepreneurship in Singapore and saw their activities as central to the development of Singapore's start-up ecosystem. Along with private investor funding, The Accelerator received support from Singapore's government, which also saw Singapore's future tied to innovation and technopreneurship.

The Accelerator, in its first round, had accepted and invested in 11 start-ups and promised to accelerate their growth with high-quality mentorship, taking them "from an idea to investment in a matter of 100 days". Each of those start-ups, most of whom were just at the level of idea, promised to bring some social change through their services. One wanted illiterate workers to find better jobs; another wanted travelling salespeople to have an easier way of managing their inventory; another two offered better ways for people to plan their travels; another two wanted to connect parents with their children better. The plan was that for 100 days, they would be mentored 'for success' to bring their visions to life. At the end of the program, the start-ups would be showcased to a room full of investors, and the appealing ones would receive funding for further development.

On this particular day at the end of January, the start-up founders gathered on the second floor in a former factory building that was now allocated for Singapore's start-ups called Blk 71. After a few brief welcome talks and a performance of a traditional Lion dance for good luck as part of the Lunar New Year celebration and opening of the program, The Accelerator opened the doors to the participating teams. The first day

was nerve-wracking for the founders, who, with no lengthy introductions, had to pitch their businesses as a way to get to know one another. They immediately received feedback from the organisers on how to improve their pitches because the next day, they were already scheduled to pitch to select investors The Accelerator had invited. Investors would provide their perspective on what they wanted to see from these budding companies by the time the Demo Day arrived. Demo Day would mark the end of the program but, ideally, be an important stepping stone in a longer trajectory of start-up growth.

The stakes seemed high for the teams accepted at The Accelerator. While some teams were local, others had specifically flown to Singapore for this 100-day program – from New Zealand, India, the Philippines, Indonesia, Malaysia, the Netherlands and Thailand. For many budding founders, that meant giving up their jobs and suspending their social lives, at least for these 100 days. Most of the participants were males younger than Oscar and Wei, and for almost all of them, this was the first time they had established and run a start-up. Most of the participants were also in financially less secure positions, and many relied extensively on their savings, from the support of their families, or had borrowed from friends to afford the three months in Singapore. The idea of potential start-up success they were chasing seemed to add additional pressure.

For example, Seth, a participant from the Philippines, told me that his parents had great trust in him and expected that this trip to Singapore would mean that he would be onto 'something big' – "like Facebook or something", as he put it. For his family, the fact that he was selected to come to Singapore was already a sign of his success, and his being here just meant that even more success was pending. Partially fuelled by this confidence in their son, they had lent him money to pay the rent for him and his co-founder for the months in Singapore. Fidgeting nervously with his fingers as we discussed these family expectations, he admitted that he was worried that he would let them down.

Seth had met his co-founder, John, at their previous employer, and they had become friends. Now, in Singapore, they had found a small room they shared in an apartment owned by a Singaporean family. It was an hour's ride away with the metro from the Blk 71 offices, and they were allowed to do their laundry once a week during specific hours. Sometimes, it meant that only one of them could make it for the mentor meetings and lectures organised by The Accelerator, as the other had to stay home to do laundry. John's family couldn't support John's trip to Singapore financially, and as John admitted, they were somewhat concerned about his start-up aspirations. According to John, he was supposed to be the breadwinner in his family – after all, he was the first and only one who received, even if not finished a university education. Now, he had to stop supporting them and rely on his co-founder for a living.

They had four more teammates in the Philippines who couldn't afford to come to

Singapore and, therefore, worked remotely despite the organisers' preference that the whole team be present. Both John and Seth often found it impossible to communicate the atmosphere and intensity of The Accelerator program in their daily calls to their teammates. They often felt that their teammates didn't appreciate their hard work and the pressure they were dealing with. They felt the only way to make it 'real' for their teammates would be to bring them over. The Accelerator and Singapore's start-up social life brought together mentors, investors, successful entrepreneurs who had exited their companies before, and other aspiring start-up founders; the insights, the routine pitch presentations, and also simply being in Singapore where even 'the escalators moved faster' - all of it was something one needed to experience to 'really' understand. In a conversation, Seth explained that he had been in Singapore once before participating in the program and that it had been:

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"Just…[searching for words] hands down - it was one of the most
amazing experiences that I had, especially when I went to Marina
Bay Sands, and the light show over there was fantastic."
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At that moment, back then, he felt he could imagine living here, and now, coming here, to this futuristic and spectacular city to build a start-up was a dream come true. However, even before they could present at the Demo Day, Seth left the start-up.

He had a feeling that in too many meetings with mentors and potential investors, John was promising things they couldn't deliver and was increasingly uncomfortable about how they were getting along. For him, too much 'photoshopping' was happening as they presented themselves and the future possibilities of the product they were building. Added to that was the pressure that was part of The Accelerator program, where already on the first day, they felt 'behind' and in need to 'catch up'. Combined with the stress from the living conditions he found himself in, it was too much to bear. For example, it turned out that John was a loud snorer, leaving Seth seriously sleep-deprived. He'd try to mitigate that by working from The Accelerator's office at night and sleeping during the day when John was in the office. That didn't help their relationship. Seth also felt that John didn't treat the limited budget he had borrowed from his parents seriously enough, seeing John's purchases of cigarettes and other personal care items as careless and irresponsible. All in all, what was supposed to be an amazing acceleration into future success was in fact, taking too much of him. On a start-up work-related trip back to the Philippines halfway through the programme, he decided not to return to Singapore and quit the start-up.

Meeting Seth a few months later in the Philippines, I learned about the heartbreaking personal drama he underwent as he was making the decision to quit and in its

aftermath. He felt like he had failed his family, friends, teammates and himself by quitting the start-up. He felt depressed and ashamed and wondered if he had lost his life's biggest opportunity. In that conversation we had, it was hard for him to find the words to explain how tough it was for him, and he would often pause, needing to handle the strong, painful emotions that the recollection of this experience was still bringing him. Yet, another year later, in an online call with him, I learned he was working in yet another new start-up in Manila. He was asked to join the team precisely because of his trip to Singapore, which marked him as 'experienced' in start-up matters. In our online call, he told me that The Accelerator had been a fantastic experience, which he was now talking about proudly. He felt he had made some mistakes in 'considering risks', but he would be more careful this time and was excited about the new start-up and the future they were building there. No, he was not in touch with John. He admitted that the relationship was broken beyond repair.

In many important ways, Seth and John were like other aspiring start-up entrepreneurs I met and interviewed during my research. Some were less vulnerable, others even more; some were more successful, and others, just like Seth and John, invested considerable energy to recast their often painful experiences favourably. Yet, they all were inspired by the promise of a better future through building a technology start-up and becoming entrepreneurs.

To better understand the structuring role future plays in the present, in this dissertation, I explore how future was a critical temporality upon which start-up building practices hinged. What constituted the 'Asia opportunity', and why would participants from around the world come to Singapore to chase it? Why would investors and the Singapore government provide funds for people who did not have much more than just an idea? How come 'Photoshopping' that Seth found too much to bear was not so much his co-founder's culpability as much as it was crucial for start-ups trying to make themselves attractive to investors? Why was Seth's experience of failure in Singapore so painful to him, yet also how was it viewed as an 'asset' that ensured new job opportunities later in the Philippines? Answers to all of these questions can be explored by taking the futurities that structured start-up practices seriously. The start-up futurities promised a lot to those who were pursuing them - opportunities to discover themselves, live a driven, purposeful life, bring wider social change and gain economic prosperity. Yet, they did so in very particular ways, shaped by the particular contexts and places. By exploring start-up futurities, I aim to, first, expand the anthropological understanding of how to study futurities ethnographically and, second, explore the larger question of the cultural significance of the future in a capitalist context.

Despite the Singapore government's strong push for developing a high-tech economy, culturally, Singapore has often been seen as the very opposite of the highly liberal San Francisco Bay Area, the home of the world's most famous and arguably most influential technology companies. Asia, more generally, but also Singapore, has long been featured as the 'Other' in the global order of technology innovation. Science fiction writer William Gibson famously described Singapore as "Disneyland with the Death Penalty" (Gibson 1993), exemplifying the perceived mismatch between Singapore's aspirations and its cultural identity, which was often said to be based on 'Asian Values'—a set of norms loosely based on Confucianism that value industriousness, familial piety, discipline, frugality, educational achievement, collective needs above individual freedoms, etc. Similarly, Richard Barbook and Andy Cameron, in their canonical text "The Californian Ideology" in 1995, criticised the worldwide embrace of the contradictory merger of hippie ideals with the neoliberal ideology that they saw spreading through the web technologies developed in Silicon Valley and suggested that Singapore had the potential to offer an alternative digital future. They drew out the inherent contradictions in the Californian ideology, which promises to both "replace corporate capitalism and big government with a hi-tech gift economy" (Barbrook and Cameron 1996, 6) as well as establish a thriving competitive marketplace where "each member of the virtual class is promised the opportunity to become a successful hi-tech entrepreneur" (Barbrook and Cameron 1996, 7) and warned that it should not be adopted as an inevitable future around the world. Instead, it should be challenged by what they call 'technological artisans' elsewhere. In the article, they suggested that Singapore's governmental oversight in the development of networked technologies presents an alternative version of how the digital future can unfold. Is Singapore, then, presenting an alternative for the digital future? This thesis will show that Singapore's digital economy was developing in ways that were both uniquely Singaporean as well as shaped by Singapore's embeddedness in global power hierarchies, where Californian ideology shaped the aspirational landscapes in meaningful ways.

Expectations of the future and concerns about what needs to change in order to reach these visions infused many aspects of the daily lives of my interlocutors, animating their aspirations and enticing them to invest their energies while also coming to terms with the limitations in obtaining those ideals. Focusing on the terrain of technology start-ups where new technological services are launched offers fertile material to explore how the future features in everyday practices since so much about what happens with technology start-ups in the here and now has to do with what it promises and projects to do *in the future*. This thesis then ethnographically details how 'common'

people, just like Seth, John, Oscar, Wei and others, tried to create their futures by aligning with, challenging and co-shaping larger narratives about what the future holds on a daily basis. In this way, shifting between the individual, collective and larger structures, this thesis follows the feminist approach to studying capitalism as it explores the "powers and practices through which people constitute diverse livelihoods (and from which capitalist inequalities are captured and generated) as they seek to realise the potentialities of resources, money, labor, and investment" (Bear et al. 2015).

2. Anthropological Study of Futurities

In a broad sense, this dissertation explores the cultural significance of future in how people live, make life, and relate to themselves and others. Despite future being something that is never 'here'—only always yet to come—it nevertheless shapes the here and now in many fundamental and intricate ways. The main research question I seek to address throughout this dissertation is: How can future be studied ethnographically? What kind of theoretical and practical assumptions do anthropologists need to embrace to develop their understanding of futurities, especially when acknowledging the 'not-yetness' of futures ethnographically? I build my contribution to this larger question through an ethnographic study of the technology start-up futurities in Singapore in the years 2010-2014. I define 'start-up futurities' as various futures related to and necessary for the practice of building technology start-up companies.

In my writing, I deliberately violate the rules of English grammar by not using the definite article for the term 'future' - in the descriptions of encountering futures in ethnographic contexts, I will use the terms 'future' and 'futures' without the definite article to emphasise the inherent multiplicity of futures present at any given moment. I will use the term 'the future' with the definite article only in cases where I find it important to emphasise that there is a process of claiming and controlling ideas about future unfolding, and one should read it accordingly as a claim to power. In instances where I aim to emphasise an analytic approach to future, I will refer to it as 'futurity' or 'futurities' (plural) - analytical constructs for understanding different types of futures as distinguished by differing forms and structures (Adam 2004; Pels 2015; Koselleck 1985). Below, I elaborate on why I have made such decisions.

Anthropologists are known to study culture, which, in popular understanding, is often associated with cultural history, traditions, and heritage - generally speaking, 'things of the past' rather than 'of the future'. Even though most anthropologists would disagree with the characterisation of their research interests as tied to the past, it is also true that future as an explicit focus of anthropological analysis is relatively recent and arose only with the end of the Cold War (Pels 2015; Valentine and Hassoun 2019). Anthropologists have been dealing with temporality directly (Bryant and Knight 2019; Gell 1992; Munn 1992; Pels 2015; Ringel 2018; Salazar et al. 2017; Valentine and Hassoun 2019) as well as indirectly when discussing "political structures, descent, ritual, work, narrative, history, cosmology, etc., as well as, at another level, general theories of anthropological discourse" (Munn 1992, 93), yet explicit attention to the future as a construct remained rare, especially if compared to the attention given to the relevance of the past. As anthropologist Nancy Munn, in her comprehensive overview, put it: "(..) anthropologists have viewed the future in 'shreds and patches', in contrast to the close attention given to 'the past in the present'"(Munn 1992, 116). Similar criticism has also been expressed in later works that have attempted to explore the impact, implications and variations of thinking about the future (Appadurai 2004; Bryant and Knight 2019; Guyer 2007; Pels 2015; Persoon and van Est 2000; Rosenberg and Harding 2005; Wallman 1992). Peter Pels has convincingly argued that the lack of serious attention to the future can be understood as an unfinished project of decolonising anthropology (Pels 2015). For Pels, the crucial aspect of decolonisation is to recognise modernity's primitive temporal classifications in which anthropological work is caught up and which clouds our ability to recognise the plurality and complexity of futurities and, more generally, the multitemporality of human experience.

Interestingly, a growing anthropological interest in futurities has been witnessed since roughly around the second decade of this millennium. Ethnographic attention has been increasingly directed to how people's daily lives are structured by what they expect, hope, fear, or don't expect to happen (Valentine and Hassoun 2019). Reviewing this recently growing interest, Ringel has even described the future as a "fashionable topic" in anthropology (Ringel 2018, 123). One might wonder - why so? What has changed? The anthropological interest in attending to the futurities of the people they study is not and has never been neutral but caught up and shaped by our disciplinary agendas and biases (Persoon and van Est 2000). In reviewing the anthropological literature on futurity since the Cold War, Valentine and Hassoun (2019) argue that the existing concern with the anthropology of the future is rooted in anthropologists' own socioeconomic and political biases and aspirations - our concern with the impact of neoliberal global-

isation and a desire for the commonality of all people. When the future threatened "a continuing world for metropolitan actors and institutions, including those of university departments and disciplines, professional career paths, and academic labor" (Valentine and Hassoun 2019, 245), anthropologists started to consider futurities more seriously. In that regard, it seems no coincidence that this research project exploring futurities was promising enough to the funding bodies precisely in the context of the 2008 financial crisis, which had also seriously shaken European confidence in a better future.

How have anthropologists approached futurity, then? Reviewing the anthropological studies of futurities, Ringel has distinguished two often overlapping approaches - one is to empirically study practices that work towards a certain future in various sociopolitical and economic contexts. Studies following this approach highlight "local interlocutors' temporal agency and the concrete politics of, and conflicts over, the future" (Ringel 2020, 124). The other approach he distinguishes takes a more theoretical and abstract route, trying to understand how researchers can culturally understand collective orientations towards the future. This approach also includes a more nuanced reflection on how anthropology as a discipline has engaged with futurities.

This dissertation combines ethnographic and analytical approaches to studying futurities. On the one hand, I look at futures as an ethnographic fact by paying attention to how ideas about 'the future' and futures are encountered in ethnographic settings in my field of technology start-ups in Singapore. I examine ideas about 'the future' historically and contextually, attending to the politics of culturally specific 'images of the future' and practices aimed at working towards them. On the other hand, at a more analytical level, this project tries to elucidate the implicit *structure* and *form* of futures encountered (*futurities*) to learn more about the complex ways temporality is structured and structures our lives in turn.

My approach to studying futurities ethnographically

Futurities feature strongly in all the technology and entrepreneurship-related debates and discussions, ranging from the entrepreneurs assigning themselves to the role of 'creating the future' to presenting various ideas about 'the future' through their business pitches, promoting the adoption of their technologies and various other projects that actively aim to control what 'the future' looks like. A quote that captures this sentiment very well is the claim that "The best way to predict the future is to invent it" (Isaacson 2011, 216), famously attributed to people as varied as information society scholar Peter Drucker, US President Abraham Lincoln, computer scientist Alan Kay and entrepreneur Steve Jobs. It ties together the entrepreneurs' agency in determining the

future by innovation that changes social processes. In many ways, one can say that the technology start-up space is characterised by futurism. Technology start-up ideas can all be seen as claims for specific futures that they aspire to bring about, and business and technological activities are part of future-making practices.

This points to the long and strong tradition of associating technological development with societal progress (see among others Jasanoff and Kim 2015; Winner 1993; Suchman et al. 2002; Sturken et al. 2004; Adam 2004; Turner 2006b; Adam and Groves 2007). The future is often discussed in terms of new, usually denser socio-technical arrangements (Pfaffenberger 1988; Coupland 2018) and such linkage of technology innovation and futurities goes beyond Western secular traditions (Barendregt 2009; Furlow 2009; Jasanoff and Kim 2015). This widely taken-for-granted connection between futurity and technological development is part and parcel of the master narrative of modern culture (Pfaffenberger 1992) and deserves a critical exploration. In the dissertation, I aim to challenge this seemingly natural connection between technology and futurities, by showing the work and effort that went into 'claiming' futurities or forging, even if temporarily, the alignment with larger narratives about the future by people who self-identified as technologists and entrepreneurs. What can be learnt about futurities if we look at how future is configured and reconfigured at the everyday level of technology start-up production? What can be learnt about technology start-ups if attention is paid not only to the past and present but also consideration to what futurities play a role in their everyday practices? By exploring futurities in the domain of technology entrepreneurship, I aim to show this connection's inherent complexities and cultural particularity and thus 'provincialise modern futures' as Pels (2015) put it. Below, I outline my approach to futurities, which includes approaching future as a social construct, examining how futures are materialised, challenging the notion of 'the future', by looking for the multiplicity of futurities, treating claims about the future as claims for power, and examining the forms of neoliberal futurities.

Future as a social construct

Rather than contributing to the mushrooming field of futurism, this dissertation asks *how* future, rather than just being a time to come, is a social construct that plays a role in the present. Future ethnographically can be understood as a social field of never-ending projections and contestations played out in the here and now (Wallman 1992). As Rosenberg and Harding nicely explain it: "Futures (..) lie not only in a segregated, market domain (characterised by practices such as forecasting, planning, and speculation) but in the domain of social practice generally" (2005, 11) and futures can be caught "not only in explicit forms of futurism but in the manners of talking, doing, and imag-

ining that get us through from day to day" (Rosenberg and Harding 205, 11). The people I studied, generally speaking, were very well versed in dealing with future in the now- they commonly told me and others of their plans and plans about how to achieve them. As I will argue in Chapters Five and Six, it was part of the cultural style (Ferguson 1999) of entrepreneurialism to exhibit a certainty in their ability to do what they intended to do and to achieve what they intended. In most situations, they fluently operated with multiple contingency plans and displayed a high 'capacity to aspire' (Appadurai 2013). This certainty also translated into assumptions of how to relate to oneself and express oneself, including in the manners of how to speak and carry one's body.

Importantly, though, futurities as social constructs also have pasts and histories. When analysing contemporary Western societies and their relationship with the future, multiple authors (Adam and Groves 2007; Guyer 2007; Huyssen 2000; Lowenthal 1992; Rosenberg and Harding 2005) point towards a perceived loss of future or future nostalgia. Rosenberg and Harding describe it in this way:

> "In the first years of the twenty-first century, representations of the future have cycled wildly through a historical repertoire from the ray-gun gothic of the 1930s to the noir and the endism of the 1940s and 1950s to the plastic op-art modularity of the 1960s and back again. (..) More and more, our sense of the future is conditioned by a knowledge of, and even nostalgia for, futures that we have already lost" (2005,6).

As I describe in Chapter Two when discussing Singapore's narration of its history, Singapore's political elite has established a pattern in the way it approached future, so even if the contents have changed from imagining industrial to postindustrial economic development, Singapore's futurity - the structure of the future as always in danger - has remained constant and shaped how people engaged with futurities on daily basis.

Materiality of futurities

Implicit assumptions about future, some more and others less conscious, pervade most of our interactions and actions. Through various 'future making and claiming practices' that engage with futurities, such as, but not limited to, planning, speculating, designing, announcing, etc., humans are continuously re-imagining and claiming futures. Such practices often also involve and rely on what can be described as more or less explicit 'images of future' - culturally and historically specific visions, ideas, perceptions, scenarios, expectations and beliefs about the times to come. Often, they also rely on material artefacts that illustrate or point towards futures in the making - some

are more permanent than others - typically illustrations, mock-ups, prototypes, sign-posts, construction sites, and, as anthropologists have already shown - digital status notifications (Waltorp 2017) or policy plans (Abram and Weszkalnys 2013), announcement boards and marketing posters (Onneweer 2007) post-it notes or excel spreadsheets (Miyazaki 2005).

In the process of doing this research, I found the focus on the materiality of futurities very helpful. I drew my inspiration from Miyazaki (2005), particularly his work on the objectification and materialisation of finance theory, where he illustrated how discourses and ideas materialise in events, books, spreadsheets, etc. Chapter One, for example, opens with a description of how narratives about where the future is and is not located materialised in start-up events, funding schemes, blog posts, and videos, and those, in turn, provided additional context for people to move countries, start businesses and change careers. Chapter Two furthers this exploration of materiality by looking at government-led urban transformation projects in Singapore, such as one-north (low capitalisation) aimed at welcoming 'the future' in Singapore, and describing how these urban space transformations provided the ground for contesting the futures they entailed.

As this thesis will show futurities materialise not only in large-scale infrastructure projects. They also become embodied and lived. To illustrate that, I draw on Ferguson's work on cultural style amongst the miners in Kitwe, which showed that people practised and showed their alignment with particular futures in deeply embodied ways - not only with whom they associated but also the way they talked, dressed, the gestures they used and the references they made (Ferguson 1999). In Chapters Five and Six, I write about the transformations my interlocutors underwent or thought they should undergo in order to become entrepreneurs. Often, those transformations concerned how to carry their bodies and how to talk. Unsurprisingly, race and gender emerged as crucial aspects, less open to transformation than other identity markers. This highlights how embodied futures are less malleable than, for example, discursive ones and will contribute to a larger discussion about the desire for perpetual malleability that is central to start-up futurities.

Multiplicity of futures

One of the starting points for me is the recognition that 'the future' does not exist - there is always an ongoing contestation between multiple futures. In any given context, there is always a multiplicity of futures present - some are actively recognised and pursued, others are latent, unfolding in the background, set in motion earlier, sometimes labelled as 'obstacles' that need to be fixed by people concerned with them. Some are

socially constructed and primarily narrative in form; others, such as infrastructure or bodies, are materially prefigured; some are more accessible to human adaptation, others less so. To emphasise this point, I, as described earlier, purposefully avoid using definite articles with the term future, unless it is to point the contrary - that a future is being claimed and imposed as 'the future' by a particular actor.

Attuning ourselves to this diversity is a crucial starting point for an ethnographic study of futurities. In start-up practice, I could observe the multiplicity and also ephemerality of futures most visibly when the entrepreneurs would stand in front of whiteboards, routinely mapping out various paths for their businesses and products, erasing some and re-drawing others, and re-arranging their to-do lists in response to these changes. The multiplicity of futures, temporarily embraced and discarded, was also visible in the changing business pitches, or product name changes and simply casual discussions and contemplations about how to go about one's life - in which relationships to invest, which hobbies to pursue, which diet to follow, etc. This multiplicity can quickly become dizzying; moreover, one could say that there is nothing particular about the multiplicity of futures - they are mere potentialities and changes in life. Therefore, it is important to clarify why I think it is a basic but crucial starting point for any ethnographic project.

I argue that the recognition of multiplicity is especially critical in contexts where claims towards what the future will or ought to be are pursued by powerful actors, where loud claims can obfuscate the less loud ones and where seemingly hegemonic futures dominate. Studying technology start-ups in Singapore is such a case. For one, Singapore's government has been incredibly successful at claiming and monopolising the narrative about 'the future of Singapore' and the role different players had to play in it. In Chapter One, I explain how the vision for the future of the Singaporean government, entrepreneurs, and investors seemed aligned. Yet, as the chapter progresses, it also reveals the limitations of this vision and how the differently positioned actors also struggled and doubted their abilities to pursue this vision successfully. A similar pattern also reveals itself in all the other chapters where, despite the dominance of certain futures, people found themselves relying on the resources that essentially entailed different futures.

More broadly, though, the spread of digital technologies in popular understanding, but also social sciences is often associated with changing relationship with time, primarily understood as an experience of increasing acceleration (Giddens 1990; Beck 1992; Hope 2006; Larkin 2008; Wajcman 2008; Zandbergen 2012). Perceived acceleration, in combination with technological and market determinism, which was often used strategically, all contributed to a feeling of the future being a tightly defined space. I needed to actively look for multiplicity to ethnographically escape this hegemonic and

totalising frame. Here, the focus on the materiality of futurities, as described above, is very helpful as it allows us to engage with the multiplicity. In Chapter Two, I will describe how I found it to be the most rewarding in relation to physical space, where the clashes and concerns regarding futures became easily more visible. For example, the muddy pedestrian paths pressed into the green fields circumventing paved but less organic routes to the local food court in the newly built industrial science park one-north, was a simple, mundane instance of this point. Even if the hegemonic future of development was dominating, it couldn't escape the multiple ways in which people made life in, through and around it. The futurities of neoliberalism and technological determinism can appear totalising, but adjusting one's eye to the many ways in which people negotiate, adjust and contest them provides opportunities to look for alternatives.

Valentine and Hassoun have critiqued how eagerly anthropologists have embraced the notion of 'temporal multiplicity with its implication of temporal coevalness' (Valentine and Hassoun 2019, 245) as a starting point for understanding futurity. According to them, assuming multiplicity of futures implicitly suggests 'commonality' - that all people share the time. However, Black and Indigenous scholarship has shown this to be a handy tool for the oppressor who, in order to establish its power, colonises and disowns people of their futures. The problem, as they describe it, is that implying commonality doesn't acknowledge the political potential of, for example, 'refusal' to be in 'shared time' for certain groups when coevalness and shared humanity are forced by dominant groups. Rifkin's work on the temporal recognition of Indians showcases the problematics of such forced coevalness. He writes: "Shared present is not a neutral designation but is, instead, defined by settler institutions, interests, and imperatives." (Rifkin 2017, viii) I share the cautiousness expressed by Valentine and Hassoun and similarly argue that anthropologists must foreground the political nature of temporalising narratives and practices through which, for example, epistemologies of linear progress or acceleration are used to claim and retain power. Yet, I still see the multiplicity of futures as one of the core starting points, as long as it is recognised that they are steeped in power relations. Thus, even if suggesting coevalness is problematic, not acknowledging the multiplicity of futures as a starting point would be even more problematic. As I describe in Chapter One, denying coevalness is also a political move. The underlying point here is that any dealing with time is inherently political and about power (Greenhouse 1996), which is something my next proposition also takes up and elaborates on.

Claiming futures is about claiming power

All of the above-mentioned points also point to another crucial, if somewhat obvious, point: any claim towards a singular or universal future should be considered as a

claim of and for power. Power and inequality, as I will discuss more later, are often at the centre when talking about futures (Greenhouse 1996; Persoon and van Est 2000). Who is in a position to say what the future will be, and what kind of tools, practices, and systems enforce these messages? These are crucial questions to explore if one aims to study futurities.

In Sandra Wallman's edited volume (1992), which is one of the very few earlier anthropological attempts to address the role of future explicitly, Wallman argues that "Belief in the future underpins the sense of self and its survival" and "Changes in those beliefs, however generated, can work radically to alter the way individuals and groups relate to each other, to the natural environment, and to culture itself." (Wallman 1992, 16). The expectations about the future just as much as past experiences inform identities and social organisation and how people position themselves politically, economically and socioculturally in relation to each other and the 'others'.

The works that have explored the role of expectations and aspirations show that possibly one of the most significant features of images of future is that they have a tremendous capacity to mobilise as well as demobilise people, depending on how accessible or closed the future vis-à-vis the present is perceived to be. For example, Appadurai (2013), in his work "Capacity to Aspire", shows how common goal setting and collective money saving allow the poor in Mumbai to gradually stand up against their predicament gradually. Ferguson's ethnography of the miners in the Zambian town of Kitwe (1999) reveals the devastating experiences of people after the images of the modernised future they believed in fell apart with the economic decline. Ferguson shows that the myth of coming modernity in Zambia influenced a wide range of the miners' cultural and social actions. It was performed implicitly in the manners people dressed and talked, with whom they associated, and on what terms. In a related manner, Dzenovska's work (2012) dwells on the sense of a loss of any possible future in the Latvian countryside. It shows how this loss of a shared future led to the literal 'emptying' of the countryside as people left the countryside and old buildings collapsed. In this case, the lack of a perceived future led to the disintegration of sociality (while not excluding the emergence of other new social formations based on different futures) and what remains of the infrastructure. Thus, to understand how people organise their social worlds in the present, their anticipations for future must be considered just as important as their past. In my work, this is a foundational concern. It becomes most apparent in Chapter Three when I discuss the role of the notion of a 'start-up ecosystem', which brought together a set of very differently positioned actors and, despite their differences, allowed them to establish certain norms and practices around a future ideal in mind. In a more subtle way, this also reveals itself when future scenarios become a 'safe space' for start-up founders to dream of awaiting success and escape the hardships and complexities

of their actual situation.

Related to the point that joint visions of a future are crucial for establishing and sustaining sociality, this process goes hand in hand with social boundary-making and the establishment of differences. These processes also rely on temporisation, where futurism plays a crucial role. As I'll describe in Chapter One, the people I studied used both temporal coevalness to associate themselves with particular groups (e.g. other entrepreneurs in Silicon Valley), as well linear developmental teleologies to differentiate themselves from other people (e.g. the emergent consumers in Asia) to establish themselves and their businesses. Chapter One of this thesis will show how, discursively, for Singapore to position itself as the place for attracting capital, it portrayed itself as a mediator between the 'more in the future' West and 'yet to develop' East. In this way, they reinforced neo-colonial and techno-orientalist tropes.

The images of the future do not just exist here, there or elsewhere, but they must be brought into being, practised and spread. Both Ferguson's (1999) and Tsing's (2000) works show that the creation of certain global myths or images of the future is a collective endeavour supported by various actors, who can also have very different intentions as well as positions (government officials, entrepreneurs, academia, miners, lodgers, media, etc.). To illustrate the political nature of creating temporal epistemologies and the socioeconomic aspects related to such claims, I find using the notions of 'conjuring' and 'scale making' by Anna Tsing (2000) beneficial as they direct the attention to the processes through which certain groups work towards presenting particular futures as desirable or problematic or irrelevant, and helps to make that work visible. This will be an ongoing theme in the chapters of this dissertation - what needs to be un-imagined and re-imagined when start-up futurities are being pursued?

Neoliberal futurities

I argued earlier in this chapter that focusing on the terrain of technology start-ups where new technological and commercial services are launched offers fertile ground for exploring how future features in everyday practices and, therefore, learning more about futurities—analytical constructs for understanding different types of futures as distinguished by differing forms and structures. Despite the growing body of knowledge, except for Pels, who outlines Seven Steps towards Anthropology of Future as an invitation for other anthropologists (Pels 2015), there is not necessarily a coherent theoretical framework for studying futurities (Salazar et al. 2017; Bryant and Knight 2019). In his seminal article, Pels has distinguished a few futurities that seem fundamental to contemporary neoliberalism: the notion of an open future, an empty future and not-yet events (Pels 2015, 779). To what extent are they particularly neoliberal futurities?

Many social scientists with ethnographic accounts from around the world have argued that since roughly around the early 1980s the world context has been dominated by a hegemonic neoliberal future, marked by its emphasis, among others, on flexibility (Freeman 2014; Ong 1999, 2006; Thrift 2005), speculation and celebration of risk-taking (Appadurai 2013; Bear 2020; Ho 2009b; Neff 2012; Anagnost 2013; Berlant 2011), individualisation, managerialism and entrepreneurialism (Thrift 2000; Ong 2006; Freeman 2014; Neff 2012; Irani 2019) and changing notions of time and tempo (Thrift 2000; Guyer 2007; Adam, Whipp and Sabelis 2002; Larkin 2008; Wajcman 2008). These studies also make it clear that its effects and the way it makes itself apparent differ in different contexts, for different social groups, and at different times.

Start-up futurities are certainly dominated by neo-liberal thinking, yet as all the chapters will show, people embracing them constantly had to draw upon resources that were imagined to be outside of the neo-liberal futurities of capitalist production. Therefore, the work of classifying futurities and their interplay is important as it enables us to understand the continuities in the ways particular groups in societies approach futures rather than embrace the claims of constant change, which are a characteristic of modern futurities rather than a description.

In a condensed way, start-up futurities capture both the promise and the ills of neoliberal futurities - the excitement of starting up, the openness of possibilities that could be, the freshness of beginnings, the infinite malleability, the promise of perpetual improvement and change, and personal and social transformation, all while getting rich. Start-up futurities promise the perpetual betterment of life, and the promise of change is intrinsic to it. All of these promises excite and hardly ever ask to attend to the consequences that these ideas have, the resources these processes draw upon, and the complexities of solidifying and staying put that are also necessary for social life.

Throughout this dissertation, I show how, despite the seeming inevitability and openness of neoliberal futures, they require a lot of work to be maintained and appear desirable. Even then, it was not open to everyone on equal terms. Showing the work that maintaining the neoliberal future ideal required for my interlocutors allows us to question its inevitability and eventually also opens space for a discussion of possible alternatives. This seems a crucial task in a context where many have felt that "it is easier to imagine the end of the world than the end of capitalism" (Jameson 2005). Following the feminist approach to studying capitalism, this thesis aims "to reveal the constructedness—the messiness and hard work involved in making, translating, suturing, converting, and linking diverse capitalist projects—that enable capitalism to appear totalising and coherent" (Bear et al. 2015). In each chapter of this dissertation, I highlight one domain (e.g., global imaginaries, urban space, social organisation, value, subjectivity, and body) in which the hegemonic neoliberal future made itself apparent as an ideal

and then attend to the struggles in attempting to bring this idea to life. This way, I show both the enticing power of this future and reveal its limitations. In the process, I develop a framework for an ethnographic study of futures in each chapter, highlighting multiple considerations for studying futures ethnographically.

3. Why Study Technology Start-ups in Singapore?
Anthropology of (digital) technology

Anthropologists have traditionally studied technology as part of material culture (Pfaffenberger 1992; Bruun and Wahlberg 2022), yet establishing serious anthropological attention to digital technology took a while (Escobar et al. 1994a; Ingold 1997). Anthropological work on digital culture often draws upon and contributes to adjacent fields such as Science and Technology Studies and Media Studies, making disciplinary boundaries often feel arbitrary. However, the most prominent earlier works continued the material culture approach to understanding digital media and the cultures around it (Horst and Miller 2006). That allowed anthropologists to challenge many popular assumptions about digitalisation's perceived global effects. For example, Miller and Slater's pioneering ethnographic work on the Internet in Trinidad (2000) showed how the Internet, rather than being 'virtual', 'seamless', and 'placeless', can be better understood as emerging from real-world practices in Trinidad.

In 2010, Gabriela Coleman reviewed the ethnographic studies of digital media technologies. She suggested that most of the work can be loosely grouped into three areas: the cultural politics of digital media, the vernacular cultures of digital media, and the prosaics of digital media (Coleman 2010). Indeed, by the second decade of this century, digital anthropology was "well on its way to becoming a full-fledged subdiscipline" (Boellstorff 2021, 43) and as Geismar and Knox remarked: "debates and discussions within the field of digital anthropology have flourished both within and beyond material culture studies and within and beyond anthropology." (Knox and Geismar 2021, 1) Even though the work produced under the title 'digital anthropology' is incredibly diverse, yet rather little attention has been given to studying the people who are creating the digital technologies themselves, and the cultures surrounding that production. As Geismar and Knox explain,

> "(..) an exclusive focus on users tells us very little about the
> digital systems themselves – the material conditions of their
> production, the cultural logics that go into their design, their

capacity to reorganise the temporality or spatiality of social re-
lations or the opacity of many of the infrastructures of digital
life." (Knox and Geismar 2021, 8)

Carolyn Marvin, in her influential book "When Old Technologies Were New", ar-
gued that even historians of technology have typically overlooked the role of 'technical
actors' such as electricians in the way technologies such as electricity and phones came
to be understood. She argues that what might be typically seen as 'technical actors' are
"as deeply involved in the field of cultural production as in the field of technical pro-
duction" (Marvin 1988, 7).

Some of the earlier works exploring the making and developing computer technol-
ogies were pioneered by Lucy Suchman, who studied the design and office practices at
Xerox Palo Alto Research Center, affirming the intertwined relationship between what
is designed and the cultures within which the objects are produced (Suchman 2000).
English-Lueck ethnographically traced the broader everyday context of life in Silicon
Valley (2002) and highlighted the diversity and cultural complexity of the place. Works
by Turner (2006) and Zandbergen (2011) have provided more context to the cultural
environment of Silicon Valley by tracing the historical and spiritual influences of count-
er-culture and connecting them directly to the production processes of digital technol-
ogies (Turner 2006b, 2009). Ethnographies about working ethos in the gaming indus-
try (Dyer-Witheford 1999) and the hacker culture and free and open source software
movements (Kelty 2008; Coleman and Golub 2008; Coleman 2010, 2013, 2014) all have
illustrated how the social and cultural processes that sustain and enable the production
of digital artefacts are crucial for understanding not only what is being produced, but
also brought insights about the nature of work in technology sector.

The making of commercial web services

The production of web services through which the majority of the world under-
stands and experiences 'the internet' or 'the digital' happens on the spectrum between
large corporations and the products of hackers and free and open source software com-
munities, oftentimes experienced through specific apps. As Marwick, one of the few
scholars who has given more attention to the economic side of the development of web
technologies, has argued about social media technologies,

"To understand the industry of social media, we must look at Sili-
con Valley's venture-based start-ups, their culture, and how this

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culture has been and is being exported—for better or for worse—
around the world." (Marwick 2018, 2)
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She argues that technologies that people end up using are not only shaped by technological cultures but, importantly, are part of the industry and particular economic relations between the different actors involved in producing and consuming these technologies. In anthropology, we often contextualise the Web with regard to its counter-cultural and military origins (Barbrook and Cameron 1996; Turner 2006a; Rosenzweig 1998; Zandbergen 2011). Here, I propose that we pay more attention to 1994 and the browser wars (Kelty 2008), which mark the beginning of the increasing commercialisation of the Web and transformations in the interfaces and conceptualisation of 'users' that came after. After all, the majority of the inhabitants of the world understand the internet through its 'consumer-facing' web services - such as search services, online maps, news sites, taxi booking applications or social media, which are, in essence, very much the kind of services my interlocutors in Singapore tried to develop. Yet, surprisingly, in anthropology, very little attention has been paid to this intersection of commercial and technological cultures, where most web technologies get produced.

Geismar and Knox, in a recent edited volume on digital anthropology, note that most anthropological attention has focused "on open source rather than closed corporate forms of digital organisation (e.g. Kelty 2008)" due in part to the inaccessibility of the latter (Knox and Geismar 2021, 8-9). It may possibly also have something to do with anthropologists' own aspirations and biases, being more interested in the seemingly more noble value-driven areas of social organising rather than the 'business' side of sociotechnical life, which is left for economists and business studies to explore. Interestingly, some anthropologists have even insisted on keeping these areas separate - for example, Coleman has argued that with her study of free and open-source hackers, she wants to make sure that "it [will be] more difficult to group free software in with other digital formations such as YouTube, as the media, pundits, and some academics regularly do under the banner of Web 2.0." (Coleman 2013, 20). While it makes sense from the perspective of the argument she makes about the particularity of the morality of hackers working on free and open source software, in terms of thinking about the web as a sociotechnical system, such separation hinders rather than illuminates. The cultures of hacking and entrepreneurship have been closely intertwined (see, for example, Barbrook and Cameron 1996; Barbrook 1998; Turner 2005, 2009; Ardévol and Lanzeni 2017), as Coleman herself acknowledges.

Studies of contemporary large web technology companies at the intersections of media studies and political economy have been done by van Dijck (Dijck 2013; Niederer and Van Dijck 2010; Dijck and Nieborg 2009), emphasising the role of commercial con-

cerns as shaping the design and practices of web technology companies. While powerful in illuminating the power of design and economics, the latter does not provide the intimate insight that ethnographic research does, which is what this study aims to do. A good example and inspiration is Silvia Lindner's ethnographic study of makers in China, where she shows how the maker and market cultures are deeply intertwined through the notion of 'socialist pitch' (Lindtner 2020). In this thesis, I draw on Lindtner's work extensively, not least because her research also unfolded in an accelerator program. Another example is the work of Irani (2015), who studying hackathons in India, has argued that these social spaces where technology enthusiasts gather should be seen as places of ideological constructions, for example, "hackathon is not just a place where technology gets made (..) [it is] a pedagogy of entrepreneurialism"(Irani 2015, 3), highlighting the importance of understanding these cultures of technological thinking and making in an economic context. Thus, part of the task of this dissertation is to explore the structural pushes and pulls that shape individual actions as they journey into making web technology companies and how digital services emerge in the interplay between personal aspirations and more extensive institutionalised or not economic and political structures. Only rather recently, more critical attention has been given to exploring start-up culture as a global phenomenon (Friederici, Wahome and Graham 2020; Koskinen 2023) and particularly the role start-up culture plays in various nation-building and governance projects (Getzoff 2020; Moisio and Rossi 2020; Chua 2019; Irani 2015; Lindtner 2020).

Studying technology entrepreneurship in Southeast Asia

The second blind point that this dissertation tries to correct is that the knowledge generated about these spaces of technology business production stems mainly from the global North. The few ethnographies focusing on production outside the large centres show the centrality of Silicon Valley in this relationship and counter the idea that globalisation and new network technologies have rendered the world flat (Castells 2004). Koskinen (2023), building on Ong and Collier (2005), has suggested viewing start-up culture as a global form. A system of rules and principles that spread and develop across different contexts in context-specific ways, yet still with Silicon Valley functioning as a figurative template for startup cultures around the world (Koskinen 2023). Yuri Vladimirovich Takhteyev's study of software programmers in Rio de Janeiro showed how "peripheral participants in many ways bear the burden of maintaining the predominance of central sites" (Takhteyev 2009, 427). Similarly, Biao's study of the global networks of Indian programmers leading up to the Y2K bug detailed the highly unequal

nature of the worldwide IT labour force (Xiang 2007). Such works criticise the global inequality in the production of the 'new economy', where the global North usually claims the more intellectual, creative forms of labour and the positions by the assembly line and in resource extraction are relegated to the global South (Dyer-Witheford 1999; Escobar et al. 1994b; Lüthje et al. 2013; Srinivasan 2017).

Studying technology start-ups elsewhere, more attention has been given to analysing the discourses that construct entrepreneurship in particular locations. (Getzoff 2020) has examined the discursive construction of Israel as a start-up nation, depicting how this discourse also produces a neoliberal Zionist subject that economically outperforms Arabs and Palestinians and provides a neoliberal management template for other nations. Pollio, in turn, has analysed the narrative discourses that constructed Cape Town's so-called 'silicon cape' as the entrepreneurial capital of South Africa and Africa at large (Pollio 2020).

When it comes to studying digital technologies in Southeast Asia, a large part of the attention has been given to the use and appropriation of technologies, especially as a means of civil activism (especially in the case of Indonesia and Malaysia - e.g. Postill 2014a, 2014b; Rafael 2003; Jurriëns and Tapsell 2017; Tapsell 2021; Lim 2017; Nisa 2018; Frey 2020; Lengauer 2016; Sinpeng 2020; Barendregt and Schneider 2020; Schneider 2023. Interesting work is also produced at the intersections of embracing social media for advancing one's own economic goals - either through blogging or influencer culture (see, for example, Abidin 2016, 2015, 2021). Yet again, very few studies explore the technologies' producers and the contexts through which these technologies emerge. Barker's study of engineers in Indonesia is an interesting earlier exception, albeit with a strong focus on the role of the nation-state (Barker 2005) rather than delving into the lives of the engineers. A recent edited volume by Jurriëns and Tapsell on Digital Indonesia (2017) includes a section on e-commerce, thus recognising the importance of this domain within studying digital culture. Yet, none of the three articles in this section engage in a serious ethnographic analysis of Indonesian technology entrepreneurship. They do make a point, though, that there are a lot of expectations about how technological entrepreneurship should unfold in Indonesia, thus indicating that this is a culturally charged area, one that is worth exploring.

The start-ups I worked with aimed to provide specific, primarily utilitarian services - inventory management for stores, job searches, online entertainment for children, facilitating online travel planning, shopping online, video editing, etcetera. Most wanted to create technologies not as political statements but as pragmatic businesses and as a way to personally realise themselves. They were both inspired and constrained by globally and locally circulating examples of what it means to start a business. In Singapore, start-up technology entrepreneurship was understood and introduced as a new,

different form of entrepreneurship (Chua 2019). That understanding came with opportunities and challenges, as I will show in the coming chapters. In this way, this work shows how people everywhere are entangled in the enticing promises of neoliberalism. How do people in Southeast Asia, rather than just engaging as users with consumption or political activism in mind, have the agency to pursue the paths of entrepreneurship and innovation, and how exactly do they formulate what are the needs and ideas for the future and how do they claim their own futures?

4. Structure of the Thesis

Seth and John's start-up journey, sketched at the opening of the introduction in many ways, sets the narrative arch of this monograph. This thesis is structured into an introduction, a conclusion, and six content chapters, all studying futurities ethnographically. I focus on six domains where start-up futurities were making themselves felt in the context of everyday life and called for transformations, this way also contributing to the sense of their hegemonic power. I discuss 1) the ways in which futurities structured global sociopolitical imaginaries; 2) the ways in which various futurities materialised in urban space; 3) the ways in which start-up futurities invited an imagination of social relationships conducive for production as an 'ecosystem' 4) the ways in which futurities informed notions of value; 5) the ways in which futurities shaped people's subjectivities; and 6) the ways in which futurities were embodied and performed. Each chapter reveals the hard work that was needed to maintain the ideals encapsulated in start-up futurities as attainable and the limitations my interlocutors came across. The focus of each chapter also allows us to advance our thinking about how to study futurities ethnographically and move from a global scale to national, social and subjective levels.

CHAPTER ONE: "Come to Asia, Singapore is the Future!" The Aspirations of Scale

The opening chapter follows the invitations expressed in various forms by start-up entrepreneurs, investors and Singapore's government to see Singapore as the centre from which to capitalise on the emergent future in Asia. The chapter describes how Singapore's centrality in this imaginary geography relied on balancing two important aspects - on the one hand, its proximity and cultural affinity to the rising populations of 'Asia', which were being recast as emergent consumers of digital products. On the other hand, this position relied on Singapore's deep embeddedness in global finance and eagerness to learn from places like Silicon Valley. The chapter questions this imaginary geography in which Singapore stands central vis-a-vis Silicon Valley and Asia and

asks what sort of temporal relationships, social and historical contexts generated and sustained the appeal of this geography, what sort of future-making practices it enabled and explores the limitations of these images of the future ethnographically. Using examples from start-up conferences, blog discussions regarding Singapore's position in the start-up economy, and a practice called 'visa runs' where entrepreneurs would exit and re-enter Singapore to extend their tourist visas, this chapter highlights the appeal and contradictions of this imaginary geography. The promise of building economies of scale in Asia at the moment when US and European economies were in decline animated this capitalist dream of future growth and helped to attract people and capital to Singapore. It also, however, relied on and reinvigorated neo-colonial and techno-orientalist tropes, thus allowing us to view critically the claims of 'newness' central to the coming of the new economy.

CHAPTER TWO: Technopreneurship and Singapore's Future

The second chapter describes how technology entrepreneurship emerged as a national political agenda for the future in Singapore. Based on literature study, I'll explain how, for Singapore's political elite, 'the future' has been instrumental in defining the present moment and opening up areas for intervention and control. Ethnographically, the chapter zooms in on a particular place - Blk 71, an old factory building within the one-north science park temporarily allocated by the government for technology start-up use in 2010. There, the bottom-up initiatives for entrepreneurship came together with the Singapore government's ambitions to foster a future of a knowledge economy. While Singapore's government controlled the narrative about 'the future' and presented it as the only possible way ahead, the materialisation of it in space through infrastructure project one-north and the case of Blk 71 reveals the actual multiplicity of futures that permeate any given moment, and thus provide an insight in the contested nature of this vision. Overall, this chapter contextualises the Singapore government's ambitions to foster the knowledge economy future as part of a longer historical trajectory and how globally circulating ideas about the 'knowledge economy future' found their ground and can be understood as 'particularly Singaporean'. This chapter, therefore, emphasises the importance of always approaching future-making historically, locally and through materialisation in space.

CHAPTER THREE: Building Singapore's Start-up Ecosystem

Using examples from start-up networking events and places like Blk 71, amongst others, this chapter describes how the people directly involved in building technology start-ups rallied around the concepts of 'start-up community' and 'start-up ecosystem'

which denoted specific social roles and ways of engaging for different actors - government, budding start-up entrepreneurs, experienced serial entrepreneurs, investors, bloggers, students, etc.

Examining the sociality fostered by these actors, this chapter introduces the hyper-socialized environment that valorised networking, serendipity, openness and inclusivity and describes how it was equally characterised by exclusion, secrecy and strategic planning. It argues that these spaces and sociality provided the social context in which ideas of innovation and social change could be translated into commodity form and thought of as businesses. Through social validation, this context was crucial in supporting the materialisation process of start-up ideas into early-stage businesses. This context also educated and trained people to work with a very specific understanding of entrepreneurship - one that is scalable, serial and high-growth.

The chapter argues that the idea of an 'ecosystem' functioned as an image of the future of frictionless production in the new economy. The metaphor of ecosystem suggested that this future vision was 'natural' and 'desirable', but the stories described in the chapter will show that instead of being self-organising, the 'ecosystem' required a lot of work and effort, both discursive as well as material to appear feasible and attainable.

CHAPTER FOUR: Creating Value

This chapter addresses this promise inherent in start-up futurities that through technological start-ups, entrepreneurs can find personal fulfilment, change the world, and become rich in the process, all at once. It explores the work that goes into materialising technology start-up ideas into products and businesses and highlights the shifting understandings of value in the process. It describes how the various notions of value are linked to different forms of future by following a case of a start-up called Wonderings over the course of five years of the company's existence.

In the start-up world, Wonderings would be easily looked at as a 'successful' case - emerging from Start-up Weekend, it was accepted in The Accelerator program, attracted investment, and within five years was acquired by another, larger company. Following the story from the inception of the idea to the dissolution of the business, this chapter will show how the initial value of the product materialised through deeply personal, affective and embodied aspirations of future. Yet, at the moment when the company had to be valued in a financial context, this gave way to the emptying of the future, and the product was subjected to the *potential* value of company, which in turn changed how the product was developed. Drawing on examples from pitch sessions, the Lean Start-up methodology, and various training programs for start-up entrepreneurs—including the

founders of Wonderings—this chapter explores how value was understood in the early stages of a start-up and its product. It examines what was perceived as valuable, how value was performed, created, and negotiated, when there was little or no 'substance' for it in terms of the product. Importantly, the chapter invites to question for whom is the value created at the end of the day?

CHAPTER FIVE: The Entrepreneurial Ideal

Progressing further into the thesis, I explore what kind of subjects this vision of an entrepreneurial future imagined. Chapters Five and Six explore entrepreneurship as a personal, embodied project of transformation, which meant continuous work to commercialise important aspects of one's identity in order to attract potential capital. This chapter explores the importance of futurity in this neoliberal subjectivity. When people discussed the way one, and others should be and how they wished to become, it offered an ethnographic glimpse into ideas about self-hood that were linked to the dominant futurities.

My interlocutors thought of themselves as future 'projects in the making', a highly commodified form of selfhood where all their actions and experiences were expected to build up their human/social 'capital'. This, in turn, meant that they had to think of themselves as always flexible, always changing and always developing in ways that would maximise their opportunities. The entrepreneur becomes a self-directed labourer in the service of international financial capital. Drawing on interviews and observations I highlight two important aspects in this regard. One, central to this subjectivity was to be always looking for ways how to reframe current experiences as a potential opportunity in the future. This way, the narrative about failure as an opportunity, as illustrated by Seth's experiences in the opening vignette, also becomes convincing. Two, it required a constant performance of certainty about one's capability to plan for the future and strategise one's role in it.

CHAPTER SIX: Embodying the Entrepreneur

The Sixth Chapter continues exploring entrepreneurship as an individual ideal, but approaching it as an embodied, lived process highlights how the contradictions held within the neoliberal ideal work out in practice as people struggle to realise this ideal. Some parts of personhood are less 'makeable' than others, especially when it comes to gender and race. Through the examples of how bodies had to be controlled, 'Asianness' transformed, and gendered performances managed, the implicit racial and gender ideologies of the entrepreneurial ideal become visible. They reveal how this ideal is steeped in global power relations and puts at a disadvantage bodies that don't fit the

implicit ideal based on the Western white male stereotype.

Family relationships were typically seen as something that slowed down the speed and limited the flexibility of the entrepreneur unless they provided resources, such as inspiration for commercial ideas (e.g. ageing parent, sick child, angry spouse, etc.), or useful contacts or networks, or financial support, or space to work or a chance to offload care-work. Similarly, military service was seen as delaying entrepreneurs unless it was understood as a space to gain useful connections, grow one's network, learning about new business opportunities.

The concluding chapter confronts this implicitly white masculine ideal by showing how entrepreneurs in Singapore struggled to live up to this ideal. Race and gender all caused different levels of friction in the commodification process and, when commodified, had different market values or abilities to attract attention and, along with potential financial capital. By focusing on the continuous work, social context and body, this chapter challenges the understanding of entrepreneurialism, common in business management, as a compilation of particular personality traits.

5. This Project

This research has been based on the "deep hanging out" and participatory observation of daily practices of start-up entrepreneurs, investors, mentors and many others who associated themselves with the technology start-up scene in Singapore. The first step in exploring what my field could be was via the internet. During my pilot study in late 2010 and early 2011, I looked for technology-related events in the region that were planned or had happened and had been discussed online, using 'BarCamps' and 'unconferences' as my starting point. By mapping out the instances of various BarCamps, I could identify the people who seemed to be actively involved, the organisations they were associated with, and, importantly, also the leading blogs and media platforms that reported on these events. Following these online sources allowed me to draft a list of people to reach out to, which I did via e-mail, followed by a meeting in a local cafe or food place once I travelled to Southeast Asia.

After the pilot study, I kept following the forums and news platforms I had become aware of during my initial travels. In the autumn of 2011, on the Hackerspace SG forum, I learned that a few people in Singapore, whom I had already been in touch with during my trip earlier, were launching a new initiative in Singapore - a start-up accelerator. I jumped at this news. This context seemed to provide an interesting ground for my research on how technology enthusiasts were bringing a technological idea to life

and becoming entrepreneurs. Academic reasoning aside, this also seemed to offer some structure and a base' where to ground myself. As the planned date for my fieldwork was approaching, I was increasingly experiencing the anxiousness many scholars feel in the face of uncertainty of impending fieldwork (see, for example, Coleman 2013). Where will I go? Who will talk to me? How will I fill my days in a meaningful way? Grounding myself in the accelerator program offered me a clear starting point for at least 100 days. Excited, I e-mailed the two organisers to see if they would be open to having me observe the program. In a quick response, I was kindly welcomed to be their 'in-house anthropologist' for the duration of the program.

The Accelerator program was run multiple times - I followed the first run of the program in its entirety in 2012 and partially the subsequent three runs. I spent six months, from January to July 2012, following the first start-up accelerator program in Singapore and making shorter trips to Indonesia (March/April) and the Philippines (May/June 2012). I travelled to Singapore again in 2013 from February to March to observe the second run of the program and again in 2014 from March to June, combined with a brief trip to the Philippines at the end of this trip. I then travelled briefly to Singapore again in February 2016. These visits to the field were supplemented with online calls with my interlocutors that I had gotten to know, as well as following the events through online forums and blogs.

The people behind The Accelerator become akin to my host family in many ways - which is not uncommon in anthropological fieldwork. Not only could I study their work in close detail, but my informal association with them also provided a social context when meeting and introducing my research interests in technology start-ups to others. The fact that The Accelerator opened a cafe and organised regular informal networking events in their large open office space meant that this was an excellent place for "deep hanging out"; in fact, it was not very different from classic anthropological fieldwork. Being close to the organising team gave me an unexpected but deep insight into the investors' concerns. It also allowed me to see the development of more than 20 start-ups close-up as I sat in their meetings with the organisers, mentors, and pitch sessions, as well as in the shared office room, joined them for lunch, dinners, and smoking breaks. It is out of this position of being immersed in a particular training program and the connections that it provided within Singapore and the region that this dissertation and its central arguments emerged.

The Accelerator program, for the majority of the time of my research, was housed at Blk 71 - a large ex-factory building officially allocated to start-ups and located within the one-north development area. Such a position gave me easy access to many start-up companies and allowed me to explore their practices in closer detail. In addition, I spent time at physical locations of other start-up spaces in Singapore, such as Hackerspace and The Hub and visited multiple others, such as N-house, the Foundry, etc. Alongside spending time and meeting my interlocutors in these comparatively permanent locations, I also regularly took part in the various events and meet-ups such as BarCamps, Start-up weekends, Founders Evenings, SG Geek Girls, Open Houses of The Accelerator, Startup Grind events, WalkaboutSG, Supper Happy Dev House, Hackathons, various pitch sessions organised by universities or during the start-up conferences Echelon and Startup Asia; networking sessions between investors and start-up founders, etc. organised by different players, all of which I describe in greater detail in Chapter Three when discussing the idea of a start-up ecosystem. In addition to participating and observing, I did semi-structured interviews with investors (early-stage private investors and fund managers), entrepreneurs, start-up event organisers and multiple start-up program managers. These interviews were all in English, the first language for many of my interlocutors, but for many others, including me, their second language. Most of the start-up entrepreneurs were in their twenties and thirties, while most of the investors were in their forties, fifties or older.

In addition to my fieldwork interactions and observations, I followed and analysed the online discussions that were taking place in online discussion groups and online media platforms such as e27 and TechInAsia, which addressed the technology start-up industry. Likewise, I read the books, blog posts and news articles that start-up founders were advised to read or discuss during our meetings. Like many of my interlocutors, I followed US-based technology and start-up media such as Hacker News, Wired, TechCrunch, etc. I also draw on various government documents and reports about start-ups in Singapore and globally. My interlocutors often wrote publications with varying depths of analysis - from blog posts to manuals on accepting investments and reports for government to their master's and doctoral theses and books on entrepreneurship-related topics. Where necessary, I also draw upon these sources, some of which were public, and others were shared with me privately.

At the time of my research, the social networking site Facebook was very popular across Southeast Asia. I decided early on that I would not actively invite anyone I met to connect with me there because Facebook can be used in many different ways, including it being perceived as a very 'private' place (Miller et al. 2016). I accepted the 'friendship'

request only if the people I had met invited me to connect on Facebook after they already knew I was an anthropologist doing research.

All fieldwork positions come with their gains but also limitations. Locating myself within Blk 71 and The Accelerator, in particular, also meant that I was less involved with events and start-ups in other locations and contexts. The benefit of following a few companies in closer detail and frequently attending events in different locations provided me with both the breadth and depth necessary for ethnographic research. At the same time, I am aware that positioning myself, for example, within one of the universities' start-up spaces or Hackerspace would have shaped this dissertation differently. Moreover, Blk 71 was a project championed by specific people in the government, and even if the Singapore state is often discussed as a monolith entity, it certainly isn't one; instead, it is a complex mishmash of splintering interests. To some degree, this is addressed in Chapter Two. Likewise, The Accelerator had its particular approach to entrepreneurship, and my association with it opened many doors while also certainly closing some others.

My position within the accelerator program

Within The Accelerator program, my position vis-á-vis the start-up teams was introduced as a researcher, and in an e-mail sent to the start-up teams, the director of The Accelerator clarified:

> "Zane - is not part of our operational team and is here to do independent academic study. She would appreciate it if you are willing to share your journey through the bootcamp and beyond, but that is an arrangement between you and her."

I also relied on individual explanations and discussions with the members of the participating start-up teams about my role. I reminded them that they could ask me to leave any meetings at any moment, which some did on occasions when they felt the need for it. In practice, I was often referred to as someone 'to talk to', a 'psychologist', someone who is not involved but can 'help to see the forest from the trees' after a conversation. The start-up founders within The Accelerator, used to my continuous presence, would often invite me to walk with them for them 'to vent' after a particularly stressful experience. This resonates with the labour division in the Shenzen accelerator that Lindtner studied where women in support staff were responsible for the emotional labour to make the "precarious and high-risk conditions of "venture labour" both

manageable and fun." (Lindtner 2020, 145) I would also help them in pitch training by listening and checking if they are following the script or keeping time. In attempts to be 'useful', I would also help them prepare questions for their potential customers and join in the occasional interviews, providing a sounding board to discuss their ideas. Over the course of time, I was increasingly viewed as a holder of specific knowledge that can be useful for the participants, resonating with Lucy Suchman's thoughts on the 'consumption of anthropology' in commercial enterprises where the anthropologist is herself somewhat exotic as well as has potential to provide intimate access to relevant others (Suchman 2007).

Position in the field

After the first month in the field, I started to worry that I often talked and spent time with people from Europe and the USA. Was I subconsciously looking out for foreigners like myself? I questioned myself. This misguided search for an 'authentic Singaporean experience' (Handler 1988) allowed me to realise that the start-up space in Singapore indeed was a mix of Singaporeans, people from the region and many foreigners from around the world, but predominantly the West. Even though my research was in Singapore and my insights are contextualised in relation to Singapore, my interlocutors were a highly diverse group with regard to their ethnic and national backgrounds as well as their temporariness or permanence in Singapore. It consisted of Singaporeans (some belonging more easily than others to the state-recognised racial labels such as Chinese, Malay, Indian; see, for example, Rocha and Yeoh 2021), Filipinos, Indonesians, Indians, Malays, Americans, and people from various European countries. Many had very diverse global migration experiences, challenging my attempts to 'place' them to a single, explanatory origin. For example, Singaporeans who had lived large parts of their lives in Canada and the United States, or second-generation Eastern European immigrants in North America now moved to Singapore, or Indonesian Chinese whose families migrated to Hong Kong but then moved to Singapore for education (see, for example, Ong 1999). While many of my interlocutors were born and raised in Singapore and did not plan to leave for extended periods, many others were hoping to spend extended time abroad at some stage in their lives. Foreigners had relocated to Singapore, some permanently, others did not plan to stay long term, while many others saw Singapore as their 'base' to touch and go as part of their mobile lifestyle. Many didn't identify as living in Singapore but would be arriving there for work on a regular basis for extended periods of time over many years.

In this sense, this ethnography is 'Singaporean' insofar as it recognises Singapore

to be constituted by such a diverse group of people who were there at the moment of my fieldwork, but many others, just like me, were there temporarily. As I will discuss in Chapters One and Two, this is not an accident but a result of conscious Singaporean government actions. This research primarily focuses on the perspectives and experiences that would belong to the so-called 'metropolitan' part of Singaporean society - those who have received a good education and have travelled abroad as well as 'foreign talent' - well-educated professionals from abroad that the government has deemed necessary for the state's economic development. Although some of my informants came from working-class backgrounds, they had generally attained a university education, which positioned them for upward socioeconomic mobility. Many others came from much well-off contexts already, and this socioeconomic capital they inherited was crucial, as I will discuss in more detail in Chapter Five. My occasional conversations with working-class Singaporeans such as taxi drivers, cleaning aunties and hawker centre workers reminded me just how particular and bizarre the start-up scene was.

In many aspects, I resembled many of my interlocutors. My education (including my technical education during my Master in Media Technology at Leiden University), my interest in start-ups, and my international background fit me relatively easily in Singapore's context. Being well educated and white skinned often meant that I was perceived as a 'foreign talent', and that, in combination with me 'studying culture' sometimes seemed to suggest that I have deeper knowledge and insight into 'how things should be' (Suchman 2007). I was also part of the racial hierarchy in Singapore, where colonial legacies, in combination with the Singapore state's policies, meant that whiteness afforded me benefits that many of my interlocutors of colour in many cases would not have (see, for example, Rocha and Yeoh 2021). Start-up sociality, which I describe in detail in Chapter Three, celebrates openness and sharing, and in that sense, it also facilitated my research.

Being female also shaped my position in the field, as most interlocutors were male. Within The Accelerator, I bonded more with the female support staff of the program, developing more intimate relationships and insights about their concerns. While many male interlocutors became good friends, I believe being male would have led me to different contexts and events, as I was aware many 'male only' events were happening. On the other hand, perhaps it was easier for men talking to me to open up about the pressures of family and spheres that commonly would have been seen as off-topic in this masculine environment. A more extensive discussion of race and gender occurs in Chapter Six of this dissertation.

The relationships with many of my interlocutors grew over time. I participated in their life events in ways that went beyond 'professional' - for example, by celebrating Chinese New Year with their families, being invited to weddings and birthday parties,

watching movies, shopping together, and even going on a multi-day hike to Mount Kinabalu in Malaysia. Wei and his mother were incredibly generous, hosting me in their family home upon my return trips in 2013 and 2014. This sense of having a 'home' meant a lot, not only emotionally but also financially. In 2014, Singapore was ranked the world's most expensive city by the Economist Intelligence Unit (EIU) in their Worldwide Cost of Living Survey (*Worldwide Cost of Living* 2014), and my PhD research budget was stretched very thin by my fieldwork in Singapore. The close relationships with many of my interlocutors and their international mobility also meant that we would occasionally meet outside of my official fieldwork when they visited Europe. Multiple of my interlocutors have visited and stayed with me in The Netherlands and Latvia.

I am pseudonymising most of my interlocutors and their companies in order to protect their privacy. I am keeping the names of the locations, events, blogs and news platforms unchanged. In some instances, I have taken the liberty to change some minor information regarding the business or personal history of the people I am describing, aiming to make them less identifiable and, at the same time, not entirely misrepresent them. Even though for people personally knowledgeable of the start-up field in Singapore at the time of my research, it would be rather easy to recognise the mentioned people and companies, my efforts in pseudonymising are primarily concerned with preventing my dissertation showing up in online search results when these companies or people are being searched for by their names.

Other work

Parts of this dissertation have been published earlier. Parts of Chapters One and Two found their way into Tim Bunnell and Daniel P.S. Goh's edited volume "Urban Asias: Essays on Futurity, Past and Present" in a chapter titled "Geographies of Futures and Singapore's Technopreneurship Aspirations" published by Jovis in 2018, while part of the material and arguments from Chapter Three were published as Kripe, Z. (2019). Making Community Work: Constructing Singapore's Start-Up Community. Asiascape: Digital Asia, 6(3), 161-184. https://doi.org/10.1163/22142312-12340110. Parts of Chapter Four informed the Kripe, Z. (2014) "The business behind the business: the role of finance in the design of web services" Selected Papers of Internet Research 15: The 15th Annual Meeting of the Association of Internet Researchers.