Make, Measure, Fail, Learn, Repeat.
Life and Work in the Start-up Episteme

by

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Abstract

This research examines how the concept of start-up has transcended its original acceptation as a synonym for early-stage, hi-tech company to become a historically specific way of knowing, ordering, and acting in the world. Relying on the Foucauldian archaeological project, I define such a historically specific way of knowing as an episteme, understood as a series of regularities across contemporary discourses. Echoing concepts from complexity economics, design thinking and Agile software development, the start-up episteme provides a model by which to interpret reality and articulate power, both over others and within ourselves. To capture the manifold implications of the start-up episteme, I conducted a 22-month ethnographic investigation of Vancouver's digital and new media industries. Through participation in professional groups, interviews with digital practitioners, and review of managerial literature, the research analyzes how the start-up, as a broad signifier for progress and disruption, is reshaping corporate organigrams, informing local development policies, and constituting new professional identities and collective work cultures. The fieldwork reveals how living and working in the start-up episteme requires people to remain constantly open to jumping on new projects (pivoting in start-up jargon) to maximize the chances of stumbling on successful ones. This need to stay flexible and agile at all costs justifies risk-prone practices of self-exploitation, which are justified as performative displays of a proper hustling work ethic. The result is the proliferation of professional subjectivities (e.g., the digital nomad, the solopreneur, the freelance, the bootstrap entrepreneur) trapped in a state of perpetual becoming, where self-actualization and stability seems always one project away but is never achieved. The findings emphasize the tactics employed by digital and new media workers in the attempt to escape new forms of managerial (self-) control and to create a more just and inclusive workplace. Besides contributing to the ongoing debate about digital and entrepreneurial labor, this research shows how ethnography can be employed to experience and study macrotheoretical concepts and narratives. This approach acknowledges the impossibility of understanding some forms of knowledges through simple observation and invites ethnographers to hybridize their research practices with those of their participants.

Keywords: start-up culture; digital labor; entrepreneurship, digital media; episteme.

For Francesca and Tommaso

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As a settler scholar of European descent, I respectfully acknowledge that this research was conducted in the xʷməθkʷəy̓əm (Musqueam), Sḵwx̱wú7mesh Úxwumixw (Squamish), səl̓ilw̓ətaʔɬ (Tsleil-Waututh), q̓íc̓əy̓ (Katzie), kʷikʷəƛ̓əm (Kwikwetlem), Qayqayt, Kwantlen, Semiahmoo and Tsawwassen peoples unceded traditional territories.

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List of Acronyms

API	Application Programming Interface
BCIC	British Columbia Innovation Council
BMC	Business Model Canvas
CEO	Chief Executive Officer
DSI	Distinctive Software Inc.
EA	Electronic Arts
FIPPA	Freedom of Information and Protection of Privacy Act
FOSS	Free and Open-Source Software
LMS	Learning Management System
MDA	MacDonald, Dettwiler and Associates
MMOG	Massively multiplayer online game
MVP	Minimum Viable Product
NASDAQ	National Association of Securities Dealers Automated Quotations
PFF	Progress and Freedom Foundation
SCOT	Social Construction of Technology
SEO	Search Engine Optimization
SFI	Santa Fe Institute
SFU	Simon Fraser University
SOP	Standard Operating Procedures
STS	Science and Technology Studies
SWOT	Strengths, Weaknesses, Opportunities and Threats
ToS	Terms of Service
UBC	University of British Columbia
UWP	Urban Worker Project.
VC	Venture Capital
VEC	Vancouver Economic Commission
VFS	Vancouver Film School
VP	Vice President
WINBC	Wireless Innovation Network Society of British Columbia

Introduction

On Friday 10 March 2000 the NASDAQ closed for the weekend at the record level of 5,048 points. The day will be remembered as the turning point in the dot-com era – a bull-run which lasted eight years during which capital flooded into the start-up ecosystems of major metropolitan areas such as San Francisco, New York, and London (Cassidy, 2009). The euphoria lasted for the weekend as, on the Monday, the market entered a phase of high instability. Venture capitalists' expectations about the economic potential of media, computing and telecommunications convergence, were shattered by increased financial scrutiny and mounting scepticism about dot-com's fundamentals (Barbrook & Cameron, 1996; Indergaard, 2004, p. 128). Barely five years after Netscape's debut on the stock market, the techno-financial enthusiasm that fuelled the spectacular rise of what came to be known as the *New Economy* started crumbling right in front of investors and analysts (Willoughby, 2000).

"Technology changes, economic laws do not" (Shapiro & Varian, 1999, p. 2) warned economists in their attempt to curb the enthusiasm of investors caught up in what turned out to be the first speculative bubble of the twenty-first century. It took one month for the NASDAQ to collapse. From 10 March to 14 April 2000, the New Economy stock market index lost 25% of its overall valuation – the most significant points drop in its history. In the process, 500 internet-based start-ups failed, and half a million jobs were lost (Cassidy, 2009; Lovink, 2003).

Despite ultimately failing to realize the wildest dreams of start-up founders and shareholders, the New Economy was a period of great experimentation in the workplace. In major tech-hubs of the Global North, Internet-based start-up companies tried to harness the still largely untapped economic potential of technical knowledge and new forms of digital creativity. This often involved the subsumption of casual and immaterial labor, resulting in dot-coms becoming the archetype of a new breed of flexible and networked enterprises, where self-organisation and entrepreneurship substituted previous forms of bureaucratic command and control (Du Gay, 1996, p. 191). Dot-coms reframed digital labor as an opportunity for individual self-actualization in opposition to industrial capitalism's alienating dynamics (Marwick, 2013, p. 62; Turner, 2006, p. 237).

The managerial discourses which constituted the foundations for the organization of labor in digital start-ups endured the stock market downturn and evolved significantly in the post-dot-com period. In the twenty years since the NASDAQ crash, the logic of capital accumulation which originated in the heyday of the New Economy transitioned from the margins to the forefront of economic development agendas (e.g., European Commission, 2016; Minister of Citizenship and Immigration Government of Canada, 2015). Business schools and marketing gurus alike consecrated the “start-up” as the latest managerial revolution and connected it with other buzzwords of the post dot-com business zeitgeist, such as creative disruption (Abernathy & Clark, 1985), lean manufacturing (Ries, 2011), and agile management (Blank, 2007). The result was a pervasive, yet not necessarily coherent, start-up-inspired managerial discourse that, leveraging issues of empowerment, freedom, and autonomy, thrust the 1990s techno utopianism into the 21st Century. A discourse that echoes the free-wheeling and entrepreneurial spirit which, at the onset of the Internet era, Barbrook and Cameron defined as the *Californian Ideology* (1996): “a bizarre mish-mash of hippie anarchism and economic liberalism beefed up with lots of technological determinism” (p.10).

Unlike this earlier Californian Ideology, the contemporary entrepreneurial discourse is no longer the preserve the techno intelligentsia of skilled workers in the “media, computing and telecoms industries” (Barbrook & Cameron, 1996, p. 4). The Economist hailed the diffusion of the start-up into “every nook and cranny of the economy“ as a new Cambrian moment, one in which “anyone who writes code can become an entrepreneur—anywhere in the world” (Sigele, 2014). The influence of the start-up managerial discourse was not limited to the hi-tech and digital circles either. As a loose signifier for economic growth and innovation, it transcended its managerial acceptation to become a lens priming our perception of the economic reality and offering us a way to conduct ourselves within it. Besides providing managerial methods for the organization of people and technologies into systems of capital accumulation, the start-up lives today as a cultural phenomenon capable of formulating new meanings for existing economic institutions and processes. As a twofold system of economic and meaning production, the start-up discourse is creating new professional subjectivities and work cultures whose economic and societal implication remains largely beyond scrutiny (Werning, 2019).

The goal of the research presented in this thesis is to foreground and analyze the new forms of alienation brought about, and normalized, by the proliferation of the start-up discourse. Through a 22-month ethnography of Vancouver's digital and new media industry, I analyzed how the start-up way of thinking has influenced the work cultures, and the professional subjectivities, of digital and new media practitioners. In my research I emphasize and magnify the tactics on which my participants rely on in their attempt to escape new forms of managerial (self-) control introduced by the start-up managerial discourse. In the context of everyday working and para-working practices (e.g. social gatherings, tech-meetings, networking events), I identify the contested territory where cultural and the material instantiations of the start-up are enacted, confronted and contested. Specifically, I focus on the role that informal professional communities play as sites of resistance opposing the underpinning principles of the start-up paradigm. As liminal and immanent spaces for manoeuvre, these moments of tactical opposition can reveal the unrealized potential of the start-up way of thinking and open up possibilities for its democratization.

Structure of the thesis

The first step into my research is a theoretical one. The reader might have noticed how, so far, I have qualified the *start-up* as a discourse, as a managerial paradigm, and as a way of thinking. The use of such generic terms is a mere sleight of hand meant to hint at start-up's complex nature without actually defining it. To address start-up's multifariousness while trying to avoid reductionistic or essentialist definitions, in Chapter One I advance a conceptualization based on Foucault's concept of episteme. Episteme, concisely defined as the series of regularities taking place across contemporary discourses, is fundamental to my analysis of the start-up in relation to the knowledges that legitimize it. The reader looking for a precise definition of start-up will be disappointed by my use of episteme which, rather than capturing the essence of the start-up, traces regularities across discourses thus rendering it somehow legible and identifiable, yet at the same time impossible to grasp in its entirety. Based on this intentionally open-ended conceptualization of start-up, I investigate its potential as a cultural reference across a wide range of contexts: as an element in the constitution professional subjectivities, as a component of collective work cultures, as a model for urban and economic development.

Before exploring the start-up episteme in all its facets, in Chapter Two I introduce my research protocol. In particular, I describe the journey which led me to conduct an extensive ethnographic fieldwork in Vancouver, a city striving to become a global creative hub, and also a city marked by a turbulent industrial past and striking inequalities (Startup Compass, 2015; Startup Genome, 2017, 2019). The fieldwork unfolded over 22 months, during this period I attended more than 30 events for tech professionals as participant observers, and conducted 27 interviews with practitioners, employees, independent workers, and labor activists. Alongside classic ethnographic practices such as participant observation and interviews, I developed a software application which, retrieving data from the events platform *Meetup.com,* allowed me to map the Vancouver communities of digital and new media professionals. The experience of developing this software application also allowed me to experience firsthand the managerial practices of the start-up episteme. In Chapter Two I look back at my research journey and I reflect on how the same process of developing a research protocol (and the technological instruments underpinning it), constituted in itself a meaningful and unique opportunity to engage with the Vancouver community of digital and new media workers.

In Chapter Three I begin my analysis of the start-up episteme by tracing some of its cultural origins. Previous works have already investigated the emergence of flexible forms of production as a reaction against the disciplinary regimes of military, academic and economic institutions of industrial capitalism (e.g., Boltanski & Chiapello, 2007; Fisher, 2010; Ross, 2004; Turner, 2006). Although these contributions are fundamental and underpin most of my work, in this research I focus specifically on the nexus between the managerial ethos of the New Economy and complexity economics, a school of thought in economics championed in the 1990s by the Santa Fe Institute (Cowan, 2010). In particular, I analyze the influence that complexity had in the legitimization of self-management and soft power practices that were responsible for the constitution of the digerati worker: a bold, risk taking, independent, entrepreneurial, and mostly male, flexible individual. I then move the focus of my inquiry to the dot-com stock market crash of 2000, which I identify as the point of diffraction originating the lean and agile inspired entrepreneurial discourse that now permeates the start-up episteme. In tracing the elements of continuity, and of disconnection, between the New Economy and the start-

up episteme, I analyze how managerial and self-help literature promoted a lean approach to entrepreneurship and to personal development.

Having explored the historical conditions that led to the constitution of the start-up episteme, in Chapter Four, I analyze how its discursive regularities impact the very urban and economic fabric of cities. Using Vancouver as a case study, I discuss how the repurposing of complexity-inspired metaphors allows policymakers, alongside various international organizations, to describe local digital economies as emergent phenomena (e.g., ecosystems). In the case of Vancouver, positioning the city as a start-up ecosystem serves a specific rhetorical purpose within policy discourse. Specifically, it aligns itself with the notion of creative and cultural production as an instrument for urban and economic revitalization. Reiterating concepts such as self-organization and emergence, the start-up episteme at the local level furthers the idea that innovative and knowledge-based industries cannot be administered through centralized forms of control. On the contrary, they flourish when economic forces and actors are left free to self-organize. In Vancouver, the effects of the start-up episteme can be seen in the development of the *Vancouver Startup City* program (Vancouver Economic Commission, 2015), an initiative meant to attract investments and to retain digital companies, but that fell short of addressing the needs of the digital and new media workers.

In Chapter Five I explore the professional subject positions predicated into existence by the managerial discourses of the start-up episteme. Advancing a Foucauldian conception of subjectivity which regards it as being derived from power and knowledge without being fully dependent on it, I investigate the influence that power has over the constitution of the self and vice versa: the role that subjectivation has in the constant regeneration of epistemic power. Relying on my experiences in the fieldwork, I discuss how the percolation of managerial discourses from the organizational down into the personal, urges people to chase authentic and fulfilling professional identities. In doing so, the start-up episteme creates a culture where professionals' subjectivities are maintained in a perpetual state of becoming, where self-actualization and stability seem always within reach, but are never fully achieved. Focusing on subjectivity I was able to observe the process of subsumption as it incorporates critiques, and hope, into the mechanisms and the spirit of capital accumulation through the active participation of desiring subjects. The constitution of restless professional subjectivities, I argue in my

conclusion, represents the most visible aspect of capitalism's ability to recuperate previous forms of alienation, and to contextually introduce new ones.

Lastly, in Chapter Six I explore the interstitial spaces of resistance and critique within the start-up episteme. In particular, I analyze the role that informal communities of tech workers (meetups) can play in reforming the episteme from within. Based on my fieldwork observations, I argue that these gatherings could, potentially, become significant in the constitution of individual subjectivities and collective professional cultures capable to tactically reform the organization of labor informed by the start-up inspired managerial discourses. Theoretically, I borrow the concept of occupational communities as developed by Van Maanen & Barley (1984) and defined by the authors as informal organizations connecting workers with similar competences and professional interests. Occupational communities have been studied as impromptu sites of collaboration and mutual support amongst workers (Orr, 1996). Transposing the concept of occupational communities from industrial to flexible capitalism, I investigate the critical role that meetups have in the start-up episteme. In my conclusion, I discuss how, on the one hand, meetups effectively help new media and digital workers to navigate the uncertainty of start-up labor. On the other hand, these gatherings represent an enormous reservoir of immaterial labor which is selectively compensated by organizations and corporations to pursue their institutional goals. In the case of Vancouver, the city council capitalized the immaterial labor performed by the hundreds of professional groups to promote the city as a start-up ecosystem.

Contribution

Although my research is based on fieldwork conducted in the digital and new media industry of a metropolitan area of the Global North, my findings point to the far-reaching implications of the start-up episteme. The way in which the start-up episteme invites us to constitute ourselves in relation to our work has implications that are neither just personal nor limited to the organization of labor in cutting edge, knowledge-based industries. As I am going to discuss in the following chapters, the epistemic regularities of the start-up are now pervasive throughout the social body and are reshaping professional cultures, local development policies as well as global flows of capital and people. Charting the social and political consequences of these transformation is, therefore, of utmost importance.

Besides contributing to the current debate about digital, mediatized, and entrepreneurial labor (Gray & Suri, 2019; Irani, 2019; Lorusso, 2019), my work has theoretical and methodological aspirations too. Referring to the former, my research demonstrates the possibility of recuperating Foucault's archaeological project for the analysis of material and discursive formations. This can be particularly useful for the study of technologies and managerial methodologies of production, in media industries and beyond. The latter, instead, refers to the possibility to use ethnography as a way to experience and study "macrotheoretical concepts and narratives" (Marcus, 1995, p. 96), of which the episteme is a prime example. This approach acknowledges the impossibility to understand some forms of knowledges through simple observation (Pink, 2011, p. 271) and invites ethnographers to attune their research practices to the regularities of the episteme they are seeking to investigate. In my case, this meant hybridizing my research protocol with entrepreneurial practices in order to understand what it means to live and to work in the start-up episteme. I am hopeful that such methodological approach can be useful to other ethnographers of professional cultures.

Chapter 1. Unthinking the start-up

Start-up is everywhere. The term has been employed since the 1970s to indicate "any company with a limited operating history, new, and usually in a phase of product and market discovery" (Kidder, 2012, p. 14). In the 1990s, the word start-up gained a more precise connotation, one connected to the kind of experimental, technology-based, highly scalable, and venture-backed businesses that became the most visible embodiment of the New Economy techno-utopianism (Werning, 2019). Today, the term is widely known and used beyond managerial circles, so much so that it has become a subject of TV shows such as the reality game Shark Tank, MTV's Dropout, and HBO's irreverent series Silicon Valley. Start-up has become a codeword for the kind of entrepreneurial spirit which, according to founder and investor Chris Dixon, will change the way we conceive work in the 21st century. "The notion of lifetime employment is over", he argued while describing a future belonging to the entrepreneur, to those who "aspire to own a much larger piece of [their] lives." (Kidder, 2012, p. 114). If "entrepreneurs are everywhere", as the father of the *Lean Startup*[1] method Eric Ries argues (2011, p. 8), then it is urgent to understand how the start-up is working its way inside out and reshaping professional cultures, managerial models, and economic institutions at large.

In this chapter, instead of addressing the start-up head on, I take a step back and I lay out the theoretical grounds which will allow to unthink the start-up as a broad signifier for technological and social progress. The goal of this exercise is to avoid essentializing what the start-up is or means and, instead, treat it as a historically specific way of knowing, of ordering and of seeing the world. *Prima facie*, we can think about the start-up as a "cultural infrastructure" (Turner, 2009), a "way of thinking" whose ramifications are as pervasive as fleeting.

When I began my investigation into the cultural significance of the start-up, my understanding of the term was rather focused on its organizational meaning. Specifically, I conceived it as a way of structuring knowledge manufacturing processes in digital and

[1] Throughout the thesis, Start-up, as a noun, is always hyphenated. When the term appears within quoted materials, the original spelling is maintained. For example, in the case of the Eric Ries' *Lean Startup* method (2011).

new media industries. The original idea for my research was therefore to capture the essence of start-up-inspired systems of production, to understand their logics, and to chart their economic and social consequences. However, the more I talked to people working on, or for, start-up companies, the less confident I became about the possibility to delimit the meaning of start-up as an organizational theory. Quite the opposite, start-up emerged in a series of ramifications and acceptations that were only barely reminiscent of my initial understanding of the term. Things became confusing at times, especially when, following the start-up metaphor and letting it guide me through my fieldwork, I found myself talking to freelancers and to people working in corporate jobs. Although they might have not used the kind of concepts and jargon permeating the managerial literature I was reading at the time as part of my background research, their descriptions of their jobs, and of themselves, somehow evoked a start-up way of thinking that I started to notice as pervasive even beyond the communities of self-identified entrepreneurs I observed in the early phases of my fieldwork. Through my interviews, start-up surfaced not only as a way to organize production processes, but also as a transcendent way of seeing and organizing the world, as a way of acting within it, as a way to relate to others and to oneself.

In the attempt to grasp start-up's significance and to give a name to the "start-up way of thinking", in this chapter I introduce Foucault's archaeological project. Several works have already employed, rather productively, Foucault's ideas to analyse management, and self-management, in post-Fordism (e.g. Du Gay, 1996; Ross, 2003; Sennett, 1998; Szeman, 2015). These works relied, mostly, on Foucault's ideas of governmentality and disciplinary power for describing the birth of the modern, self-managed, neoliberal subject (Foucault, 2008). In the context of this research, I suggest recovering an earlier Foucault. In particular, in this chapter I suggest relying on the Foucauldian concept of episteme as a way to think about the start-up way of thinking.

Through the concept of start-up episteme, I describe the nexus between culture and technology, between discourse and its material substrate, as coevolving and interdependent. Following this conception, I study the managerial cultures informing the work of digital and new media practitioners as a way to understand how digital technologies of production, and associated work practices, are designed and normalized as formally rational and efficient. At the same time, I investigate the materialities of

production to understand how technological and economic conditions determine the very possibilities we have for interpreting reality.

1.1. The start-up episteme

Episteme is probably among Foucault's least popular, yet highly debated, concepts. Foucault introduced and defined the term in *The Archaeology of Knowledge* (1972) and the *Order of Things* (2002). Foucault the structuralist, as some "half-witted 'commentators'" (Foucault, 2002, p. xv) labelled his work in the 1970s, described episteme as the "basis on which ideas could appear, sciences be established, experiences be reflected in philosophies, rationalities be formed" (ivi. xxiii). As root word of epistemology, episteme indicates a historically specific way of knowing. Or, always reinterpreting Foucault's words, episteme can be conceived as a figurative space within which knowledge is configured in ways that do not refer any rational value or objective form, but only in relation to its conditions of possibility. For Foucault, the analysis of the transformation of the conditions of possibilities of knowledge over time is not so much the work of historians as much as that of archeologists.

The idea of basing my research on the episteme concept only partly depends on start-up's polysemy. Indeed, start-up, as a word, possesses different meanings. Following Steve Blank's definition, start-up can be thought of as "an organization formed to search for a repeatable and scalable business model" (2010b). Alternatives definitions of the term exist, and the meaning of the word start-up has been the object of disputes since the early days of the dot-com era (I present a historical overview of this debate in Chapter 3). Some of the people I talked to throughout my research, especially venture capital firms' partners and business mentors, adhered to Blank's definition of the term. Others, instead, defined start-ups as a work ethic and as a way to organize labor within companies. For example, a young start-up employee I interviewed described start-up as "working hard and close in small units. Without bureaucracies, and lots of structure". Her description was devoid of any reference to scalability and repeatability which, on the contrary, were central to how venture capital funds, following Blank, defined start-ups.

Through this concept I aim to emphasize not just how the word start-up can mean different things to different people. What I am mostly concerned is how start-up, as a concept, as an object, and as an identity element, among other things, is employed by

different people to interpret reality, to justify economic practices as good and proper, to constitute subjectivities, and, ultimately, to articulate power, both over others and within themselves. Investigating these other dimensions of the start-up means, following Foucault, conceiving them as discourses. As such, the start-up does not simply describe the world, but constitutes it in the same act of describing it. In doing so, it enables us to engage with the world, and with ourselves, with modalities that are neither inevitable, nor objective or rational, but rather specific and peculiar to a certain time and place. The regularities that can be observed across contemporary discourses is what constitute an episteme. As I will discuss in the following chapters, in the case of the start-up episteme, these regularities span from the personal, to the economic, to the organizational, the technological, and the political. Through the concept of episteme, I aim to capture these regularities and to demonstrate the necessity to treat *start-up* as more than just an economic practice or a managerial concept.

Without any doubt, other concepts could have been employed to similar ends. These include Andrew Feenberg's idea of rationality (1999, 2002, 2010), Don Ihde's macroperception (1990), Ian Hacking's styles of scientific thinking and doing (2012), Ludwik Fleck's thought styles (Fleck, 1979), and Thomas Kuhn's paradigm (1970). The reason why I decided to base my theoretical understanding of the start-up on the concept of episteme can be summarized in three points. First, I wanted to base my research on a theoretical approach that allowed me to foreground the regularities across different fields of knowledge, and to explain how such regularities legitimize the articulation of power, orient processes of meaning creation and of capital accumulation. Secondly, I needed a way to conceptualize the interplay between the material (meant as practices, technologies, procedures, etc.) and the discursive (meant as cultural, symbolic) dimensions of the reality I was observing without falling prey to some sort of deterministic explanations of the relation between the two. Third, I wanted to describe the role of subjectivities, and their relation to objects and practices, in a more nuanced way than what structuralists or humanists explanations can provide.

Before putting the episteme at work in the analysis of the start-up, I begin by providing an overview of the term and of its constitutive elements.

1.2. Defining Episteme

To understand the concept of episteme it is necessary to introduce the constitutive elements of Foucault's archaeology: discourse formations and statements. Figuratively, we can think these elements as connected hierarchically: statements are "the atom of discourse" (Foucault, 1972, p. 80) and series of statements constitute discourses. Discourses, in turn, compose, albeit indirectly, epistemes. Although these concepts are not as neatly nested one into another as this first description seems to suggest, in the next pages I follow this inductive scheme, from the statement to the episteme, as a way to review and operationalize Foucault's archaeological project for the study of the start-up.

1.2.1. Statements

Foucault defines statement in the third part of The Archaeology of knowledge as a modality of existence of language (1972, p. 79). A modality that allows whichever group of signs, produced on the basis of such language, to be more than "a succession of marks on a substance" (ivi, p.107). Statements allow whichever linguistic performance to be connected to a domain of objects, to prescribe a definite position to any possible subject, to be situated within other groups of signs, and to be used, repeated, and materially actualized (ibid.). Not surprisingly, Foucault's definition of statement, while introducing some important characteristics, raises more questions than it answers.

A common issue in the analysis of discourse formations is to conceive statements as simple linguistic units, as sequences of subjects, verbs, and objects. Indeed, statements are often conveyed through propositions, sentences, and speech acts. The qualifier "often" is relevant as it emphasizes how the relation between linguistic units and statements should not be considered biunivocal. For example, multiple statements can be found in one single speech act and, conversely, one statement can be expressed through multiple, equivalent, sentences. Moreover, not all statements are instantiated into units of the linguistic kind. Tables, charts, diagrams, and even algebraic formulas can be, in some cases, statements. Regardless of the way in which statements are actualized, their validity and legitimacy is not subject to the same rules applying to the linguistic form through which they are conveyed, whether this is grammar, logic or analysis. Instead, the validity of statements is justified by their enunciative function which

cuts across sentences, propositions, and speech acts, and puts them in relation to “concrete contents, in time and space” (Foucault, 1972, p. 82). This relational work performed by statements’ enunciative functions defines the conditions of existence of signs (Ivi, p.86) or, in other words, sets the conditions which make people at a certain point in time to take certain speech acts, sentences, proposition, formula, chart or, more in general, sign, seriously (Dreyfus & Rabinow, 1982, p. 58). More precisely, the way in which statements give material body to signs and legitimize their existence is by relating them to a field of objects, to a number of possible subject positions, and to a field of other statements.

Referring to the first element, Foucault calls correlate the domain of objects (these include both material, immaterial and fictious objects (Foucault, 1972, p. 91)) to which the statement can refer (ivi, p.96). Unlike signification, in the case of enunciation the material referent of the statement, i.e. their object, is not external to the statement but, on the contrary, is endogenous to it. In other words, the object of a statement is not already there waiting in a limbo to be discovered, described, signified, by the statement. Instead, it is part of the statement and it is constituted through it. Thus, statements allow things, i.e. the pre-discursive materialities constituting the correlate, to emerge and to be constituted as objects (Tiisala, 2015, p. 664).

The way in which the material correlate is constituted into objects depends on the statement itself, on the statement’s relation to other statements (i.e. its field of stabilization (Foucault, 1972, p. 103)), and on the statement relations to “institutions, economic and social processes, behavioral patterns, systems of norms, techniques, types of classification, modes of characterization" (ivi, p.45). These discursive relations develop through surfaces of emergence, authorities of delimitation, and grids of specification. The surface of emergence indicates the historical conditions and institutions out of which a new object is constituted. In his analysis of criminality, for example, Foucault indicates in the penitentiary the surface from which criminology, as a science, was constituted. As I will discuss in my historical analysis of the start-up (see Chapter 3), four of the sides of the polyhedral surface from which start-up emerged were: lean manufacturing, complexity economics, computer science and the creative city policies for urban regeneration (Florida, 2012). Moreover, objects do not emerge by themselves, propelled by some form of internal energy or in virtue of their inherent objectivity. Instead, some individuals and groups have the power to identify and

legitimize new objects as such. These are the so-called authorities of delimitation. In Foucault's history of criminality, these authorities were doctors and judges. In the context of this research, entrepreneurs, business gurus, consultants, and what Turner and Larson call network celebrities (2015) are those entitled to delimit the objects the start-up discourse talks about. Lastly, grids of specifications are systems through which the new object is "divided, contrasted, related, regrouped, classified, derived from one another" (Foucault, 1972, p. 42). Referring once again to the start-up as a managerial discourse, the functioning of grids of specification can be found in the proliferation of methods and concepts advancing new ways for conducting business, and conducting oneself, in the spirit of the start-up (e.g. the *Lean Startup*, the business model canvas, the lean canvas, customer development, etc.) In chapter 3 I provide an analysis of how the start-up, as managerial discourse, splintered into different strands.

Problematizing the relation between statements and objects even further is the impossibility to access the material correlate in its entirety, at all time, through enunciation. According to Foucault, only sub-sections of the material world, i.e. its referential, would be open to be engaged through statements depending on a whole variety of relations between institutions, instruments, and systems of concepts (1972, p. 91). Foucault's idea of correlate acts as a reminder that the object is not constructed exclusively by discursive relations, i.e. through statements. Non-discursive relations also order, predispose, in specific ways the materialities upon which statements operate. Echoing Ihde and post-phenomenology's concept of microperception (Ihde, 1990; Verbeek, 2005), I interpret Foucault's idea of referential, i.e. the conditions of existence of the material correlate (Kusch, 1991, p. 62), as a reminder to conceive the role that non-discursive objects (e.g. equipment and tools) have in disclosing and ordering the material correlate, thus making it available as a resource to be engaged and enunciated into existence through statements.

Foucault's conception of the relation between statements and material correlate is also aware of the power struggles involving the creation and use of the formers. What counts as an object does not depend on the things in themselves, nor on some forms of objective knowledges imposed from without. What an object is and means depends on the relations between the object and the statement, and the association is as strong as the authority producing it. Yet, statements are not set in stone and immutable; on the contrary, they are made to be reevoked, re-actualized and integrated into new fields of

use. In one passage of the Archeology of Knowledge, Foucault is very clear about the conflictual relationships involving statements and their use:

> Instead of being something said once and for all […] the statement circulates, is used, disappears, allows or prevents the realization of a desire, serves or resists various interests, participates in challenge and struggle, and becomes a theme of appropriation or rivalry (Foucault, 1972, p. 105)

Referring to the relation between statements and objects, the quote above emphasizes the necessity to conceive materialities as specific articulations of discursive relations hardened by relations of power.

After having analyzed the relation between statement and objects, I now move to the second element of Foucault's definition of statement: the subject. Akin to the material correlate, also the subject is constituted by the enunciative function of statements. Abandoning the idea of a sovereign subject, Foucault argues that subjectivities are "effects proper to the enunciative field" (1972, p. 122). Through the concept of enunciative modalities, Foucault positions subjects in terms of their status in relation to other social groups, in relation to the institutions from where, and on behalf of which, they speak, and in relation to the object itself.. Statements thus create "a particular, vacant place that in fact may be filled by different individuals" (1972, p. 75). Such place is what I will refer to as professional subjectivity (discussed in greater length in Chapter 5).

Maintaining an anti-essentialist stance, Foucault argues that there isn't any inner self nor substance determining who we are. Similarly to how things surface into objects under the impulse of authorities of delimitation, so as subjectivities are the result of historically contingent vectors of power. However, unlike objects, the subject is not an inert substance ready to be molded into a subject by relations of power alone. The subject has one distinctive feature that renders its treatment more challenging than the analysis of objects: reflexivity. This is where Foucault's conception of power, as both negative and positive, emerges. Subjectivation, the term Foucault uses to describe the effect of power on subject creation, is negative when it imposes a norm, a canon that subjects are asked to embrace and to embody themselves. Yet power does not work only through coercion in respect to subject positions. Power operates positively whenever it enables the subjectivities we claim. When, instead of restricting self-

expression, it invites us to seek our inner truth, to engage in rituals of self-interpretation and discovery. Foucault conceives this form of subjectivation, one which urges individuals to know themselves and to be themselves, as historically dependant and characteristically modern. As I will discuss in greater length in Chapter 5, the effects of this modern forms of subjectivation can be found in the proliferation of new professional subjectivities which individuals claim as a way to escape the disciplinary regimes of industrial capitalism and to create spaces of self-expression and realization.

Lastly, statements are meant to be used, repeated, and materially actualized. Whether it is the trace left in the memory of the author, the words on paper composing the sentences of a poem, the voice of the speaker, or the line of code on a computer screen, statements, and the enunciative function they embody, always entail some form of materiality. The materiality of a statement is an integral part of it. This is what Foucault calls the “repeatable materiality” of statements (Foucault, 1972, p. 102), which emphasizes how changes in the way in which a statement is materialized can also change the statement. Conversely, different materialities can be enunciatively (i.e. at the level of statement) equivalent (B. Brown & Cousins, 2010). This concept is particularly relevant because points to the possibility for statements to be reinscribed, transcribed, and repeated, thus allowing them to change over time, to alter their materiality, to enter in relation with new enunciative fields, and to serve different ends.

For example, throughout my fieldwork I took part in a series of seminars about personal accountability and time management. At the inaugural meeting, I was asked to reflect on my personality using the strength, weakness, opportunity and threat (SWOT) matrix. Developed in the 1960 at Stanford Research Institute (Humphrey, 2005), the SWOT analysis is a tool routinely employed in corporate planning to set business goals and define a company’s mission (“SWOT Analysis,” 2012). At the statement level, the SWOT analysis creates a subject, the manager, and an object, the business to be managed. It gives the manager the responsibility to retrieve information about the business’ strengths, weaknesses, opportunities and threats, and prescribes a course of action aimed at “developing and implementing an effective organizational strategy” (“SWOT Analysis,” 2012). In the personal accountability group, the SWOT analysis performed a different enunciative function. Despite being materially unaltered (the SWOT analysis was presented in the canonical 2-by-2 matrix), in this context the SWOT differed at the statement level as it created a new, unified, position for both the object

and the subject of the analysis. As the invisible subject in Velasquez's painting Las Meninas discussed in the introduction of *The Order of Things* (1972), in this new, unstable, position I was invited to become the object to be managed and the managing subject. From this unstable position, I was asked to identify my personal strengths, weaknesses, opportunities and threats, and I was given instructions on how to systematize them into a strategy of personal development.

The concept of material replicability of statements is a key element in the analysis of the start-up episteme as it allows to understand how statements travel, through replication, across contexts, serve different functions, and constitute new subjects and objects along the way. To appreciate its relevance, it is necessary to introduce another element of Foucault's archaeology: discourse.

1.2.2. Discourse

Statements do not exist in isolation. Quite the opposite, they are always in relation to other statements. Collections of statements entailing and enunciating the objects, concepts and subjects in similar ways are known as discursive formations. As many other elements of Foucault's archaeological project, also the concept of discourse formation is, at times, ambiguous. Foucault was critical and wary of the way in which historians represented the chronology of human thought as a sequence of incommensurable unities (e.g. époques, paradigms, traditions) punctuated by phenomena of rupture. In response, Foucault's archaeological description advances a new principle of unity, the discursive formation, which does not attempt to reconstitute history as a sequence of unities defined on the basis of a common object, subject, concept or theory to which they refer. The unity of discursive formations would be based on the interplay of rules that make possible the appearance of objects, subjects, or concepts in a given period (Foucault, 1972, p. 32). The work of the archaeologist is therefore to analyze the conditions of existence of those statements, which entails analyzing statements in respect to "the objects to which they refer, the people who formulate them, the concepts they contain, and the different ways they can be combined" (Kusch, 1991).

Abandoning the idea of discourse as defined, single-handedly, by a common object, subject or concept, means grouping statements which are not necessarily

coherent nor consistent but that express some form of regularity, of order, of correlations in terms of positions and function (Foucault, 1972, p. 38). Consequently, within a discourse, the same objects, subjects and concepts can lose the unity which can be intuitively attributed to them and become, instead, dispersed. This is the effect of what Foucault calls points of diffraction, i.e. points where different strategies allow the discourse to branch off into equivalent, alternative or independent sub-discourses. Foucault's concept of strategies is also a reminder that discourses are systems of power articulation, places where the same correlate and subjects are constituted in different, co-existing and sometimes competing ways.

For example, analyzing the start-up as a discourse means conceiving it not only as I did at the onset of my inquiry, as an organizational paradigm, as a way of structuring manufacturing processes. Conceiving it as a discourse means abandoning the possibility to ground the analysis on a single defining object or concept and to embrace, instead, the dispersion of discourse. Such dispersion, created through diffractions, articulates the start-up in several different ways. Again, these different strategies are not held together by a unifying concept, object or subject to which they refer to. The start-up, as described by the freelancers I spoke to, was different from the start-up as conceived by venture capitalists. The difference cannot, however, be reduced to mere polysemy, i.e. start-up as having a different meaning to different people. The difference is ontological: start-up is a different thing in different strategies. It can be an economic model, an organizational paradigm, a subject position, a managerial theory, an investment vehicle and, sure enough, many other things that I did not have the possibility to witness throughout my investigation. Holding together these different strategies are discursive regularities, which span across strategies and discursive formations. Relying on the concept of episteme I aim to emphasize precisely this latter aspect: the discursive regularities which render the start-up both pervasive yet impossible to grasp in its entirety.

1.2.3. Episteme

The regularities across strategies belonging to concurrent discursive formations constitute the episteme. The word "constitute" might suggest that the episteme is actually a thing when, in reality, it is not: "Episteme is not a form of knowledge (*connaissance*)" (Foucault, 1972, p. 191). Episteme is not even a hidden system of rules prescribing processes of meaning creation, despite some have described it precisely in

these terms as an “historical a priori, that underlie the thought of any given epoch” (Bevir, 1997, p. 2). Episteme is not even an imaginary relationship of individuals to their real conditions of existence, which remains inaccessible to them yet incredibly accessible to detached, objective inquiry. An episteme is not a world view, a paradigm. Instead, Foucault defines it as:

> the total set of relations that unite, at a given period, the discursive practices that give rise to epistemological figures, sciences, and possibly formalized systems. […] the totality of relations that can be discovered, for a given period, between the sciences when one analyses them at the level of discursive regularities. (Foucault, 1972, p. 191)

Although some seem to equate episteme with the concept of paradigm so central in the philosophy of science (Couzens Hoy, 1986, p. 6), Foucault’s archaeology is less interested in studying processes of transition than it is to explain periods of continuity, what Kuhn called periods of “normal science” (Kuhn, 1970, p. 35). Episteme describes, similarly to Ihde’s idea of macroperception, a “way of knowing” (1990, p. 33) of a specific period, as found through the analysis of the discourses people use to engage each other, with the world and with themselves.

Why should we pay attention to the bundles of regularities spanning across world-constructing discourses and their strategies? To what end should we try to identify and name an episteme? To answer these fundamental two questions, it is necessary to recall another description of episteme that Foucault introduces in *The Archaeology of Knowledge*: the episteme represents the boundary of discourse, i.e. the limit of what can be said about something in a certain historical moment. In limiting discourse, the episteme does not oppose knowledge to ignorance, objectivity to fantasy, rationality to irrationality. In other words, episteme is not a form of substantively-biased rationality limited by “inadequate techniques, mental attitudes, or the limitations imposed by tradition” (1972, p. 192). At the same time, an episteme is not grounded and does not depend entirely and directly on essential traits of the material world surrounding us. Instead, it depends on an interpretation of the material reality that is impersonal, subjectless, and plural.

As Andrew Feenberg points out in his theory of critical constructivism (Feenberg, 1999, 2017), Marx had, before Foucault, similarly argued that modes of life and, hence, the nature of society are determined by what he considered being the independent

variable active in all of history of humanity: the “relations of production in their totality.” (Marx, 2009, p. 17) Through the concept of episteme, Foucault extended Marx’ position even further and argued that discourses of all sorts, not just economic ones, participate to this act of world construction. Foucault discussed how the diffusion of techniques, practices, knowledges and other “microphysics of power” (1995, p. 26) developed within specific discourses (e.g., the medical, the administrative, and the military ones), led to the instauration of the modern episteme, one in which disciplinary technologies and normative social sciences constitute the “most precise, productive, and comprehensive system of control of human beings” (Dreyfus & Rabinow, 1982, p. 153). In the case of the start-up, the concept of episteme so conceived can help to investigate how regularities developing across practices and knowledges provide justification to specific ways to interpret reality and act within it.

Episteme, and the configurations of knowledge and power they legitimize/legitimizing them, are historical. Foucault described episteme as a “constantly moving set of articulations, shifts, and coincidences that are established, only to give rise to others” instead of a “motionless figure that appeared one day with the mission of effacing all that preceded it” (1972, 192). Epistemes can therefore be conceived as historically relative truths which do not emerge from the imposition of a single source of power. They rather emerge from multiple “layers of influence coming from different regions of society and responding to different, even opposed, logics” (Feenberg, 2017, p.28). They are rational in the way they reproduce and represent dominant forms of seeing and behaving as found in domain-specific practices and knowledges. The start-up way of seeing, interpreting, and acting in the world did not become popular because of the influence of venture capital funds, as in a modern re-enactment of Veblen’s *Engineers And The Price System* (2001), had on the organization of the economy. Instead, the uncoordinated contribution of several discourses, from computer science, to design thinking, to lean manufacturing, naturalized the start-up way of thinking as a rational and efficient way to organize production in knowledge intense industries.

Epistemes are not only historical; they are also plural. As I will discuss in greater length in the following section, for every dominant discourse, there are countless others never surfacing into awareness. This idea of multiplicity is present throughout all levels of Foucault’s archeological model. At the level of the statement, he argues that the material domain of the correlate is open to multiple authorities, which might coexist and

compete among each other. There is no object as such beyond relations, only things waiting to be brought into history through relation between the different surfaces (and related authorities and grid of specification) in which they appear. Similarly, discourses and their strategies are described as neither consistent nor coherent. Therefore, it is always possible for complex bundles of assonances and similitudes across discourses to enunciate subjects and objects in multiple, alternative, ways.

Recuperating a staple concept in the field of science and technology studies, I suggest adopting a symmetrical stance in reference to alternative epistemes (Bijker, Hughes, & Pinch, 2012). This means adopting the same standards and vocabulary to explore and analyze alternative discursive formations, without attributing primacy to one in particular, and subjecting them to "the same type of social explanation regardless of their truth or falsity." (Feenberg, 1992, p. 305).

The concept of episteme is not immune from criticism and free of shortcomings. Dreyfus and Rabinow pointed to the ambiguity of Foucault's archeological method of which the episteme is one of the key concepts (1982, p. viii). Such ambiguity would be due to Foucault's attempt to escape both hermeneutics' commitment to search for the concealed origin of history and to unearth the deep truth behind experience, and structuralists' quest for transcendental rules underlying theories, practices and sensibilities of an age. Foucault's third way, based on the analysis of systems of transformation that constitute change, and agnostic in respect to the meaning and the truth value of the changing discourses, would be ambiguous, according to Dreyfus and Rabinow. This ambiguity would be reflected in the sometimes descriptive, sometimes prescriptive, nature of Foucault's archaeological method. If Foucault's archaeological analysis swung between structuralism and hermeneutic, it did it on purpose and the very source of ambiguity represents, I believe, one of its main strengths. On the one hand, his archaeological model allows to preserve the distancing effect of structuralism. At the same time, it maintains the rich and idiosyncratic understanding of meaning and cultural practices of hermeneutic.

1.3. Materialities, subjectivities and powers

With a clearer idea of episteme, in this section I am going to illustrate how its application in the context of this research can help understand start-up in its countless ramifications

and facets. As mentioned in the introduction to this chapter, there are at least three reasons for adopting the concept of episteme: it allows to talk about the discursive and the material dimension of the start-up in equal terms, it allows to understand and describe how individuals interact with start-up, whatever this means or is, without having to side with either humanists or structuralists explanations and, lastly, it can help produce a description where power is relational and multiple, constantly creating and dissolving islands of stability in a sea of disorder. The issue of power, and its role in the definition of objects and subjects, has been addressed in the field of sociology of science and technology studies, particularly after the constructivist turn of the 1980s. In the following pages, my discussion of episteme is closely linked to some of the theories developed in these disciplines.

1.3.1. The discursive and the material

Objects are ambivalent. Intuitively and rather uncontroversially, this means that the same object can mean different things, and serve different purposes, to different people. The relation between objects and their meanings has been the focus of sociological inquiry since the mid-1980s, when what it is now commonly referred to as Science and Technology Studies (STS) broke with the positivist and determinist traditions of the cold-war era (e.g. the works of Bauer, Rosenbloom, & Sharp, 1969; Helmer, 1967) and relativized technology, thus making it object of social and historical inquiry. The work of, among others, Pinch, Bijker, Hughes, Callon, Latour, and Law published in the classic 1987 book *The Social Construction of Technological Systems* (2012), introduced some of the ideas which have become foundational in the field of STS. Among these, the idea that technological artifacts are “interpretatively flexible”, i.e. the meaning of artifacts, and therefore their technical features, can be interpreted in different ways by the various social groups which coalesce around a new technology. In Pinch and Bijker’s iconic example of the bicycle (1984), the meaning and the finalities served by this new technology emerged through a process of interaction among different social groups and achieved “closure” (1984, p. 410) when one of them was able to impose their interpretation, the bike as a means of transportation, over competing ones. As such, features such as safety and reliability came to play a dominant role in the definition of the artifact, and led to a design which differed, for example, from the one informed by an understanding of the bike as a recreational equipment.

In addition to conceiving the design of technology as a social act, constructivism argued for a symmetrical approach to the study of technology. Transposing Bloor's concept of symmetry (1981), originally developed in the study of scientific controversies, constructivism (in all its sub-branches such as SCOT, Actor-Network Theory and Large Technical Systems) rejects the positivist and teleological idea of progress and advances a symmetrical explanation to technological controversies. This means treating different interpretations of the same technology as equally valid and plausible, thus denying the possibility to explain technological development through secular and historically specific concepts such as efficiency or efficacy.

The rhetorical dimension of technology was largely undertheorized in early constructivists' formulations. What social groups are, what interpretation means, and how issues of power affect the process of technological closure, especially in relation to conventional sociological macro categories such as class, gender and race, were among the main limitations of early constructivist theories (Bijker, 2012, p. xix; Winner, 1993). The work of Andrew Feenberg addresses some of these limitations by creating a connection between STS and Frankfurt School's Critical Theory. His ideas are relevant and useful for both developing a more nuanced and power-aware understanding of "social construction", as well as for conceiving the role of individual agency within larger technical systems.

According to critical constructivism, technical objects can be conceived as composed of two hermeneutic dimensions: a social meaning and a technical rationality (Feenberg, 2010, p. 18). Technical rationality determines artifacts' functionalities and is supposedly neutral, i.e. isolated from social interests. Yet, technical rationality is formally rational in respect to the cultural horizon in which it develops. For instance, industrial capitalism led to the development of the layered corporation structure, of staff-and-line corporate functions, and of technologies organizing the productive forces in ways that recreated capitalism's conditions of existence: i.e. that reinforced the operational autonomy of managers, ossified class hierarchies, and deskilled labor. Within this context, the organizational and technological innovations just described were formally rational and efficient. The values they embodied and reproduced, however, reflected a hegemonic and secular conception of rationality. Such values can be questioned once the technologies embodying them enter into circulation and use. This is when the second hermeneutic dimension of technology, its social meaning, emerges. The

possibility for technologies to be connotated socially contraposes the idea that objects' function and meaning are determined by technical rationality alone. The evolution of the Internet from a military system of communication to (among other things) a virtual mall is but one example of how a new connotation of existing objects can be produced through social interactions, and how such meaning can subvert the intended functions and goals of a technological artifact. The clash between social meaning and technical rationality can lead, through a process that Feenberg calls democratic rationalization (1999, p. 72), to a reformation of the technical rationality which inform the design of technologies.

The relation between the rhetorical dimension of objects and their materialities was also a matter of inquiry in the phenomenological study of technology. Ihde framed the issue as one between culture and technology. Using the term multistability, Ihde described how "the 'same' technology in another cultural context becomes quite a 'different' technology." (Ihde, 1990, p. 145) Ihde's innovative contribution goes beyond the concept of multistability which, as the author also acknowledge, was already present, although partially, in Kuhn's study of scientific revolutions. Ihde's originality can be found in the way he addresses the culture-technology relation from a perceptual perspective. More specifically, he distinguishes between micro- and macro-perception. The former is the complex sum of bodily impressions, of sensory inputs. Through microperception, individuals access a portion of a pre-existing reality which remains, in its totality, always beyond the reach of senses. Microperception is, however, in many cases mediated by technical devices. Whether it's the magnification of microscopes or the reduction of cartography, technical devices disclose aspects of reality which are inaccessible to naked perception. Microperception, however, is not alone in the creation of meaning from the reality being sensed. This requires interpretation, a cognitive process that takes place in what Ihde calls macroperception. As a cognitive process, macroperception is not immune to the influence of the cultural context, Ihde argues. The interplay between macro- and micro-perception is not a simple rehash of early constructivist ideas suggesting that the interpretation of objects is influenced by the cultural frame. Through the concept of "instrumental realism", Ihde short-circuits the object-meaning relation arguing that microperception also influences macroperception. In other words, sensory perceptions, and the technologies mediating subject and reality, play a role in the constitution of macroperception and therefore "determines the very possibilities human beings have for interpreting reality." (Verbeek, 2005, p. 132).

Despite the extensive literature concerning the relation between materialities and their discursive *qua* rhetorical, cultural, or rational dimension, I still argue for the development of a new theoretical approach based on Foucault's concept of episteme. Using Foucault's archaeological vocabulary, this approach conceives the relation between the rhetorical and material dimensions as one between discursive and non-discursive formations. The former refers to statements, and pertains to the world of language, of expression, of cogito. The latter instead refers the to material environment, the visible, or what Foucault calls the correlate (1972, p. 91). Between the two forms there is a mutual presupposition but never correspondence or causality: discourse enunciates the material correlate into existence, as much as the material correlate verifies and rearticulates discourses. The two forms are irreducible, regardless of how they are brought into coadaptation. The force bringing together discourse and correlate is knowledge (*savoir*[2]), and each epoch is defined by the way in which knowledge combines discourse and correlate into mechanisms. Gilles Deleuze's (1988) interpretation of the relation between these two formations is evocative. He uses the term "visibilities" (1988, p.48) to describe objects or features of objects that exist only under a certain light, under specific conditions laid down by discourse. Discourse illuminates the correlate with a gleam of light that renders it perceptible to the subject. The correlate, in turn, modulates light: some parts will necessarily be overexposed while others will remain hidden in half-light. As light changes and moves around the correlate, new objects and features will emerge while other disappear.

As suggestive as it is, Deleuze's reading of Foucault misses three elements which, I believe, are fundamental for the operationalization of the episteme for the study of materialities and their meanings. The first is the possibility to conceive statements as travelling, through material replication, across different discourses, thus illuminating different correlates in similar ways. The proliferation of similar strategies across different discourses is what constitute the "fingerprint" of an episteme. This is a fundamental aspect and will be addresses in the analysis the start-up as an economic practice, and

[2] On the distinction between *connaissance* and *savoir*, both synonyms of the English word *knowledge,* I suggest referring to Foucault's own definition of the two terms, as reported by Sheridan-Smith in the 1972 translation of *The Archaeology of Knowledge*: "By *connaissance* I mean the relation of the subject to the object and the formal rules that govern it. *Savoir* refers to the conditions that are necessary in a particular period for this or that type of object to be given to *connaissance* and for this or that enunciation to be formulated." (Foucault, 1972, p. 15)

its relation to design and software development models (see chapter 3). The second limitation of Deleuze reading concerns the role of non-discursive elements in the constitution of discourse. Recuperating Ihde's idea of instrumental realism, the analysis of the episteme must be attuned to the role of non-discursive elements (e.g. mediating instruments) in the organization of the correlate upon which statements insist. In addition, framing the relation between material correlate and discourse as coevolving means conceiving the possibility for the former to influence, albeit indirectly, the latter. Without falling into a purely determinist explanation, this means understanding how material conditions are reflected into the discourses used to describe them. As I will discuss in Chapter 3, this relation became evident in the 1990s when the diffusion of the Internet, as a technical artifact, allowed the network to become a metaphor used to describe society and its institutions. Lastly, the most fundamental aspect is concerned with the uncertainty of the correlate. In the episteme, objects are plural because they are open to multiple enunciative possibilities. The optical analogy might suggest that there's unity in the things enunciated into existence and that plurality involves the way in which they are interpreted or, to further Deleuze's interpretation, illuminated. Through episteme, I am trying to emphasize not only how the meaning of the correlate is multiple, but its very constitution into an object is ontologically uncertain (Lane & Maxfield, 2005). As discussed above, this uncertainty is attributable to the different ways in which the same correlate is diffracted across discourses through its involvement into different strategies. As I am going to discuss in the last two sections of this chapter, uncertainty is not a prerogative of objects but extends to subjects as well.

1.3.2. Episteme and subjectivities

Earlier I used the adjective *subjectless* to describe episteme's anti-essentialist stance in respect to individuals. This, however, does not mean that episteme and their discourses lack a subject; quite the opposite, Foucault is very clear when he argues that statements exist only in presence of a subject (1972, p. 95). Subjects, in turn, exist only against a discursive background that creates positions for individuals to inhabit. The subject, therefore, is a function of the statement and is not a motionless, static entity (e.g., the author) giving concrete form to statements. In the episteme, the subject is a position, a vacant place "that in fact may be filled by different individuals" (Foucault, 1972, p. 95).

The role of subjects in the episteme has led critics to attack it as Foucault's deus ex machina, an opaque and totalizing concept capable of explaining the conditions of existence of complex discursive architectures, a straitjacket constraining individuals within the limits of its unspoken rules. Humanist critiques of the concept of episteme describe it as an historical a priori capable of determining "what individuals can and cannot think, rather than themselves being products of the rational deliberations of particular individuals" (Bevir, 1999, p. 192). Carving out and prescribing a specific position to individuals in ways not too dissimilar to those employed to enunciate objects into existence, the concept of episteme was criticized for sketching an image of subjects as lacking interiority and consciousness and, for this reason, incapable of generating meaning outside of the boundaries imposed upon them by the episteme (Dreyfus & Rabinow, 1982, p. 57). Foucault himself was also very explicit about the role of individuals in relation to the episteme:

> What I am trying to do is grasp the implicit systems which determine our most familiar behavior without our knowing it. I am trying to find their origin, to show their formation, the constraint they impose upon us (Foucault interviewed in J. K. Simon, 1971, p. 201)

To a certain extent, it is difficult not to agree with the humanist critique to the concept of episteme. It is hard to find in *The Archaeology of Knowledge* (1972) significant differences between subjects and objects. Similarly to objects, Foucault is more interested in studying subjects, as positions, in their totality, in their dispersions, rather than in themselves as thinking, knowing, speaking individuals (1972, p. 55). Instead of dismissing Foucault's archaeology altogether, I welcome the humanist critique as an invitation to develop a more articulated understanding of the subject and its relationship with the episteme. In this respect, I think it is worth relaxing archaeological orthodoxy in favour of a theoretical perspective which, in continuity with Foucault's concepts so far discussed and with his later works, is capable of describing the processes of transformations taking place within the episteme. Without sliding into a pure humanist perspective, this extension of the concept of episteme can reveal how subjects reproduce, challenge or reconfigure epistemes in new forms.

Far from being a purely theoretical conversation about subjectivities and their relation to systems of power, this re-evaluation is also meant to inform my research methodology, and my subsequent analysis, in order to capture and emphasize the

fleeting, interstitial, marginal spaces where power is articulated, reproduced, and contested. This requires introducing the separation between object and subject that Foucault's archaeology, as well as post-humanist theories in the study of science and technology, attempted to blur. Such division should be operated on the common-sense notion that subjects, unlike objects, possess unique reflexive capacities (Feenberg, 2002, p. 34). On this basis I advance a conception where subject and episteme are mutually interdependent thanks to individuals' ability to create a space for critical consciousness within, despite, and because of the positions prescribed to them by discourse. This means conceiving epistemes not only as "powerful underlying structure of thought – a historically specific order of words and things – that shaped discourse and experience in a particular era" (Garland, 2014, p. 370), but also as systems possessing, within themselves, the means of self-critique. Following Foucault, I search for these means of self-critique in the pockets of reflexivity created by subjectivation and from which individuals are able to question both the episteme and themselves (Maclean, 1998, p. 154). This, however, requires adding one more and last element to the theoretical mix: power.

1.3.3. The circulation of power and the role of the subject

Subjects, like objects, are constituted through regularities spanning across discourses. Discourses not only reveal aspects of the world in the form of correlate, but also make manifest the existence of the individual in the form of subject. The subjectivities constituted through discursive regularities characterizing an episteme are neither passive nor immutable and are not simply imposed upon individuals. Instead, they are offered as positions for individuals to inhabit and to enact. Subjectivities, therefore, represent the nexus where power, in both positive and negative form, becomes visible.

Two concepts employed by Foucault to describe how power operates on individuals are discipline and governmentality. The former can be understood as the negative, coercive, dimension of power, expressed through the imposition of subjectivities through discourse. Discipline aims to reform and control certain subjectivities through detailed supervision. Here power is deployed as a way to command obedience and is as far reaching as the organs administering it. Governmentality, or governmental rationality, instead, reaches beyond discipline. The

subject is not forged through coercion or control, instead is constituted by educating their desires, habits, aspirations, and beliefs. As a way to conduct the conduct of individuals, governmentality consists in "arranging things so that people, following only their own self-interest, will do as they ought" (Scott, 1995, p. 202). In both discipline and governmentality, the subject is imbricated within networks of authorities projecting their power upon them. Some of them can take the form of norms and habits, others can be “materialized in architecture or devices, […] practices, organizations and standardized roles” (Feenberg, 2017, p.23).

In the context of Foucault’s archaeological project, governmentality and discipline can be described as the effects, on subjects, of regularities travelling across discursive formations. Specifically, I interpret Foucault’s instruments of discipline and governmentality as instances of discursive strategies spanning across scales, enunciating subjects and objects in ways that are intelligible, or formally rational, in respect to the episteme. A clear example is provided by Foucault himself when, in *The Birth of Biopolitics* (2008), describes how neo-liberalism as an economic school of thought created a new homo economicus, one who was not just the self-interested rational optimizer theorized by the physiocrats. The neo-liberal homo economicus is “an entrepreneur, an entrepreneur of himself.” (Foucault, 2008, p. 226). As such, the individual is enunciated into existence through the same strategies employed to constitute the economy at large, thus enabling economic analyses to be applied to the subjective scale. Here, the individual is enunciated as an enterprise, capital is reframed as human capital and wage becomes a return on investment of time and skills, “nothing other than the remuneration, the income allocated to a certain capital” (ibid.). Similarly, consumption is understood as an enterprise activity, aimed at either producing satisfaction or, as an investment, at increasing the value of the human capital. The subject enunciated through the transposition, at the individual level, of neo-liberal economic strategies is not determined by them. Strategies provide individuals a grid “of intelligibility and a principle of decipherment of social relationships and individual behavior” (Foucault, 2008, p. 243). Instead of limiting individuals, discursive strategies offer them ways to render themselves visible and intelligible to others by reinstating, at the personal level, ways of knowing and of ordering that characterize the episteme in which they emerge as subjects.

If discursive regularities saturate the entire episteme, from the organization of the means of production down to the most intimate aspects of subjectivity, where are, then, the pockets of reflexivity which I suggested investigating as a way to understand the interplay between individuals and epistemes? Answering this question constitutes one of the motivations behind my decision to study digital and new media industries ethnographically. At a theoretical level, Foucault provides some hints about where to look for answers. When discussing the interplay between power and discourse in the codification of homosexuality in 19th century psychiatry, Foucault argues that:

> There is not, on the one side, a discourse of power, and opposite it, another discourse that runs counter to it. Discourses are tactical elements or blocks operating in the field of force relations; there can exist different and even contradictory discourses within the same strategy; they can, on the contrary, circulate without changing their form from one strategy to another, opposing strategy. (1978, p. 102)

Foucault's words can be read as an invitation to conceive individuals not only as straightforward embodiments of strategies reaffirming the discourses dominating the episteme. Instead, every expression of power, articulated through discursive strategies, translated into instruments of discipline and governmentality, and embodied by individuals, creates the condition for the affirmation of new, "reverse" (1978, p. 101), subjectivities. In other words, subjectivities created through the embodiment of certain discursive strategies can create new demands for subjectivations which counter the strategies which created them in the first place. Thanks to a conception of subjectivation as a process inherently conflictual, Foucault's archaeology can, I argue, account for individuals' abilities to explore alternative subjectivities without resorting to the humanist position of the individual as a "rational and creative agent" (Bevir, 1997, p. 2).

Undergirding and legitimizing the creation of alternative subjectivities are residual and tactical forms of knowledge or, in Foucault's terms, subjugated knowledges (Foucault, 2003, p. 7). These are "insufficiently elaborated knowledges: naive knowledges, hierarchically inferior knowledges, knowledges that are below the required level of erudition or scientificity" (Foucault, 2003, p. 7). They are subjugated not because inherently inferior, but rather because irreducible to the forms of knowledge which characterize a certain episteme and that enunciates subject and objects into existence. Subjugated knowledges exist as a necessary side effect of the episteme; they are created by the same organization of individuals and of the correlate which also tries to

silence them. These knowledges can inform new subjectivation and provide novel opportunities for individuals to constitute themselves.

Feenberg used Foucault's concept of subjugated knowledge to understand how individuals can project new meaning towards material forms of powers (e.g. technical artifacts, procedures, etc.). He called this process "democratic" or "subversive" rationalization (Feenberg, 1992, 1999, p. 72) and relied on de Certeau (1988) to describe how this process of rationalization takes place though fleeting and multiple tactics opposing the strategic imposition of rational thought. In the context of this research, I rely on a similar idea of democratization to understand if and how these forms of knowledge can open spaces of reflexivity allowing individuals to develop alternative subjectivities and if these counter-subjectivations can alter the episteme from which they originate.

1.4. Conclusion

Equipped with a working definition of episteme, in Chapter 3 I discuss how the start-up episteme came into being. Through Foucault's archaeological lens, I look at how the advent of commercial Internet was welcomed by economists and pundits as a paradigmatic shift in the history of capitalism. This new economic phase was described as incommensurable to everything that preceded it and, therefore, illegible to neoclassical economics models. Against this backdrop, I analyze how complexity economics, a school of thought in economics championed in the 1990s by the Santa Fe Institute, rationalized networked forms of production and consumption, and legitimized distributed and flat forms of corporate organizations. Despite the ultimate failure of the so called *New Economy* (Kelly, 1998, p. 1), the complexity-inspired epistemic regularities undergirding the dot-com managerial and economic discourses survived the stock market crash of 2000 and resurfaced within the body of literature about lean and agile entrepreneurship. Before moving into the analysis of the start-up literature, in the next chapter I describe the steps I followed in the development of my research protocol and I discuss how I was able to access and study the start-up episteme ethnographically.

Chapter 2. Studying the start-up episteme ethnographically

The start-up episteme, defined as a series of regularities spanning across world-constructing discourses, is at the same time pervasive and fleeting. It is pervasive in the way it structures our perception thus offering a “way to understand and access reality” (Mejias, 2013, p. 9). It is fleeting because it is not a form of knowledge (*connaissance*) but rather a form of *savoir* ordering and disciplining the correlate upon which its statements insist. The impossibility to define and delimit unequivocally what the start-up episteme is and means (unless opting for one of its essentialists conceptions) raises some fundamental epistemological challenges. How to study an episteme from within? How to identify and investigate its regularities? How to maintain an appropriate level of reflexivity in order to be able to say something meaningful and critical about it? To answer these questions, I chose ethnography over other qualitative, idiographic methodologies because of the possibility that its methods offer to “adapt flexibly to social circumstances as these arise" (Vered, 2000, p. 10). Ethnography seemed therefore a proper way to approach and theorize a macrotheoretical concept (Marcus, 1995, p. 96), the start-up episteme, whose ramifications and implications are neither limited to one social context nor specific to one group of actors. Specifically, throughout my research journey I blended ethnographic methods, interviews, participant observation, analysis of archival records, and embodied forms of learning by doing (Pink, 2011, p. 271) with entrepreneurial practices. This allowed me to constitute myself as a subject of the start-up episteme and to experience and enact its regularities in the same way my participants did. As discussed in this chapter, my research protocol developed significantly throughout my fieldwork.

At the onset of my investigation, I understood start-up as an organizational principle. Following Eric Ries (2011) definition of the term (for a detailed analysis of Ries’ theory of the start-up, see section 3.3.2), I understood it as a “human institution designed to create a new product or service under conditions of extreme uncertainty” (2011, p. 27). On this premise, at the beginning my intent was to study its application in the organization of labor in digital and new media companies. Therefore, I conceived the workplace as the natural setting where to observe the interplay between the start-up organizational paradigm and its enactment in the form of work practices. This

understanding was derived from previous ethnographic investigations into the organization of labor which relied on shadowing as a way to develop an emic perspective on specific work cultures (e.g., Orr, 1996; Shaiken, 1985). However, the more I talked to people, the more time I spent attending events, the more I witnessed how the start-up way of thinking, or episteme as I later rationalized it, transcended the organizational acceptation of the term that I conceived as unproblematic at the beginning of my research. As a participant observer at meetups, through interviews with entrepreneurs, employees, and freelancers, and through the analysis of managerial literature and archival records, I expanded my initial understanding of start-up and I started following it across chains, paths, threads, conjunctions and juxtapositions of locations connected by its discursive regularities (Marcus, 1995, p. 105). In other words, I start treating and exploring the start-up as an episteme. From this new perspective, I documented how the epistemic regularities of the start-up have become central to the articulation of beliefs, work practices and professional subjectivities. Not only that, I also analyzed how these regularities act as a model for the development of economic policies for urban regeneration, as well as for the constitution of managerial culture embraced by freelancers, early stage ventures, as well as established companies. Methods such as participant observation, semi-structured interviews and qualitative analysis of archival records were instrumental to, and supportive of, my changing understanding of both the concept of start-up and of the field I was exploring.

In addition to the challenges raised by an epistemic understanding of start-up work, my research protocol had to adapt also to the dispersed and deeply mediatized nature of digital work. As an example, consider how deeply the circadian rhythms of digital production have been altered by the introduction of portable devices, the diffusion of remote work practices and, ultimately, the affirmation of a culture that demands and celebrates a perpetual standby kind of attitude. As Melissa Gregg convincingly documents (2011), such approach leverages, instrumentally, on sentiments such as passion and love to promote an ideological attachment to work, and to blur the boundary between the professional and the personal sphere. This was particularly true in the case of my research; people mentioned escaping the “9 to 5 jail” as one of the main reasons pushing them toward more entrepreneurial and independent careers (see Bianca’s interview in Chapter 5.1.2). At the same time, showing up at weekends, early morning, and evening meetups was often communicated and understood as a performative

display of one's work ethic. Furthermore, as discussed in Chapter 6, participating in meetups was, for many of my participants (interestingly, not exclusively for independent workers) a natural extension of the working day, a kind of infrastructural work that participants needed to perform in order to maintain their employability. In this context, observing work required both a redefinition of what constitutes work and, consequently, of what constitutes working time.

Another element complicating the investigation of start-up labor resides in its spatial dispersion. This aspect applies not only to extreme instances, as in the case of digital nomads, the new class of remote workers who move to low-income countries in order to maximize their business opportunities (see Chapter 5 for an analysis of this character). The spatial dispersion of labor in digital and new media industries takes place at different scales and can render the job of the ethnographer challenging even in the context of intimate corporate offices. As C.W. Anderson described in his analysis of the digital newsroom (2013), everyday work experience is enmeshed with, and supported by, mediated forms of communication. My participants mentioned using email, instant messaging platforms (e.g. *Slack*), and project management software (e.g. Jira, Asana) to communicate and coordinate with near and far colleagues. At events, the pervasiveness of mediated forms of communication was replicated and rendered visible in the way people employed, with a certain degree of professionalism, collaborative tools of communication and production. Examples include Twitter (for example, through the creation of group-specific hashtags), business-grade instant messaging apps, and custom social networks.

Because of the uncertainty that characterized the meaning of start-up, an uncertainty which, in Chapter 1, I have described as ontological, throughout my fieldwork I had to periodically reassess what the object I was investigating was and what it meant to me and to the participants. This meant re-evaluating my interview scripts, my participants' selection as well as the events I planned on attending. On these occasions, instead of drawing the boundaries between what was inside and outside the scope of my research, I tried to embrace the uncertainty of the start-up episteme and to turn it into a working principle of my methodology. The flexibility afforded by ethnographic methods favored this process of adaptation of my research tactics to my shifting understanding of the start-up, thus leaving my work open to "unanticipated discoveries and directions" (Vered, 2000, p. 17). As discussed in the following pages, conducting research within

the episteme required constituting myself as a subject of it. This was not a simple transition from insider to outsider. It meant hybridizing my research methods with the epistemic regularities of the episteme in order to render myself, and my research, intelligible to the people I met. In particular, the way I developed my research protocol, and the way I constituted my identity in relation to it (specifically in relation to the digital tools that constituted my research toolkit), followed the regularities of bootstrapping and project thinking. At the end of this research journey, I was no longer a researcher investigating the start-up as an organizational principle. I was a subject of the start-up episteme myself, constituted through, and enacting, the same practices and rituals I wanted to study and document.

What follows is a description of the series of events which led me to formalize and define my research protocol. I believe it's worth discussing the epistemological dimension of my research beyond its most formal aspects (e.g. sample size, recruiting methods, interview protocols, etc.) because methodological and technical choices taken in the course of the investigation clearly created new opportunities for interaction within the start-up episteme, thus determining, ultimately, what I was able to observe and experience. Moreover, developing the research protocol exposed me to a series of events and encounters which seemed only marginally connected to my original conceptualization of the start-up principle, but that, nevertheless, helped me understand the start-up as an episteme that transcends the organization of production in digital and knowledge intensive industries.

2.1. The story of a research protocol

The findings reported in this thesis come from extensive immersion in the Vancouver digital and new media industries. Even though the official field research took place over 22 months, from November 2017 to September 2019, I have been reading about Vancouver and its start-up and new media industry even before moving to the city in September 2014. My first contact with Vancouver was, actually, virtual. In February 2014, six months before setting foot in the city, I subscribed to the Vancouver *Start-up Digest*, a newsletter promoting events "laser-focused on the needs of start-ups in Vancouver" (Start-up Digest, 2014). Delivered to my email inbox every week, the newsletter provided a curated collection of local events for software developers, marketers and aspiring start-up entrepreneurs. In those early days, the newsletter

afforded me a convenient means to learn more about Vancouver and its digital industry. As someone with years of experience working in the new media industry, I thought attending or even just reading about this kind of events could have helped me to transition and to move into a new city.

My desire to move to Vancouver grew issue by issue. Through the pages of *Start-up Digest*, Vancouver appeared, at least to me, as a thriving hub for creative and digital professionals. Every week, I would read about networking events like the popular *Start-up Drinks*, "a casual gathering of people involved/interested in founding, operating or funding start-ups" or the understandably slightly less popular *Open Coffee*, an event "similar to Start-up Drinks, but in the morning and with coffee." Besides networking events, the newsletter also featured technical, hands-on meetups, like the *Hack Night* for Ruby On Rails developers or the *Van iDeveloper Monthly*, a regular gathering for iOS apps developers. The image of Vancouver conveyed through *Start-up Digest* was also one of a globally connected, cosmopolitan digital hub. *Start-up Digest* itself was an emanation of *TechStars*, one of the most popular start-up accelerators in the world, founded in Boulder, Colorado, and with local chapters across the globe. Moreover, each issue was sponsored by tech giants or venture capital firms and events were often hosted by renowned local start-ups such as *Hootsuite* or *Unbounce*.

Once I moved to Vancouver, I finally had a chance to attend some of the events promoted through *Start-up Digest* in person. During these initial months, I jumped from event to event in the attempt to connect with digital professionals and to get accustomed to their languages and practices. Part of this exploration also involved familiarizing myself with the technologies they used to find events and to connect with other professionals. For example, I started using platforms such as *Meetup.com* and *Eventbrite.com* as a way to learn about new events and to plan my weekly visits to local tech groups. In addition, I started relying extensively on social network websites such as *LinkedIn* and instant messaging applications like *Slack* to connect and stay in touch with other meetup-attendees.

My initial groundwork turned into a more deliberate exploration of the Vancouver digital and new media industry in November 2014, when I decided it was time for me to attend my first hackathon. The event was significant because it exposed me, although rather serendipitously, to a whole new world of practices, languages and concepts that I

thought were worth investigating. The hackathon was organized by the local *Meetup* group *Bootstrap Collective*, a community of “web, software, and design craftspeople of Vancouver” and was hosted by one of Vancouver’s oldest coworking spaces, located in the heart of Gastown, Vancouver’s district home of dozens of digital agencies, marketing firms and Internet start-ups.

The term hackathon commonly refers to a multi-day event during which a more or less diverse cohort of computer scientists, marketers and business people gather to brainstorm, develop, test and pitch new product ideas (Irani, 2019, p. 112). Some hackathons develop around specific themes, while others are open to all sorts of projects. The *Bootstrap Collective* hackathon adopted the *Start-up Weekend* format, a trademarked format developed and owned by the already mentioned *TechStars* and meant to expose participants to the ”highs, lows, fun, and pressure that make up life at a start-up” (Techstars, n.d.). The possibility to get a taste of start-up life, without actually having to work at a start-up company, was the main motivation that pushed me to participate to the hackathon. Moreover, the event format, with its unrealistically tight deadlines and its “no talk, all action“ orientation (Techstars, n.d.-b), seemed extravagant, foreign, and somehow appealing.

As prescribed by the format, at the beginning of the 54-hour coding-marathon, each participant was given one minute to pitch an idea to the audience. After pitching, we were invited to get to know each another and to start grouping around some of the projects presented at the beginning. After two hours of pitching, networking and mingling, the approximately 50 attendees split into around 10 groups, each one working on a different project. I joined a group working on a technological solution to the problem of youth disengagement from politics. As a ”non-technical person” (upon registration, each participant had to self-identify as a technical or non-technical person in order to maintain a balanced pool of skills), I proposed to help the group to conduct the necessary background research and also to help with users’ testing. That was enough for me to secure a spot in the team and become the VP of Marketing of a new and rising fictional start-up. My seven teammates were all employed in local tech companies, most of them in junior positions and, except for Kristen, the team’s Communication Manager, they were all male.

In hindsight, the Start-up Weekend format delivered on its promise. Throughout three intense days of brainstorming, sketching, coding, deploying, testing and pitching, I was exposed to an in-vitro and time-compressed representation of what later became the focus of my research: the culture and the practices of start-up labor. During those 54 hours, we translated an abstract problem, how to foster youth participation in politics, into a technological solution: a mobile application specifically. We tested the app wireframes (a schematic representation of the app content, navigation and interaction elements) multiple times with real users, developed a business model, pivoted once, presented the idea to fictional investors and eventually released a beta version, also known as *Minimum Viable Product* (MVP) (Ries, 2011, p. 77) in current start-up parlance, to the public. Although the outcome was nothing more than a dynamic mock-up of the app, the project was, to some extent, successful. Our idea ranked third overall and was awarded the Social Innovation special prize. Despite the moderate success, the project never developed beyond the inception phase. The group dissolved after the hackathon as the enthusiasm waned and everyone went back to their respective jobs. Yet, this experience was significant in the way it allowed me to connect to some of the new media and digital institutions inhabiting Vancouver, such as incubators, accelerators, public agencies and grassroots organizations. Institutions which, until then, I had only read about on the pages of the *Start-up Digest* newsletter.

In addition, the Social Innovation special prize granted me access to an acceleration program organized by *Novio*, a local and socially driven start-up incubator. This was a 4-month course that allowed me to learn more about the managerial practices employed in start-up circles and to connect with people whom, later in my investigation, participated to the development of the digital tools undergirding my research methodology. In November 2017, precisely three years after the *Bootstrap Collective* hackathon, I started my fieldwork, which lasted until September 2019.

In the span of time between the Hackathon and the official beginning of my research, I attended events on a regular basis and strengthened my relations with key informants. This period of informal exploration and participation facilitated my subsequent entrance into the field of (Garcia, Standlee, Bechkoff, & Yan Cui, 2009, p. 60) and helped me define the methodological foundation of my research. The more I followed freelancers, creative practitioners and start-up entrepreneurs across networking events, technical seminars and mastermind groups, the more I felt the urge to render

and communicate these experiences in the most intelligible and qualitatively rich form possible. Reading previous ethnographic accounts of the post-industrial workplace, such as the works of Andrew Ross (2003), Melissa Gregg (2011) and Gina Neff (2012), further solidified the belief that relying on research methods rooted in the ethnographic tradition could provide an insightful perspective on the start-up episteme.

In particular, the development of my initial research protocol was inspired by Gina Neff's ethnographic investigation of Silicon Alley (2012). In order to capture and describe the New York new media industry business culture, Neff carried out her research across multiple organizations, locations and firms, instead of following one specific company or one group of actors (Neff, 2012, p. 31). One of the challenges of Neff's approach resides in the necessity to orient research efforts, for obvious reasons limited by resources, time and funding constraints, toward relevant and potentially significant areas of the research field. Neff relied on a combination of ethnography and social network analysis (Berthod, Grothe-Hammer, & Sydow, 2017; Howard, 2002); analyzing the events published in *The Cyber Scene* weekly newsletter, she mapped Silicon Alley's institutions, events and personalities. She then applied social network analysis techniques as a way to identify the most interesting cases to study and participants to interview (Neff, 2012, p. 33).

Neff argues that such approach would be better suited to capture and to describe the inter-organizational networks of collaboration that undergirded cultural production in the dot-com era (Girard & Stark, 2003; Neff, 2012, p. 33). Therefore, instead of observing digital workers' everyday lives during the canonical, i.e. industrial, working time, Neff shifted the focus of her research to those after-hours events, such as office parties, informal meetings and debates, that her participants identified as "central to their mobility and visibility within the field" (Neff, 2012, p. 32). Following Neff's lead, I decided to avoid focusing on one specific location (e.g. a coworking space, an incubator or a single start-up) or one specific community. Instead, I started my investigation following the start-up, as a metaphor, across all the events where this concept figured prominently.

Following the start-up metaphor (Marcus, 1995, p. 108) and taking advantage of a research protocol loose enough to allow me to shift strategy as I saw fit, I relied on a multi-sited ethnography in which meetups constituted the primary occasion for

participant observation and face-to-face interaction with creative professionals and aspiring entrepreneurs. These are events organized by grassroots organizations connecting workers with similar competencies and professional interests. *Meetup* events represented half-way spaces, moments "between the private and public spheres of the professional" (Mayer, Banks, & Caldwell, 2009, as cited in Ortner, 2009). In part instrumental (functional, work-related) and in part purpose-free (recreational, entertaining), this form of socializing was particularly revealing of professional and industrial rituals, as well as cultural assumptions of the Vancouver digital and new media industry (Wittel, 2001, p. 57). Events were not, however, the only occasions for interaction and observation. As discussed in greater length in the following pages, following the start-up metaphor also meant interacting within online communities for start-up entrepreneurs and digital workers *on* and *through* the online platform *Meetup.com*[3] (Lesage & Lusoli, 2021).

Overall, throughout my journey within and across the start-up episteme, I attended 32 events as a participant observer: from "Start-up drinks" for aspiring entrepreneurs to demo nights organized by local bootcamp schools, to more traditional conferences for *Agile* developers and peer-to-peer evening classes for instructional designers and e-learning specialists. Field observations enabled me to capture some of the informal practices of the start-up episteme and to familiarize with basic concepts employed by participants. I wrote down my impressions and notes after each event using the qualitative data analysis software NVivo. In addition to live events, I joined 21 online groups for digital and creative workers hosted on the event platform *Meetup*. Recruiting from both face-to-face meetings and online forums, I snowball-sampled 22 participants with whom I conducted 27 semi-structured interviews totaling 33 hours of recorded material (the list of interviews is available in the Appendix).

At the time of the investigation, the Vancouver start-up digital and new media industry was dominated by the archetypal digerati worker: white, highly educated, young male (Fisher, 2008). In order to maximize the heterogeneity of my sample, whenever possible I oversampled minority groups and involved people at different stages of their careers. Throughout my field research, I had the chance to sit down for interviews with

[3] A note on notation: *Meetup* (capitalized and italicized) refers to the event platform *Meetup.com*. meetup (lowercase) instead refers to live events often, but not always, organized using *Meetup*.

two labor activists, one civil servant, two business consultants, three full-time software developers, two digital nomads, three mid-level managers, four entrepreneurs, one venture capital partner, one freelancer, one student and two unemployed professionals. Thirty-six percent (n=8) of my respondents self-identified as women and 36% (n=8) of the sample were immigrants. The majority of interviews were conducted in person, with the exception of six interviews that were conducted over the phone. Interviews were recorded and transcribed into NVivo, a qualitative data analysis software, in order to facilitate their analysis.

Alongside field notes and interviews, I conducted extensive archival research. For the historical analysis of the start-up, I reviewed managerial, academic, self-help, and business grey literature published between 1980 and 2019. The list of titles to read and analyze was constructed via interviews, both asking participants to suggest books to read and identifying the sources of some of the concepts they mentioned during interviews. Overall, I read and analyzed 104 texts including 43 academic articles, 39 books (self-help book, academic books and textbooks) and 22 grey literature texts (blog posts, reports, magazine articles, etc.). This analysis served two functions. One the one hand, it allowed me to develop an archaeology of the start-up episteme (discussed in Chapter 3). On the other hand, familiarizing with start-up vocabulary and concepts was fundamental in constituting myself as a subject of the start-up episteme. A similar review was conducted for the historical analysis of Vancouver's hi-tech and new media industries. In this case, however, the investigation relied mostly on newspaper articles, reports, and archived websites. Overall, I reviewed and coded 156 documents: 75 newspaper and magazine articles, 23 academic articles, 30 reports, 19 websites (online and archived), seven miscellaneous documents and two books.

The analysis of interviews and literature followed an inductive coding method: I began coding interview transcripts, field notes, books and other documents into broad themes, which I then exploded into sub-themes. Nodes and their hierarchical organization were periodically revised in light of new knowledge. The process was documented through the compilation of a research diary (totaling 19 entries), which I used to both keep track of my reflections and to sketch potential future research avenues. To ensure confidentiality, I substituted all participant and company names with pseudonyms. *Meetup* groups and events names were substituted in all those cases

where my findings could violate the privacy and confidentiality expectation of those who participated in those groups or events.

2.1.1. Entering the start-up episteme

Looking back at my five years' experience as a graduate student, it is difficult to identify the moment when my everyday experience as someone attending technology- and Internet-focused events turned into a structured inquiry into the start-up episteme. According to my own fieldnotes, my research began on the evening of November 30th, 2017. That night, I was invited by my former hackathon teammate Kristen, to attend an event organized by the Vancouver chapter of *Start-up Grind,* a global community of start-up entrepreneurs. The event format was the canonical *fireside chat*: a 45-minute interview with a host, followed by fifteen minutes of questions from the audience. To conclude the evening, a one-hour networking session with drinks and snacks was kindly provided by the Gastown-based venture capital firm sponsoring the event. The event's guest for that night was Kristen's boss, Manuel Deboer, CEO of a successful Vancouver-based online publishing company. It was the first event I attended as a participant observer. Yet, except for the emotion to officially kick-off my in-field investigation, going to that event did not feel particularly different from the dozens I had been going in the previous three years.

My main reason for attending the Start-up Grind event was to take advantage of the networking session to get to know people and to connect with potential informants. Being familiar with the informal, and sometimes outright chaotic, nature of these kinds of events, I prepared an "elevator pitch", a short introduction explaining who I was, what my research was about and what I was trying to accomplish that night. My objective was to render my research as appealing as possible to the people I was seeking to study, hoping to catch their attention and to establish connections with industry insiders. I even brought a stack of blank informed consent forms, just in case I had the opportunity to conduct my first interviews on the spot. In hindsight, my expectations were overly optimistic. Despite the effort I spent in crafting a clear and concise elevator pitch, during the networking session I experienced, as a researcher, the same difficulties I faced when I used to attend those events as a participant. The main one being the difficulty to connect with people I had never met before and with whom I had little in common and nothing to offer, other than my elevator pitch. To the thirty people attending the event

that night, I was neither a potential client, nor a colleague. I did not have war stories to tell, projects to present, opportunities to offer or experiences to share. I was just someone trying to explain to them why they were doing what they were doing. At least this is what I thought going home that night with my pristine ream of informed consent forms in my backpack.

My ethnographic dreams shattered against a wall of perceived indifference toward my research. Maybe it wasn't the right event to attend? Probably not, as I also struggled to establish connections with other participants at the events I went to in the following weeks, regardless of their formats and audiences. This initial difficulty to blend into the community I sought to study imposed a re-evaluation of my research, of my role as researcher and of my understanding of the research field. To better understand the significance of this switch, it is necessary to introduce how my initial understanding of the field, and of my role as researcher, developed.

2.1.2. Where is my field?

At the onset of my investigation, my understanding of ethnography was very much aligned with a traditional, western, and colonial conception of this methodological approach. As a first-time ethnographer, I expected to immerse myself into the research field, to witness the unfolding of esoteric practices, to report my experiences and to write my findings on top of them.

Initially, I conceived my ethnographic field as the chain of events that I used to attend on a weekly basis and somehow connected with the topic of start-up entrepreneurship. I used to jump from event to event in my pursuit to follow the start-up metaphor (Marcus, 1995) wherever it brought me. Doing so allowed me to appreciate how attending events, either before and after work hours or during weekends, was very much part of the working day for digital professionals, especially, but not only, of those with non-traditional forms employment (e.g. freelancers and contractors). In addition, I noticed how participants tended to use digital media platforms to complement offline, real life interactions. An example is the use of the professional social network *LinkedIn*. During events, especially those with dedicated networking sessions, it was not uncommon to send a connection request on this platform to other participants. Another example is the use of the professional chat app *Slack* as a way for organizers to create a

stronger sense of community among participants and also to extend it beyond the temporal boundaries of live events. During my pre-research period of acclimatization, *Meetup* emerged as the main platform employed by Vancouver's digital and creative professionals to find topical communities and to connect with other people.

Meetup is an online website founded in 2002 by the dot-com entrepreneur Scott Heiferman. Heiferman' idea was to use technology to counter the destruction of social capital described in Robert Putnam's book *Bowling Alone* (2000) or, in Heiferman's own words, to "use the Internet to get people off the Internet" (Heiferman, 2009; Kidder, 2012, p. 192; Weinberg & Williams, 2006). The platform allows users to search for events and to connect with people with similar interests who are locally available to meet in person (Benkler, 2006). Within the website, everyone can either join existing groups or create a new group and become organizers themselves. *Meetup* is free for all participants, while group organizers must pay a monthly fee in order to gain the privileges to organize events and promote them within the platform. *Meetup* became popular thanks to its role as a political instrument in the 2004 Kerry-Bush Presidential campaign (Sessions, 2010). In 2017, the platform hosted approximately 225,000 groups in 180 countries (Toledano, 2017). In that same year, *Meetup* was acquired by the coworking chain company WeWork (Neumann, 2017). Alongside basic functionalities aimed at helping users in creating and participating in events (e.g., browse the events calendar, retrieve events' information, send RSVP, etc.), *Meetup* also provides some functionalities routinely found in other social network platforms. For example, users can join virtual groups, post messages on forum boards and send direct messages to other users. Enacting the same practices I observed at the first events, I created a *Meetup* account and started relying on this platform to find events and to interact, both virtually and in person, with communities of tech practitioners. Using the platform, I wished to transform my weekly pilgrimages around the Vancouver start-up community into a systematic exploration of such community.

Relying on *Meetup* proved to be an effective way to orient my research efforts. Every week I would search for keywords such as "entrepreneurship" and "start-up" and select the most promising events to attend. Relying on local events as the primary occasion for participant observation and interaction with participants raised unanticipated methodological challenges. Specifically, I struggled to conceive my nomadic weekly participation at events as a proper research field. First and foremost, the field I was

exploring was neither away nor distant from my everyday life. Quite the contrary, it was deeply intertwined with it. Therefore, entering or leaving the field did not require any significant effort. My research did not entail any trip to distant places, as most of the events I attended and observed were scattered around the Vancouver metro area, the city where I was already living in. Moreover, the possibility to attend events at specific times and on determined days allowed me to fit the fieldwork within my working hours. The regular alternation of fieldwork time, work time and personal time, together with the possibility to choose which events to attend and when, further reinforced the idea that I was constructing a field (Burrell, 2009, p. 182), rather than discovering one that was "autonomous of the fieldwork through which it is discovered" (Vered, 2000, p. 6). In addition, lacking an objective criteria for selecting which events to attend among the hundreds available (in 2017, the year I began my investigation, the city hosted more than 800 events), rendered it difficult to assess how relevant or representative of the larger context were the chains and paths of events I decided to follow.

2.1.3. The Meetup spider

In the attempt to develop a more robust system for the evaluation and selection of events to attend, I began retrieving data from *Meetup* automatically. My intention was to collect as much data as possible in order to represent the field as a network and thus foreground the community of digital and new media industry workers "against the social complexity of its urban setting" (Burrell, 2009, p. 190). Conceiving the field as a heterogeneous network where nodes were events and groups, and edges were topics and participants, I was hoping to "understand both [my] own positions and [my] informants' positions relative to the rest of the observable community" (Howard, 2002, p. 560). To achieve such representation, I developed a simple and rudimentary content scraper, the *Meetup Spider*.

Content scraping has been described as a natively digital method (Kennedy, Moss, Birchall, & Moshonas, 2015, p. 175) which, thanks to the large availability of standalone software and ready to install software libraries, promises " to enable the development of new ways of collecting, analysing, and visualising social data" (Marres & Weltevrede, 2013, p. 313). In the context of my research, the *Meetup Spider* simulated the behavior of a user and periodically (although, not regularly) searched for *Meetup* groups and events using the platform's search engine. Subsequently, the scraping

software automatically browsed all the results and collected all the public information. The results were stored on a local, password protected and Freedom of Information and Protection of Privacy Act (FIPPA) compliant, database.

In the development and deployment of the *Meetup Spider*, several aspects were taken into consideration, firstly with the ethical aspects pertaining the eventuality to infringe *Meetup*'s Terms of Service (ToS) and *Meetup* users' privacy. Referring to the former issue, the automated collection of public information was not prohibited by *Meetup*'s 2017 ToS ("Terms of Service (3/28/17)," 2017). More concerning was, instead, the issue of participants' privacy. In scraping contents and repurposing them for research, I could inadvertently expose participants' names, along with other profile information and user generated contents, to the public. Even though the *Meetup Spider* only collected information published on public *Meetup* pages, the reuse of such information in new contexts (e.g., research reports, grant applications, conference presentations, and research blog) could have conflicted with users' perceived level of privacy within *Meetup*. For this reason, the *Meetup Spider* only collected public information about groups and events (e.g., group name, members count, creation date, associated tags, events names, date, venue, confirmed participants), omitting users' information and any form of user generated contents such as comments and forum discussions. Once collected, data were analyzed using the data visualization software Tableau.

At first, I decided to only collect information about *Meetup* groups which had at least few members, which held events with a certain regularity in the past and that had events planned in the calendar. In this manner I was able to remove from my initial set of results new *Meetup* groups with no or few participants, and old *Meetup* groups with a large memberships but without events in the calendar. Lastly, the decision to whether join a group or attend an event was taken based on the group and event description. In the first month after having deployed the *Meetup spider*, I was able to identify six *Meetup* groups to join and follow (November 2017).

Relying on the *Meetup Spider* raised some fundamental technical challenges. Although content scraping was not explicitly prohibited by *Meetup* ToS, platforms have every interest to discourage this kind of practice. In part this is due to platforms' need to maintain the contents produced by their users within their walls. For many platforms,

Meetup included, user generated contents are the only content they have, and represent the main reason why users engage with them (Steinberg, 2019). Moreover, the *Meetup Spider*, running from a desktop computer, could have been treated as a spam-bot by Meetup and its IP address could have been blacklisted, thus permanently preventing it to access the website. Lastly, content scraping is incredibly inefficient and unreliable. In order to collect the requested data, the spider had to crawl thousands of pages, download Gigabytes of irrelevant data (e.g., images), and save only the relevant bits of information. This method was also unreliable because, mimicking a user's behavior, the *Meetup Spider* followed browsing patterns which I had to configure beforehand. In other words, I had to instruct the *Meetup Spider* on how and where to retrieve the data I was looking for. In practice, I had to constantly reconfigure these navigational protocols because changes in the Meetup interface would inevitably break them. Because of these technical difficulties, I was able to run the *Meetup Spider* only a few times before realizing how unsustainable this method was.

2.1.4. Developing a Minimum Viable Protocol

The *Meetup Spider* only partially alleviated my frustration about the impossibility to establish a sustainable, reliable and effective way to scan *Meetup* and produce a thorough and accurate representation of Vancouver's start-up scene. It allowed me to identify the first six groups to join and helped me find some events to attend in the first month of my fieldwork. However, given the dispersion and the mutability of start-up-focused groups in Vancouver, I perceived my field as something that needed to be constantly redefined throughout the process of data gathering, rather than be delimited once and for all at the beginning of my investigation (Burrell, 2009, p. 184). The technical issues affecting the *Meetup Spider* necessarily limited its sustainability and, therefore, its effectiveness as a research tool. The usefulness of *Meetup Spider*, however, materialized not because of its instrumental value, but as an object through which to establish relations with meetup participants.

While testing the *Meetup Spider*, I was also regularly attending events and I was still facing the problems to connect with industry insiders. More than the quality or the quantity of data produced, what the *Meetup Spider* achieved was allowing me to have a project to talk about. At events, I could talk about, and show to other participants, some of the early visualizations created using the data extracted from *Meetup*. Even more

interesting was talking about the technical difficulties of extracting, storing, manipulating and visualizing a relatively large amount of data. Building on my knowledge of the start-up vocabulary, I started thinking and talking about the *Meetup Spider* as my *Minimum Viable Product* (MVP) (Ries, 2011, p. 77; see Chapter 3 for a rigorous definition of the term), as a rough prototype serving as a basis for the development of a more sophisticated, and more stable, tool for *Meetup* data extraction. In some cases, the *Meetup Spider*, as a research instrument, became corollary and subordinated to the necessity to have an object, a technical problem, to talk about in my interactions with participants.

In addition to communicating the *Meetup Spider* in face-to-face interactions with participants, I created a research blog where I documented the process of developing it and where I released some of the visualizations created from the data generated with Tableau. I gave the website a catchy name, *Labora*, and I even sketched a logo to use in all my presentations[4]. This work of branding, I thought, could have helped me to communicate my research in terms and ways not too dissimilar from those employed by participants to describe their own business ventures. In a sense, the *Meetup Spider* acted as a boundary object, as an "object which lives in multiple social worlds and which has different identities in each" (Star & Griesemer, 1989, p. 409). Acting as an interface between me and my participants, the *Meetup Spider* represented a research instrument, as well as a technological element whose technical features, and potential applications, were of some interest to the members of the start-up community.

The next step in the construction of my research toolkit was to develop the MVP into a full-fledged research instrument. The plan was to develop a new version of the *Meetup Spider* to improve the reliability of the research infrastructure, and to release it as *Free and Open-Source Software* (FOSS) to be reused and applied to different contexts. This meant revising the entire technological foundation of the project and to move from a system based on content scraping to one based on *Meetup*'s Application Programming Interface (API).

APIs are interfaces allowing third-party applications to get free or paid access to platforms' data sets (Van-Dijck, 2013, p. 31). Retrieving data through API requires the

[4] The blog is till online and can be found at https://labora.co

development of a software component (a client application), responsible for sending the requests to the platform's server using some form of platform-specific protocols. Among the advantages of using API is the possibility to retrieve more data, more efficiently, and in real time. Thanks to a stricter integration with *Meetup*, it could have been possible to create visualizations based on fresh data, to move the focus of the analysis to new geographical areas (for example, running parallel analysis in Toronto and Vancouver), and to expand or restrict the scope of the analysis at ease (for example, focusing only on fintech start-up events). Moreover, developing and licensing the new *Meetup Spider* as a FOSS, would have allowed everyone to reuse the code and to embed it into new contexts. This latter aspect could have increased the utility of the tool as a research instrument and as a boundary object. Lastly, being API developed and maintained by the platforms' owners, API-based methods are usually more stable and reliable than those based on content scraping (Freelon, 2018). However, developing a client application requires technical skills that are far more advanced than those needed to setup a simple, desktop-based content scraper. The development of the next iteration of the *Meetup Spider* turned out to be another occasion for ethnographic encounters.

2.1.5. The Meetup Archiver

Patrick was a project manager working at a local information technology company. He moonlighted as an independent software developer and was trying to make his side-hustle his main job. I never met him in person, despite the fact we both lived in Vancouver and we both attended, although in different cohorts, the *Novio* acceleration program. The first time I met Patrick was in the *Novio*'s *Slack* channel, a chatroom dedicated to *Novio*'s alumni which participants used to share information about events, jobs and funding opportunities. As soon as I received the news from my supervisors that some funds were made available for the development of the new *Meetup Spider*, I posted a message on the *Slack* channel asking for help for the development of this new version:

> Hello everyone! As part of a SFU sponsored research project, I am looking for someone who can help me develop a software application capable to extract data from Meetup API, store them into an online database and make them available to third party applications, such as desktop software. DM me if you are interested.

Patrick sent me a direct message (DM) shortly thereafter expressing his interest to participate in the project. After having evaluated together the technical details and the development costs, we agreed to collaborate on the creation of what came to be known as the *Meetup Archiver*.

Patrick was a skilled developer and project manager trained in the *Agile* framework (Beck et al., 2001; Shore & Warden, 2008). This means that, instead of developing the software on the basis of an initial set of requirements, Patrick asked me to develop a series of "user stories" (Shore & Warden, 2008, p. 255) in which I described the ways I envisaged using the *Meetup Archiver*. Analyzing my stories, he would provide me with a list of functionalities which we then prioritized together and that he later would translate into software code. The process was iterative: Patrick released new versions of the *Meetup Archiver* periodically for me to test and debug. The development of the tool had to consider issues of privacy and data security, as well as respect the protocological rules (Snodgrass & Soon, 2019) enforced by *Meetup* (e.g. limit the number of requests sent to *Meetup*, *sign* all requests for data using my personal *Meetup* account, etc.). The development process took roughly two months, at the end of which the *Meetup Archiver* was ready to be deployed and incorporated into my research repertoire.

The release of the *Meetup Archiver* was a significant milestone in the development of my research methodology for several reasons. Participating to its development and working closely with an *Agile*-trained software engineer allowed me to experience firsthand the dynamics prescribed by this software development framework. In addition, the decision to abandon content scraping secured, although only momentarily as I will discuss in the epilogue section, the research repertoire from the *Meetup* ToS changes which, in August 2019, explicitly prohibited screen scraping ("Terms of Service," 2019). Lastly, it made my research toolkit more flexible; even though the software and the data resided on a private cloud server, I made a commitment to render the dataset available to everyone who requested access to it. This commitment was meant to further redistribute my research, to open it to external scrutiny, and to expand the public utility of the *Meetup Archiver*.

At a practical level, the main advantage of switching to the *Meetup Archiver* was the possibility to retrieve and visualize a larger amount of data, and to update the analysis periodically and regularly. Specifically, using Tableau I created a new set of

dashboards to be released on the research website. Once a week, the *Meetup Archiver* would download new data and update the dashboards to reflect the new information. Developing the dashboards was also a useful exercise to think about issues of power and normativity in technical protocols. While the speed and efficiency of API are beyond question, not so evident were the issues of power embodied in the way in which such data were provided. For example, the organization of data made it relatively easy to replicate the measures employed by *Meetup* to classify, measure and rank groups, such as groups could have been easily classified in terms of their size simply by counting the number of their members. Or events could have easily been ranked by counting the number of participants who RSVP'd. However, these sort of calculations, and the visualization of their outcomes through easy to navigate user interfaces, would replicate and further reaffirm *Meetup*'s own definition of relevancy and popularity. The challenge then was to develop dashboards which, relying on the data provided by *Meetup*, and through more or less complex operations of data manipulation, could represent the Vancouver community of digital and new media workers in ways that escaped the normative models enforced by the platform's protocological rules. In the attempt to visualize, and explore, the field in ways that differed from *Meetup*'s imposed optics, one based on popularity and relevance, I developed a dashboard displaying all those groups which, despite small members counts and low growth rate (calculated as the differential of member number over a week time period), had held events on a regular basis. These groups tended to be small, relatively stable over time and focused on niches not necessarily hot or trending. This allowed me to identify and join, for example, a group dedicated to instructional designers. Even though their events were relatively small (20 people in attendance on average), this site was particularly rich and interesting to observe (for a detailed description of the group see section 6.2).

2.1.6. The multistable role of Meetup in the constitution of the researching epistemic subject

It should be evident by now how ambivalent the role of *Meetup* within my research was. The first time I encountered *Meetup* it was in the form of an object embedded and enmeshed into the daily working practices of start-up workers. For example, people working independently tended to describe *Meetup* as a way to overcome the sense of isolation deriving from their work arrangements. They talked about *Meetup* as an instrument to find and connect with people in similar working

conditions or industries, thus limiting the sense of isolation and disconnection they perceived working from home or from coworking spaces. As one of my respondents said when asked about why he spent so much time organizing meetups: “Meetings help reinvigorate the community and help bring the community together.” People also used *Meetup* as a marketing channel, to promote themselves or their companies. Small businesses and large corporations alike used *Meetup* to market their services, often by creating groups and hosting events targeting specific niches within the digital and hi-tech industries. For example, a local coding school hosted regular meetups dedicated to blockchain. The events featured presentations from local blockchain experts as well as sales pitches promoting the school’s 12-week blockchain course.

My initial understanding of *Meetup* as an empirical object shifted once I started using the platform as a proxy for conducting in the field, face-to-face investigation. In what I describe as a hermeneutic relation to *Meetup* (Ihde, 1990, p. 80), my perception of the platform changed from being the focus of my investigation, to a research instrument. Extracting and analyzing *Meetup* data through the *Meetup Spider*, I used the platform to inform and guide my ethnographic, on the ground, research efforts. In this phase, I described my research as a networked ethnography of Vancouver’s digital and new media industries. Figuring *Meetup* within my research repertoire in a position of mediation (Lesage & Lusoli, 2021), as a research instrument, was the reason that pushed me to investigate the possibility to develop more efficient and effective data collection methods.

Developing the *Meetup* Scraper and its later iteration, the *Meetup* Archiver, involved spending time on the platform, browsing it extensively and, inevitably, being exposed to and learning about the norms and practices of its users. It also required the creation and the customization of a personal profile. From this new position, that of a user, I was able to experience the platform not only as an empirical object or as a research instrument, but also as a field in itself, with its own practices and norms. Within *Meetup* groups, users had the possibility to exchange information using the internal forum sections and to engage in less structured forms of talk using the events’ comment sections. In these places, users discussed about events, shared news and resources, and promoted themselves and their services (although most groups discouraged users from posting blatantly promotional messages). This understanding of *Meetup* as a space

for social interactions was confirmed in interviews, where the platform was described as something more than a website for organizing and finding events.

Lastly, *Meetup* became, at some point during my investigation, a key artifact through which I was able to constitute myself as a subject of the episteme. My experience working with *Meetup* data and API helped me to gain access to and connect with the people I was observing. For example, as a *Meetup* expert, in October 2018, I was invited to present at a *Meetup* group about social innovation (the group and the specific events are described in section 6.1). On that occasion, people from the audience raised technical questions about the *Meetup* Archiver. Questions which allowed me to identify some bugs in the API client and to improve the efficiency of the tool. In addition, the publication of the dashboards and the release of the *Meetup* Archiver as a free and open-source software further validated my position as a subject of the start-up episteme.

From this position I was able to engage with people otherwise not interested in my research. As in the case of the director of an incubator for early-stage companies. As a type of "networker" (Boltanski and Chiapello, 2007, p. 120), he was also very difficult to connect with. In my introductory email to him, I asked him if he had time for an interview and I made sure to include a link to the research website. His response was positive and, to my surprise, when we met in person, he opened the conversation by asking about the *Meetup* Archiver and the dashboards published on the research website:

> "It would be great to have some sort of collaboration with your research project, like the possibility to feed that map [the Meetup Dashboard] and show it somewhere on [INCUBATOR WEBSITE]. Everything you are working can feed into our work, as I'd like to bring people together, as I'd like this project to be collaborative."

Even though the project never developed, this example shows how *Meetup* was fundamental in the definition of my subjective position withing the start-up episteme, and how that position created opportunities for interactions with participants.

2.2. Becoming a subject of the start-up episteme

Some months after the conclusion of my fieldwork, I can now look back at my experiences from a critical distance and appreciate how much developing an insider's

perspective of the Vancouver's start-up collectivity required conforming to, and enacting, the regularities of the episteme. These became evident in the way I both developed my research tools and conducted myself in the field. In particular, the act of constituting myself as a subject of the start-up episteme required the enactment of two discursive regularities: project thinking and bootstrapping. The former refers to the possibility of defining objects and subjects as projects in a way similar to Boltanski and Chiapello's (2007) understanding of the term: entities fostering new encounters, occasions to get oneself recognized by others and opportunities to expand one's network. Bootstrapping, instead, refers to a particular chronotope commonly found in start-up narratives. It entails a spatiotemporal articulation of subjects and objects or, more in general, of projects, one that is cyclical and apparently endless. Following the bootstrap narrative structure, objects and subjects are described as entities leaving a condition of equilibrium in favor of a state of indeterminacy, instability, and multiplicity. It is in this state of tactical and recursive change that subjects and objects can express their identities and functions. Although these concepts will be discussed in greater depth in Chapters Four and Five, in this section I reflect on how they manifested themselves in the context of my research.

Project thinking had a significant influence on the way I conceptualized the development of my research tools. In particular, it affected the way I designed and released the *Meetup Archiver* to the public. As a project, the *Meetup Archiver* became relevant throughout my investigation for both its inherent utility (i.e. to extract data from the *Meetup* API) as well as for the possibility it afforded to draw insiders' interest to my research. For these reasons, I decided to develop it not as a full-fledged standalone software serving the specific needs of my research but, rather, as a multipurpose interface allowing users to tap into *Meetup*'s data using whichever software application they preferred. In this manner, I hoped the *Meetup Archiver* could serve the needs of a larger audience than just academic researchers. Following the same logic, I decided to release it using the most permissive and open license available (MIT License), and I published it on a popular software hosting platform (GitHub). If, on the one hand, these decisions were a reflection of my commitment to render my research as open and public as possible, on the other hand they were further attempts to extend the *Meetup Archiver*'s utility as a project, by offering opportunities to others to engage, materially, with my research. Albeit apparently technical, these decisions were fundamental also in validating my identity as an insider of the Vancouver start-up collectivity.

The way I achieved an appropriate level of insideness was also through the enactment of the kind of bootstrap narrative I often saw at work in the constitution of my participants' identities and their projects. As mentioned, the *Meetup Archiver* was an essential object for engaging participants in my research. On the basis of the level of interest they expressed toward my work, I cyclically revised the *Meetup Archiver* in order to make it increasingly more effective as a project. In the process, the way I defined myself in relation to my work also changed significantly. As the *Meetup Archiver* transitioned from being a prototype, to a research tool, to a free and open-source software, my identity also changed. At meetups, I was no longer, or better, not only, a researcher investigating the world of start-up labor. I was also someone prototyping a new technology for finding better and more interesting events to attend, someone working on a *Meetup* API client, someone visualizing data in Tableau and, finally, someone responsible for a free and open-source project. Constituting myself through the same discursive regularities and practices employed by my participants, I was able to relate to others' experiences and to render my project, and myself, intelligible to the people with whom I was trying to connect. At this point, I was no longer conducting research only *through Meetup* (i.e., using *Meetup* instrumentally to identify events to attend) or *on Meetup* (i.e., *Meetup* as a digital research field). Conducting research *with Meetup* allowed me to constitute and validate my identity as "someone equipped with a project in a way that was analogous to what the start-up workers encountered in the fieldwork" (Lesage & Lusoli, 2021, p. 2230).

Reflecting on the resonances between my research and the episteme I was seeking to study should serve as reminder of the importance of artifacts in the constitution of ethnographers subjectivities (something already discussed in the past, e.g. Schouten & McAlexander, 1995). It is also a useful exercise for thinking about access, legitimation, and positionality as an act of balance. That is, balance between conforming to the episteme as a way to validate oneself as an insider against the risk of further reifying epistemic regularities through their enactment in ethnographic practices. In this respect, maintaining a reflexive understanding of research practices and of "researchers' roles in the field" (Adler & Adler, 2008, p. 14) becomes essential. Reflexivity, understood as "an exercise which places the social investigator back in the research frame" (Knowles, 2000, p. 56), means being able and willing to recognize that our attempts at "being with, and doing things with [participants]" (Pink, 2011, p. 170) can

foster as well as hinder our ability to understand and develop critical insights into “the experiences and meanings of other people’s lives” (Pink, 2011, p. 170). In the case of the start-up episteme, for example, the field offered countless opportunities for *doing things with* the people I met, especially in connection to the development of the research tools. Conforming to the logics of start-up entrepreneurship, it would have been relatively easy to harness the power of volunteer and free labor for the development of the *Meetup Archiver*. For instance, I could have involved aspiring entrepreneurs as technical co-founders of the *Meetup Archiver* and I could have just as easily compensated them for their work in *sweat equity shares*. In this manner, I could have positioned my research even closer to the regularities of the start-up episteme, being reliant upon entrepreneurial free labor a common and popular practice. However, doing so would have also reaffirmed these practices, and the epistemic regularities informing them, even further, thus contributing to extending their reach (for example, demonstrating the possibility for leveraging participants’ free labor as a way to conduct social research). Hiring Patrick to help to develop the *Meetup Archiver*, and releasing the code in the public domain, on the contrary, represented an intentional departure from the practices of the episteme. Reflexivity, therefore, means becoming intentional about when to follow and when, instead, to counter the regularities of the episteme, and acknowledging that having such a choice is, in itself, an expression of a privilege that was not available to everyone, definitely not all my participants.

2.3. Epilogue

Ever since its inception, the plan was to release the *Meetup Archiver* as a free tool which could be reused and embedded into new contexts of use. Many digital methods rely on technical devices, and some of them are available for free in the form of open-source software (Freelon, 2018). While there are many software libraries available to researchers for collecting data from major social networks and search engines (Driscoll & Walker, 2014; Plantin, Lagoze, Edwards, & Sandvig, 2018), there is not a ready to use, free and open-source *Meetup* API interface. By releasing the *Meetup Archiver* as a FOSS, I hoped to fill his gap and to facilitate novel investigations of this platform. I also saw it as an opportunity to go beyond the canonical way of conceptualizing the relation between researchers and subjects, a relation postulated on the model of knowledge extraction, elaboration and dissemination. Instead, releasing the

Meetup Spider in the public domain was an attempt at redistributing my research (Marres, 2012), thus opening it to public scrutiny.

Following the departure of Patrick, who abandoned the idea of becoming an independent software developer and accepted a job as a hardware developer at a local tech start-up, I was left with a version of the *Meetup Archiver* that was running smoothly, but that was not ready, yet, to be released publicly. In addition to technical difficulties, releasing the source code of a software application in the public domain presents some challenges, especially for someone who is not a computer scientist and has little experience in the field. Identifying which license to adopt is one of them. In the case of a university-sponsored project, this should be chosen in accordance with the institution's intellectual property (IP) protection and technology licensing model. IP compliance is only one aspect; in order for a software application to be useful to others, it is important to make it available on repositories that are both popular and easily accessible to the public. Luckily, thanks to a connection developed at the social innovation *Meetup* group where I presented the project, I learned about the Mozilla Foundation Open Leader program. This is a program sponsored by the Mozilla Foundation and meant "to make openness the norm in innovation and research" ("Mozilla Open Leaders," n.d.). I was admitted into the program in January 2019 and, in the course of 14 weeks, I learned the basics of open-source licensing. Through weekly calls with a mentor and bi-weekly meetings with experts, the program helped me navigate the technical and legal aspects involved in the release of the *Meetup Archiver* as a FOSS. In July 2019, with the fundamental support of the Research Computing Group at Simon Fraser University, the *Meetup Archiver* was released on the software development platform GitHub under MIT License.

2.3.1. Post-mortem

Writing post-mortems is a ritual of start-up entrepreneurship. Through irony, start-up entrepreneurs use this form of business-eulogy to reflect on their failure and make fun of their entrepreneurial debacles. As an ethnographer of the start-up episteme, I believe this is the appropriate time and place to celebrate the ultimate failure of the *Meetup Archiver*. Paraphrasing Steve Blank's words, the *Meetup Archiver*'s eulogy could read as follows: "I don't understand what happened. We did everything that worked in our last start-up" (Blank, 2007, p. 23).

Shortly after the publication of the *Meetup Archiver* on GitHub, *Meetup* announced a radical change to the way they handled API connections. Specifically, they announced they were moving to a new authentication method known as OAuth2 and supported by the Internet Engineering Task Force (IETF). In addition, they restricted the use of the API to subscribers of the *Meetup Pro* service (a paid service meant for organizations managing multiple *Meetup* groups) and limited the scope of the API drastically. The news enraged the community of third-party developers who integrated *Meetup* data into their applications. Within the forum dedicated to developers, which I visited regularly since the announcement of the forthcoming changes to the API, the decision was interpreted as WeWork's (*Meetup*'s parent company) attempt to maximize revenues at a time when the company was under increased financial scrutiny (Trainer, 2019). This example, posted after the *Meetup*'s engineering team Principal Architect announced the transition to OAuth2.0, well represents the general feeling of the developers' community:

> The original API team were amazing folks, very responsive and recognized the value of extending the Meetup platform to automation tools such as Zapier, IFTT, and Adobe. After being purchased by WeWork, the company focus changed directions. They moved several key features from Meetup to Meetup pro. So chess clubs, camera clubs, Autism support groups, jogging clubs, etc. are no longer the focus of the Meetup ecosystem. The more expensive Pro tier is intended for well funded national organizations and corporate clients that are more likely to drive sales to the WeWork platform. ("Questions about decision to charge for Server Side API with Credentials," 2019)

In the absence of an educational license, these limitations rendered it virtually impossible to retrieve any kind of information from the platform, thus making the *Meetup Archiver* effectively useless. Besides disrupting the regular flow of data powering my research infrastructure, *Meetup*'s decision to move to a new API standard was an expression of platform's power to enable and at the same time discipline the work of third-party developers. APIs, in particular, further platforms' double logic (Helmond, 2015): on the one hand they allow automation and data exchange between platforms and third-party applications and, in doing so, they contribute to the constitution of the open and programmable internet prophesized by O'Reilly at the onset of Web2.0 (Lesage & Rinfret, 2015). On the other hand, through the use of protocological parameters, APIs extend and recentralize *Meetup*'s own economic and computational models, all the while outsourcing the creation of new functionalities to communities of

third-party developers which have no power in API's technical governance (Bucher, 2013; Snodgrass & Soon, 2019). As a social researcher conducting research in, of, through and with *Meetup* (Lesage & Lusoli, 2021), I was not immune to the platform's double logic. The eventual decommission of the *Meetup Spider* is a testament to the need to "keep the tenuousness of our access to digital data firmly in mind" (Freelon, 2018, p. 668). It is also a quintessential expression of another regularity of the start-up episteme: failure. Following project thinking, failure is not always a mistake, it is also a learning opportunity and –potentially– the beginning of a new project.

Chapter 3. The start-up episteme: an archaeological inquiry

> *Lean [start-up] started from the observation that you cannot ask a question that you have no words for. (Blank, 2018)*

Equipped with the definition of episteme introduced in Chapter One, I analyze the slice of history going from the early 1990s to 2010s with the aim of identifying the principles ordering and shaping the current start-up managerial discourses. For the sake of exposition, I divided this analysis into two periods: the dot-com and the post-dot-com era. The former is defined as the period between the launch of the first browser Mosaic in 1993 and the burst of the New Economy bubble in 2000. The latter, instead, begins after the stock market crash and extends up until present days.

Analyzing business and managerial literature from the two periods, I discuss how, prior to the New Economy bubble burst, the term start-up was anchored to established managerial concepts. As a synonym for “early stage company”, the term was associated to the entrepreneurial activity of launching a new business. In these years, a teleological conception understood start-up as a transient phase of the corporate life cycle. This understanding of start-up can be found, materialized, in the business model, a planning methodology particularly popular in the dot-com years and analyzed in this chapter. After the dot-com bubble burst, managerial literature on the subject became increasingly self-referential and self-serving. In this moment in time a new understanding of start-up developed. Echoing concepts from design thinking and *Agile* development, start-up became a permanent mode of being for individuals and corporations of all sizes, rather than a stage in the constitution of a new economic venture. It was in this moment, I argue, that the start-up discourse transcended its original acceptation as an organizational principle to become a way of thinking about labor, a way of structuring and conducting it, as well to constitute oneself within and in relation to it. A conception which, I argue, reflects the technological and economic conditions of the dot-com era and that, in turn, shapes the material correlate on which it depends. This new understanding of start-up can be found instantiated in the business model canvas, a graphical instrument and method employed for the development of lean business models.

Despite significant differences in the ways in which the start-up was conceived before and after the dot-com stock crash, in my analysis I try to emphasize the continuity between the two conceptions rather than charting one as the evolution of the other, thus furthering the narrative of the start-up as the latest revolution in business (as proclaimed by Blank, 2013a). The continuity between the two periods is predicated upon the concept of non-linearity which, transcending from natural sciences, to economics and to management, has made people at different points in time to take the start-up seriously, before, after, and despite the bubble burst.

3.1. From Atoms to bits

In the early 1990s, a wind of techno-optimism swept the industrialized countries of the western hemisphere. As the short century was about to pass into history, US citizens were preparing to reap the benefits of almost thirty years of government-funded research into nuclear-proof information and communication technologies (Mazzucato, 2014, p. 168). In the public imagination, the opening of the Internet's virtual doors to commercial usage was celebrated as the coming of the "information superhighway" (1990), as the then-Tennessee Senator Al Gore, perhaps in observance of a family tradition[5], famously depicted the Internet in a 1990 Washington Post article (Flichy, 2007, p. 17). Journalists, pundits, and investors hailed the diffusion of personal computers in American households, and their interconnection by means of telephone wires, as the herald of a new economic phase, one based on zeros and ones rather than on land and labor. Some commentators went so far as to claim that the irrevocable and unstoppable transition "from atoms to bits" (Negroponte, 1995, p. 4) called for a new economics (e.g. Mandel, 1996), as neoclassical principles would no longer be useful to describe, let alone model and predict, a new economic system based on intangible assets and commodities such as knowledge and data.

The New Economy rhetoric gained momentum and strengthened as the decade unfolded. In 1992, Al Gore, now US vice-president candidate, made the information superhighway the rallying cry of Clinton's presidential campaign, promising to "wire up

[5] Albert Gore Sr., father of Albert (Al) Gore Jr., also served as Democratic Senator for Tennessee. In the 1950s he was among the main supporters of the creation of the US interstate highway system (Cringely, 1996, p. 346).

every classroom in the country" in case of victory (Cassidy, 2009, p. 38). Starting in 1993, the year the first user-friendly browser, X Mosaic, was released, a flock of digital and media companies joined the Internet gold rush, as Bill Gates dubbed, not without a hint of skepticism, the competition to gain market shares in the fast-growing consumer markets created by the diffusion of digital communication technologies (Gates, 1995). Less skeptical were Morgan Stanley analysts and early Internet gurus Mary Meeker and Chris DePuy, who saw the information age as "The great communication backfill opportunity" (1996, p. 2). The opportunity was the chance to transform the already existing 150 million computer users worldwide into the Internet's first paying customers.

The object of the rising political, economic and financial attention were the so-called dot-coms, Internet-based firms caught up in the competition to capitalize every opportunity afforded by the digital medium, all the while leveraging on the stock market to amplify the impact of their businesses. Experimenting with innovative models for extracting value out of the cultural, technical and creative work performed, often for free, by early Internet adopters (e.g. online communities, virtual chatrooms), the dot-coms became icons of the entrepreneurial spirit of the roaring nineties: bold, risk taking and fast acting. A spirit which also affected their organigrams. Dot-coms introduced novel forms of corporate organization: more flexible, more distributed, more organic (Afuah & Tucci, 2003, p. 67) and a "flatter" hierarchy than those of the industrial era. By the time the New Economy hit its high-water mark on March 13th 2001, the apex of an eight-year speculative bull market run fueled by an ironclad confidence in the economic potential of networked forms of immaterial production, the managerial practices undergirding the dot-coms had spread to much of the industrialized world, beyond the confines of the high-tech districts, San Francisco's Silicon Valley and New York's Silicon Alley, where they originated (Feng, Froud, Johal, Haslam, & Williams, 2001, p. 470; Turner, 2006, p. 175).

3.1.1. Third wave capitalism

Countless metaphors were used to describe the economic impact of information and communications technologies. Business and managerial literature usually relied on colonial metaphors, describing the Internet as the last electronic frontiers and dot-com entrepreneurs as "intrepid explorers and colonists of the 16th and 17th centuries" (Moore, 1991, p. 90) trying to grab their share of virtual land. However, the *terra*

incognita that early colonizers found entering the cyberspace appeared as radically different from the one they were coming from. The digital world seemed to escape the economic rules they relied on to describe the production and consumption of commodities in the “real world”. Even the most basic laws of physics did not seem to apply to digital artifacts: they did not wear out through consumption, they could be replicated with little or no expenditure of energy, they moved across space at no cost and in almost real time, and they were extremely difficult to own exclusively.

The differences between real and digital commodities also affected taken-for-granted economic identities and roles. Above all, the distinction between producers and consumers, whose aggregate abstract behaviors have been used since the beginning of economic thought to formulate fundamental laws such as the model of supply and demand, became blurred in the virtual land. "Everybody will become information providers as well as consumers", Steve Case of America On Line (AOL) prophetically argued in 1993 (as mentioned in Gilder, 1993b). Business consultants, politicians and the media framed the Internet as an opportunity for people to own their means of production, thus opening new possibilities for self-actualization not only as consumers but also, and mostly, as creators.

The Progress and Freedom Foundation (PFF) was among the main supporters of the kind of cyberbolic thinking (Woolgar, 2002, p. 9) surrounding the diffusion of the Internet. The PFF was a self-defined “market-oriented think tank” (1993) connected to, and supported by, the new-right Republican congressman Newt Gingrich (Barbrook & Cameron, 1996, p. 7) and animated by the digerati clique orbiting around the online forums of the Whole Earth 'Lectronic Link (The WELL). In their 1994 futurist manifesto, *Cyberspace and the American Dream: A Magna Carta for the Knowledge Age*, the PFF quadrumvirate Esther Dyson, Alvin Toffler, George Gilder and George Keyworth (1996) described the rise of the Internet as the passage from the second wave to the third wave economy. The former stood for industrial capitalism, an economic regime based on the classic three factors of production: capital, land and (machine-enhanced) labor. The latter, instead, represented the New Economy, a system of capital accumulation where knowledge would become the fourth, and the most important, factor of production or, as the management guru Peter Drucker (1993) put it, “the only meaningful resource” (p.38).

Despite the triumphant tones, Dyson and colleagues did not believe the success of the third wave economy was either unavoidable or achievable through relentless technological innovation alone. Combining technological utopianism with free market rhetoric, the PFF manifesto pressed Western democracies to support the third wave economy through a clear political program. This meant, on the one hand, reaffirming and updating individuals' fundamental rights, first and foremost those pertaining to economic self-determination and intellectual property, to the electronic regime. Secondly, it urged governments to remove all barriers hindering universal access to the digital infrastructure and to free their political agendas from the entrenched powers of the second wave economy. This translated into laissez faire economic recommendations undermining the legitimacy of the "interventionist welfare state, the central planning in businesses and the economy, the hierarchized corporation, and the tenured worker" (Fisher, 2010, p. 23).

The PFF ideas for a freewheeling knowledge based economy echoed through the work of Kevin Kelly, also a member of the "new communalists" (Turner, 2006, p. 4), the intellectual hi-tech elite originating from the countercultural movement of the 1960s and coalescing in the 1980s around the aforementioned forum The WELL. Co-founder of Wired magazine (also an emanation of The WELL), Kelly offered an even more dramatic vision for the third wave economy than the one envisaged in the PFF *Magna Carta*. In his influential book *New Rules for the New Economy* (1998), Kelly argues that the prime goal of the New Economy was to dismantle industrial capitalism "company by company, industry by industry" and to rebuild it on the basis of the decentralized and participatory principle of the network.

Akin to Dyson and colleagues, Kelly's ideas are also wrapped in technological utopianism. However, unlike his contemporaries, Kelly appeared less interested in the technology itself and more on the network as a new metaphor for making sense of society. Indeed, technology played a fundamental role in Kelly's account of the future to come. It was thanks to "enabling innovations" like the personal computer and the microchip that digital networks became part of everyday experience for millions of Americans by the end of the 1980s. Pervasiveness and ubiquity, however, represented just the first step along a path to transcendence. The network, once part of the everyday, could have become the "central metaphor around which our thinking and our economy are organized". As an allegory, the network, as a technological element of the material

correlate, provided a template for organizing and describing institutions and forms of collectivity (Mejias, 2013, p. 9). In its disembodied form, the network could have potentially changed our perception and understanding of “society, culture, humanity, our own individual identity, and of all economic systems” (Kelly, 1998, p. 5).

Swayed by the network discourse, the institutions inhabiting and structuring society would be redrawn based on decentralized logics and enter a new phase, one of constant transformation. Unlike industrial-era institutions, shaped around centralized and vertical systems of discipline and control meant converging, over time, toward asymptotic states of equilibrium, New Economy institutions would emerge from the constant interactions among independent nodes acting without a masterplan and responding exclusively to individual and local contingencies. As a result, network-based institutions were described as in a perennial state of transition, a “constant state of flux”, always “within reach of disaster”, but for this reason capable of constantly propelling themselves “forward with grace” (Ivi, p, 114). Kelly described the fine act of balancing chaos with order as the necessary condition for achieving a state of “constant innovation” by means of “perpetual disruption” (Ivi, p, 110) within networked-firms, -industries, -economies and -societies.

3.1.2. The Influence of Complexity

As a system of regularities patterning discourses within a given era, the episteme is mutually dependent on its material correlate. In the works of Kelly, Dyson and colleagues, the mutual and self-reinforcing relation between discourse and their material correlate can be found in the way they borrowed the Internet language and topology to portray institutions as networks composed of independent nodes. Epistemic regularities, however, extend also across concurrent discourses. In this respect, the vision offered by Kelly and the PFF is of a world as a system in constant state of chaotic flux. A vision based on a non-linear, complex conception of the economic reality. Borrowing concepts from biology, firms were compared to cells within living organisms (Kelly, 1998, p. 6), capable of self-organizing in response to external stimuli. Similarly, the economy was conceived as an inherently unstable ecosystem, capable of amplifying every small interference into a threat to the general equilibrium, but for this reason also able to constantly create opportunities for disruption, reinvention and progress (Benkler, 2006; Drucker, 1985). Therefore, instead of trying to predict or control instability, everyone

involved in networked forms of production should have learnt to “surf” economic turbulence to generate forward motion (Kelly, 1998, p. 114). Kelly and Dyson works epitomize the kind of non-linear perspective which, as I argue in the following pages, represents the unifying principle shaping managerial and economic discourses within the start-up episteme.

Alvin Toffler was among the first ones to describe the information era economy, and society, through the lens of non-linearity. In *The third Wave* (1980), Toffler described the industrial era as one characterized by the cultural constant of the line, which shaped our conception of time and space:

> In all industrial societies, capitalist or socialist, Eastern or Western, the specialization of architectural spaces, the detailed map, the use of uniform, precise units of measurement and, above all, the line, became a cultural constant—basic to the new indust-reality. (Toffler, 1980, p. 110)

On the contrary, the information-age would be characterized, Toffler continued, by a non-linear conception of time and space. To live in it and make sense of it, we should “resist the temptation to be seduced by straight lines” (1980, p. 130) and become acquainted to a reality where causes and their effects are not directly and proportionally related as we have been trained to think. A new economics, as well as a new managerial culture, were deemed necessary to navigate the uncertainty of networked systems of production or, in the words of Lash and Urry of “disorganized capitalism” (Lash & Urry, 1994, p. 25).

Although Kelly’s, Dyson’s, and Toffler’s references to non-linearity were at times loose and cursory, their works build on, and reinstate, a series of discursive regularities which have been the subject of scientific inquiry since the mid-1980s within the dispersed, scattered field of complexity. As a broad umbrella term, complexity denotes the various approaches which, across disciplines, have been involved in the study of non-linear systems.

Previous works have already traced the cultural lineage of the New Economy and connected it to the 1990s studies on complexity (e.g. Tiziana Terranova, 2000, 2004; Thrift, 1999, 2005; Turner, 2006). Building on and expanding these works, in the following pages I discuss how the sub-branch of complexity involved in the study of the economy was fundamental in constituting the start-up episteme. Modeling the social

world as a system characterized by emergent, self-organizing, and adaptive behaviors, the complexity discourse legitimized economic representations and managerial practices of the dot-com era. These, in turn, legitimized (and in part reflected) the network technologies of production that in those years were becoming increasingly familiar and common.

More than the diffusion of digital technologies of communication, more than the affirmation of knowledge as a productive factor, more that the rise of venture capitals and dot-coms, but at the same time because of all these elements, complexity provided the vocabulary that allowed the dot-com era to be described as a paradigmatic shift, as an economy of plenitude rather than of scarcity (Kelly, 1998, p. 39). Considering the amount of works developed in the field of complexity throughout the 1980s and 1990s, in the following section, I focus on the work conducted by the Santa Fe Institute, the organization which, more than anyone else, popularized complexity theory beyond the natural sciences in the late 1980s (Cowan, 2010, p. 145).

3.1.3. Complexity in economics: The Santa Fe approach

Complexity developed in the natural sciences in the 1960s, famously through the work of Ilya Prigogine on thermodynamics, as a non-reductionist response to the classic physics description of natural phenomena (De Landa, 2000, p. 14). In the following decades, complexity emerged as a recurrent topic in such diverse fields as biology, meteorology, population ecology, mathematics and computer science (Johnson & Burton, 1994, p. 321). Despite the limited cohesion, all contributions shared the same critical stance with respect to the reductionist and deterministic approaches to the study of non-linear systems of Newtonian physics premised on the possibility of understanding systemic phenomena from the study of their constitutive parts. According to critics, these could not account for the apparently “unpredictable but nevertheless strangely ordered” (Urry, 2003, p. 23) behaviors of non-linear systems and would be of little utility in describing the interaction patterns between the numerous, even countless, components of such systems (Arthur, Durlauf, & Lane, 1997, p. 3). When they did, results often led to oversimplifications of systems’ dynamics, accounting only for the most prominent forces at play and ignoring those of lesser importance, routinely treated as corrective, random, or residual at best (a problem also known as linearization (Bertuglia & Vaio, 2005, p. 39)). Examples of complex systems in the natural realm include the living cell, composed

of chemically reacting proteins, lipids, and nucleic acids, and the brain, whose cognitive functions cannot be deducted from the analysis of individual neurons.

In response to reductionism, complexity scholars called for a holistic approach to system analysis (Byrne, 1998, p. 15). This meant considering how a system's components interacted with each other, how they responded to changes taking place at different scales and how their behaviors evolved as a consequence of learning and adaptation to environmental changes. On the basis of such a holistic perspective, complexity theories and models discerned between purely chaotic and complex systems. The latter were of particular interest because, working at the "edge of chaos", the theoretical threshold delimiting order from disorder, they exhibited process-dependent and evolving behaviors, also known as emergent behaviors (Bertuglia & Vaio, 2005, p. 277), even without the guidance of a centralized apparatus of control.

The vision for complexity was, however, more ambitious than simply filling the void left by classic physics: complex models of natural phenomena, even of relatively simple ones such as the motion of a pendulum, questioned established linear descriptions of them. The reality portrayed through complexity was messier and less predictable and therefore less prone to fit the elegant mathematical models that classic physics tried to impress upon it. Research on complex systems was not confined to the biological and natural realms either. Computer-based models demonstrated how even simple algorithms such as Cellular Automata (CA), discrete time/space logical universes composed of arrays of cells in which each cell can assume a finite number of values depending on their internal logics and on the values of the neighboring cells (Langton, 1990, p. 13), could produce complex behaviors over time (Wolfram, 2002).

If even in vitro and remarkably simple computer models could exhibit complex behaviors, how could one of the most complicated and extensive human-made systems, the economy, be fully understood through the Newtonian-inspired, reductionist and linear lenses of traditional economics? What if the economy could have been studied as a living and evolving organism, rather than as a machine, as it had been conceived since the beginning of economic thought? (Aspromourgos, 2012). The apparent randomness of markets might have had a simple, yet complex, explanation, after all (Johnson & Burton, 1994, p. 321).

This idea pushed a group of physicists, biologists, computer scientists and economists to launch a collaboration in 1987 at the Santa Fe Institute (SFI), an interdisciplinary research center founded in 1984 by a group of former Los Alamos National Lab researchers and funded by Citicorp, the National Science Foundation and the US Department of Education (Arthur et al., 1997, p. 1). Throughout the 1990s the SFI Economics Program, led by the Stanford economist Brian Arthur, developed what they called the "Santa Fe approach" to economics (Waldrop, 1992, p. 252), which became fundamental for the articulation of thinking on the New Economy.

As discussed in the following pages, concepts such as positive feedback, non-linearity and edge of chaos became powerful metaphors used to talk about the economic possibilities of the Internet. Despite the critiques that social sciences application have received for their, sometimes superficial, use of complexity concepts and metaphors (in this respect, Johnson & Burton (1994) provide a strong critique of managerial applications of complexity), the complexity vocabulary and imagery was fundamental to constructing and justifying the economic discourse of the New Economy. As Kelly, himself a fond reader of Arthur, wrote: "as networks have permeated our world, the economy has come to resemble an ecology of organisms, interlinked and coevolving, constantly in flux, deeply tangled, ever expanding at its edges" (1998, p. 108). To Kelly, the "irrational exuberance" of the New Economy was not irrational at all. It was rather the proof of the transcendence of the fundamental laws of life, regulating in the same manner the natural as well as the social world. In the following pages I discuss in which way complexity came to form the cultural hinterland of the start-up economic and managerial discourses.

3.1.4. Questioning Neoclassical economics

In the same way as complexity theories questioned Newtonian physics in the natural sciences, in economics the "Santa Fe approach" (Arthur et al., 1997, p. 3) questioned neoclassical theories of the past. In their quest for simple, orderly, explanations of social phenomena, neoclassical economics relied on concepts borrowed from Newtonian mechanics. Complexity was thus offered as a solution to the shortcoming, or outright failure, of Newtonian-inspired economics to explain non-linear economic systems (Johnson & Burton, 1994, p. 322). In particular, complexity broke with

the neoclassical tradition on three fronts: its cognitive foundations, its general equilibrium theory, and its structural foundation.

The cognitive foundations of neoclassical economics were deeply rooted in the physiocratic image of the homo economicus, the self-interested rational optimizer (Bertuglia & Vaio, 2005, p. 258). The economy was therefore conceived as the collective action of agents sharing the same information and the same set of rules for deciding what to do and how to act within the market: agents “know everything that can be known about the choices they will face infinitely far into the future, and they use flawless reasoning to foresee all the possible implications of their action” (Waldrop, 1992, p. 141). Of course, the homo economicus did not pretend to be an accurate description of individual human behaviors; it was, nevertheless, a convenient assumption for modeling large-scale market phenomena.

The Santa Fe approach was not the first attempt to question the validity of such a theoretical construct. Thirty years before the first Santa Fe meeting, Herbert Simon (1955) had already questioned the idea of the economic agent as an individual endowed with unbounded rationality. In contrast, he advanced the idea of the economic agent as a “choosing organism of limited knowledge and ability” (p.114) and therefore capable only of approximating rational behaviors. The complexity perspective added sophistication to Simon’s conception of economic agents. It argued that agents act following personal, individual, expectations, as well as on the basis of the anticipations of what they expect will be others’ expectations. These expectations create the market which, in turn, creates individuals’ expectations (Arthur, 2015, p. 87). Arthur introduced the problem of modeling and forecasting rational expectations in his El Farol bar problem:

> The idea had occurred to me at a bar in Santa Fe, El Farol. There was Irish music on Thursday nights and if the bar was not too full it was enjoyable, if the bar was crowded it was much less so. It occurred to me that if everyone predicted that many would come on a given night, they would not come, negating that forecast; and if everyone predicted few would come they would come, negating that forecast too. Rational forecasts—rational expectations—would be self-negating. There was no way to form properly functioning rational expectations. (Arthur, 2015, p. xvi)

In addition to being unable to act on the basis of rational expectations, agents learn new strategies as they develop experience: the most successful strategies are carried forward and enacted to anticipate the future; the least successful ones are

abandoned (Arthur et al., 1997, p. 10). As a genotype evolving generation after generation, with random mutations introducing innovative elements into the genetic pool from time to time, likewise the economic behaviors are described by complexity as adaptive systems swayed by historical accidents altering the rationality driving agents' actions (Beinhocker, 1997, p. 29, 2006, p. 129).

The Santa Fe approach also broke with neoclassical economics in terms of the modeling of market dynamics. Classic economic theories described what the PFF *Magna Carta* called the first and the second wave economies' markets as systems converging towards asymptotic states of equilibrium. The inevitability of equilibrium was predicated upon the existence of mechanisms of negative feedback which would limit the polarization of resources, wealth, market shares, etc. For example, in the agriculture-based first wave economy, equilibrium was thought to be the natural state of the market because of the supposed limited fertility of lands. Therefore, it would have been impossible, according to Turgot (1793) and Ricardo (1815), to generate increasing returns from land through larger investments into labor and capital. These would, on the contrary, yield to decreasing returns due to the depletion of land's natural resources. Therefore, in a market where land is distributed evenly across a population of landowners, no one would be able to corner the market, notwithstanding the amount of labor and capital invested. Competition among farmers would stabilize, in line with the supply level and the corresponding demand.

With the industrial revolution, the interplay between positive and negative feedback mechanisms made the situation more complex but, according to neoclassical analysis, did not change the overall dynamics: markets would necessarily reach a steady state of equilibrium. On the one hand, as Smith (1954) suggested, the division of labor would transform complex production processes into simple steps and also provide the opportunity for the mechanization of labor (1954, p. 2). As illustrated through the iconic example of the pin factory, mechanized and atomized labor would be incommensurably more efficient than traditional artisanal forms of production. However, the improvement in performance attributable to simplification and automation would be limited by the extent of the market. In other words, the lack of a sufficient demand for a specific commodity would not justify the creation of highly efficient production systems. Even

discounting Smith's limiting factor of the market, as Young suggested[6] (1929), the possibility of sustaining increasing returns in industrial production would still be limited by both internal and external factors, argued Alfred Marshall in *Principle of Economics* (1890). External factors are all those market-related dynamics which would determine an increase in the marginal costs of production which, in turn, would compensate for the higher productivity made possible by mechanization, for example, the higher price of the factors of production due to higher production levels. Internal factors, instead, refer to all the intra-firm dynamics which would have a negative impact on the marginal costs of production. Also known as diseconomies of scale, these include management and communication costs, organizational inefficiencies and financial costs.

The idea of an asymptotically stable economy resulting from internal balancing mechanisms was criticized by Arthur in his early works, where he advanced a conception of the economy as a system dominated by mechanisms of positive feedback or, in economic parlance, of increasing returns. When positive feedback becomes the dominating principle in the economy, Arthur argued, every small disequilibrium, any small historical event has the potential to change the market altogether (Arthur, 1989). Unlike negative feedback, which tends to bring a system to homeostasis, towards a single point of equilibrium, positive feedback creates "tipping markets" (Shapiro & Varian, 1999, p. 179), susceptible to small changes, unstable and prone to reward winners disproportionately. As a mechanism, positive feedback is a polarizing one: it "makes the strong grow stronger and the weak grow weaker" (Shapiro & Varian, 1999, p. 174).

Arthur theorized the existence of positive feedback in the economy, especially in hi-technology and digital markets, in the form of demand-side economies of scale, network effects and coordination externalities. The resulting economy would be one dominated by the interplay of exponential growths and decays – an economy where "new niches, new potentials, new possibilities, are continually created" (Arthur et al., 1997, p. 4) and where every agent capable of exploiting the potential of positive

[6] Young questioned the idea of the market as a limiting factor for increasing returns, flipping Smith's argument on its head and stating that as much as "the division of labour is limited by the extent of the market" (A. Smith, 1954, p. 15) also "the size of a market […] depends upon the division of labour" (Young, 1929, p. 139).

feedbacks, no matter how small, established, or influential, can move to the forefront of this process of perpetual novelty.

Lastly, the Santa Fe approach differed from neoclassical economics in the way it conceived the structural foundation of the economy. In models of general equilibrium, the market was conceived as the locus where economic agents interacted. However, little or nothing was said about the actual interaction among agents. The general assumption considered that each agent could interact with all other agents within the economy. The complexity perspective, instead, conceived and modeled individuals as sparsely connected nodes within networks.

The complex, networked perspective is recursive as well: entities at one level "combine to produce units at the next higher level", thus generating infinitely-regressing networks of networks, or meshworks (De Landa, 2000, p. 32). For example, markets are described as networks of firms, in the same way that economies can be thought of as networks of markets, and firms as networks of agents. Entities located at different levels would develop their own regularities and structures while also responding to patterns' and mechanisms' transcending levels or, in complexity jargon, that are scale invariant. While not being necessarily hierarchical, this perspective allows for inter-level relations of causation: phenomena taking place at one level might influence, enable or constrain entities at different levels. However, what happens at a specific level does not depend necessarily on the sum of the contributions of its individual entities located at underlying levels: "large-scale patterns or properties emerge from, but are not reducible to, the micro-dynamics of the phenomenon in question" (Urry, 2003, p. 25).

Having delineated the main innovation brought forth by the Santa Fe approach to economics, I will now discuss how some of its key concepts such as positive feedback, network effects and emergence were picked up and used in managerial literature as instruments for orienting business strategies after the advent of commercial Internet.

3.2. Management in the New Economy

The economic vision heralded by the Santa Fe Institute found widespread application within the managerial discourse of the 1990s. One way to look at the relation between complexity and the New Economy is to think of is as cooptation, an example of

capitalism's ability to justify its own existence by incorporating "cultural products that are contemporaneous with it and which, for the most part, have been generated to quite different ends than justifying capitalism" (Boltanski & Chiapello, 2007, p. 20). Alternatively, this relation can be understood as one of mutual support and reinforcement: New Economy pundits found in complexity a rationale justifying new corporate structures and managerial practices. Conversely, the Internet provided material instantiation for complexity's networked ontology. Concepts central to complexity such as positive feedback, network effect and edge of chaos became intelligible to a larger population when used to talk, for example, about the dynamics among networked firms in a market, compared to when they were applied to describe the reaction to local magnetic moments of ions in a spin glass (Arthur, 1996, 2015). In the process, a series of regularities was established among discourses and between discourses and the material correlate they enunciated. In the start-up episteme case, these regularities enunciated, and originated from, an economic reality that was described as unpredictable, exponentially unstable (tipping), and distributed.

In the attempt to map the interplay of regularities between complexity and the dot-com managerial discourse, in this section I provide an analysis of some key texts from the managerial literature of the 1990s. As Boltanski and Chiapello also argue, this kind of literature should not be overlooked on the basis of its technical and prescriptive orientation. Managerial texts can be a valuable archive "in which the spirit of capitalism is inscribed" (2007, p. 57).

This analysis has no pretense of being exhaustive but rather aims at pointing at the main concepts and tools characterizing the dot-com managerial discourses. In particular, I focus on three differences that, according to managerial literature from the 1990s, set the information era management apart from the industrial past. These are the passage from decreasing to increasing returns, the affirmation of flexible organizational networks instead of static and hierarchical organigrams, and the necessity for companies and employees to adopt fast reacting and open-ended planning methods instead of relying on long-term strategic models. These differences employ concepts and metaphors from complexity for describing the functioning of companies in knowledge intense industries. Doing so, they reiterate and reaffirm the discursive regularities of the start-up episteme to order and make sense of the economic and technological conditions of production in knowledge-based industries. In the fourth and last section, I use the

business model, a managerial method for charting the evolution of information era companies, as a prime example of a practice embodying the epistemic regularities of the start-up episteme.

3.2.1. Increasing returns

The vision of the economy as a tipping and unstable system found widespread application in the description of knowledge intense industries: “Marshall’s equilibrium model was a reasonable approximation to the agricultural and manufacturing economy of his time, and it is still useful in many situations. But it runs into trouble in today’s dynamic high-tech and service-dominated economy” (Beinhocker, 1997, p. 31). Once knowledge is turned into bits and exchanged as a commodity through digital networks, the resulting economy will very likely exhibit non-linear, self-reinforcing and unpredictable phenomena. Therefore, companies and their manager should have learnt how to surf the chaotic patterns of the digital economy.

The basis of the so-described paradigmatic shift from neoclassical-inspired management to complexity management was the unique nature of knowledge-based commodities. According to Hal Varian, Berkeley professor and soon-to-be Chief Economist at Google, and his colleague Carl Shapiro, the replicability of knowledge commodities was among their most consequential features. From new drugs to new operative systems, the cost of creating one additional unit of an existing knowledge-based commodity, also known as its marginal cost, would be very low, sometimes even null (Shapiro & Varian, 1999, p. 24). Because of their low marginal costs, it would be relatively easy for companies competing in knowledge-based markets to achieve economies of scale. However, low marginal costs came with a price, which was reflected in the high upfront investments needed to create a new knowledge-based commodity in the first place (Coyle, 1997, p. 13).

If the possibility to replicate commodities at zero marginal costs was unprecedented, its consequences on the economy were not too dissimilar from the ones observable in the case of traditional, industrial commodities. According to Varian and Shapiro, even in the presence of zero marginal costs, supply-side economies of scale would still be limited by internal and external factors and turn, at some point, into diseconomies of scale. Organizational and financial costs, for example, would limit

growth and pull the supply level back towards homeostasis; towards equilibrium. According to these two economists, what ruled the New Economy and set it apart from the second wave economy was the combination of supply side economies of scale with network externalities, or so-called demand side economies of scale.

The concept was first studied by Jeffrey Rohlfs in relation to optimal pricing strategies in the telecommunication industry (Rohlfs, 1974). The idea was later developed in the mid-1980s by Shapiro and Katz, who studied the increase in utility which users of a good would derive from an increment in the number of users of the same good (Katz & Shapiro, 1985). The law stated that the relation between utility and number of users would be exponential rather than linear. This meant that even a small arithmetic increment in the number of people consuming a commodity, for example in the number of people purchasing a fax machine, would have a more than proportional positive effect on the perceived utility for all users already using fax machines (Chandler & Cortada, 2000, p. 243).

Shapiro and Varian (1999) defined the relation between users and the value created through their interconnection as a “network externality” (p.183) because the additional value created by each new user in a network would not be the direct outcome of supply-side economic activity. It would rather be a side effect or, in economic terms, an externality, of an action performed by agents pertaining to the demand side of the market. They also described this phenomenon as a demand-driven economy of scale because, just like traditional, i.e. supply side, economies of scale, it derives from and depends on the number of commodities consumed. However, unlike supply side economies of scale, demand side economies of scale can only grow as consumption increases: the more people use a specific software, adhere to a standard, connect to a network, the higher will be the utility perceived by all other users, actual or potential – utility which is available to be transformed into surplus value if appropriated by those who own the network, develop the software, manage the standard.

Demand side economies of scale are quintessential positive feedback mechanisms: even slightly more connected networks, popular software or accepted standards will become even more so. Conversely, the relatively less connected networks, popular software or accepted standards will disappear. The combination

between supply side and demand side economies of scale was what set apart the New Economy from the industrial age:

> "Both demand-side economies of scale and supply-side economies of scale have been around for a long time. But the combination of the two that has arisen in many information technology industries is new. The result is a 'double whammy' in which growth on the demand side both reduces cost on the supply side and makes the product more attractive to other users—accelerating the growth in demand even more. The result is especially strong positive feedback, causing entire industries to be created or destroyed far more rapidly than during the industrial age." (Shapiro & Varian, 1999, p. 182)

In the 1990s, network externalities became popular as the Metcalfe's law, named by George Gilder after Ethernet's inventor and 3Com's founder Robert Metcalfe (1993a). Regardless of the actual accuracy of Metcalfe's law, whose predictive accuracy has been questioned by, among others, the same Varian and Shapiro (1999, p. 184), the underlying idea about networks' "tendency to explode in value" (Kelly, 1998, p. 24) thanks to the "magic of interconnections" (Gilder, 1993a, p. 2) became fundamental in the articulation of the start-up episteme and impacted the organization and the planning of economic activities.

3.2.2. The networked organization

An economic system where success was predicated upon the possibility of exploiting supply and demand side economies of scale required a different corporate structure. In the words of Toffler, a new knowledge-oriented organization should have been different from the "hierarchical, permanent, top-down, mechanistic organization, well designed for making repetitive products or repetitive decisions in a comparatively stable industrial environment" (Toffler, 1980, p. 263). According to Kelly, throughout, industrial era hierarchies have been the "most intelligent way to construct a complex organization in the absence of plentiful information" (Kelly, 1998, p. 119). A hierarchy, coupled with a set of rules disciplining the work of employees across ranks, would have guaranteed coordination even in the absence of real-time communication between the various parties involved in the production process. Moreover, bureaucratic ranks were functional in the separation of work's planning and execution, between managers and shop floor workers – a separation, the one between knowledge and praxis, that, across the history of industrialization, has been enforced also through the involvement of

technical devices. From the introduction of movable types at the dawn of the typographic industry to the diffusion of computer numerical controlled (CNC) machines in the 1980s, the split between the manual and the "human" content of labor meant that it became possible to achieve higher efficiency and secure the operational autonomy of the cadres at the expense of the workforce on the shop floor (Shaiken, 1985).

With the diffusion of digital means of communication, hierarchies became, all of a sudden, obsolete: "The cost of hierarchical decision making […] are now too high to bear. Referring everything up the ladder means decisions get made too slowly for a fast-paced market" (Hammer & Champy, 1994, p. 100). According to the proponents of process reengineering, a branch of management involved in the radical transformation of corporate workflows (Davenport, 1993, p. 24), bureaucracies in highly connected, unstable environments would not only be inefficient but would also hinder effective circulation of knowledge through the branches of corporate organigrams. Instead of splitting the intellectual from the manual content of labor along corporate lines, and enforcing their coordination through top-down discipline, everyone within knowledge-based organizations should have been responsible for the planning, the execution and the self-disciplining of their own labor. As the story goes, in the information era, digitally equipped workers would have been able to reclaim their autonomy within and across corporate ranks all the while maintaining the levels of efficiency of the industrial era (Chandler & Cortada, 2000).

Hollywood and Silicon Valley became the new organizational models replacing the old myths of Ford and Toyota (Albert & Bradley, 1997, p. 132; Coyle, 1997, p. 194). The transition from hierarchies to networks (or, in some cases, heterarchies, a combination of network and minimal hierarchy (Girard & Stark, 2003)), resonated with, and found justification in, the complexity-inspired vision of the economy discussed in the previous section. In a 1996 Harvard Business Review article, Arthur argued that "hierarchies flatten not because democracy is suddenly bestowed on the workforce" (Arthur, 1996), but rather because, in the third wave economy, success was predicated upon the possibility of "commandos" of mission-oriented workers producing the "next-thing-for-the-company" (p.7). Because of systems of positive feedback ruling the digital and networked economy, it was no longer needed, or enough, for a company to base its competitive advantage on efficiency, Arthur argued. The digital economy resented a casino in the way it rewarded, disproportionately, "the players who are first to make

sense of the new games looming out of the technological fog" (Arthur, 1996). He surely was not referring to the financial aspects of the dot-com (also described as a casino economy elsewhere, e.g. Indergaard, 2004, p. 16), but rather to the possibility of establishing monopolistic control over markets through the development of commodities able to exploit demand-side economies of scale and thus generating increasing returns. To use Kelly's word, the New Economy required a perspective shift from "How do I do this job right?" to "What is the right job to do?" (Kelly, 1998, p. 148). Exploration more than efficiency should have become the driving corporate principle. From this perspective, the role of managers was to create "the necessarily unstable conditions required for that effective learning and political interaction from which new strategic directions may or may not emerge" (Stacey, 1993, p. 11).

Organigrams should have been designed in a way to maximize exploration and learning rather than efficiency, which meant allowing employees engage in forms of unbounded collaboration and experimentation and providing support to the most promising projects: "Self-organizing processes can produce controlled behavior even though no one is in control–sometimes the best thing a manager can do is to let go and allow things to happen" (Stacey, 1993, p. 16). Peter Drucker described the problem as one of balance between "planning and centralization" and "decentralization and diversity" (1993, p. 173). The best that companies could have done was to create the conditions for people to connect and provide support in the form of a "methodology for organizing the stages in which a given problem can be tackled" (1993, p. 175). In parallel, managers should have learnt to cope with the uncertainty inherent in this process of loosely organized exploration, and transition to a chaotic style of management, as Terranova (2004) described the new managerial style opposed to the efficiency-bound principles of "Newtonian management".

The mark of complexity can also be found in the layered and scale invariant understanding of structure as a feature emerging out of complex production systems. The network, used within corporate boundaries to describe ever changing and flexible organigrams, found application also in regional economics, where it was used extensively to describe the formation of industrial districts. Building on the work of Alfred Marshall, among the first to study the issue of industrial concentration (1920, p. 156), a renewed interest in the study of industrial districts developed, throughout the 1980s – a networked vision of regional economies, in which complex relations of competition and

cooperation among economic, institutional and civic actors would be at the basis of historical, and therefore path-dependent, processes of regional specialization (Brusco, 1982; Lane, 2002; Saxenian, 2000). Also in this case, the optimal configuration of regional economies could hardly be achieved or controlled through centralization. Instead of centralized control, industrial districts would prosper in environments characterized by institutional frameworks allowing for organization to emerge out of the multiple, dispersed and ever changing interactions among economic, political and civic actors (Piore & Sabel, 1984, p. 31). This orientation would later be picked up and applied at the urban level by theorists of the start-up city (e.g. Feld, 2012), as discussed in Chapter 4 in relation to Vancouver's economic development.

3.2.3. New strategic logic

The concept of "strategy" in business literature is surprisingly recent. Strategy courses appeared in business schools' curricula in the 1960s, at a time when models such as the Strengths-Weaknesses-Opportunities-Threats (SWOT) analysis were becoming popular and consulting companies such as the Boston Consulting Group (BCG) and McKinsey & Company started applying quantitative research methods to business administration (Ghemawat, 2002).

Alfred Chandler was among the first to study the diffusion of strategic thinking in business administration and linked its appearance to the establishment, in early the 20th century US, of the multi-divisional, vertically integrated firm (1962, p. 15). On that occasion he also advanced a definition of strategy as the "determination of the basic long-term goals and objectives of an enterprise, and the adoption of courses of action and the allocation of resources necessary for carrying out these goals" (Chandler, 1962, p. 13). Michael Porter, instead, advanced a conception of strategy not only as an administrative technique ensuring smooth communication and coordination across multidivisional companies, but also as a tool for the establishment of competitive advantage. Porter then identified three fundamental approaches to market competition, namely costs leadership, differentiation and focus, which firms can implement to gain market shares and move to a position of sustainable competitive advantage (1980). Also known as Porter's generic strategies, they describe how companies can generate above-average returns in the long term through lower costs or through the use of

“proprietary technologies, strong brands, and privileged relationships with key partner” (Beinhocker, 2006, p. 325).

Responsible for the elaboration and execution of strategies would be management, the corporate organ designated to administer strategic activities and resources (Chandler, 1962, p. 13). Management’s duties include the setting of long-term objectives, the monitoring of business’ key indicators as well as their maintenance within the margins of predictability. Influenced by early cybernetic research, managers within Newtonian economies were framed as controllers and enforcers of negative feedback loops whose role was to “restore the homeostatic functioning of whatever system was under examination” (Urry, 2003, p. 27). The homeostatic condition in business administration corresponded with the strategic objective set through long-term, teleological planning methods (Chesbrough & Rosenbloom, 2002). In other words, the role of management was to ensure that positive and negative oscillations were captured and dampened through the deployment of an appropriate system of feedback capable of bringing performance indicators back onto their planned paths (Stacey, 1993, p. 11).

The methods employed to formulate and evaluate strategies changed as industrial capitalism entered into a more turbulent and competitive phase in the 1980s. New methods, such as BCG’s time based competition and game theory inspired models attempted to answer “the dynamic question of how businesses might create and sustain competitive advantage in the presence of competitors who could not all be counted on to remain inert all the time” (Ghemawat, 2002, p. 64). Yet, in spite of the shorter time horizons of new strategic approaches and a dynamic conceptualization of the competitive environment, according to critics, these approaches still hinged on “two fundamental assumptions: first, that one can make confident predictions about what strategies will be successful in the future, and second, that one can make strategic commitments that will result in sustainable competitive advantage” (Beinhocker, 2006, p. 325). These were two assumptions which would not stand the test of the network economy.

In networked and knowledge intense economies, a position of competitive advantage could not have been achieved through the enactment of generic competitive strategies developed on models of the markets based on negative feedback. Reducing the temporal horizon of strategies or speeding up the flow of information flowing through

the managerial loops of control had not improved the probability of succeeding either, critics argued (Wheatley, 2006). The New Economy required an entirely different strategic approach, one capable of taking advantage of the turbulent and exponential forces created by positive feedback and of appropriating the value generated by network externalities. Again, critics pointed to the necessity to embrace and foster instability rather than trying to control it in the attempt to achieve a pre-established objective, since:

> Negative feedback controls a system according to prior intention [while] positive feedback produces explosively unstable equilibrium where changes are amplified, eventually putting intolerable pressure on the system until it runs out of control. Given a choice between these two possibilities, it is clear where success lies. (Stacey, 1993, p. 13)

The most prominent instantiation of the open-ended, chaotic, and exponential orientation of the New Economy strategic thinking can be found in the concept of *first mover advantage*. This concept has been defined as the possibility for pioneering firms to earn positive economic profit thanks to technological leadership, pre-emption of scarce assets or the locking in of customers (Lieberman & Montgomery, 1988). Based on the assumption that networked markets are dominated by positive feedback, New Economy managerial texts emphasized the importance for firms to be among the first ones to enter a market. Since positive feedback dynamics could transform even the slightest, most transient, advantage over competitors in a virtuous cycle of growth, managerial literature stressed the relevance of converting "a timing advantage into a more lasting edge by building an installed base of users" (Shapiro & Varian, 1999, p. 146). The idea was to leverage on the initial user base to create an increasingly larger one over time. An example of one among many ways to convert time advantage into a lasting edge was the establishment of technological standards. These were meant to facilitate interactions between adherents while at the same time fencing-off potential competitors. Standards, along with other lock-in mechanisms (e.g. legal agreements, training programs, compatibility, etc.) increased users' "switching costs", i.e. the price users had to pay to switch to a substitute or alternative commodity. In networked economies, the "magic of interconnection" (Gilder, 1993a) involved the possibility of turning the same users-base into a "lock in" factor:

> "Given the network externalities feature of the Internet, switching costs can be network size where network externalities are important. For example, the larger a community or number of clients, the more valuable it is to

> members and the more difficult it is for a member to switch to a lesser community" (Afuah & Tucci, 2003, p. 81).

Managerial literature relied on well-known cases to explain the lock in power of network externalities: eBay (Amit & Zott, 2001), the VHS standard (Coyle, 1997), Microsoft Windows (Arthur, 1996) and Amazon (T. Lewis, 1998). At the same time, the first mover competitive advantage was not described as irreversible (Evans & Wurster, 1997, p. 80). As Arthur has been arguing since his first work on increasing returns (1989), historical effects can always reconfigure the market, in the same way that "late-movers" can just as well take advantage of network externalities and reap the benefits of stronger, fastest growing, increasing returns.

Subordinated to the "get big fast" (Feng et al., 2001) imperative of the New Economy's strategic logic was the second-most important predicament of the dot-com era: prioritize market share over cost recovery. Assuming the existence of network externalities, the advantages of fast and sustained growth in new markets were twofold: it would have kept potential new entrants at a bay and would have constituted the basis for further, faster, growth:

> "The more customers a company has, the more it gets. Microsoft gets bigger because it is bigger. Yahoo's stock price climbs higher because it's already high. More people sign on to America Online because AOL has more subscribers. This is the mantra of increasing returns—the theory that rules Silicon Valley" (T. Lewis, 1998, p. 93).

Managerial literature thus emphasized the need for companies to scale, especially at the early stage, and to seek scalability even at the expense of profitability (Afuah & Tucci, 2003, p. 59). In a market dominated by network externalities, the consequence of not prioritizing scale was failure. Because of the effects of positive feedback, slow growing companies were at risk of entering vicious cycles (also an expression of positive feedback, the weak get weaker) driving, for example, the adoption of a their technologies or services into a downward spiral. Consequently, operating at a loss became common for dot-com companies, and made them famous for their insatiable appetite for capital, readily and abundantly provided by venture capital funds, and for and their ability to "burn" it on their way to profitability or, more often, to their Initial Public Offering (IPO). Amazon is a paradigmatic example of a giant hyperactive company whose "business model implied continuing dependence on the capital market" (Feng et al., 2001, p. 482). Fearing that Bill Gates (1995) dreams of "friction free

capitalism" (p.111) might become reality, Jeff Bezos justified Amazon's decision to operate at a loss during its first seven years as the only way to acquire a significant market share and discourage new entrants from entering the market: "Bezos's strategy was to raise a lot of money from investors and use it to build market share. Once market dominance had been achieved, hefty profits would follow automatically" (Cassidy, 2009, p. 147).

A managerial approach, and a supporting financial system, based on increasing returns can only lead to a few spectacular wins, and countless failures. The presence of positive feedback implies that the dot-com era "which started with many small new companies, will finally be dominated by a few large old companies" (Feng et al., 2001, p. 492). Kelly saw the monopolistic tendency as a feature, rather than a bug, of networked markets. Referring to the winners in winner-takes-all markets of the dot-com era, Kelly (1998) argued that

> "They are not like any monopolies of the industrial age. When antitrust hearings are conducted today, the witnesses are not customers angered by high pricing, haughty service, or lack of options—the traditional sins of a monopolist. Customers have nothing to complain about because they get lower prices, better service, and more features from network superwinners—at least in the short term. […] But in the long term, the customer will have reason to complain if competitors pull back or disappear" (p.27).

The last sentence is particularly meaningful as it emphasized the open ended, undetermined vision of the New Economy: positive feedback, going back to Arthur's definitions, can only lead to multi-equilibria systems (1989), meaning that even the most concentrated markets can be overthrown by new entrants capable of harnessing the power of network externalities.

3.2.4. Controlling complexity: The business model

Dealing with the supposedly complex and turbulent markets of the New Economy required new managerial tools. Probably the most popular managerial method of the dot-com era was the *business model*. Even though the use of the term business model, and of various synonyms such as business concept, revenue model, and economic model predate the advent of the Internet (Schindehutte, Richardson, & Allen, 2006, p. 28), the business model as a genre in business writing became prevalent in the mid-1990s (Zott,

Amit, & Massa, 2011, p. 1022). Henry Chesbrough (2002) provided a clear-cut definition for it:

> "a coherent framework that takes technological characteristics and potentials as inputs, and converts them through customers and markets into economic outputs. The business model is thus conceived as a focusing device that mediates between technology development and economic value creation." (p.532)

More prosaically, managerial manuals presented the *business model* as a description of "how a firm makes money now and how it plans to do so in the long term" (Afuah & Tucci, 2003, p. 4). Despite the lack of an agreed upon a definition or a generally accepted framework, business models were commonly referred to as structures, or templates, made of components (e.g. team, markets, products, sources, pricing, revenues, etc.) and connections among them describing a start-up's current, and future, value creation mechanisms (Afuah & Tucci, 2003; Schindehutte et al., 2006, p. 33). The entrepreneurial work consisted of the act of mapping these elements and connecting them in ways to generate value for the stakeholders (Feng et al., 2001). The outcome was usually a narration, a "good story" (Magretta, 2002) punctuated by economic and financial forecasts, describing the hypothetical evolution of the business.

The *business model*, as a managerial genre and practice, was at the center of a heated debate between supporters and detractors. On the one hand, managerial literature described business models as the planning methodology for the Internet era, a way to chart the long-term evolution of start-up companies acknowledging the necessity, or possibility, of changing and testing different business propositions along the way. On the pages of the *Harvard Business Review*, the business model was presented as "the managerial equivalent of the scientific method—you start with a hypothesis, which you then test in action and revise when necessary" (Magretta, 2002, p. 5). On the other hand, critics pointed to the supposed inability of this method to capture the speed at which start-ups changed their value creation mechanisms. As a result, business models were described as perennially outdated, half-baked or, even worse, as ex-post rationalization of otherwise unanticipated, unplanned and contingent courses of actions (M. Lewis, 1999, p. 256). Writing on the pages of the *Harvard Business Review*, Michael Porter (2001) criticized the business model for its lack of strategic depth, i.e. the absence of proper analysis of the industry structure and of competing firms. He argued that defining entrepreneurship as the act of writing business models "is an exceedingly

low bar to set for building a company" (p.73), concluding that the "business model approach to management becomes an invitation for faulty thinking and self-delusion" (ibid.). Beyond question was, instead, the effectiveness of the business in communicating the essence of new businesses to journalists, venture capitalists or shareholders, especially at a time when "entirely new business forms were being created, rapidly grown, and harvested" (Schindehutte et al., 2006, p. 33). In particular, the business model proved to be particularly useful as a mediator between start-up companies and venture capital firms, which relied on them as a way to plan their investment strategies (Chesbrough & Rosenbloom, 2002, p. 522).

Notwithstanding its actual utility, the business model provides a glimpse into the start-up managerial discourse of the dot-com era. It responded to the "get big fast" imperative of the New Economy (Feng et al., 2001) in the way it allowed start-up companies to secure the resources to scale within their respective markets, sometimes even prior to actually having operations in place. On the other hand, the shortcomings of the business model were manifest in the way it failed to provide strategic guidance to entrepreneurs and in its inability to fully capture and support the "make it up as you go along" dot-com approach to business building (Pratt, 2000). This latter aspect became central in the following period with the introduction of increasingly flexible, lean and agile managerial methods. More importantly, the business model reflected the dot com teleological understanding of start-up in the way it provided a future-oriented roadmap informing the actions of the management (Schindehutte et al., 2006). Within this roadmap, start-up was framed as a transient phase aimed at achieving resolution and closure, usually within the three- to five-year time horizon of business models' cost recovery plans (Feng et al., 2001). As discussed in the following section, this conception of start-up also changed after the burst of the dot-com bubble.

3.3. Management in the post-dot-com

The economic reality that followed the market crash of March 2001 looked radically different from the irrationally exuberant times that nurtured the New Economy in the 1990s. In the stock market, a return to a unitary logic in the evaluation of old- and new-economy stocks, one based on profitability measures rather than on proxy predictors such as estimated market size or user-value (Meeker & DePuy, 1996, pp. 1–10), cooled off investments in Internet-based businesses. In management, the response

to the dot-com crash was more complex and the outcome was not a simple return to business as usual, i.e. a return to pre-Internet managerial practices. The response was articulated and based on both a recuperation of pre-Internet managerial concepts, as well as the incorporation of ideas from design thinking and new software development paradigms. All the while, self-help and managerial books downscaled management principles and turned them into codes of personal conduct for a new generation of entrepreneurial workers. It is in this moment that, I argue, the start-up episteme came to full realization becoming a way to order reality, and a way of being.

3.3.1. Back to basics

In a series of articles published in the aftermath of the dot-com crash, entrepreneur and Stanford professor Steven Gary Blank denounced the inadequacy of the planning practices he himself employed in the dot-com period. His critique begins with an attack on the 1990s concept of start-up, rooted in the idea that these are nothing other than small-scale corporations. This conception of start-up, which I have labeled teleological in the previous chapter, was built on the assumption that both nascent companies and established corporations could be administered through the same set of managerial techniques. As a result, linear approaches to business development rationalized, and attempted to extract value, out of start-ups' promethean phase, what Kelly called the "protocommercial stage" (1998, p. 60), i.e. the moment of unbounded experimentation made possible by new communal and networked methods of production. If the dot-com era ultimately failed to deliver the dreams and the economic returns that early soothsayers promised, it was also because of a managerial approach that, despite paying homage to ideas of complexity and chaos, was still largely rooted in a "build it and they will come" kind of approach: "According to the decades-old formula, you write a business plan, pitch it to investors, assemble a team, introduce a product, and start selling as hard as you can" (Blank, 2013b). According to Blank, the post-dot-com needed a new vocabulary for describing the job of start-up companies, a vocabulary that discriminated between corporations and start-ups: the former defined as organizations executing known business models, the latter conceived as experiments searching for viable business model (Blank, 2013b, p. 3).

Blank's critique was not just about definitions, instead it went straight to the dot-com's original sin, the get big fast imperative. The faith in the power of speed as a factor

of economic success was based, on the one hand, on wrongful assumptions about the advantages deriving from being a “first mover”. This was an assumption, according to Blank, unproven in theory and in practice, as dot-com’s ultimate failure demonstrated:

> "‘first mover advantage’ was first popularized in a 1988 paper by a Stanford Business School professor, David Montgomery, and his co-author, Marvin Lieberman. This one phrase was the theoretical underpinning to the out-of-control spending of start-ups during the dot-com bubble. Over time it gained mythical status until the idea that market-share leaders have been the first (not just early) entrants into their categories became unchallenged conventional wisdom in Silicon Valley.” (Blank, 2007, p. 136)

The consequences of dot-com’s misplaced emphasis on speed were exacerbated by the adoption of rather simplified and unproblematic models of product development. A case in point was the use of the technology life cycle adoption curve. Originally developed by Rogers (1983) and refined by Moore (1991), this model advanced the idea of innovations as a process of diffusion. The almost iconic bell-shaped curve postulated that innovating firms should focus their sales and marketing efforts on convincing the left tail of the curve, the technology enthusiasts and visionaries, to adopt a new product or service. In case of success, early adopters would become the main advocates for the new technology, allowing it to spread across other market segments, i.e. the pragmatists, the conservatives and, ultimately, the skeptics. In the case of networked technologies, the compounding effect of demand-side economies of scale would accelerate the process, offering a reason for why being a first mover, and developing an installed base of users early on, would be key to success. Dot-com’s obsession with speed had generated, according to Blank, a problem of premature scaling, reflected in the construction of oversized productive structures, the launch of extravagant and costly marketing campaigns and the hiring of large staffs early on, which ended up limiting start-ups’ ability to experiment with alternative value creation mechanisms.

Responsible for the rushed approach to business development, for the adoption of teleological planning models in the face of the complexity of the economy, for the hundreds of media-boosted IPOs, would be venture capitals. Notwithstanding the manifest, inability of early dot-coms to generate sustainable revenues and consistent profitability: “VC’s engineered financial transactions, working with entrepreneurs to brand, hype and take public unprofitable companies with grand promises of the future.

The goals were ‘first mover advantage,’ ‘grab market share’ and ‘get big fast.’” (Blank, 2011).

The opinion of Blank was shared also by Y-Combinator founder Paul Graham, who argued that by prioritizing scalability over everything else, including cost-recovery, start-ups limited their range of action by focusing only on those problems which could be resolved through scalable solutions. He concluded that “It might be a good idea to stop thinking of start-up ideas as scalars” (Graham, 2013). Graham and Blank’s conclusions were also an invitation to reboot the Internet economy and to rebuild it on a different foundation. It was time to go “back to basics” (2011) and approach start-ups for what they are or, rather, should be: cost-effective experiments aimed at maximizing learning opportunities rather than generating revenues or securing a user base ahead of competitors. Following this new definition, start-ups should have invested all the resources at their disposal in analyzing the problem they were trying to solve, understanding the potential users, and exploring possible solutions. Blank called this new learning-driven approach “customer development”, and he kept it separate from, yet in a close relation with, product development, this latter defined as all the activities pertaining to the production, sale and marketing of products (Blank, 2007, p. 15). Customer and product development, combined, would have allowed a start-up to move from the left tail of Rogers’s diffusion curve to the right tail, in other words to control their respective markets, from technology enthusiasts to skeptics. Blank’s contribution was fundamental for the constitution of the post-dot-com approach to start-up entrepreneurship and, more generally, to business management.

Not everyone in the post-dot-com shared Blank’s feelings about the New Economy era. PayPal co-founder Peter Thiel was among the fiercest defenders of the dot-com method of business development. According to Thiel, the “back to basics” attitude represented an over-reaction to the market collapse of the 2000s, which many interpreted as a “divine judgement against the technological optimism of the ‘90s” (Thiel & Masters, 2014, p. 19). Methods like Blank’s customer development would be unable, according to Thiel, to generate breakthrough innovations, like the ones that changed the Internet in the 1990s. What was needed was a bold and risk-tolerant approach to innovation, instead of a timid development model based on small incremental steps. Thiel’s vision also rejected approaches to entrepreneurship based on calculated rounds of trial and errors in which the role of the entrepreneur was reduced to that of an

agnostic, uncreative executor. Entrepreneurs and managers, Thiel argued, should reclaim their role as creators and engage in long-term, vision-driven, planning.

Thiel's heroic vision of the entrepreneur, epitomized by people like Elon Musk and he himself, was not unprecedented. In the post-dot-com era, several other methodologies of business development attempted to reassert the value of radical innovation (e.g. the Blue Ocean Strategy, Chan Kim & Mauborgne, 2005), over the recuperation of the, supposedly, more conservative approaches of the pre-dot-com (e.g. Porter's Generic Strategies, Five-Forces model and the Value Chain, Porter, 1980). These attempts were, however, only marginal compared to the popularity of techniques based on a sequential, iterative, low capital intense way of developing new products or services.

3.3.2. The Lean Startup

In a 2013 article published in the *Harvard Business Review*, Blank announced that a new design methodology was about to "change everything" in start-up land. A methodology based on "experimentation over elaborate planning, customer feedback over intuition, and iterative design over traditional 'big design up front' development" (Blank, 2013a, p. 1). The methodology in question was the *Lean Startup*. Originally developed in 2004 by Eric Ries, a start-up entrepreneur, software engineer, and a Blank mentee, the *Lean Startup* materialized out of Ries' personal experience as a Chief Technical Officer of a software start-up. From the blog where he documented his entrepreneurial journey, to the publishing of the homonymous book in 2011, the *Lean Startup* methodology has since become a staple in start-up and managerial circles, as well as a trademark, an annual conference, and a movement composed of hundreds of meetup groups around the world[7]. As a method for developing new products or services, the *Lean Startup* has been adopted by start-ups, corporations, and public agencies (Schulte, 2018).

As visible and relevant as Ries' work has become, it represents only a thread of an interwoven set of practices which emerged in the aftermath of the dot-com crash,

[7] Eric Ries was also asked to curate O'Reilly's *Lean Series* ("The Lean Series," n.d.), a collection of books (9 books at the time of writing), operationalizing the *Lean Startup* principles in different business contexts (AI, Analytics, User Experience, etc.)

Blank's "back to basics" era, and that attempt to build an alternative to the New Economy's bankrupt vision. Among the contributions which influenced and complemented the *Lean Startup* method in the constitution of present-day lean managerial style are the already mentioned works of Steve Blank on customers' development (Blank, 2007; Cooper & Vlaskovits, 2010), Alexander Osterwalder's concept of the Business Model Canvas (BMC) (Osterwalder & Pigneur, 2010; Osterwalder, Pigneur, Smith, & Bernarda, 2014), and the work of *The Agile Alliance* that led to the publication of the *Manifesto for Agile Software Development* (Beck et al., 2001). Lastly, as the name suggests, Ries' methodology transposed some of the ideas developed during the lean manufacturing revolution of the 1980s (Ohno, 1988) to the context of entrepreneurship.

Ries' proposition is relevant because of the way it attempted to remediate some of the excesses and shortcomings of dot-com-era management. At the same time, Ries' ideas generalized and normalized a series of practices until then confined to early-stage software start-ups. "Entrepreneurs are everywhere" Ries argues, and every "human institution" working on the development of new products or services under conditions of extreme uncertainty should be considered a start-up. From the individuals working on side hustles, to corporations launching new products, everyone and everything can be a start-up. Opposing the heroic vision of the start-up entrepreneur, based on the myth of the "'great *men*' [emphasis added] who can make magic happen" (Ries, 2011, p. 11), Ries suggested conceiving start-up entrepreneurship as a form of management, as the rigorous and managerially administered learning process aimed at establishing sustainable business models. Nothing farther from the kind of blind experimentation supported by venture capital money romanticized in business tales of the dot-com period.

Building on Blank's definition of start-up, the *Lean Startup* model is based on the idea of continuous learning. According to Ries, the job of a start-up is to learn through experiments. More specifically, to experiment with different combinations of products, customers and problems in order to find a product which solves a problem perceived as such by a group of customers willing to purchase the product for its resolution. Whenever this happens, a start-up is said to achieve validation or, in the words of Netscape founder and VC Marc Andreessen, to have found "product market fit". At this

stage, the start-up's product creates value for the customers while securing profits for its stakeholders.

The most innovative aspect of the *Lean startup* method is the way it combines concepts from lean management, *Agile* development and design thinking into a methodology for achieving validation. The lean element is, not surprisingly, the most influential. Ries describes lean thinking as:

> "[…] radically altering the way supply chains and production systems are run. Among its tenets are drawing on the knowledge and creativity of individual workers, the shrinking of batch sizes, just-in-time production and inventory control, and an acceleration of cycle times. It taught the world the difference between value-creating activities and waste and showed how to build quality into products from the inside out." (Ries, 2011, p. 18)

In the context of start-up entrepreneurship, lean becomes the guiding principle informing the set up and the execution of cycles of experiments aimed at understanding "the right thing to build" (Ries, 2011, p. 20). Through the application of lean thinking, Ries shifts the perspective from start-up as an organization producing commodities to start-up as an organization searching for a commodity to produce. The perspective shift is meaningful because it goes against the vision-driven strategies responsible for the ultimate failure of the dot-com era. Even though the same Ries argues that the *Lean Startup* doesn't diminish the relevance of traditional entrepreneurial virtues such as "the primacy of vision, the willingness to take bold risks, and the courage required in the face of overwhelming odds" (p. 278), it contextually affirms the need to systematize the processes behind the design of innovative products. This systematization takes the form of iterative cycles of experiments through which the original vision is tested against users' expectations.

Also known as the *build-measure-learn loop*, these cycles begin with the development of a prototype, a *Minimum Viable Product* (MVP) in *Lean startup* jargon. The MVP is a barebone, yet functional version of the product and it is meant to be distributed to potential users in order to generate data to feed back into the build-measure-learn loop. The first MVP usually reflects the original vision of the entrepreneur or the manager in charge of the project. After each round of users testing, the managerial team is responsible for evaluating whether to drop some of the original features or to add new ones on the basis of users' feedback. The interplay between the

original vision and users' needs is also known as *validated learning* and reflects the middle ground between entrepreneurial push and market pull. In order for the development team to evaluate the project's progress towards validation, the *Lean Startup* suggests developing an *innovation accounting* system, i.e. a system of variables capable to measure and track the performance of the MVP. Based on the data collected through the *innovation accounting* system, at every iteration of the *build-measure-learn loop* the development team must decide whether to persevere or to *pivot*, the former meaning continuing along the original strategy and the latter indicating a major change to a new strategic hypothesis (Ries, 2011, p. 76).

The connection between *Lean Startup* and lean manufacturing can also be found in the need for a start-up to reduce experimental costs and eliminate all expenses which do not contribute to advancing the project's validation. Ries uses the concept of the *runway* (p. 160), defined as the number of *pivots* a start-up can still make before running out of resources, to explain why having efficient deployment, testing and measuring procedures is key for every start-up. To extend the *runway*, a start-up can either seek additional funds or reduce the costs of running experiments. While the former option would definitely work, the latter should be preferred because, through the application of lean principles, a start-up could not only lower the costs but also shorten the time needed to go through the build-measure-learn loop, thus maximizing the amount of validated learning achievable in a given timeframe.

The *Lean Startup* method was also deeply influenced by the *Agile* framework for software development (Beck et al., 2001). Ries (2011) acknowledged, in the introduction to his book, the importance that the *Agile* software development methodology, on which he relied in his role as chief technical officer at a software company, had on his vision of entrepreneurship. Broadly defined, *Agile* is a set of principles established in the early 2000s from the confluence of different software development styles sharing the same aversion to process-oriented, documentation-heavy and bureaucratic approaches to software development epitomized by the *waterfall method*. The 12 principles presented in the *Manifesto* propose a vision for software development based on self-organizing teams of developers, on constant interactions between the development team and the customers, on the frequent release of new features as a way to test and improve the product, and on the need to embrace changing requirements as a way to better serve the needs of the users (Beck et al., 2001). *Agile* principles found widespread application

beyond the confines of software development (Hohl et al., 2018, p. 17). In the *Lean Startup* model, the imprinting of agile thinking can be found in the idea of breaking down linear processes of product development into shorter, cost effective, cycles:

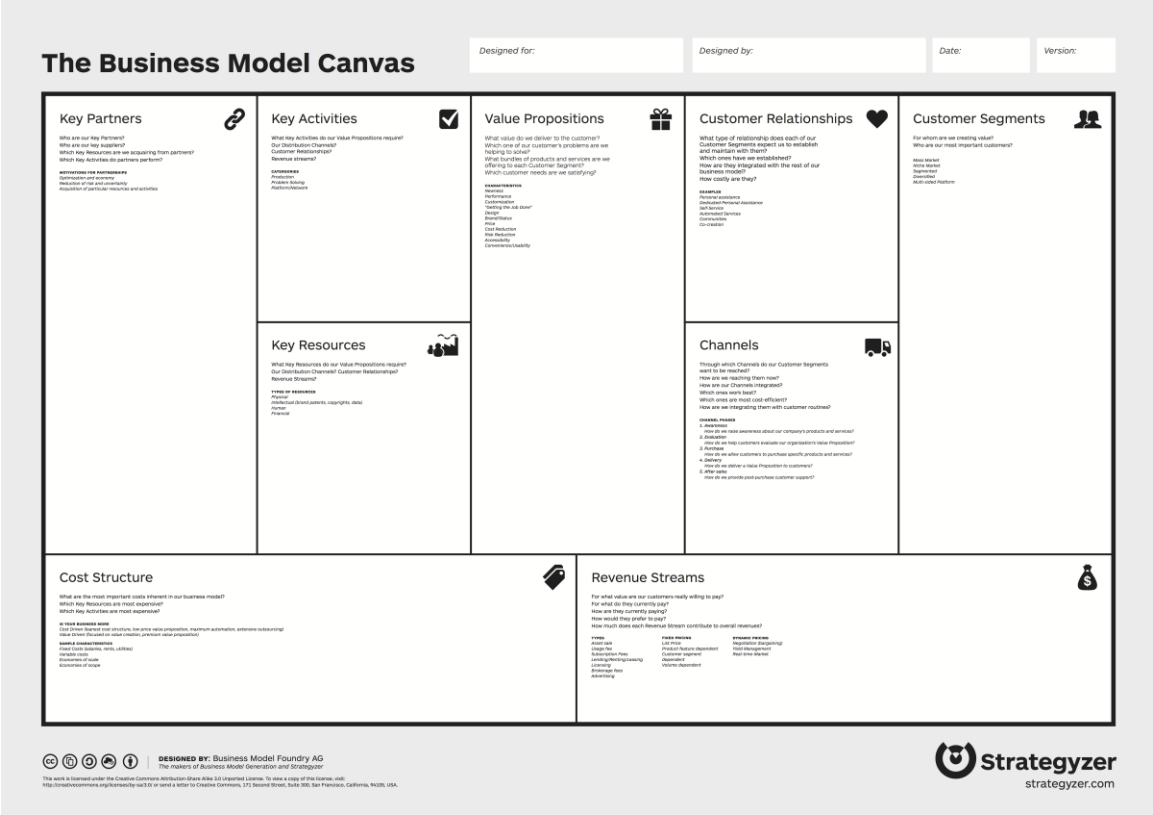
> "In contrast to traditional product development, in which each stage occurs in linear order and lasts for months, agile development builds products in short, repeated cycles. A start-up produces a 'minimum viable product'—containing only critical features—gathers feedback on it from customers, and then starts over with a revised minimum viable product." (Blank, 2013b, p. 4)

The *Lean Startup* method borrowed principles as well as practices from *Agile*-inspired software development methodologies, such as Scrum or Extreme Programming (XP). For example, Ries (2011) suggests using *user stories* (p.132) to inform the development of new features while keeping a user-centric perspective. Similarly, the deployment of new versions of the MVP could be organized into *sprint periods* (Ries, 2011, p. 132), during which some features are implemented while others are moved into the product's *backlog* (the list of features to implement at some point in the future). A further connection between *Agile* and the *Lean startup* is found in their common reference to design thinking, understood as an "ongoing cycle of generating ideas (abduction), predicting consequences (deduction), testing, and generalizing (induction)" (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2013, p. 128). Both methods favor direct collaboration with final customers (Blank and Ries warmly encourage entrepreneurs to conduct their experiments "out of the building" Blank, 2010a; Ries, 2011, p. 128), rapid prototyping, user-centered perspective, and diversified, egalitarian teams to reignite "the wisdom and initiative hidden in every factory worker" (Ries, 2011, p. 273).

3.3.3. The Business Model Canvas

The new managerial discourse, with its emphasis on agility, speed and iterative thinking, was accompanied by the diffusion of new planning methods. One of the most used in combination with the *Lean Startup* model, is the aforementioned *Business Model Canvas* (BMC) (Hanshaw & Osterwalder, 2015, p. 23). Developed by Osterwalder and Pigneur, the BMC is a synoptic instrument meant to support designers and in developing new products and services (Osterwalder & Pigneur, 2010). Presented in a convenient graphical format, the BMC is meant as a template guiding the identification and mapping of customers, product features, distribution channels, revenue streams, necessary

resources, partnerships, customer relations, skills, and costs. In stark contrast with the verbose business models of the dot-com era, the BMC is meant to support thought experiments, to help designers and entrepreneurs sketch business ideas, and to facilitate comparison between different revenue-generating models. In the words of its creators, the *Canvas* is a “shared language that allows you to easily describe and manipulate business models to create new strategic alternatives” (Osterwalder & Pigneur, 2010, p. 15). Steve Blank lists the BMC as one of the three managerial tools which, alongside his *Customer Development* and Ries’ *Lean Startup* concepts, have led to the start-up revolution in the aftermath of the dot-com bubble burst (2013a).



Business Model Canvas. Source: Business Model Foundry. Attribution-ShareAlike 1.0 Generic (CC BY-SA 1.0)

In the same way the Business Model interpreted the managerial spirit of the dot-com and provided aspiring entrepreneurs support for the deployment of first-mover strategies, in the post-dot com the BMC catered to the need for entrepreneurs to achieve product-market fit quickly and efficiently. The similitudes between the two tools, however, end here. Unlike the business model, the BMC does not have a temporal dimension. As a planning method, it is designed to avoid the kind of teleological

forecasting based on the development of “what if” scenarios routinely included in traditional business models (Schindehutte et al., 2006). Instead of supporting hypothetical and intricate business strategies, the Canvas is designed to facilitate the kind of users testing, what Blank calls “get out of the building” approach”, that the *Lean Startup* method indicates as the central element of the *build-measure-learn* loop and as the only way for designers to test their expectations against users’ feedback.

In its immediacy, the *Canvas* reflects the trial and error, iterative, and agile approach popularized by the *Lean Startup* discourse. The act of designing and assembling revenue generating systems becomes, in the Canvas, as easy as populating the different blocks composing the diagram. Used in combination with the inevitable stack of Post-it notes, the “indispensable tool that everyone reflecting on business models should keep handy” (Osterwalder & Pigneur, 2010, p. 150), the *Canvas* made planning and pivoting business models as easy as moving one note from one box to another. The *Canvas* graphical metaphor, and some of its variations, have found widespread application in lean entrepreneurship (e.g. the *Lean Canvas* (Maurya, 2012)), academia (e.g. Ellway, n.d.) and personal development (e.g., the Busines Model You Clark, Osterwalder, & Pigneur, 2012).

3.4. The start-up way of being

Ries’ definition of start-up is meaningful because, in all its vagueness, it allows the concept to become a signifier for “innovation, creativity, self-reliance, and positive-change-making” (Sá & Kretz, 2015, p. 4). Following Ries’ definition, everything is a start-up and everyone, by extension, is potentially an entrepreneur (Lorusso, 2019). As the same Ries suggests, the entrepreneur is not necessarily the creative genius romanticized by Thiel. Entrepreneurship is, after all, just another form of management. Case in point is the way in which the work of public agencies, traditionally identified as the most visible manifestation of bureaucratic culture (Du Gay, 1994), have been reframed as start-up endeavors (Schulte, 2018). Similarly, within established corporations, lean and agile *intrapreneurism* is challenging waterfall-based research and development models (Ries, 2011, p. 264).

The start-up way of thinking has become popular also as an instrument of self-development. As recipe for successful “lifestyle design” (Ferriss, 2007, p. 7), the start-up

discourse offers contractors, freelancers, consultants, salaried employees, and gig workers the chance to rethink their work, and their professional subjectivity, as an entrepreneurial activity, allowing everyone to become “entrepreneurs of themselves”. As a model for individual liberation from the oppression of industrial forms of alienation, or from the oblivion of mediocre jobs, the start-up formula was picked up and popularized by a flourishing literature on self-help and personal development. Books such as the Chris Gillebeau’s *The $100 Start-up* (2012) and Timothy Ferris *4 Hour Workweek* (2007) described the Internet as an enabler of a “microbusiness revolution”, allowing people to build a successful source of income leveraging on personal passions. (Ferriss, 2007, p. 23). As corporations of one, the entrepreneurial subject should take advantage of distributed forms of production (e.g. online marketplaces) to test business ideas and identify a sustainable personal revenue generating system, or what Ferris calls a *muse* (2007, p. 143).

Whether the ambition is to launch a start-up in the dot-com sense of the term (venture-backed, capital intense and scalable), or to build a lifestyle business (the term used to describe, often in a derogatory manner, non-scalable, individual businesses), the start-up discourse offers to aspiring entrepreneurs, solopreneurs, intrapreneurs, freelancers, digital nomads, regular employees and creative practitioners more in general, the chance to figure and to constitute themselves outside of traditional employment relations.

This is a way that reiterates the same understanding of the economy, and of society at large, as a complex, networked, non-linear and inherently unstable system. In this context, the start-up episteme offers a way to navigate and master this complexity through agnostic experimentation, validated learning, tactical adaptation and cyclical reinvention. An approach that requires no special or innate skills: everyone can, through rigorous (self-) management, achieve *validation*. This entails abandoning the teleological conception of start-up of the dot-com era, start-up as the act of setting something in motion, and embracing start-up as a permanent mode of being, start-up as the act of being in motion. As described in the following three chapters, this is achieved through, and reflected in, the diffusion and ramification of managerial discourses normalizing methods such as pivot, scale, bootstrapping and iterative thinking for the articulation of professional subjectivities, work cultures and local economic policies.

In the next chapter (Chapter 4) I give body to my definition of episteme exploring how it is employed as a model for urban and economic development. Analyzing the history of Vancouver digital and hi-tech industries, I describe how the start-up episteme furthers and extends the notion of creative and cultural production as an instrument for urban revitalization. In my findings, I discuss how the *start-up city* recipe for urban regeneration provided the City of Vancouver the rhetorical foil supporting laissez-faire local economic policies that did little or nothing to address digital workers' needs, such as access to affordable housing and protection against income instability.

In Chapter Five, I investigate how start-up episteme creates unstable professional subject positions. Analyzing the careers of people working in digital and new media industries, I discuss how the replication and enactment of epistemic regularities at the personal level allows individuals to figure themselves as businesses in a constant and iterative state of experimentation. I then discuss how the perceived need to treat one's work as a scalable start-up required my participants to relate to their own skills from a position of otherness. This relation of alterity that my subjects had to their own work represents, I argue in my conclusion, the start-up episteme ultimate form of alienation.

Lastly, in Chapter Six, I analyze new forms of sociality within the start-up episteme. Through the concept of occupational communities, conceived as informal organizations connecting workers with similar competences and professional interests, I investigate the roles that professional meetups have in Vancouver's digital and new media industry. In my findings, I discuss how these gatherings act in part as transient sites of resistance against the technologies of production and the managerial methods employed in the digital and new media industries. At the same time, professional meetups reaffirm the start-up episteme principles, furthering individualization and allowing few organizations to systematically extract value from participants' immaterial and free labor.

Chapter 4. Vancouver: “Be inspired here”

> *Break Something! This is where inspiration converges with capital, where we shatter the limits of what we thought could be. Pushing boundaries is the backbone of the city. (Vancouver Economic Commission promotional video)*

In the course of my research, from the moment I subscribed to the *Start-up Digest* weekly newsletter, to the moment I sat down to recollect my fieldnotes, I got to know a city that was caught up in a race to secure its spot in the global chart of the most competitive start-up hubs. Vancouver is a city with a turbulent and never fully realized industrial past and that was described by the people I interviewed as a place unable to support local start-ups in their quest to scale and expand internationally. At the same time, living in the city and reading about its history, Vancouver appeared to me as an *ante litteram* instance of a “creative city” (Å. E. Andersson, 2011; Florida, 2012). Vancouver’s geography, for example, is characterized by a downtown core where residential and commercial areas intertwine, with amenities, community centres, recreational and cultural spaces punctuating the city’s topography; a planning model known in urban studies circles since the 1980s as *Vancouverism* (Siemiatycki, Hutton, & Barnes, 2016). This was a paradigm that anticipated some of the features that Florida (2012), nearly two decades later, identified as fundamental for the establishment of knowledge-intense industries representing the “primary drivers of economic development” (Peck, 2005, p. 740) in the information age. On the political plane, the City Council has been working, since the mid-1990s, to promote Vancouver as a hi-tech hub, as *Canada’s Digital Rim* (New Media B.C., 2000b), in the attempt to chart the city’s post-staples, post-corporate, knowledge-based economic future (City of Vancouver, 2013, p. 16).

Despite the efforts spent in promoting the image of Vancouver as a capital of the New Economy first, and as a start-up city more recently, and regardless of the significant expansion of the city’s hi-tech and knowledge-based industries (Winterbottom, 2016, p. 20), Vancouver is neither Silicon Valley nor Beijing. Analysts and start-up pundits consider it a second-tier city in the global chart of tech ecosystems. The 2019 *Global Start-up Ecosystem Report*, for example, classified Vancouver as a late-globalization start-up hub, i.e. a mature ecosystem with moderate growth potential (Start-up Genome, 2019). But it is precisely Vancouver’s average standing in the global hierarchy of digital

hubs that renders the city an interesting place to consider. As a middle tier city, Vancouver blends unique features inherited from its industrial past, with global economic and cultural trends. Case in point is the moniker often used to describe the Vancouver digital industry: *Silicon Valley North*. Sometimes contested (Ippel, 2016) and sometimes embraced (Field, 2016), the debate about Vancouver's identity reveals on the one hand the city's aspiration to be seen as a competitive start-up hub and, on the other, a skepticism regarding the adoption of economic models that are considered unattuned to the region's specificities and its economic history. This contrast between global and local narratives emerged often during my fieldtrips and throughout my interviews with digital practitioners, tech workers, and start-up entrepreneurs.

In this chapter I use this narrative-clash as an entry point into a historical inquiry of Vancouver's hi-tech, digital and new media industries. The goal of this investigation is to show how the regularities of the start-up episteme allowed to describe, and to constitute, Vancouver's digital and new media industry as a complex and emerging phenomenon. Repurposing concepts from complexity economics, this discursive maneuvering frames local industries (especially digital and service industries) as *networks* and *ecosystems* (Feld, 2012; Hathaway & Feld, 2020) that escape any form of centralized control and that, instead, thrive when left free to self-organize. In the case of Vancouver, the start-up episteme informed the City Council economic agenda, an agenda that promoted creative and digital production as instruments for urban revitalization and that justified the implementation of laissez-faire local economic policies. In analyzing the work of the City Council and of the *Vancouver Economic Commission*, I also discuss the role that international organizations such as TechStars had in defining Vancouver as a *start-up city* (Vancouver Economic Commission, 2015).

This investigation will also be helpful to historicize and contextualize the city that I found when I began my investigation in 2014. The inquiry goes back to the late 1960s, when the conjoint effect of university-led research, government's defence investments, and the injection of knowledges coming from already established hi-tech districts, created the conditions for Vancouver's hi-tech sector to emerge. A combination that, in the following decades, has led to the affirmation of Vancouver as one of the early global centres for videogame development (Barnes & Coe, 2011) and subsequently a centre for internet-based start-ups (Florida & King, 2015). The historical inquiry is based on the analysis of both primary sources, including newspaper articles, trade publications,

industry reports, websites, archived websites and government documents, as well as secondary sources and ethnographic materials collected in the course of my fieldwork. The analysis ends with a review of the *Vancouver start-up city* initiative. The initiative leverages on the start-up discourse to relaunch the economy of the city, following the de-corporatization and foreign takeovers of local hi-tech and digital companies of early 2000s (Barnes & Coe, 2011).

4.1. From resource extraction to a service economy: the changing landscape of Vancouver's economy

Entering the downtown core from the Burrard bridge it is possible to find one of the last Vancouver's original coat of arms still in place. Under the effigies of a logger and a fisher, the motto reads: "By Sea and Land we Prosper". The motto, in its original formulation, properly reflects the city's interstitial role within global flows of commodities and capital. The urbanization of Vancouver and its affirmation as a local economic hub is, in fact, attributable to the role the city had, in early colonial times, as a regional processing, distribution, and control centre for the extractive industries of British Columbia (Siemiatycki et al., 2016). Due to its role as an interface between sea and land traffic -the city was both the coastal terminus of the *Canadian Pacific Railway* and a commercial port- Vancouver was a strategic outpost for the region's forestry, fishing and mining industries (Winterbottom, 2016, p. 20). Barely one century after its incorporation in 1886, Vancouver was transitioning from an economy based on the extraction of natural resources from the unceded, non-surrendered, First Nations territories, to one based on knowledge and symbolic production (Schrier, 2017). A transformation that started in the 1960s and that developed, in the following 50 years, along three main axes: the wireless technology industry, the film industry, and the new media industry.

The wireless industry represents the historical core of the B.C. hi-tech sector and includes those companies providing engineering services, developing software components or manufacturing devices for wireless communication (Langford & Wood, 2004). Ever since its birth in the late 1960s, the wireless industry developed around a few large companies and also prospered thanks to extensive public investments into security and remote sensing (Wills, 2011). At an institutional level, the wireless sector was represented by WINBC, the *Wireless Innovation Network Society of British Columbia*.

Vancouver's film industry, instead, was born in the late 1970s thanks to large investments from US studios and TV networks. A favourable exchange rate, a generous tax credit for foreign capitals and the same time zone as Los Angeles contributed to make of Vancouver the *Hollywood of the North* in the early 1980s ("B.C. is New Hollywood," 1982; "Hollywood moving into B.C.," 1981; Gasher, 1995). Despite its high fragmentation, recent data estimates that the industry accounts for 23,900 full-time equivalent jobs and production usually relies on networks of small and micro firms working on a per-project basis (Barnes & Coe, 2011, p. 15). Although not the primary focus of this investigation, the film industry is relevant in this context because throughout the 1980s and 1990s, Vancouver evolved from being a satellite shooting location for US shows to become a full-service production site providing, and retaining, high value-added post-production activities such as animation, visual effects, composing and sound (Barnes & Coe, 2011). A consequence of the film industry's downstream vertical integration was the proliferation of small, independent multimedia agencies that, throughout the 1990s, came to constitute the core of Vancouver's nascent new media industry (Britton, Tremblay, & Smith, 2009, p. 216).

Lastly, the new media industry includes videogames, visual effects, and software-as-a-service (SaaS) companies, as well as software houses and multimedia agencies. This cluster was born in the 1980s and was supported by governmental agencies such as *Creative B.C.* (formerly known as *B.C. Film Commission*) and by non-profit organizations like *New Media B.C.* The latter was founded in 1998 (R. Smith, McCarthy, & Petrusevich, 2004) and represented, at its peak, approximately 1,100 multimedia companies in the province (Jordan, 2007). The paths of the wireless and of the new media industry crossed in 2009, when WINBC and *New Media B.C.* merged into a new umbrella organization: *DigiBC*, the Interactive and Digital Media Trade Industry Association of British Columbia (T-Net, 2009). Today, the hi-tech and new media industries represent, together, one of Vancouver's largest economic sectors in terms of employees. The region's digital, hi-tech, and new media industry grew constantly between 2010 and 2016 (BC Tech Association, 2016). In 2016, 106,000 people and 10,000 businesses animated the British Columbia digital and hi-tech industries, more than "mining, oil and gas, and forestry sectors combined" (Schrier, 2017, p. 18). Of these, close to 70% were located in the Greater Vancouver area.

In the following pages I explore in greater detail the evolution of Vancouver's knowledge-based industries. For sake of clarity, I have split Vancouver's tech history timeline into four segments: the origins (1960s and 1970s), the crisis of the 1980s, the affirmation of the new media industry (1990s), the post dot-com boom (2000s). In the final section (4.5), *Vancouver: a start-up city*, I analyse how, in the wake of two local new-media companies successes, the City Council relied on the start-up discourse for the implementation of urban and economic revitalization policies that followed and extended the creative city model (Å. E. Andersson, 2011; Florida, 2012).

4.2. 1960 and 1970s: The origins of Vancouver's hi-tech industry

1969 can be considered the year-zero of Vancouver's hi-tech industry. In that year, John MacDonald, a professor from the University of British Columbia (UBC) Electrical Engineering department, and Werner "Vern" Dettwiler, head of *UBC's Special Projects*, founded *MacDonald, Dettwiler and Associates* (MDA). In its early days, MDA was nothing more than a part-time job for two academics moonlighting as software and hardware consultants. In the 1970s MDA ventured, successfully, into the field of remote sensing technologies and moved from MacDonald's basement to its first office at the *Vancouver Film Exchange Building* (Wills, 2017, p. 78). Over the following 40 years, MacDonald and Dettwiler's side-project developed into one of Canada's largest electronic and remote sensing companies (Marketline, 2014), triggering a process of industrial renovation which changed British Columbia regional economy. Still today, the media describe MDA as Vancouver's original "anchor technology company", the "Fairchild of British Columbia"[8] (Waye, 2019).

MacDonald and Dettwiler both graduated from UBC in 1959, the former earning a degree in Electrical Engineering, while the latter graduated from the Department of Mathematics and Physics. MacDonald, determined to pursue an academic career, moved to Boston, where he earned a PhD at the Massachusetts Institute of Technology (MIT) in 1964 (Wills, 2011, p. 134). Most of MacDonald's doctoral work was conducted at the *Research Laboratory of Electronics*, a research facility generously funded by

[8] The reference is to *Fairchild Semiconductor International, Inc.*, the silicon transistors manufacturer founded in 1957 in San Jose (CA) and generally recognized as the initiator of the Silicon Valley economic boom.

various US defence agencies (Wills, 2011). Boston in the late 1960s was the place to be for computer scientists and electronic engineers, as the region was on its way to becoming the nation's leading centre of innovation in electronics (Saxenian, 2000, p. 17). Pioneering companies in the field of microcomputers such as *Wang Laboratories*, *Computer Control Corporation*, *Digital Equipment Corporation* (DEC), *Data General Corporation* (DG) were all founded between 1951 and 1968 along Boston's beltway (Chandler & Cortada, 2000, p. 29; Saxenian, 2000, p. 19). Within the emerging semiconductors district, later popularized as *Route 128*, MIT played the role of war technology think tank (Wills, 2011, p. 135), a knowledge hub (Caloffi, Rossi, & Russo, 2014) brokering resources between the US Department of Defence and the local public, and private, research centres. The years at MIT shaped MacDonald's vision about universities and the private-sector's involvement within systems of publicly funded defence research (Wills, 2011, p. 136). Having completed his PhD in 1965, MacDonald returned to Vancouver where he was hired as tenure-track professor at the UBC Electrical Engineering Department. Leveraging on the exposure and the connections that came with his new academic position, MacDonald became one of the first agitators of the Vancouver electronics community. He was not only an active member of the Vancouver chapter of the Institute for Electronics and Electrical Engineers (IEEE), but he also engaged in extra-academic work as an independent contractor (Wills, 2017, p. 149).

MacDonald future partner, Vern Dettwiler, started working at UBC right after his graduation. He was the fifth employee of the UBC Computing Center (Werner Dettwiler, BSc'59, 2015) and one of the few British Columbians to have access to a computer in the 1960s, as there were only two of them in the entire province at that time (Wills, 2011). A technician at heart, Dettwiler enjoyed engaging in technical challenges and often undertook side projects as a way to tinker with new electronic devices (Werner Dettwiler, BSc'59,'2015). In 1965, Dettwiler reconnected with his UBC fellow, MacDonald, to organize an informal group of electronics enthusiasts, mostly composed of UBC students. The group met regularly at MacDonald's basement to tinker with electronic components and, occasionally, engage in consulting jobs (Wills, 2017, p. 65). Seeing the possibility to turn that work of passion into a real business, in 1969 MacDonald and Dettwiler incorporated under the name MacDonald Dettwiler and Associates (MDA) (Caudill, 2011). At the beginning, MDA was a small software and hardware consulting firm still operating out of MacDonald's basement. A part-time job for

the two founders who, at that time, still retained their academic positions at UBC. MDA prospered in the following years, partly thanks to a growing interest from lower mainland companies regarding industrial automation and partly to expanding government investments in surveillance technologies. Engaged by local and Alberta companies in the oil and gas, telecommunication and transportation industries, MDA developed experience in the design and implementation of computerized supervisory control systems (Wills, 2017, p. 65).

MDA's specialization in supervisory and control technologies for large complex systems allowed the company to bid for, and win, a contract with the Canadian Department of Energy, Mines, and Resources, which, in the early 1970s, was working on the Landsat 1, the first satellite equipped with remote sensing technologies. MDA was involved in the project as the developer of the software responsible for the transmission and elaboration of satellite images. Landsat 1 was launched on July 23, 1972, and, when the satellite orbited over the North American continent for the first time, MDA's *Quicklook* software produced the first picture of Canada taken from outer space. The event was a technical and mediatic success (Gwynne & Clark, 1975). In the wake of the 1973 Landsat's success, MacDonald officially quit his academic career to become a full-time entrepreneur. MDA's achievement as a contractor in the aerospace industry brought more business as well as more competitors, as new hi-tech companies began appearing in British Columbia's lower mainland. The snowball effect that MDA's success had on Vancouver's hi-tech sector can be seen in the proliferation of new firms in the years following the *Landsat 1* project (PricewaterhouseCooper LLP, 2013). This process has been described as one of fission or mitosis, through which "one firm begets another firm through the mechanism of employees leaving and setting up a new company" (Kyllo, 2009 as cited in Barnes & Coe, 2013). This was the case of *Mobile Data International* (MDI), a wireless data technology company founded in 1978 by Dan Gelbart, an MDA employee, and purchased by *Motorola* in 1988 and also of *Creo*, a digital imaging company co-founded in 1983 by the aforementioned Gelbart and his former MDA colleague Ken Spencer, and sold to Kodak in 2005 (Littlemore, 2015). As the industry matured, new actors started appearing to serve the needs of the Lower Mainland hi-tech companies, such as *Ventures West Capital*, the first venture capital firm of British Columbia (Spratt, 2007). Incorporated in 1972, *Ventures West* was

instrumental in the success of MDI and other companies in the decades to follow (Kostuch, 1985).

4.3. The crisis of the 80s and the rise of the new media industry

Profound changes in the global flows of capitals and prime materials put pressure on the extractive industries which, despite the rise of the hi-tech compartment, still accounted for 50% of British Columbia's GDP in 1980. At the end of the 1970s, the BC mining industry was undercut by South-American competitors and US import tariffs on Canadian timber undermined the stability of the logging industry (Barnes & Coe, 2011). In addition, the 1980s were also a decade of consumers boycotts, First Nation protests, and organized mass demonstrations against the exploitation of natural resources (Hayter, 2000, p. 326). The increased public awareness, and mounting criticism, toward the environmental sustainability of British Columbia's extractive industries imposed a reflection on the future of the province's economy. The Vancouver Expo 86, themed "Transportation and Communication: World in Motion - World in Touch", was a paradigmatic event in the way it attempted to relaunch the region's identity at a time of economic turmoil (Olds, 1998) and tried, in the words of its organizers, to provide a spectacle that "transcend[ed] the reality of a troubled decade" (Government of Canada, 1986).

MDA was not immune from the effects of the economic downturn. The ten-year span between 1982 – 1993 was a bumpy period for BC's anchor company. In the early 1980s, an undercapitalized expansion and the failure of a large project (*FOCUS*, a flight operations computer systems (Wills, 2011, p. 137)) forced MDA to seek outside equity: a challenging task at a time of economic downturn and capital shortage. Against all odds, MDA was able to gather funds from a group of venture capitalists, private investors and the Canadian Government. The deal, however, imposed MacDonald to resign from his position as President and to reduce his participation in the company from 60% to 15%. The management put in charge by the new board transformed MDA radically. They introduced cost control systems and changed the organization of production in order to make MDA a multidivisional company with independent production and profits centres. This structure allowed MDA to branch out into new divisions and to explore new business opportunities, including Internet-based services in the 1990s. MDA was

eventually acquired in 1995 by the US based aerospace company Orbital Science, which marked the beginning of a controversial process of internationalization that led the company to leave British Columbia for good and to become, in 2019, a Delaware-based entity (Security Exchange Commission, 2018). While the capital-intensive hi-tech sector of satellite remote sensing was going through the turmoil of the economic recession of the early 1980s (Statistics Canada, 2019), and the city was attempting (successfully, in hindsight) to market itself as the next economic opportunity for real estate developers (Kenny, 2016), a new era of Vancouver's hi-tech industry was about to begin.

4.3.1. It's in the game! Vancouver's videogame industry

In 1981, Don Mattrick and Jeff Sember, two teenagers from Burnaby, developed *Evolution*, a videogame for the *Apple II* computer where the player impersonates an organism as it evolves from amoeba to human (R. Smith et al., 2004). It took Mattrick and Sember six weeks to develop the gameplay and transform their idea into an actual and playable game. In the attempt to market their videogame, the two teenagers contacted Tarrnie Williams, a local software entrepreneur and founder of *Sydney Development Corporation*. Williams helped the two students to transform their summer project into a packaged software and to seal a distribution agreement with national retailers (Schom-Moffatt, 1988). *Evolution* was an overnight success: the game sold hundreds of thousands of copies worldwide and Mattrick and his business partner Sember opened their own videogame development agency, *Distinctive Software Inc.* (DSI), the following year in 1982. Just like MDA in the automation and remote sensing industry, DSI became in a few years the anchor company for the Vancouver videogame sector. However, unlike remote sensing, videogame development did not require extensive governmental subsidies or upfront capital. Between 1981 and 1988, DSI developed dozens of titles thanks, also, to a successful partnership with the US-based production company, *Accolade*. DSI games sold millions of copies and, at the apex of success, Mattrick bought out Sember and moved the company offices to Yaletown, the future home of many local start-ups (Barnes & Coe, 2011, p. 7). *Distinctive Software*'s journey ended in 1991, when the homegrown software house phenomenon was acquired by *Electronic Arts* (EA), a giant California-based videogame producer and publisher ("Electronic Arts To Buy Distinctive," 1991). The acquisition had relevant consequences on Vancouver's digital industry: EA opened its largest, and today also its

oldest, studio in Burnaby, in the outskirts of Vancouver. Also known as *The dream factory*, *EA Studio* occupied a massive portion (450,000 sq.ft) of the newly created Broadway Tech Centre. EA's arrival into town, and a steady devaluation of the Canadian Dollar, initiated a process of expansion in the videogame industry that unfolded throughout the 90s.

EA's $13 million investment into Vancouver's video game industry (Lamphier, 1996) was heralded by media and analysts as "BC's foremost new media success" (New Media B.C., 2000c). Not everyone was thrilled by the prospect to work in one of the world largest video game studio. This was the case for Rory Armes, a former Distinctive employee who had been working with Don Mattrick since 1988. After *Distinctive*'s acquisition, Armes declined the offer to join EA and founded, together with Ian Wilkinson, *Radical Entertainment* (R. Smith et al., 2004, p. 205). The company was born as "pure development" studio, i.e. a software house creating titles under contract for a variety of game publishers. Headquartered in a former male brothel in Yaletown (Barnes & Hutton, 2009), *Radical* prospered in the 1990s, becoming one of the five largest pure development studios in North America in the early 2000s (Torin, 2005). The company hired more than 200 developers at that time (Wahl, 2003). It was a thriving business with an anti-corporate corporate culture ("No sex or drugs on the premises" were the only rules (Withers, 2002)). *Radical's* success triggered a process of mitosis, as employees started jumping ship and founding their own independent studios. Among the most notable examples of this were *Barking Dog* and *Black Box Games*, both founded in 1998 by ex-*Radicals*. The former made headlines thanks to a collaboration with Minh Le, the Simon Fraser University student who developed the blockbuster title *Counter Strike* in his Burnaby dormitory room (Dyer-Witheford & de Peuter, 2009, p. 25). The company was eventually acquired in 2002 by *Take Two Interactive*, a US-based videogame holding company, which incorporated it into Rockstar Games, the publisher of the controversial triple-A videogame saga *Grand Theft Auto* (Wahl, 2003). Black Box Games was also acquired in 2002, by *Electronic Arts Canada*, as its "downtown Vancouver subsidiary" (Barnes & Coe, 2011, p. 21). The same destiny was also shared by Relic, another Vancouver-based independent video game studio founded in the 1990s which was acquired in 2004 by THQ, a US videogame publisher, as a way to gain access to new market segments (Uhle & Wernick, 2008). In 2005 *Radical*, by then one of largest independent development studio globally, also capitulated to foreign capital. The

company was purchased by the French media conglomerate Vivendi which later merged with Activision (Britton et al., 2009; “Radical Changes at Hothead Games,” 2009).

4.3.2. Vancouver new media industry in the 90s

Despite the consistent influx of foreign investments, the city was, in the early and mid-1990s, struggling to elevate its business profile. The US takeover of BC hi-tech and digital jewels, with MDA, DSI and *Radical* at the top of the list, was described by the media as a plague (Lamphier, 1995). It was not simple business chauvinism; according to the critics, the systematic acquisition of companies of a meaningful size signalled the inability of British Columbia’s economy to support the expansion of larger businesses.

Takeovers and foreign acquisitions were not the only forces at work in the reshaping Vancouver’s economy. The late 1980s and early 1990s was also a period of de-industrialization in traditional and resource-based sectors (Barnes & Hutton, 2009, p. 1255). This was a process in part driven by the outsourcing of industrial activities to countries with a favourable cost of labor (Rowthorn & Ramaswamy, 1997). In part, it was the outcome of a calculated political plan that identified in advanced service sectors the key to the city’s economic recovery (Hutton, 2004, p. 1962). The tertiarization of Vancouver’s economy was enacted through the rezoning of the industrial areas, specifically through the conversion of the southern shore of False Creek, in the city downtown peninsula, from industrial to residential and recreational. A process that was accelerated by the 1986 Expo, a project initially opposed by the City Council and that displaced manufacturing and light-industrial activities from the downtown core to make room for office buildings and recreational amenities (Hutton, 2004, p. 1961).

The economic and material void created by the progressive de-industrialization was filled by advanced services such as banking, finance, and higher education (Hutton, 2004, p. 1962). In the nascent digital sector, small and micro multimedia agencies occupied the vacant offices and processing warehouses of Yaletown, Mount Pleasant, Downtown East Side and False Creek Flats (Barnes & Hutton, 2009; R. Smith et al., 2004, p. 206). These were agencies specialized in either one specific product or service (e.g. website development, digital animations, e-commerce, online marketing, CD ROM products, software development, etc.) or offering several of these product or services to one specific sector (e.g. education, entertainment, retail, etc.). According to the 1998

Canadian Heritage report on the multimedia industry, 13% of the multimedia companies operating in Canada were located in BC, 40% in Ontario and 28% in Quebec (AC Nielsen & DJC Research, 1999). As the 1999 report highlights, multimedia agencies were mostly small and micro firms (fewer than 10 employees). A finding that was confirmed in a subsequent survey (New Media B.C., 2003), that revealed a progressive reduction in size of the average multimedia company, from 21 employees in 1995 to 13 employees in 1999. A tendency that was in part attributed to the 1998 economic slowdown (Kibble, 1995) and to a labor market that was becoming increasingly flexible, with contract workers accounting for 33% of the total (AC Nielsen & DJC Research, 1999, p. 4; New Media B.C., 1999).

4.3.3. The Vancouver Film School and the birth of Canada's Digital Rim

As the knowledge-based, new media industry became more relevant in the city's economy between 1980 and 2000, so did the institutions catering to the needs of the new population of knowledge workers. In 1987, Richard Appleby and James Griffin founded the *Vancouver Film School* (VFS) in a Yaletown building. The School was meant to train generations of professionals who would then go on to find employment in the expanding BC film industry (Costantineau, 2014). The VFS was founded in the same year that the government of British Columbia financed the development of Bridge Studios, one of the largest film studios in North America which consolidated the Vancouver motion picture industry as the third most important on the continent. However, despite the constant expansion of the industry throughout the 1980s, Vancouver studios were subsidiaries for large Hollywood productions. On average, every year, 60-80% of the revenues generated by the Vancouver motion picture industry depended on works commissioned by productions based in Los Angeles (Barnes & Coe, 2011).

Seeing the opportunity to retain a larger share of the value generated by the film industry in Vancouver, the VFS introduced two new one-year intensive courses: a new media course in 1991 and a special effects program in 1994 (Riches, 1994; Wilson, 1995). The former was set up with the intention of training students in video production, editing, computer generated graphics, sound and music production, as well as web design and CD ROM creation and marketing. The latter, instead, was subsidized by the

Toronto-based visual effects software company *Alias* (developer of the then-widely used animation suite *PowerAnimator*). The goal of this course was to train junior visual effects artists to fill the ranks of Vancouver's nascent post-production industry. The experiment proved successful and beneficial not only to the Vancouver film industry, but also for hundreds of multimedia firms which set up shop in Vancouver (Siemiatycki et al., 2016, p. 191). Several other private educational institutions followed VFS's lead and launched new multimedia-focused programs in the second half of the 1990s, e.g. the Vancouver Institute of Media Arts in 1997 and the Lost Boys Studio in 1998 ("Film Schools and Training Programs Across Canada," 2006).

Given the increasing relevance of the new media industry in the economy of Vancouver (New Media B.C. estimated the industry generated north of $1 billion revenues in 2000 (2000a)), the City Council took a proactive stance in an attempt to promote an image of Vancouver as a "Dynamic, wired, competitive, international and diverse" city (Vancouver Economic Commission, 1999). In 1996 the city council established the *Vancouver Economic Commission* (VEC), a development agency for the international promotion of the city designed to support the local business community. The VEC promoted Vancouver as a city "for work, for play and for life", cosmopolitan and culturally vibrant thanks to a "wide spectrum of visual and performing artistry" (Vancouver Economic Commission, 2000b). Building on Vancouver's reputation as a city with a high quality of life, as acknowledged by the *Life survey* of the *United Nations Development Program* (UNDP) and the 1999 *Cities that Work* report (Koerner, Wright, Cue, & Pritchard, 1998), the VEC portrayed Vancouver as a post-industrial city whose economy was moving beyond "forestry, fishing, mining and transportation" and into "high technology and knowledge-based industries" (Vancouver Economic Commission, 2000a).

In 1998, two years after the establishment of the VEC, *New Media BC* joined forces for the promotion of Vancouver's multimedia industry. The association was meant to support Vancouver's new media producers through "networking, mentoring, training, business matchmaking and marketing" (New Media B.C., 1999) and, in its first year of existence, it could already count on more than 100 members working in games and digital entertainment; digital film, animation & VFX; interactive design, mobile content and applications, and eLearning. Relying on the creative city trope before the term was popularized through the works of Richard Florida (2012), the association marketed

Vancouver as *Canada's Digital Rim* (New Media B.C., 2000b), a gateway to the US and Asia located in a "spectacular physical setting attracting and inspiring many of the industry's best and brightest" (ibid.).

4.4. Vancouver after the Dot Com bubble burst

The shockwaves that resulted from the burst of the dot-com bubble reached *Canada's Digital Rim* shortly after March 10th 2000, the day the NASDAQ peaked at 5,048 points before nose-diving into a phase of high volatility. Paradoxically, the limitations that hindered the expansion of Vancouver's tech industry throughout the 1990s were the same ones that helped to attenuate the impact of the dot-com boom in the early 2000s. Besides some notable exceptions in the videogame industry (e.g. the aforementioned *Radical* and EA), Vancouver's new media industry was composed almost entirely of small firms. These were often bootstrap businesses, i.e. self-reliant, small producers financing their operations without access to external financing (New Media B.C., 2003). According to the 1999 *Canadian Heritage report* (1999), only 5% of small multimedia companies (i.e. with fewer than 10 employees) had access to venture capital to finance their expansion; most of them relied on informal investors, personal funds (including friends and family), banks and government programs to finance their start up phase.

If, on the one hand, the lack of venture capital had prevented Vancouver's new media firms from scaling and achieving the exponential growth expected from New Economy start-ups, on the other hand it shielded the city's new media industry from the harshest effects of the dot-com crisis. Nevertheless, the consequences were significant; many multimedia companies that had come to coalesce around Yaletown shut down and the construction of the *False Creek Flats Tech Park*, a tech hub which should have hosted "high-tech, bio-tech, and knowledge based companies" (Tech Park, 2002) was jeopardized by the technology market downturn (Stueck, 2001). Losses were substantial; Vancouver registered a 46% decline of commercial leasing activities in 2001 compared to 2000 (Wong, 2001). In the same years of the dot-com boom, Vancouver's economy was also going through a process of progressive de-corporatization. Initiated in the mid-1970s, Vancouver's corporate diaspora accelerated in the 1990s eventually peaking between 1999 and 2004, when the city lost 30% of its head-office jobs in the span of five years (Barnes & Coe, 2011, p. 4).

Despite the economic turmoil, Vancouver's digital and new media industry rebounded in the early years of the 21st century (Barnes & Hutton, 2009, p. 1260; McElgunn, 2003) when a second-wave of internet firms repopulated the vacant offices of Yaletown, Gastown, and the Downtown Eastside. Among these, two companies in particular played a fundamental role in building Vancouver's reputation as a hub for start-up and creative internet companies: *Invoke Media* and *Ludicorp*.

4.4.1. Homegrown narwhals

Invoke Media is a multimedia company founded in 2000 by Ryan Holmes, a project manager and programmer who had previously worked at a local dot-com company. Originally from Vernon, BC, Holmes founded Invoke to provide multimedia services to local businesses: web design, web hosting and digital marketing (Invoke Media, 2004). In 2008 the company was looking for an efficient way to manage the multiple social media accounts it was responsible for. That's when the idea for *Hootsuite* came up: a dashboard for managing multiple social media accounts from one single interface. The service was released for free in December 2008 and, by summer 2009, it had built a base of 100,000 users (Ebner, 2011). At that point, Holmes decided to spin off *Hootsuite* from *Invoke Media*, develop a premium version of the service and go down the venture capital route. The company raised an initial $1.9 million in series A round from US-based VC companies in 2010. The company made headlines worldwide when, in 2013, it raised $165 million in its series B round (Hootsuite Media Team, 2013), one of 2013's largest rounds for a start-up, according to the popular tech magazine *Techcrunch* (Lunden, 2013), and one of the largest-ever for a Canadian company (Akkad, 2013). This investment alone was enough to boost Vancouver's profile as Canada's capital for software start-ups in 2014 (Florida & King, 2015). The company has, ever since, become one of Vancouver's success stories and a member of the exclusive Narwhal Club (the group of Canadian companies with an estimated evaluation greater than $1Bn). Under the Robertson administration, the City Council worked to make of *Hootsuite* Vancouver's digital anchor company (Platt, 2012). This entailed the selling of a former police station in the Mount Pleasant area at below-market rates to host the company's new headquarter (Bula, 2012) thus responding to a competing bid coming from Montreal (Ebner, 2011).

Another player within the second-wave of new media companies whose success was fundamental in strengthening the Vancouver's reputation as a digital hub was *Ludicorp*. While the name might sound obscure to many, its main product, *Flickr*, was one of the most popular photo sharing websites and "early poster-child of the Web 2.0 environment" (B. A. Brown, 2014, p. 704). *Ludicorp* was a gaming company founded by Stewart Butterfield and his wife Caterina Fake in 2002. Butterfield, originally from Lund, BC, moved to Vancouver in 1998 after earning a MA in philosophy from Cambridge University. In Vancouver, he spent two years working as a web designer for a local multimedia company. Fake was, in contrast, a Silicon Valley veteran. Originally from Pittsburgh, Massachusetts, she moved to San Francisco where she worked for several start-ups before becoming the art director of *Salon.com*, one of the first online newspapers and owner of the historical and aforementioned online forum The WELL (Brennan, 2007). She moved to Vancouver with Butterfield where the two founded *Ludicorp* and started developing *Game Neverending*, a Massive Multiplayer Online Game (MMOG). The game was radically different from traditional triple-A titles in the way it offered its players an entire world to explore and to interact with. Apparently without a goal and non-competitive, the game was all about "social, political and economic interactions" (Gameneverending.com, 2002) within the confines of a digital city. The Alpha version of the game was released in spring 2003. In 2004 it became evident that the game was not gaining the traction the founders wished for. One specific in-game feature was, however, very popular among players: the ability to take pictures and share them with others. Seeing a potential new application for that functionality, Fake and Butterfield shut down *Game Neverending* and launched the photo sharing functionality as a standalone service: *Flickr*. Unlike *Game Neverending*, *Flickr* was an overnight success in part thanks to the rapid diffusion of mobile Internet connections and portable cameras.

Launched in February 2004, *Flickr* had 100,000 users by the end of the year. At that point, *Ludicorp* started negotiating with *Yahoo!* which eventually acquired *Flickr* on March 2005 for $30 million. The entire *Ludicorp* team moved to *Yahoo!* headquarter in Sunnyvale, CA. Butterfield worked three years at Yahoo! before quitting and going back to his roots in videogames (Kopytoff, 2010). He returned to Vancouver in 2009 and founded a new gaming company: *Tiny Speck.* Thanks to his reputation as a successful entrepreneur, Butterfield was able to raise $15 million from *Andreessen Horowitz* and

Accel Partners, two of the most accredited Silicon Valley venture capital firms, for the development of his second MMOG: *Glitch*. The development started in 2009 but by late 2013, it was clear to Butterfield that, like *Game Neverending*, his second game would also never achieve the critical mass needed to become a sustainable business. Despite the underwhelming performance of *Glitch*, *Tiny Speck* development team -composed largely of former *Flickr* employees- was particularly fond of an intranet tool they developed to manage team communications. Butterfield therefore decided retool this internal communication platform for the market, akin to what he did with *Flickr* ten years before. This time the success was even greater: the internal chat system was rebranded *Slack* and was made available to the public as freemium software (free software with premium features available to paying customers) (Stevenson, 2015).

In 2016, *Slack's* evaluation was already in the billion range (Isaac, 2016). Unlike *Hootsuite*, *Slack* left Vancouver and moved its headquarter to San Francisco. Still, many consider *Slack* a Canadian company due to its roots in Vancouver, despite the company maintaining only a satellite office in the city. Among them is the *Vancouver Economic Commission*, which mentions it as one of the three homegrown *unicorn* companies (Vancouver Economic Commission, n.d.). In December 2020, *Salesforce* acquired *Slack* for $27.7Bn, making it the second largest software acquisition in history, after IBM's acquisition of *Red Hat* (Calhoun, 2020).

4.4.2. Incubators, bootcamps and co-working spaces

It was during Vancouver's post-dot-com renaissance that some of the institutions which became central in the future start-up city started appearing. Four institutions that seemed particularly relevant and influential throughout my ethnographic investigation of Vancouver were: incubators, bootcamp schools, local universities, and coworking spaces.

Incubators are organizations helping start-up companies to develop their businesses providing them "workspace, shared facilities, and a range of business support services" (Diane A, 2013). Incubators started appearing on Vancouver's tech map around the time of the dot-com bubble burst as mediators between venture capital firms and start-up companies. *Idea Park* was among the very first to open for business in Vancouver. Founded in 1999 in Yaletown by two dot-com veterans, *Idea Park* offered

support to aspiring entrepreneurs in the form of mentoring and marketing, legal, financial, technical, administrative and strategic services (Calleja, 2000). Moreover, thanks to connections with Canadian and Silicon Valley-based venture capital firms, *Idea Park* helped the incubated start-up companies to seek external financing (Shaw, 1999). In exchange, *Idea Park* charged companies a monthly fee in addition to 5-10% in company shares. The incubator was acquired in 2001 by the gold mining company *Vengold Inc.* and rebranded as *Itemus*. The company filed for bankruptcy during the dot-com crash in 2001 (CBC News, 2001). In spite of the failure of Itemus, several new incubators emerged in the first years of 2000s. These ranged from provincially-sponsored initiatives such as Innovate BC, to privately-owned incubators like Bootuplab (2008), *Growlab* (2011), *Launch Academy* (2012) and *Spring Activator* (2014) to university-based incubators and industry-liaison offices like Simon Fraser University's *VentureLabs* (2012) and University of British Columbia's *Hatch Accelerator* (2016). All of these organizations were working to promote Vancouver and British Columbia as a proper start-up hub, in an attempt to retain successful ventures in the province and avoid migrations toward more competitive regions (Braga, 2013).

Another element of the Vancouver start-up ecosystem emerged in the first years of 2010s: bootcamp schools. The first one to open in Vancouver was *Lighthouse Labs*. Founded by two former software developers in 2013 (Czikk, 2013), and supported by the local incubator *Launch Academy*, *Lighthouse Labs* was among the first private educational institutions to offer *coding bootcamps* in Vancouver (W. Maurice Young Centre for Entrepreneurship and Venture Capital Research, 2016). These are short, intensive, hand-on crash courses on the most popular and requested technical skills. Unlike traditional courses, bootcamps usually rely on the flipped classroom method, a pedagogical approach in which students engage with technical problems during class, leaving the theoretical explanation of such problems to post-class, often online-based, video-lectures. Inspired by similar initiatives developed in Toronto, *Lighthouse Labs* was born with the aim of satisfying the city's increasing demand for skilled digital workers (Nguyen, 2016). At the beginning, the school offered courses on programming languages such as JavaScript, Ruby on Rails and HTML+CSS, and on iOS app development. Lighthouse Labs' business and pedagogical model sparked imitation as several other bootcamp schools opened for business: *Codecore Bootcamp* in 2013, *Red*

Academy in 2015 and *Brainstation*, originally from Toronto and operating in Vancouver from 2017.

Local universities have also played a role in shaping Vancouver's start-up scene. Alongside university-industry liaison offices and incubation programs, the University of British Columbia, Simon Fraser University, Emily Carr Institute of Art and Design, and British Columbia Institute of Technology established, in 2007, the Centre for Digital Media. The Centre's curricula blends "visual arts, industrial arts, writing and literature, technical expertise in computer hardware and software, and business studies" (Barnes & Coe, 2011, p. 20). Throughout the program, students are engaged in several course projects, some of which turned into real start-up companies.

The last component of the Vancouver start-up landscape, co-working spaces, also emerged during the digital media renaissance of mid-2000s. The first one to open for business was *Workspace Café*, founded in 2006 and located in a former meat packing building in the heart of Gastown. The idea for *Workspace Café* came from *Queen Street Commons*, a communal space for artists and community activists in Charlottetown, Prince Edward Island (Azpiri, 2008). Inspired by the collaborative and artistic flair of *Queen Street Common*, the founders of *Workplace Café* described Vancouver's first co-working office as a *third space*'[9] where freelance, professionals, digital nomads and contract workers could be "more creative, more effective and happier with their workday" (Workspace, 2007), Instead of "walled-in offices and cubicles that suffocate most modern offices" (Workspace Cafe, 2007), the *Workspace Café* office design was open, in order to foster informal and spontaneous collaboration between members. A journalist from *The Globe and Mail* described the space as "the physical representation of the collaboration that blogs, wikis and related technologies have fostered over the Internet" (Schick, 2006). In the following decade, co-working space has become increasingly common: today the city hosts more than 40 co-working spaces, operated by both local companies such as *Werklab*, a holistic wellness and co-working community located in the -increasingly-post- industrial area of Strathcona, and international groups such as *Wework* and IWG (*Information Workers Group*).

[9] As defined by Ray Oldenburg (1997): third space as a hybrid between the domestic first space of the home and the professional second space of the office.

4.5. Vancouver: a start-up city

In an often mentioned blog post, venture capitalist and Y Combinator co-founder Paul Graham discussed the influence that the environment, urban environment, specifically, would have on people's ambitions and achievements (2008). According to Graham, each city whispers its own, unique, message. Subtly, almost subconsciously, every city speaks "to you mostly by accident—in things you see through windows, in conversations you overhear. It's not something you have to seek out, but something you can't turn off." (Graham, 2008).When I began exploring Vancouver in 2014, the city was sending a clear message. It was neither subtle nor whispered. Vancouver wanted to shrug off its image of a laidback touristic destination and be perceived as a thriving digital ecosystem. A local angel investor I interviewed expressed his frustration about Vancouver's public perception, especially in relation to the city's inability to attract venture capital:

> If you ask people about Vancouver, the first thing they say is: "Vancouver is very beautiful". That's what we are successful at promoting, but nothing else. So nobody's think of Vancouver as a place where you can work. They think of it as a place where you can come and enjoy tourism, but not a place where you can work.

The affirmation of Vancouver as a start-up city required, in the words of the people I encountered throughout my research, the constitution of an entrepreneur-led community capable of showcasing and promoting local successful companies and model Vancouver's image after those of successful start-up hubs. It also depended on historical contingencies and required deliberate political calculation. With the former I refer to the unique history of Vancouver's economy. A history, as described in the previous section, punctuated by the emergence of successful hi-tech and digital companies yet at the same time swayed by periodic takeovers by foreign corporations, often supported by fiscal incentives (e.g., the 2010 Interactive Digital Media Tax Credit) all within a regional economic context caught-up in a twofold transition: from resource extraction to knowledge production and from corporate to post-corporate.

The latter, instead, refers to the specific rhetorical purpose that the start-up plays in the policy discourse. Specifically, arguments in favor of the establishment of Vancouver as a start-up city usually rely on the familiar idea of creative and cultural production as an instrument for urban and economic revitalization. Building on the long

history of local policies in matter of creative industries, e.g. the creative city model (Å. E. Andersson, 2011; Florida, 2012) the start-up discourse furthers the idea that innovation and creativity cannot and should not be prescribed or controlled from above. Furthering the epistemic regularities about emergence and self-organization, and describing the local digital and new media companies as nodes within networked industries, the start-up city recipe for urban regeneration provides the rhetorical foil supporting laissez-fare economic development politics.

Unlike Fordist industries, where government interventionism into the economy was justified by the necessity to provide the industry with complex infrastructures and welfare measures to protect capitalism from failure and overthrow (Fisher, 2010, p. 21; Romano, 2017), digital and new media industries only need, allegedly, basic communication and logistic infrastructures and relatively small investments aimed at stimulating the local entrepreneurial energies (Ross, 2009, p. 17). This usually involves the creation of institutions for capturing the "latent creativity of individuals and communities" (Ross, 2009, p. 17), such as incubators and accelerators, the rebranding of the cities and regions' images (e.g. *Vancouver Start-up City' StartUp Here Toronto*, *Square One Regina* and *The Corridor, Toronto-Waterloo Region*) and the promotion of a liberal, tolerant atmosphere (Pratt, 2011, p. 124) in the attempt to cater to the emerging class of digital and entrepreneurial workers (Å. E. Andersson, 2011; Florida, 2012).

According to Brad Feld, co-founder of the already mentioned *TechStars* and a recognized authors in matter of start-up communities, instead of trying to control innovation, cities should accompany the "shift from the hierarchical society that has dominated the industrial era to a networked society that has been emergent throughout the information era"(2012, p. 1). In his *Boulder thesis* (ibid.), Feld advances a framework for the development of successful start-up communities, describing the process as similar to that of developing and launching a start-up company. Consequently, and unsurprisingly, Feld indicates in the entrepreneur the leader and sole responsible for the creation of start-up ecosystems, although recognizing the importance of engaging with the entire "entrepreneurial stack", which includes "aspiring entrepreneurs, investors, mentors, employees of start-ups and service providers" (2012, p. 34). The government influence in the construction of start-up community must be kept at bay: local governments should only be involved as "feeders", as resource providers (Feld, 2012, p.

37). This usually involves investing in entrepreneurs-led initiatives and creating business friendly regulatory environments.

In the latest iteration of the *Boulder thesis* (Hathaway & Feld, 2020), Feld makes the connection between his theory of local development and the start-up episteme explicit. He describes start-up communities as adaptive systems, as instances of complex phenomena that transcend the natural and the social. Described as inherently unpredictable and unstable, start-up communities should be neither controlled nor administered though linear system thinking. Instead, community leaders should create the conditions for the system to achieve its best possible configuration. For example, local governments should limit their role to set the table so that free, unregulated, chaotic interactions among entrepreneurial subjects can generate results otherwise unachievable through linear planning methods. Government interventions should create "the right conditions so that the right outcomes can unfold naturally" (Hathaway & Feld, 2020, p. 15). Feld does not conceive start-up communities as unregulated enclaves, but rather as spaces that need to be carefully produced by the sovereign power, for example through flexible immigration laws, favorable tax regimes, infrastructures and innovation policies (Hathaway & Feld, 2020, p. 54). As in a modern re-enactment of the physiocrats' ideal of the market as the expression of transcendental natural order (Bertuglia & Vaio, 2005, p. 259), the start-up community becomes a contemporary site of veridiction for governmental practices (Foucault, 2008, p. 32), a yardstick through which to measure the quality of the local development policies. A sphere where economic relations should be allowed to naturally unfold following the regularities of the start-up episteme.

In practice, *TechStars*' approach usually involves coordinating the work of the various business organizations already operating in a city, establishing new business incubators/accelerators, setting up a communication strategy showcasing the work of local entrepreneurs, and helping universities to strengthen their relations with local industries. The influence of the start-up city model is not limited to regional economic policies alone. *Techstars*' approach is, in itself, a representation of the start-up episteme. For example, in each local chapter *TechStars* organizes *Meetup* events (e.g. *Open Coffee*, *Startup Drinks*, *Weekend Hackathons*) which are meant to provide the infrastructure, the space for people to engage in the sort of unbounded, casual interactions which Feld describes as "tangible, focused engagement around the activity of entrepreneurship" (Hathaway & Feld, 2020, p. 275) and that he considers

fundamental for the establishment of a vibrant start-up community. This approach is, I argue, a reflection of the complexity inspired approach of Feld and responds to the regularities of the start-up episteme. Positioning itself as a platform in the transactional and a-technological acceptation of the term (Steinberg, 2019), as a catalyzer for local entrepreneurial energies, the *TechStars*' model responds to its own need to scale, this time through replication, by leveraging and capitalizing on the free and immaterial labor performed by local organizers and participants. At the same time, *TechStars*' approach to local economic development hints at the managerial practices of lean entrepreneurship suggesting that instead of engineering the outcomes, local organizers should "run small-scale experiments, learn from them, adapt as necessary, and repeat" (Hathaway & Feld, 2020, p. 15). This kind of agnostic, iterative experimentation normalizes uncertainty and precarity as the necessary conditions for the establishment of a thriving start-up ecosystem. An objective supposedly unachievable through deterministic, top-down development policies.

4.5.1. Inequities in the start-up city

When I began my investigation in Vancouver, entrepreneurship and innovation were at the forefront of political agendas across all levels of government. At the municipal level, the 2013 *City of Vancouver Digital Strategy* set as a priority the support of digital ventures through the creation of a favourable business environment (City of Vancouver, 2013, p. 23). The strategy was translated into two urban interventions: the establishment of a start-up incubator to help "develop, attract and retain talent and business in the digital sector" (City of Vancouver, 2012, 2013, p. 23) and the review of "zoning bylaws to remove or minimize impediments to digital clusters districts" (City of Vancouver, 2013, p. 24). For what concerns government's participation to the creation of a start-up community, the most visible contribution was the 2015 collaboration between the *Vancouver Economic Commission*, the *Bootstrap Collective Meetup* group, and Feld's *TechStars* to extend the *Start-up Weekend* hackathon event into what became the *Vancouver's Start-up Week*, a week-long celebration of the Vancouver start-up ecosystem (Vancouver Economic Commission, 2015).

At the provincial level, the *British Columbia Innovation Council* (BCIC, now known as *InnovateBC*) invested in the creation of new acceleration and incubation programs. Through the *Venture Acceleration Program*, BCIC established collaborations

with Simon Fraser University and University of British Columbia for the creation of two incubation programs, *entrepreneurship@SFU* and *entrepreneurship@UBC*, as well as with private organizations like Launch Academy (Sá & Kretz, 2015, p. 59). At the Federal level, in 2013 Stephen Harper's Conservative government set aside $60 million to support business incubators and accelerators across the country and sustain Canada's venture capital industry (Department of Finance Canada, 2013). Approximately $10 million ended up in Vancouver (BC Tech Association, 2014), to fund the operations of two local accelerators: *Highline* (formerly known as *Growlab*) and *Wavefront* (shut down abruptly in 2018 due to financial issues (Soltys, 2018)). The most evident manifestation of Vancouver's new economic orientation was the launch, in 2015, of the *Vancouver Economic Commission* (VEC) *Start-up City* program.

Taking advantage of the visibility gained thanks to Vancouver's 18th place in the *2015 Global Start-up Ecosystem Ranking* (Start-up Compass, 2015), due in great part to *Hootsuite*'s 2013 $165 million series B round (Florida & King, 2015), the VEC partnered with local start-up organizations to "take Vancouver's already globally recognized start-up ecosystem to the next level" and promote the city as an "Innovative, Creative and Sustainable' start-up hub" (Buggey, 2016; Vancouver Economic Commission, 2019). All the while the city, and its digital industry, grew increasingly polarized. Polarization due, in part, to the deepening of a housing crisis which made it increasingly difficult to live and work in the city, even for full-time, skilled, employees working in the digital industry. According to the *2019 Labour Force Survey*, the average hourly wage for people employed in the Information, Culture and Recreation industries in B.C. was $29.84 for men and $23.23 for women (StatCan, 2019). In addition to the disparity between men and women wages —women in the industry earning 23% less than men, whereas the average gender pay gap is B.C. is around 16% (StatCan, 2019)— both wages are below the $35.43 per worked hour needed to rent an average-priced two-bedroom apartment in Vancouver (Macdonald, 2019). In addition, the progressive fluidification of employment conditions pushed more people into self-employment and temporary jobs which, in 2019, accounted for 47% of the entire workforce in the Information, Culture and Recreation industries in the province, compared to 31% of the B.C. average (StatCan, 2019).

These issues fell outside the purview of the *Vancouver Startup City* program but emerged often in interviews and conversations with tech professionals that were either involved in, or affected by, Vancouver's transformation into a start-up city. During the 22

months I spent in the field I had the chance to collect the stories of dozens of digital workers, freelancers, unemployed tech professionals, and aspiring entrepreneurs. Hearing their words, I found hope as being among the main reasons urging them to embark on risky and unstable careers. Hope to leave mediocre jobs, hope to escape systemic forms of professional marginalization, and hope to find realization at work. It would be unfair to dismiss these demands for freedom as mere products of neoliberal ideologies. They represented real and genuine responses against the forms of alienation and discrimination that my participants experienced in their everyday jobs.

However, when one leaves stable forms of employment, the alternative is too often one modeled after the economic and technological principles of the start-up episteme. One that leverages, instrumentally, on affects such as passion and love to blur the boundary between the professional and the personal sphere. One that urges people to constantly update their technological skills in order to maintain their employability. One that frames flexibility as necessarily antithetical to job security. One that justifies local economic policies granting generous tax credits to foreign capitals while leaving tech professionals overexposed to the ebbs and flows of the market. One that, ultimately, does not allow almost half of the independent workers population (40%) to earn a livable salary (*Independents' Day: Why gig work is taking hold in B.C. August*, 2018; Ivanova & Saugstad, 2019). In the next chapter I discuss some of the strategies employed by the people I met throughout my research in the attempt to cope with the difficulties of being a tech worker in Vancouver. Through the stories of four participants, Bianca, Daniel, Eddie and Kenny, I illustrate how embarking on an independent career, whether as a freelancer, as an entrepreneur, as a consultant, or as a digital nomad, was experienced and described as an act of liberation against oppressive corporate structures and their cultures. However, these stories of liberation also reveal new forms of exploitation which, I argue, are essential traits of the start-up episteme. Lastly, in Chapter 6 I look at grassroot organizations for tech workers and I discuss the role they might have in the democratization of start-up episteme and in making independent, flexible, labor more equitable and fair.

Chapter 5. Nomads and hustlers: subjectivities of the start-up episteme

> *Welcome! Thank you for joining this mastermind group. We all look forward to a productive and effective time together, where we learn from and motivate each other to achieve our business goals. Before our first meeting, write down and share your goals for the next three months and your "punishment" in case you don't meet them. (Mastermind group ground rules)*

In the course of my exploration, I became increasingly interested in studying the experiences of people transitioning from stable to flexible forms of employment, and vice versa. I was intrigued by the way people talked about the emotions, fears and expectations involved in the process of jumping off the corporate cliff and beginning a career as an independent worker. I use the generic term *independent worker* intentionally. Throughout my journey in the world of start-up and digital labor, I have encountered people who identified as freelancers, consultants, start-up entrepreneurs, solopreneurs, digital nomads and lifestyle businesspeople, to name just a few. I therefore use *independent workers* as a broad signifier to indicate a wide range of professions, in the digital and new media industries, united by the fact of being non-salaried. I was also interested in understanding the strategies that these people enacted in an attempt to cope with the challenges that independent careers often bring with them. In the hope to interact with, and collect the experiences of, independent workers, I started attending *Meetup* events on a regular basis.

Meetups are a very interesting, yet challenging, type of events to study. Popularized by the homonymous website *Meetup.com*, the term meetup (lowercase) is commonly used to refer to hybrid online-offline, also known as "electronic-to-face" (e2f), communities (Sessions, 2010; Weinberg & Williams, 2006). These communities are, often, self-organized, run by volunteers and focused on a specific topic. Meetups are generally open to the public, making it relatively easy to connect with a specific group of people without having to pass via established gatekeepers. At the same time, their casual nature makes them fleeting and inconstant. The audience can change greatly from one event to the next, even in the most esoteric, specific, and active groups. Consequently, it can be very hard to establish long-term research relations with participants through meetups. Moreover, my own experience of meetups suggested that

they did not always occur as regularly as I was originally led to believe. Lack of a space to meet, lack of volunteers, or simply the lack of time were the most common causes that rendered it difficult for groups to maintain a regular schedule.

The *Weekend Warriors* group was among the most regular and interesting groups I had the chance to follow. The group aimed to connect freelancers, aspiring start-up founders, and independent workers in general, and to provide them with a quiet space from where to work. The *Weekend Warriors* meetups took place in the morning of each third Saturday of the month. The events were described as *work retreats*: four hours, from 9.00 to 13.00, to work on side projects, to finish the tasks of the week or to plan the work for the forthcoming week. The format involved four cycles of 50-minute work sprints followed by a 10-minute break. At the beginning of the event, each participant had to write down their objectives on a sheet of paper and was asked to share them with their neighbour. The events usually took place in coworking spaces or tech companies that sponsored the group. In addition to access to their offices, the sponsoring companies often paid for coffee and food. Because of the popularity of the *Weekend Warriors Meetup* group, events were limited to 30 participants maximum. In the course of my research, I used to attend these work retreats every month.

The April 2018 event was hosted by a local e-learning start-up company located at the edge of the False Creek Flats, not too far from the tech park inaugurated in the aftermath of the dot-com bubble burst and described in Chapter 4. In that occasion, the start-up company allowed us to use their board meeting room overlooking the North shore mountains. I got to the event way before 9.00 AM so that I could observe participants as they arrived and set up their workstation for the day. I enjoyed attending these events because they served a double function. They constituted part of my participant observation of the start-up episteme, and they also allowed me to put some extra work into the administrative aspects of my own research. Approaching the Weekend Warrior events with this mindset helped me to blend into the group and connect with other participants. Just like my fellow freelancers, I made a list of my daily objectives, I shared them with the other people sitting next to me and I tried to make Saturday morning the most productive time of the week. That day, I decided I was going to work on an abstract for a forthcoming conference. As prescribed by the format, I shared my daily goal with my neighbours and got to work.

I used the first 10-minute break as an opportunity to get to know the person with whom I was sharing the desk and who was working on clearing his inbox of customers' care request emails. Kenny was a 30-something guy with a thick British accent. Originally from Manchester, Kenny had been living in Vancouver for three months when we met the first time. He described himself as a digital nomad working in the e-commerce space. He had been travelling over the past eight years and now he was looking for a place to settle down with his partner. Curious about his story, I asked if I could interview him after the meetup. He agreed and we continued our conversation the following Monday at a coffee shop in downtown Vancouver.

A digital marketer by training, Kenny lived and worked for several years in Dublin. Right after graduation, in the early 2000s, he aspired to work at *Google*, as the company was "pioneering the advancement of much of the Internet as it is now and it had this reputation of being a great place to work." Once he had completed his bachelor's degree in marketing, he applied for a position as product specialist in the *Google AdSense* team. *AdSense* is *Google*'s platform allowing publishers (e.g. website owners, app developers, YouTube creators) to host banners on their websites, apps or videos and to earn money every time a user clicks on them. The other side of Google's advertising platform is *Google Ads* (formerly knowns as *AdWords*), which, instead, allows advertisers to buy advertising space (i.e. banners) on both *Google* properties and third-party publishers' websites. His application was successful and, in 2002, he became one of the first employees of the *Google* European headquarters in Dublin. Throughout his two years at Google, he got to learn the dynamics of online advertising. In his daily job he would interact with Google engineers and salespeople to promote the *AdSense* advertising platform among large online publishers. This is when he started pondering the possibility of using the knowledge he had acquired in his daily job to start his own website and become a *Google AdSense* publisher himself: "So that job exposed me to all these publishers that were making money from having websites that they owned, and I thought, 'Well, hey, I should get a piece of the action, right?'". It was then that Kenny, while employed in one of the largest tech companies in the world, decided to get a "piece of the action" and start his *side hustle*.

Kenny's plan was to build a network of websites and to generate revenues through the sales of advertising space back to his employer, *Google*. His experience in the field and his connection with major European publishers allowed him to understand

and learn the tricks of the trade and build, in a relatively short span of time, a successful network. Lacking the technical expertise needed to develop a website from scratch, at first he purchased a pre-existing website that he saw as a potentially good candidate for the *AdSense* program. “It was kind of like a rough house in a nice neighborhood type of situation” Kenny recalled thinking about his first investment into his side hustle. Managing a website while being a full-time employee was, however, challenging. Not only because he worked nights and weekends on expanding his website, but also because he had to carefully keep his two identities, the *Googler* and the *side-hustler*, as he himself retrospectively described his second identity, distinct and isolated one another. His personal business “Almost got me in trouble, because there was some conflict of interest”. Despite the challenges, in approximately two years his side hustle as an *AdSense* publisher started to generate some significant revenues. “It was not an overnight success”, Kenny recalled and it was not even enough to sustain a life in Dublin. However, it was enough to keep him motivated to invest more time and effort into the project. At the same time, his dissatisfaction with the corporate environment and with Dublin, a city in which he had never felt at home, was also growing. That’s when he started pondering about the possibility of moving elsewhere and going full-time on his side hustle: “So, it got to a stage where I was earning enough that I could start fantasising about this idea of living somewhere cheaper […] and develop my network further.”

As much as he wanted to quit and focus exclusively on his network, possibly relocating to another country, his getaway from the corporate life had to wait two more years. Right when he was maturing the idea of quitting *Google*, another tech rising star announced the opening of a new office in Dublin: *Facebook*. Despite his aversion to Dublin and the eagerness to focus exclusively on his side hustle, Kenny could not resist the lure of working for another tech giant. For this reason, he postponed his plan to become an independent worker and jumped on the *Facebook* bandwagon:

> It was obvious that Facebook was going to be a success story, yet it was still in its infancy of growing in many ways. I just thought it would be interesting to join them, so I started applying for that opportunity. When I joined them, I was the fourth employee in the Dublin office. Today there are several thousand.

He ended up working at *Facebook* for almost two years. Although the working conditions were not on par with those at *Google*, he still remembers the thrill of “going

through the experience working for this new, big Internet company that was growing fast." As much as he enjoyed the office-camaraderie and working with an international team of young people from across Europe, the job at *Facebook* was neither challenging nor rewarding. Reading travel guides and digital nomads' blogs, he was still dreaming about leaving the soggy weather of Dublin and move to a Pacific island: "I remember buying a *Lonely Planet* for the Cook Islands, which are these islands off of New Zealand, and I kind of fantasized that that would the place to go".

He eventually reached a point where he felt he could no longer sustain a life in Ireland and a job at a multinational corporation. His side income was increasing. His enthusiasm to stay in Ireland was dwindling. The combination of the two pushed him to quit Facebook and to move to a country "developed enough" to allow him to work remotely, yet with a sufficiently low cost of living to allow him to survive with just his side hustle income. Choosing which country to move to was, he recalled during our conversation, not an easy decision to take. The Cook Islands were not a real option, after all. However another country ticked all the boxes:

> I was often googling, "What is the cost of living in Indonesia?" I'd never been to Indonesia, and now I had a fantasy for various reasons to go there, and it just seemed very fitting in terms of the cost of living and that it was, you know, developed enough, had good Internet.

In 2010, his decision to quit Facebook became real and he took his first step into the world of independent work. At the beginning, he wanted to give the nomadic lifestyle of the independent Internet entrepreneur a try by joining a group of 15 digital marketers and start-up entrepreneurs who were living in a shared house in Bali for a month. They were part of a group called *Project Getaway*; "an organization, a non-profit I suppose you could say, that gets together digital nomads and takes them to an exotic place"[10]. The trial was apparently successful as what was supposed to be a one-month work/vacation in Bali turned into a six-month stay. He eventually left the group of digital nomads, started renting his own place in Bali and lived in Indonesia for four years.

During his four years in Bali, Kenny took advantage of so called *geoarbitrage* to grow his business further and faster. The term and the practice was popularized by the

[10] Project Getaway is actually a company providing outsourcing and human resource services, as well as remote work accommodations.

aforementioned Tim Ferris in his book *The 4-hour Workweek* (2007) (see Chapter 3) and consists of building a business generating revenues in a strong currency, usually Euro or US Dollars, while living in a country with low cost of living and a weak currency. Limiting the living expenses to the bare minimum (also known in digital nomads' circles as *baselining*), Kenny was able to reinvest a larger share of the revenues into his network and to launch a new e-commerce business.

The motivations for launching an e-commerce business while still generating revenues from *AdSense* were twofold. One the one hand, he wanted to limit his dependence on *Google*, until then his only source of revenues through the *AdSense* program. On the other hand, developing a complex project like an e-commerce, involving a more active participation in the business operations than the more passive business model of online publishing, was also a way for him to seek meaning and realisation through work. Despite his economic success as a publisher, Kenny described his decision to open an e-commerce as an attempt to experience, once again, the thrill of working in large, complex and challenging projects. Something that, evidently, he missed in his digital nomad new professional life. As he recalled:

> My income was very passive from the [publishing] business I had at that time, and so I could get away with not doing work, and the income would stay the same. […]. I wanted something more meaningful. The sites that I owned were trivial. One of them was about Winnie the Pooh, and the other about nursery rhymes. Those were the big two that I had, and, you know, I don't care about that content. I have no association with that content or audience. So I just really wanted to try something else.

For this reason, after four years in Indonesia, Kenny and his partner, a Japanese citizen working in the hospitality industry, decided to launch an e-commerce business. Interestingly, this new e-commerce business was based and relied almost entirely on another web platform: Amazon. The idea came after he attended a course for aspiring *Amazon Sellers* (this is the name of third-party businesses selling on the *Amazon* marketplace) organized by another digital nomad entrepreneur at the Bali coworking space he used to go to. Throughout the program, he learnt the ins and outs of sourcing products from China, promoting them using online advertising, and selling them on *Amazon*.

After launching their ecommerce business, Kenny and his partner also decided to relocate to an English-speaking country. Among all the possible options, they decided to

move to Canada, mostly because it was relatively easy for both of them to enter the country with a temporary work permit. And, according to Kenny, while it was not rational for someone who worked remotely to live in an expensive city like Vancouver, he was convinced that the city would motivate him to do more and better with his businesses.

As soon as Kenny and his partner arrived in town, he started connecting with the local community of independent workers and start-up entrepreneurs. He launched his own meetup group for *Amazon Sellers*, started attending *Weekend Warriors* events and he was currently in the process of organising a Mastermind group for aspiring independent workers. After our first conversation, I asked Kenny if I could join the Mastermind as an observer. He agreed and invited me to forward the invitation to people in my network who might be interested in participating. This I did, and that is what allowed me to meet Bianca, Daniel and Eddie, and to follow their professional and personal trajectories as they unfolded over the three months we met at the Mastermind group.

5.1. Mastermind: Let's level up!

A mastermind group is a formal, structured, gathering of three to five people with common business interests, but at different stages of their career (Paetow et al., 2018). Through carefully planned and periodic (usually weekly) sessions of brainstorming and ideas exchange, they are meant to provide support to people who face similar business problems. Unlike traditional mentoring models based on hierarchical relations between mentor and mentee, mastermind groups leverage the collective experience of all participants. Originally developed by Napoleon Hill in his 1937 classic self-help book, *Think and Grow Rich* (2012), mastermind groups have become particularly popular in recent years among start-up, entrepreneurial, and independent workers circles. A mastermind group can be thought of as a structured roundtable conversation about the business problems that participants are experiencing in their respective jobs. Each week, mastermind participants are asked to update everyone on the state of their business and whether they are meeting the goals they set for themselves. After the initial round of updates, one participant per-week is asked to share a problem with the group. The so called *hotseat* section of the mastermind takes most of the meeting (around 30 minutes) and is meant to provide each participant the opportunity to receive an in-depth

feedback from other all members of the group. At the end of the hotseat, each participant is asked to set the goals for the following week.

Prior to meeting Kenny, I had never been involved in a mastermind group. He reached out to me via email after we met at the Weekend Warrior meetup in January to ask if I knew someone who could be interested in joining a new mastermind group. Given his extended experience as a digital nomad, he was willing to mentor a group of people who were thinking about starting a business or developing an independent career. I forwarded his invite to some of the people I had met throughout my research and I also asked him if I could join the group as an observer. As such, I would follow the conversations among participants and, in some cases, participate in the roundtable and hotseat debates. He agreed and, in less than two weeks, I was ready to observe my first mastermind group.

The first time we met, it was in a conference room turned into office space at the Fairmont Hotel Vancouver, a high-end hotel in the heart of the downtown core. The group was formed of five people: Kenny, in the role of the moderator; a 30-year-old graphic designer named Daniel; Bianca, a 28-year-old education manager at a local educational institution; Eddie, a 32-year-old instructional designer; and myself. The format of the first meeting was slightly different from others as it did not feature a hotseat, but, instead, allowed more time for people to introduce themselves and for going over the mastermind ground rules. These included principles against discrimination and harassment and set confidentiality rules meant to allow all participants to share their knowledge, experiences and resources in the most open and transparent way possible. In addition to the weekly face-to-face meetings, all participants were invited to post updates and goals on a private group on *Meetup.com*. The mastermind group was supposed to last three months for a total of seven meetings. This would have allowed everyone, except myself, to be in the hotseat twice. During the first meeting, participants were also asked to set a goal they wanted to meet at the end of the three months and a punishment in case they could not meet them.

Throughout the three months I spent with this group of people, I got to experience first-hand the motivations, the fears and the expectations that they faced while trying build a career in the digital and new media industries. In the following pages,

I reconstruct their professional trajectories as they evolved over the time we spent together.

5.1.1. Daniel and his quest for realization through work

Daniel was graphic designer born and raised professionally in Vancouver. He earnt a bachelor's degree in design from *Emily Carr University of Art and Design* and had been in the business for seven years. Right after graduation, he started working as a freelancer and later worked as in-house designer for some local start-ups. Embarking on a career as an independent worker was, in Daniel's case, the result of a deliberate decision. When I first met Daniel at the mastermind group, he was "in-between jobs." He had recently quit his full-time job as frontend designer and he was freelancing while also developing his own side project. In sharing his professional biography with the other members of the mastermind, he recalled how much he "never liked corporate jobs" and instead always "wanted to freelance". He considered himself a digital visual artist and freelancing was, in his opinion, the only way to find "visually interesting" projects to work on.

At the beginning of his freelance career, Daniel worked with the municipality of Surrey on the development of a digital civic engagement project; "a great experience" which allowed him to *bootstrap* his career and find new projects and clients. Confident that "one thing leads to another", Daniel was able to build, in a relative short span of time, a portfolio of clients and earn enough money to sustain a life in Vancouver. In addition, freelancing allowed him to maintain his working schedule in a sufficiently flexible manner so that he could carve out time for pursuing his passions: "I used to work 20, 30 hours a week, the rest hiking, snowboarding, fun stuff." However, after five years he became overwhelmed and was consumed by the amount of corollary and unpaid labor needed to manage the administrative aspects of each project. As much as he enjoyed the creative freedom afforded by his freelance career, he decided to look for a corporate job: "I was looking for full-time work because, basically, I was not good at taxes and administration. So I looked for a corporate job." It did not take Daniel long to find employment at local start-up in the healthcare sector. It was, he recalled, an ambitious project, as the start-up wanted to "disrupt" the healthcare and insurance sectors by providing people with an easier way to choose an insurance provider and submit claims. Interestingly, he had never considered the idea of joining a start-up, until

he did it. The work environment, more than the actual product itself, seemed attractive and aligned with his ways of working: unscripted and creative. Moreover, joining a start-up seemed to Daniel a great opportunity to learn new skills and new software.

Joining the start-up had downsides too. It meant accepting a wage below industry standard. He was making $30,000/year, as opposed to the industry average salary of $45,000/year for a similar position at an established company. Still, the possibility to learn new tools and experiment with new software more than offset the wage gap:

> I joined the start-up, and I was convinced, because it took a lot of time to them [the management] to figure out what was going on [with the business]. So I used that time to learn the tools. And it benefited me.

Not only tools and software. Daniel was also motivated by the idea of learning how to work in larger teams composed of engineers and managers. As a freelancer, he was rarely involved in teamwork: he used to serve his clients, rather than cooperating with them. Instead, in the start-up he hoped to learn how to work following the *Agile* model; a design paradigm premised on the idea of frequent users' testing and feedback (Pixton, Gibson, & Nickolaisen, 2014). Given these premises, Daniel's expectation was to find an environment where he could express his creativity with the support of the management and development team and without the administrative burden that comes with freelance life.

Daniel's expectations were met, at least at the beginning of his experience. In the first months as an employed frontend designer, he enjoyed a substantial degree of freedom in the selection of the tools and software to learn and use in his job. Things were going well for Daniel. He had the chance to learn how to use Jira; a software for organising and prioritising tasks following the *Agile* paradigm, and how to develop mock-ups and wireframes using *Sketch*, a quick-prototyping tool for front end and interaction designers. He also became used to the rituals of *Agile* development: stand up meetings, 2-week sprints, product owners and users' stories.

> The fundamentals of Agile are interesting. You stand up and talk about what are you working on and what is blocking you. That's cool. I like the democratic nature of everybody voting on a ticket.

Following the *Agile* paradigm, Daniel's work was organized in "2-week sprints." At the beginning of each sprint, the entire team would vote on a set of functionalities, also known as user stories, to be implemented in the product over the next following two weeks. Every two weeks, the team would reconvene, share the progress, release an updated version of the app, go over the new user stories list and prioritize the work for the following sprint.

Daniel was enjoying his role, as he had responsibility for testing the product and coming up with new user stories as well as improving the interface of the app. All was going as he wished until, one day, the founders announced that the start-up was going to be acquired by a large company operating in the healthcare sector. The goal of the acquisition was to integrate the application developed by the start-up within the suite of products offered by the larger company. The acquisition was also, in Daniel's recollection of the events, an "acquihire." An acquihire usually serves as a way for large companies to incorporate the skills, know-how and culture of other, usually smaller, companies. Listening to Daniel's story, I remember thinking about how the acquisition should have been good news for a start-up employee earning less than his corporate colleagues and significantly more exposed than them to the ebbs and flows of the market. However, it was apparently not good news for Daniel, to whom the acquisition was a prelude to a clash between two incommensurable cultures: the corporate and the *Agile*.

> It was interesting. While I was there, I saw two competing cultures. The two cultures were very different. […] To me it was like a corporate culture meeting an innovative thing. My job was still to be innovative, but translated for the corporate world.

The acquisition had direct and detrimental effects on Daniel's experience of the work environment. Grafting the *Agile* framework, and its associated culture, into a corporate structure led to new conflicts within the former start-up team and across the corporate hierarchy. As a result, he no longer enjoyed the same degree of freedom in planning his work and in developing his skills that he had experienced in the start-up days. Paradoxically, to some extent he gained more freedom as the new company allowed him to work remotely. Location independence, however, did not compensate for the loss of authority he experienced, especially for what concerned the creation and the

prioritisation of user-stories. He often found himself alone in advocating for his ideas to the development and the management teams:

> The "soft" skills were depreciated in value in an engineering, left-brain, team. It was also a really hard thing to ask to decision maker that we needed to go outside and show this stuff [the application] to people. I think it's hard to convince an engineer that the person using the app is more important than how the app is built. […] If the team you are working with has a lean mindset, an agile mindset, you are fine, you can test stuff, but if you have a team that follows the waterfall process, then they will do A, B and then C without users' feedback.

As much as he tried, Daniel struggled to adapt to the new organisation of labor. During his days at the start-up, the priority for Daniel was to test and iterate as fast and as frequently as possible: “you have an idea, test something, see the results and based on that, react.” In the new corporate environment, *Agile* seemed to him to be nothing more than a façade. Beyond the ritual aspect of *Agile*, the parent company was still running according to traditional “waterfall” production logics. This paradigm, which predates *Agile*, is a linear process for the development and deployment of software applications that begins with the definition of the specifications and ends with the delivery of the final product. The development team works at the software based on the agreed-upon initial set of specifications and releases an almost-final version only when all functionalities are implemented. At that point, the software enters two major cycles of testing (also known as *Alpha* and *Beta* stages) prior to the final release (Berry, 2011).

In the new corporate environment, the focus shifted from the development of new functions to the maintenance of efficiency-levels of existing applications. The development paradigm, therefore, reflected corporate priorities. Instead of processes that iteratively tested and measured the effectiveness and the utility of new functionalities, the workflow was heavy on protocols and accounting systems meant to safeguard the existing codebase.

> In a start-up, you want to test if something has value. So you are not much concerned about quality as you are concerned about feedback from your customers. But for a more established product, you are more concerned about your current customers. You are not so much concerned about growth, but more on revenue streams.

The shift from growing to maintaining a software application necessarily penalized what, from Daniel’s perspective, was the most attractive and fun part of his

job: prototyping and testing. It did not take long for Daniel to quit and go back to where he felt most comfortable: freelancing.

Daniel volunteered to be the first one in the hotseat in the second mastermind group meeting. At that time, he had just quit his job and entered, for a second time, the freelance market. He appeared happy and confident that, this time, he would make it work. Since he had been out of the freelancing circle for a year, the time he worked as employee, he decided to rent a desk at a local coworking space called the *Fabrik*. Located in an industrial area in Strathcona, the eastern part of Metro Vancouver, the Fabrik was particularly popular among creatives. Even though renting a desk at a coworking space can represent a significant expense for a freelancer (at the time of this study a shared desk at a coworking space could range between $200 and $500 a month), the motivations to work out of a shared office are not just of a logistical nature. In Daniel's case, he rented a desk at the *Fabrik* mostly because he needed to find a way to reconnect with the freelance environment. The *Fabrik* was, in this respect, what he was looking for. Besides casual conversation in the kitchen, Daniel often participated to the events that the *Fabrik* organized after work. Twice a month, he had the possibility to interact with local start-ups, creatives, and digital practitioners. Moreover, included in the rent was an invitation to the private *Fabrik Slack* channel. There, in the virtual chatroom, all residents could share news about new projects, celebrate accomplishments and publish job advertisements. Just few weeks after having quit his previous job, Daniel was already collaborating on some projects he had found thanks to his connections at the coworking space. The projects were interesting and, most of all, allowed him to earn enough to live in Vancouver while working the equivalent of a part-time job. As much as he appeared confident of his decision of going back to freelancing, and despite the satisfaction he seemed to experience from his new working conditions, he was "investing" the remaining 20 hours/week to plan his next move.

> I hit the ground running. Same old same old. I am working less, doing similar money, maybe a little less. But now I am starting my own idea, and I am investing my time in my own project.

After having experienced first-hand the hardship of being an independent worker, Daniel decided to invest time and effort in developing a platform that would allow freelancers to seek help from other freelancers. Through his *side-hustle*, he wanted to build a cooperative marketplace where freelancers could buy, sell, or trade their services

and help each other in managing the various aspects of independent labor, such as accounting, quoting, health benefits, etc. At the time we met, he already had some interactive wireframes of the platforms. Moreover, he was attending a training programme for small business owners developed by *WorkBC*, the Provincial agency for work and employment. The course was designed to help him in writing a business plan and creating the financial projections for the first year of the business, “which is great because you can use it for investors.” His expectations were high, especially because he was planning to turn this side-project into his main source of income over the next year. From my perspective, Daniel’s career appeared as eclectic and surprising, especially for a person who considered himself “not a really entrepreneurial guy” and one of those who “do not love the risk.”. Sitting in the hotseat, he reiterated his belief in the necessity to develop software around users’ needs. Therefore, he used his first hotseat session to involve us in the design process and come up with new user stories to use in the next development sprint of his marketplace.

Daniel’s second hotseat happened more than a month after the first one. As an external observer not used to the practices of independent workers, it was surprising, and at times unnerving, to witness how the people I was observing could take career-changing decisions in the span of a month. When Daniel sat for his second round of ‘public scrutiny’, his position had changed significantly. He was still working from the *Fabrik* coworking space; however, he decided to sacrifice, or to put on hold, his side-hustle in order to have more time to work on a new and big client’s project: a blockchain-based application. He found this job via LinkedIn shortly after his first hotseat. A start-up contacted him and offered a full-time position as an interaction designer; a position which, at a different time, he would have loved. However, working as a full-time employee would have meant having to “invest” his entire work week on a single project. A risk he was not willing to take:

> They wanted me to sign. […] I was super nervous to work with them. I told them right away: I am not gonna work full time for you, no chance! […] I made a line in the sand and right now it is working really well. My strategy is to show them that I work better like this [as a contractor] and that I do not want to be part of the machine.

The decision had a significant impact on his side-project, the cooperative marketplace for freelancers he had been working on for almost two months at that point. Questioned by the other mastermind participants about his decision to give up his side-

project so soon, Daniel was very open and transparent about the motivations which led him to accept the new job. As much as he liked his side-project, he felt joining a blockchain start-up would be beneficial in the long term. It was at this point that a recurrent pattern became evident to me. In a similar way to when he joined the start-up in the healthcare sector the year before, he seemed to be attracted to this new project in part because of the possibility of learning new technologies and developing new skills. This time he was looking forward to learning more about blockchain, as he believed that this technology could somehow be applied to his side-project as well. This big client was, for him, a way to "learn more about blockchain and getting paid to do it." In addition, he was very strategic and aware about the contribution that this project could have on his portfolio. In the agreement he signed at the beginning of the collaboration, Daniel asked for permission to use the company reference and logo in his portfolio. He was convinced that having a blockchain project at that point in time could open many doors to him for future collaborations. In a sense, his participation in a blockchain project at a time when blockchain was on everyone's lips but rarely seen in practice, could potentially have a compounding effect on his reputation in the years to come.

The last time we met at the mastermind group, Daniel was still working on the blockchain project. He had conducted some design sprints in which he tested some functionalities with potential customers; the kind of testing and experimenting he always enjoyed doing. He was two months away from the end of his collaboration and he was trying to convince the founders to hire him as a remote employee. He was trying to get the best of both worlds: the flexibility of freelancing without the administrative burden. His goal was to get a contract, maybe some equity to cash later-on, and move to North Vancouver Island with his partner:

> My ideal would be continue working with these guys, make a good wage, keep my business alive, keep designing apps and services, and being in a position in January to start paying a mortgage instead of renting. At that point, I hope I will have enough knowledge about blockchain and be able to rebalance my efforts 50-50.

I did not meet Daniel again since our last mastermind group.

5.1.2. Bianca: escaping the golden-jail

I first met Bianca via *Meetup.com*. We were both members of the *Growth hacking for Start-ups* meetup group. Growth Hacking was the latest and greatest marketing trend of 2017 (Ginn, 2012) and the group discussed mostly about how to develop and test stratagems and tactics for increasing the user base of a product or service. I asked to join the group as I thought it would be a good way to hang out with early-stage start-up entrepreneurs trying to launch and market their products and services. As usual, after joining the group, I posted a message on the discussion board introducing myself, my research and inviting everyone to contact me in case they were interested and available for an in-person interview:

> Hello everyone, Alberto here, I am PhD student at SFU. In my research I study the work practices of freelancers, entrepreneurs and start up employees. If you want to help me with my research, let's chat tomorrow. If you want to read more about my project, here is my development blog: https://labora.co/. See you tomorrow.

Bianca replied via direct message saying she was available and happy to sit down for a coffee. A week later, I met with her at *CTRL+*, a local coding bootcamp (see Chapter 4 for a history of this kind of educational organizations in Vancouver) where she was working as a career consultant. *CTRL+* office, or campus as they called it, was located on a brownstone building on Hastings Street, at the edge of the Downtown East Side, Vancouver's oldest residential neighbourhood and home to the city's most economically marginalized population (Barnes & Hutton, 2009, p. 1248). Originally founded in Vancouver, *CTRL+* had recently opened new branches in Toronto, Ottawa, Calgary, Montreal and Victoria. The school (although they never use this term to refer to themselves) organized 3-week intensive (12 hours a day) courses (or, in *CTRL+* jargon, *coding bootcamps*) meant to provide students with basic coding skills. Students could choose among technology-specific curricula, either JavaScript, iOS or HTML/CSS. The goal was not so much to cover the theoretical aspects of coding, as a computer scientist or software engineer would do in academic courses. Rather, *CTRL+* aimed at training their students "to think as a developer" and in teaching them "good habits, so that when they are out in the real world they will be able to think as a developer would." I already knew *CTRL+* at the time I met Bianca as I used to attend their *demo nights* regularly. These are monthly events in which the students of the graduating cohort present their course projects in front of an audience of friends, family, and potential employers. The

first time I met Bianca, she introduced me to the school's curricula and the teaching philosophy and gave me a tour of the offices. We then sat down for an interview in one of their meeting rooms overlooking the Woodward's building, a former department store now turned into a residential-commercial-educational complex and a living testament of the gentrification process involving the Downtown Eastside (Kenny, 2016).

Prior to joining *CTRL+*, Bianca used to work in the Human Resources department of a large mining corporation in British Columbia. She had never enjoyed the "traditional and conservative" work environment that she described as "super male dominated, an old boys club kind of thing," which was probably why the news that she was going to be laid off sounded to her as liberation and an opportunity to move to a new work environment. That's when she joined *CTRL+* which, back then, was in its early stage. She was the third employee and the school had only one office in Vancouver. Moving from a large corporation in the resource extraction sector to a new company, a start-up as she defined *CTRL+*, in the educational sector was a significant career shift. At the time we spoke, she had been working for *CTRL+* for about three years and she had experienced the company's start-up and growth phases. Asked about her memories as an early employee, she told me, with a hint of nostalgia, how much she loved being part of a small team of highly motivated people. "It definitely used to be more *start-uppie* and is now more processes driven. Now, it's more than just five people in a room working late into the night."

Asked about what she meant with *start-uppie*, Bianca described it as a moment in time, as period when the entire *CTRL+* team "acted as one" and when everyone did what they felt was the right thing to do, rather than what they were supposed to do. It described it as a time when she could feel the thrill of contributing to success of *CTRL+*. Interestingly, Bianca still described *CTRL+* as a start-up, mostly because the management team was "lean" (20 employees in Vancouver) without bureaucracy and with a "flat structure." Moreover, as with all good start-ups, *CTRL+* adopted the test-measure-iterate paradigm as described and prescribed by the *Lean Startup* method. The school constantly tracked and measured the performances of both courses and instructors in order to tweak their educational offer and improve the courses' curricula. Interestingly, none of *CTRL+* permanent staff are instructors. These are contract workers, usually developers hired at local tech companies working as instructors as a side-gig. Or, as Bianca put it, "*CTRL+* is a school without teachers".

Despite the flat structure and the start-up spirit, reflected in the informal work environment, Bianca felt her job had changed significantly over the years. On the one hand, her working conditions improved over time, as she no longer had to do all the work alone and could delegate much of it to her colleagues. On the other hand, she had a "sense that things are always changing and we are always exploring new programs", but she could neither participate in nor influence where the school was going. As the company grew, its governance was split from the day-to-day operations and centralized in a "leadership team" composed of the founders and a general manager. She had limited visibility over the strategic decisions taken by the leadership team. While she still described the school as a start-up, she felt that the start-up attitude, the "do whatever you think it's gonna work" spirit, had faded.

To counter the dissatisfaction and the lack of motivation she experienced in her job, Bianca confessed to me that she was thinking about starting her own business. She started participating in meetups as a way for her to get to know new people and to scout for business opportunities. Moreover, working in a tech-hub like *CTRL+*, she was in a strategic position for finding people to partner with and start "side-hustles." Just a few months before meeting her, she had explored with a colleague the possibility of launching an e-commerce for beauty products. After having conducted some initial market research, the two realized that the possibilities to succeed were so thin that it was not worth to invest time, effort and money in the project. While that project never took off, the experience changed Bianca's perspective about her job and her career:

> I definitely had a dream of becoming an entrepreneur, but my mindset was not quite there yet. I was not mentally ready to launch into this huge journey because I believe entrepreneurship, in its many different forms, is a huge personal development tool. You change and you grow and you do so many different things that you must adapt to in order to be successful. I was not quite there yet at that time.

The second time I met Bianca was at the first meeting of the mastermind group, two months after our interview at *CTRL+*. The first mastermind was an opportunity for me to hear about the latest updates concerning her professional plans. I was not completely surprised to hear that, two months after our first interview, she was already working on a new side-project. She had definitively abandoned the idea of developing an e-commerce and opted, instead, to develop a network of blogs. Just like Kenny did at the beginning of his career, Bianca also wanted to create a network of websites, blogs in

this case, to monetize through advertising. This time she was so committed that she had already resigned from her job at *CTRL+*. Moreover, she had already booked a flight to Chiang Mai, Thailand, where she was planning to develop her network of blogs using the savings she had accrued during her three years as an employee at *CTRL+*.

The idea to quit her job and drastically change her career materialized while she was attending the *Nomad Summit* conference in Las Vegas, a yearly conference for digital nomads and online entrepreneurs. There, she had the chance to meet people from across the world, although mostly from North America, and to hear their experiences as location independent Internet entrepreneurs. After the summit, she became convinced that if she wanted to reignite passion for her work, she had to abandon her current job and follow her "entrepreneurial spirit." Understandably, she was concerned about leaving a steady employment and embarking on a new, risky, entrepreneurial journey. To force herself outside of her "comfort zone" she felt she had to create a point of no return or, to use a metaphor often employed in start-up circles, she had to destroy her ship as a present-day Cortés. In her specific case this meant submitting her resignation letter to *CTRL+* and booking a flight ticket to Chiang Mai even before having a plan for the development her network. The decision of moving to Thailand was not casual. As I got to learn from my previous conversation with Kenny, geoarbitrage is a standard practice among digital nomads. Baselining in Chiang Mai would have allowed Bianca to put her "savings at work", instead of letting them idle on her bank account or, far worse, burning them to cover the costs of living in an expensive city of the global north. The decision was so abrupt that, when we met for the first mastermind meeting, she was still working for *CTRL+* but her mind was already projected on her next step:

> Why am I spending eight plus hours working when I could be working on my own thing and I can be that much further? I am scared, yes. It could very well not work out the way I imagined it to be. But I also think, I am single, I do not have kids, I am not married, I have a mortgage, but, whatever, I can always sell it [the apartment]. It's almost the perfect stage in my life to be taking such a huge risk. I just want it.

Considering her savings and the baseline costs of living in Chiang Mai, she estimated she would have had roughly nine months of "runway" (in start-up lingo, the span of time a project can survive without being profitable). Her decision to move also had repercussion on the mastermind group. Since she was supposed to leave three

weeks after the first mastermind, she asked to join the following ones via Skype from Chiang Mai. The group agreed on condition that she would have one in-person hotseat before leaving.

Bianca volunteered to be in the hotseat at the second mastermind meeting. At that time, she was preparing for her imminent departure and relocation to Chiang Mai. Curious about the destination, I asked her why she chose Chiang Mai. She told me she had visited the city in the past and really enjoyed it and felt it could be a safe place to live in. Although she considered other places, especially in South America (Medellin, Colombia), Eastern Europe (Budapest, Hungary and Prague, Czech Republic), she eventually opted for Thailand, mostly because of her familiarity with Asian cultures (her family is originally from Hong Kong) and cost of living. But, most of all, Chiang Mai made it to the top of her list because, over the years, the city has become a hub for digital nomads. “If my goal is to network with other like-minded people and be around other nomads, I need to be where they are. Right?” In preparation for her departure, she was connecting with local communities of start-up entrepreneurs and freelancers on *Meetup* and *Facebook*. She joined several groups and she was confident it would not be too difficult to transition to a new life and get to know other expats pursuing a non-traditional career as an Internet entrepreneur. To get a sense of her expectations, I asked her to describe how the best-case scenario would look like to her:

> The best case scenario would be I find people who are, like, a few steps ahead of me, who have finished that grind, and have that steady income coming in. […] Maybe they can help me with my journey and help me build my business.

As with many independent workers I have encountered throughout my research, Bianca too was already calculating her possible future moves. Chiang Mai seemed to her a temporary stop in a longer journey and she did not exclude the possibility to ‘upgrade and level up’ in the future and move to a more expensive destination.

I then tried to get a sense of the motivations which pushed her to embark on this professional, and personal, journey. A big role in her decision to abandon *CTRL+* and start a career as an independent worker was played by less-than-ideal working conditions. While at *CTRL+*, she could not see a way to develop her career in a way that was meaningful to her. Remaining at *CTRL+* would have meant having to work the same job in the years to come, “doing the same thing every single day.” Quitting and joining

another company would have not solved the problem either. She was tired of trying to climb the corporate ladder, of “having to always look for that next step” and eventually ending up always in similar, alienating, working conditions where she felt she did not have a role, a voice, in building the company’s future. Quitting was not an easy decision, yet she described her choice to start a new career as liberating and a “no-brainer” kind of decision: “I walked away from something that was pretty stable and financially rewarding, but it just felt I was willingly going to jail every day, if that makes any sense. […] ‘Here, put handcuffs on me’” she said while theatrically surrendering her wrists.

On the other hand, part of the motivation to leave *CTRL+* came from her entrepreneurial drive, from her desire to engage in a thrilling professional and personal adventure. I already knew from previous conversations with her that she dreamt of becoming an entrepreneur and developing her own business. Starting a career as a location independent worker meant, to her, having the possibility to explore new places, meet new people and experience new things. It also meant entering a period of intense work, self-sacrifice and, more profoundly, a transition to a different professional subjectivity. This metamorphosis started with incorporating as a business in British Columbia prior to leaving Canada. Although she did not need to do it, she thought this would put her in the right mindset. She was now “legit, an actual business” and her hope was that the new professional subjectivity would help her to think and act as a business. As such, she was getting ready to “bootstrap” her business and take all the responsibility for it: “If I succeed, it's on me, but if I fail it's also on me. I'm just solely accountable for everything that will happen.”

It was when Kenny asked her what her long-term plan was, that I was able to grasp a fundamental similitude between Bianca and Daniel in the way they described and experienced their professional subjectivity. In Daniel’s case, professional realization was defined as the possibility to work on visually-engaging clients’ projects and to see his side-project, the marketplace for freelancers, come to completion. To achieve realization, Daniel felt compelled to accept jobs not because of their economic value, but because of the learning potential they offered. For example, in his first start-up job, Daniel accepted a salary significantly below market level in exchange for the possibility to learn new software and design practices. In the case of the blockchain project, his main motivation was the possibility to become familiar with a technology potentially relevant in the future.

In Bianca's case, the plan instead consisted of building a network of websites in the span of 12/18 months. This meant outsourcing the creation of new contents to remote freelance writers so that she could progressively withdraw from the day-to-day operations involved in the publication of new articles. According to her plan, the network would break-even (i.e. generate enough money to cover all the expenses) at month 12 and, in the subsequent six months, generate enough surplus revenues to allow her to live in Chiang Mai. With an established Internet business covering all her expenses, she would eventually have enough time and resources to repeat the process and bootstrap a second network of websites. Or an entirely new business. Interestingly, she barely mentioned the topics of the websites and she was very open about the fact that she had no expertise or experience in the niches she wanted to target with her websites. The decision of how many and which websites to build was based exclusively on their economic dimension, i.e. content creation costs and advertising revenues forecasts. As she talked about her future network(s), she described them as "assets", capable of generating "passive income", i.e. generating revenues without requiring her to work on them.

In Daniel and Bianca descriptions of their plans, the idea of engaging in a project, either as an independent worker or as an employee, was described as an opportunity to accrue the resources and the skills necessary to engage with more interesting projects in the future. In the case of Bianca, the development of value-generating assets would have allowed her to dedicate time and resources to new businesses. In the case of Daniel, learning new and cutting-edge technical skills would have allowed him to work on more visually engaging projects in the future. Central to this project-oriented thinking is the idea of *portfolio* (Neely, 2020), understood as a collection of diversified skills, achievements, and work experiences, that independent practitioners such as Bianca and Daniel deem important in respect to their ability to land new projects. Portfolio building is an exercise that involves taking risks and that, therefore, requires strategic investments of time, efforts and resources. As discussed in the next section, the concept of portfolio and project-thinking emerged also in my conversations with Eddie.

I followed up by asking Bianca what her main fears were prior to starting this journey. She did not have many concerns. Quite the opposite, she was confident she was going to succeed. At the same time, she was very open about, and ready to face, the idea of failing. What she feared the most was not failing *per se*, but rather being

unfairly judged by her peers who did not share, or could not understand, her decision to abandon a stable job. She could already imagine what her former colleagues at *CTRL+* would have thought once they learnt about her decision to become a location independent worker: "'Digital nomad' [sarcastic tone], you're just really a backpacker with a laptop that's not making money. And then, eventually, you'll go back to your home country and get a job." Because of that, she had shared the decision to move to Chiang Mai only with her closest friends. Her anxiety about being misjudged by friends and former colleagues was, in part, balanced by her confidence in her ability to "reinvent" herself in case things didn't go as planned.

The last time I met with Bianca was during her second hotseat session. This time, she joined the mastermind via Skype, as she had already moved to Chiang Mai. At the time we spoke, she had been living in Thailand for almost three weeks. Since her arrival, she had started attending meetups and events organized by expats working as location independent entrepreneurs. Networking was a fundamental part of her days, but it soon became overwhelming and too distracting: "There are so many meet-up groups […] everybody here is also new and everybody wants to connect."

On a personal and professional level, Bianca was very proud of the subjective transformation she experienced in becoming a location-independent entrepreneur. Prior to her move, she used to downplay, to herself and to others, the relevance of her "side-hustle." "I'm just working on a couple of websites", she used to say to friends and colleagues in an attempt to gloss over her side project. Three weeks into her new career, she felt secure and proud in her new professional subject position: "I'm an affiliate marketer. That's what I do. It is still very early stages, but that's what I'm doing." This affirmation of her new professional subject position came at the expenses of the previous one. She disconnected from all her former colleagues at *CTRL+* because she feared they could pull her back into her old, non-entrepreneurial, mindset.

Concerning her project, she was finally "settling into a routine and actually producing content on a schedule." She was in the proverbial "grind' phase", trying to bootstrap her business while reducing the expenses to the bare minimum. This meant setting up the first website using *WordPress*, a popular Content Management System for blogs, writing the first articles, optimising them in order to rank on search engines and animating the social media channels connected to the website, all the while trying to

establish a routine in an attempt to cope with her precarious working conditions. She was particularly frustrated by the lack of an office space. After having tried some local coworking offices, she ended up working either from home of from coffee shops. This solution was working, but was not optimal. She had rather preferred to establish a routine that would allow her to have enough time to unwind in the evening:

> Basically, work as if it's like a normal job, like a 9-5 or 10-6 type of job. And then, at night, break from screens, 'cause it'll get a little bit too much. So far, that hasn't quite happened, but that's my ideal.

She also used her second hotseat as a way to gather feedback on her websites and find ways to improve them. Her goal was to publish her tenth article by the end of the week, fine-tune the look and feel of the website and then find and hire a freelance writer who could write articles and accelerate the expansion of the website. At the end of the three-month mastermind, she had earned her first few advertising dollars. I remained in touch with her, mostly via the *Meetup* group forum, in the subsequent months.

5.1.3. Eddie and his learning-driven career

Describing my participation in meetup events as carefully planned and strategized would be an overstatement. While some strategic considerations were involved in the identification and selection of which events to attend (for example, by systematically examining topic, attendance, location, time of the day, etc.), I also intentionally decided to engage in groups I did not consider to be central to my research. The way I got to know Eddie is a prime example of how my strategy, or lack thereof, exposed me to certain kinds of serendipitous experiences.

I first met Eddie at a meetup for instructional designers. According to the description, the group was a gathering for "trainers, coders, learners, teachers, flash addicts, captivate curious, videographers and anyone who might have input." The group met once a month and discussed mainly about e-learning methods, technologies and practices. The events were usually relatively small (15 to 20 people) and formal. Unlike many other meetup groups, participants seemed to know each other. I met Eddie at the first meeting I attended. He was a 32-year-old e-learning specialist working as an in-house training manager. He was interested in my research and we had regular conversations, both in person and via email in the following months. During one of these

conversations, he mentioned to me his intention to change job and seek a better position. When Kenny told me of the mastermind group, I suddenly thought it could have been of some interest to Eddie.

At the first mastermind, Eddie introduced himself as an e-learning specialist working at *Wharfedale*, a local insurance company. His daily job involved creating online training materials for the company's employees. He had been working for *Wharfedale* for about three years. Prior to joining *Wharfedale*, he had been working for a year at an e-learning start-up. Even though the project eventually failed, he had good memories of those days and he was still grateful for that experience because it allowed him to land a job at *Wharfedale*. When he was hired, the company had around 600 employees scattered around British Columbia. As the company expanded, it became increasingly expensive to provide the workforce with in-person training programmes. *Wharfedale* management, thus, decided to reform their training programme, substituting in-person coaching and support with high quality online training. The transition would have not been just cost-saving, but would have also allowed to formalize the company's intangible "know-how" and make it available to all employees. That's when they hired Eddie.

At *Wharfedale*, Eddie was responsible for creating training material and for setting up, maintaining and improving the platform (in technical terms, known as Learning Management System or LMS) on which the materials were hosted and made available to all employees. His passion for his job was visible and genuine. He described it as "a real gift" because it allowed him to engage in creating the training curricula, in the shooting of the videos, and their editing and distribution via the LMS. His work allowed him to express his project management, technical, and to some extent creative skills. Yet, he was starting to feel a sense of malaise. After three years, he was considering whether to remain at *Wharfedale* and grow within the company or, instead, change job and try to develop a career as a consultant.

At his first hotseat, Eddie shared his doubts with the groups and asked for their opinion about whether to quit *Wharfedale* and start working as a freelance consultant or whether to remain and pursue a managerial career within the company. To facilitate the conversation, I invited him to list the pros and the cons of his job. In addition to the already mentioned possibility to follow every aspect connected to online training, he enjoyed having an "insider perspective" on the learning process. One of the benefits

working for an organisation, he argued, consisted in the possibility to have “more insights of your learners' day to day life and their problems.” Having such a deep understanding of the company’s dynamics helped him to develop training curricula and also to witness the effects of his work on the company’s performance. Conversely, he felt that working for *Wharfedale* was limiting his potential for growth. For example, the company’s training materials were distributed through a centralized Learning Management System that he helped to select, set up, and launch at the beginning of his career at *Wharfedale*. Three years later, he felt the urge and the curiosity to try and test new e-learning platforms. However, because of *Wharfedale*’s strict policies in matter of security and compatibility, he could not introduce any new software without obtaining clearance from the IT department. This seriously limited his possibilities to learn new tools, especially when compared to his freelance colleagues who, on the contrary, could try and “play” with different software on different projects:

> I am limited right now in my execution of things by what I know is going to work within the system, and it is getting outdated, because I have been working with the same software for the past three to four years. […] E-learning specialists out there can easily keep up with the latest technologies. […] I do not think I am keeping up.

Asked about how he was coping with the need to keep up with the latest technologies, he indicated meetups served as a way for him to hear and learn about new software and tools for instructional designers. However, he thought that in the long run limited first-hand experience with e-learning tools and exposure to one single business context could have serious repercussions on his personal growth and worth as an instructional designer. He felt such limitations could not be compensated by an increased salary:

> In terms of salary and promotions, there is room to grow in my current company. But, as regard what concerns personal growth, having worked for one company, doing this one thing, at the end of the day it will not convince anyone that I am really worthy.

Moreover, by staying at *Wharfedale* he thought he could grow professionally only linearly. When he joined *Wharfedale*, the company employed around 600 people. Three years later, employees numbered 900. A significant expansion indeed, yet still a linear and gradual growth. As he was entering his fourth year, his disillusion about the possibility to leap up the corporate ladder became increasingly real:

> If they hire 100 additional people, I will probably benefit from that, but the change is gradual. I can grow into my role, but I do not see opportunities for jumping up the ladder. […] Maybe they could hire a new developer, and I could become a Project Manager and manage a team of developers. But this is unlikely to happen.

At 32, Eddie thought he should have sought for bigger and bolder professional opportunities. Even though he was not yet sure whether he wanted to venture into the world of freelance consulting or to stay at *Wharfedale*, at the time of his first hotseat he was already working on curating his professional image. For example, he had built a personal website to showcase his experience in the attempt to establish an image as a skilled e-learning specialist. “It's all about experience”, he answered when asked about the elements he wanted to emphasize and communicate on his website. In addition, he was also attending a part-time MBA at a local university. Earning a master’s degree was part of his long term personal growth plan of possibly one day becoming a university professor:

> My vision is to become a university professor in my 40s. In the next 10 years, I have to involve myself in learning, develop experience, so that I have something to teach at the end of the day.

Eddie’s concerns about keeping up with the latest technologies and the necessity to curate and showcase his work experiences resonated with Bianca and Daniel’s perceived need to expand their portfolios. I found Eddie’s testimony particularly insightful because, unlike Bianca and Daniel, he described his career as fulfilling and relatively secure. However, he still felt pressured to hone his skills and to expand his knowledge about LMS beyond what was needed and required at his job at *Wharfedale*. This pressure was enough to motivate him to change, rather drastically, his professional journey.

Things had changed considerably when Eddie sat down for his second hotseat session. One month after the initial conversation, Eddie had quit his job at *Wharfedale* and had started working at *Bain & Partners*, an e-learning consulting agency based in Calgary with a satellite office in Vancouver. Despite being a small boutique agency, *Bain & Partners* served the high-end segment of the market. The possibility of having “exposure to bigger companies” was what persuaded Eddie to abandon his position at *Wharfedale*. Although he did not start a career as an independent consultant, his job at *Bain & Partners* was more entrepreneurial than his previous one at *Wharfedale*. *Bain &*

Partners allowed all their employees to work remotely and to manage their clients with full autonomy. To Eddie, joining *Bain & Partners* seemed the perfect intermediate step on his journey to become a freelance consultant. He could now enjoy the freedom of organising the work at his own pace without having to worry about finding new clients each month. Moreover, he was free to decide when to go to the office and when to work from home. As a result, he was staying home most of the week, using the commuting time to focus on "value-creating activities." In addition, the increased flexibility allowed him to take on some extra clients and practise his skills as a freelance consultant while still being employed full-time. The increase of freedom came at a cost, however, as Eddie had to renounce most of the benefits he enjoyed at *Wharfedale*. From Eddie's perspective, it was a sacrifice worth making: "All good things come at a cost", he argued, explaining his new working conditions. On the downside, he also mentioned the blurring of personal and professional spheres: "Work never ends" he said, while smiling and seeking approval and compassion from the other mastermind participants.

The decision to leave *Wharfedale* came while attending an entrepreneurship class at his MBA programme. That class made him "reopen his eyes" about entrepreneurship and made him think about his first work experience at the e-learning start-up he was part of prior to joining *Wharfedale*. The emotions he experienced as they tried to launch a new software for e-learning imprinted in him the "entrepreneurial spirit", which, almost five years later, pushed him to seek a career as a consultant:

> 'That was so much fun. There's something that just attracts you to that kind of life. It's hard to describe. Even if it's a failure, it just feels like I got something really valuable that's worth more than money.'

That experience had left him with a strong desire to go back to business and, hopefully, not fail again.

5.2. Who we are is what we do. What we do is how we do it.

The stories of Kenny, Bianca, Daniel, and Eddie foreground two regularities which, I argue, are central to the start-up episteme and have a profound impact on professional subjectivities of digital and knowledge workers. These are project thinking and bootstrapping. I already discussed both of these regularities in Chapter 2 (section 2.2), where I analyzed their influence over my research protocol as well as in Chapter 3,

where I connected them to the managerial literature of the post-dot-com. In the *Lean startup* model (Ries, 2011), project thinking and bootstrapping are found, for example, in the concept of *Minimum Viable Product* (MVP) and in the description of the build-measure-learn loop, respectively. The concept of MVP represents an instance of project thinking in the way it is described as an object designed to “start the process of learning as quickly as possible” (Ries, 93). If MVPs provide some sort of functionalities to their users, they do it exclusively with the aim to “test fundamental business hypotheses”. An MVP is neither a product meant to be sold, nor a prototype “evaluated solely for internal quality by engineers and designers” (Ries, 2011, p. 77). It is a transient project meant to generate the necessary knowledge needed to inform the development of the next iteration of the MVP. The MVP reiterates an open-ended and conjunctural conception of progress in which a project is valuable only insofar as it creates and charts the path for future projects. In the experiences of the mastermind participants, project thinking can be found in the way work experiences are described as valuable in the way they create opportunities for future ones. For example, Daniel was eager to work on a blockchain project not so much because of his interest toward this technology for commercial applications. The real value of that experience came from the possibility to enhance his portfolio and, in this manner, to position himself at the forefront of technical development. This would have, in turn, increased his chances to work on visually interesting projects in the future. Similarly, Bianca described her project of launching a blog network as a way to build “assets” allowing her to launch, in the future, an even larger network. She had little or no interest in what the network was about, and the decision about what to write about was based on a cost-benefit analysis. In a similar manner, Kenny admittedly had very little interest in his first network of websites. He did not see himself as an Internet publisher. Instead, he described himself as an entrepreneur. Web publishing happened to be his first business, his launching pad which allowed, and motivated, him to move to ecommerce later in his career. The disconnection between Eddie, Bianca and Daniel and the content—the substance—of their independent jobs is meaningful especially considering that the impetus to engage in these work experiences came from the desire to escape what they perceived as unfulfilling and alienating corporate careers. Listening and reflecting on their word, I am left wondering what, then, professional fulfillment and realization did mean to them.

To unpack Kenny, Daniel, Eddie, and Bianca's understanding of realization and professional fulfillment it is necessary to address the second epistemic regularity: bootstrapping. Bootstrapping can be understood as the temporal dimension, the propelling force, of project thinking. In the *Lean Startup*, the idea of bootstrapping figures prominently in the form of the *build-measure-learn* loop. Ries and colleagues argue that such iterative cycle of constant learning and adaptation is a fundamental aspect of every successful start-up. This concept is so central to the point that Ries defines start-up as every organization driven by cyclical learning experiments, regardless of the "size of the company, the industry, or the sector of the economy" (2011, p. 27). The process begins with an idea, which is then translated into an MVP and tested against users' expectations. The more efficient and leaner the procedure for testing business ideas is, the higher the number of iterations the MVP can go through, and the quicker validation (or non-validation) can be achieved. The *Lean Startup* temporal dimension resonates with, and is indebted to, the *Agile* framework for software development that rejected the long-term planning of waterfall-inspired development methods and instead advanced a conception of software development as a recursive experiment (Hohl et al., 2018). This regularity figured prominently also in my participants description of their own careers. For example, in talking about her time at *CTRL+*, Bianca described how her role changed as the company entered a state of maturity and decisions were delegated to the executive board. If on the one hand she was relieved by less stressful working conditions, she also missed the sense of empowerment that she experienced in the early days of *CTRL+*. Once her role as career consultant was codified and formalized, all that was left for her was executing the tasks she was responsible for, doing the work, rather than doing "whatever you think it's gonna work". To compensate for the lack of learning opportunities and stimuli at work, she engaged in several side businesses which allowed her to reignite the bootstrap process, engage in new projects and, eventually, quit her job. Similarly, Eddie lamented how his job at *Wharfedale* limited his possibility to experiment with new technologies and learn new e-learning tools. A limitation imposed by the very technical infrastructure of the company and enforced through managerial control. As Eddie recalled: "my company has some IT infrastructure limits, imposed by the specifics of hardware. So what I develop has to run on that infrastructure. Because of security issues, I cannot introduce anything new." Not introducing anything new meant, in Eddie's case, not having the possibility to engage in new projects, learn new skills, and set the conditions for future growth. Even though he recognized the value of

working within a company and learning the ins and outs of a specific industry, the insurance industry in his case, he felt his skills were becoming obsolete. This perceived obsolescence was especially concerning when compared to his freelance colleagues who, on the contrary, “can easily keep up with the latest technologies”. A sentiment echoed by Daniel, who decided to quit his job when the healthcare start-up he was working for was acquired by a large company in the same industry. In his case, the new management’s priority to preserve the existing codebase did not offer him enough opportunities to learn new technologies and design methods. The stories of Daniel, Bianca and Eddie point to the perceived necessity of my participants to engage in the kind of experimental project work that they consider fundamental to their professional development, but that it is not always part of their everyday jobs. In the case of my participants, salary, health benefits, and stable employment did not compensate for the lack of opportunities to engage in project work. Quite the contrary, economic and employment stability allowed my participants to employ or, more aptly, to invest their non-working time into new projects. These often served as the basis, as the starting points of their independent career as consultants, freelancers, or digital nomads.

How to make sense, then, of the apparent discrepancy between my participants’ desire to engage in fulfilling careers, and the reality of their independent jobs, often focused on projects substantively irrelevant to them? What I came to realize through the conversations I had during the mastermind group, was a conception of work that transcended participants’ specific occupations that was central in the articulation of their subjectivities. Even though in conversations they identified themselves as entrepreneurs, freelancers, digital nomads, and consultants, all mastermind participants shared the same orientation to work; one based on project thinking and bootstrapping. This orientation or, better, this conception of “how to work” made their professional subjectivities and career paths intelligible, regardless of what they actually did at work. At a more fundamental level, there seemed to be a shared understanding of what constituted fulfilling work, one premised on the idea of exposing themselves to opportunities through participation to projects and the possibility (actual or potential) to bootstrap their way from small to increasingly larger projects. Interestingly, the actual content of their work, the substantive dimension of their projects, was almost non-relevant and rarely mentioned in conversations. As managers measuring the success of an MVP throughout the test measure cycle, the substantive contribution of their work

was described as functional and subjugated to the desire to learn new skills, to try new technologies and to prepare the ground for future projects.

Project thinking and bootstrapping are, in themselves, professional traits each of these individuals aspired to enact in the definition of their subject position as freelancers, digital nomads, entrepreneurs or consultants. The desire to jump from project to project, the need to do it in a lean way (e.g., trough baselining and geoarbitrage), the opportunity to engage in multiple projects (side hustling), and the idea of approaching projects not because of their substantive value but because of the opportunity they offered to expand one's portfolio of experiences and skills were unique traits of the professional subjectivities of the start-up episteme. These traits cut across professions and offered individuals the possibility to picture their future as exponentially, not just linearly, different from their present. Bootstrapping and project thinking also point to new inequities that characterize the start-up way of working. These included: the amount of free, unpaid work that my participants had to sustain in order to be able to work; the necessity to constantly look out for new project opportunities; the need to strategically allocate one's times and resources in order to stay on the edge of technical development. These problems transcended employment conditions and affected independent workers (e.g. Bianca and Daniel) as well as salaried employees (e.g. Eddie). In the next chapter I discuss how informal groups of tech professional tried to address these issues and attempted to remediate to some of the limitations of the start-up way of working.

Chapter 6. Meetups in the Vancouver digital and new media industries

> *People use Meetup to meet new people, learn new things, find support, get out of their comfort zones, and pursue their passions, together. (Meetup.com, n.d.)*

So far, I have described meetups and *Meetup* groups as social occasions to meet tech professionals and to redistribute my research by involving participants in the development, and use, of my research tools (Marres, 2012). In other words, I have treated meetups instrumentally, as means through which recruiting people to interview. In this chapter I shift the analytical perspective in order to render meetups, and *Meetup* groups, my units of analysis, not just my units of observation. The switch is meant to foreground the role that grassroot organizations of tech workers might play in the democratization of the start-up episteme. In this context, democratization, or democratic rationalization (Feenberg, 2002, p. 22), means understanding how the values and the knowledges of subjugated professional subjectivities of the start-up episteme can challenge and undermine the regularities that created them in the first place. Referring back to the stories of Eddie, Bianca, Daniel and Kenny, this means investigating if, how, and to which extent, *Meetup* groups can overcome the problems created by an organization of labor which follows the epistemic imperatives of bootstrapping and project thinking. Some of these problems deal with employment continuity, skills obsolescence and portfolio building. These are issues that, as I am going to argue in my conclusion, cannot be addressed by the escapist dreams of digital nomadism and entrepreneurial freedom. Quite the contrary, these can only make them worse by actualizing the start-up imperatives into methods of self-conduct. *Meetup* groups, and informal workers organizations more in general, instead, have the potential to become tactical spaces of maneuver (de Certeau, 1988, p. 37) in which the regularities of the start-up episteme are not only enacted, but also confronted and challenged. Pockets of reflexivity (Lash & Urry, 1994) within the start-up episteme where participants are capable to question the managerial practices and the market dynamics which created their professional subject positions in the first place.

In practical terms, in this chapter I focus on two *Meetup* groups: *Social Tech Vancouver* and *YVR Instructional Designers*. Both groups were particularly active in the

period of my investigation and differed from the average *Meetup* group because of the distinct sense of solidarity and camaraderie among their participants. To help defining and understanding how these groups supported independent workers I rely on Van Maneen and Barley's concept of *occupational community* (1984) and on Boltanski and Chiapello's idea of *employability* (2007). In the last section of the chapter, I compare these occupational communities with the *Urban Worker Project* (UWP), a grassroot organization involved in promoting independent workers' rights. The activities carried out by the UWP represent an alternative route toward the democratization of start-up labor. One that is more intentional and political than the approach furthered by occupational communities, but similarly attuned to the regularities of the start-up episteme.

6.1. Social Tech Vancouver: Meetups and employability

Startup Week is the main event for the Vancouver start-up ecosystem. Every year, the city mobilizes around the topic of start-up entrepreneurship and organizes panels, workshops, hackathons, and recruitment sessions for tech enthusiasts and aspiring start-up founders. The first Vancouver *Startup Week* was organized in 2015 by the *Vancouver Economic Commission* with the support of the already mentioned *TechStars* (Vancouver Economic Commission, 2015). In 2018, I made a commitment to follow and document the entire event. I purchased a ticket, cleared my agenda of all the appointments between September 24 and September 28th and registered to all sessions I was able to follow. In addition to regular sessions, every night I participated in networking events such as the Recruitment Fair and the closing party hosted at a lavish new coworking space right across the street from *CTRL+*.

I met Graham at *Blockchain for Business*, a panel discussion organized at 7 Bridges, a Gastown-based business incubator. Originally from Yukon, Graham moved to Victoria, BC, to pursue a master's in political science. He subsequently relocated to Vancouver, where he was hired as a search engine marketing (SEM) and search engine optimization (SEO) specialist at *Bloom*, one of the local web agencies that animated Vancouver's post dot com renaissance described in Chapter 4. In just five years he climbed *Bloom*'s corporate ladder: he was promoted to a senior position after just one year, then to team leader and eventually to Director of Project Operations. As a director, he was removed from the day-to-day operations of the company and was responsible for scaling and refining *Bloom*'s recruiting and career development programs. When we met

in the waiting room of 7 Bridges, he had recently resigned from his job at *Bloom*. He registered for the *Vancouver Startup Week* as a way to get to know other digital companies and to connect with potential employers. At the time, he was also working on a personal research project aimed at charting Vancouver's demographic and economic transformation using the city's open data archive. After the event, we walked together to the *Startup Week* closing party, where we continued talking about his project and about the *Meetup Archiver* (the story of the *Meetup Archiver* is discussed in Chapter 2.1). A couple weeks after the event, I received an email from him: "Hi Alberto, I've read most of the blog today! Really cool. I think you should present at an upcoming *Social Tech Vancouver* event".

6.1.1. "A Community that supports one another"

Social Tech Vancouver is a *Meetup* group for everyone "interested in examining civic issues through the lens of design and technology". It was founded in 2017 by Graham and a couple of friends, all employed in local tech companies. To them, starting *Social Tech Vancouver* was a way to use their technical skills to solve socially relevant problems. Problems that they, as self-identified elite workers in tech companies, rarely experienced. As Graham recalled when I asked him about the motivation that pushed him to launch the group:

> I started it because I was noticing a gap. People in the tech industry are often accused of being insular. They get to work at fairly fun nice environments and they don't actually connect with people, and their real problems, and have little interest in the issues affecting their cities. […] So I wanted to find a space for myself as a person in tech, to talk more with people who either work in government, or are interested in public issues who are activists, or who are involved in the third sector, who are just curious and want to learn more about tech, and what it can do. And maybe they are just needing help. Maybe they have ideas too, and they just need support from people who have those skills.

The group met once a month to listen to invited speakers, have open discussions, and work on civic-oriented projects. *Social Tech Vancouver* was not a standalone initiative; Code for Canada, a non-profit organization, supported Graham and his friends in developing the format and launching the community. At the time of writing, there are nine Social Tech chapters across Canada.

Graham invited me to present my research at the October 2018 meeting. The event was hosted at a local SEO agency located on East Hastings Street, next to the historic and run-down Rogers sugar refinery building. A bright red tile mosaic spelling the phrase “Hello, World!” (a message often used to test algorithms correctness) on an otherwise unassuming building hall indicated I was in the right place. I arrived early to setup my laptop and to chat with Graham and his fellow organizers. At 6:30 in the evening, the office, a sizeable industrial warehouse turned into an open space office with woodsheds creatively repurposed as meeting rooms, was almost completely empty, with only a handful of employees looking busy working at their desks. People started arriving and small groups formed around the table with snacks and drinks provided by the sponsoring company. Half an hour later, after a brief presentation from a representative of the hosting company, Graham invited me on stage to present my *Meetup Dashboard* and discuss the state of the Vancouver digital and new media industry in front of an audience of 25 people.

The presentation was an occasion to talk about Vancouver and its start-up ecosystem, as well as to share the *Meetup Archiver* publicly (see Chapter 2 for a history of the *Meetup Archiver*). I was quite nervous because it was the first time I was sharing the software publicly, and doing it in front of an audience of technical people increased my perceived pressure. The more technical-inclined attendees expressed their interest toward the *Meetup Archiver* and also questioned some of the choices taken in the course of its development. Showcasing my work in front of a group of software developers felt uncomfortable, but this kind of open and public scrutiny proved to be very helpful in debugging the *Meetup Archiver* that, at that time, I was still developing with Patrick. Moreover, building on the idea of redistributing my research and enacting what I call project thinking (see Chapter 5 for a description of this epistemic regularity), at the end of the presentation I invited everyone interested to play and use the data I had collected until then. The event was not only an occasion for sharing my research, and my research tools, with the people I was studying, it also offered an alternative perspective on meetups, a perspective significantly different from the one I developed attending the frantic and sometimes outright chaotic business-oriented events. I decided, therefore, to attend the group’s meetings in the following months.

The average *Social Tech Vancouver* meetup was attended by 20 participants. Unlike most of the *Meetup* groups I observed, almost everyone knew each other and

there was a heightened sense of camaraderie among participants. Some events featured an invited speaker, and all followed roughly the same format: an initial meet and greet, the presentation or interview with the guest, and free time at the end to hang out with other participants. In addition to speaker's nights, the group hosted "Open Project Nights", dedicated to the development of socially driven projects. Among the initiatives carried out by members of the group during my period of observation there was Graham's analysis of the City of Vancouver open data catalogue, and a group project aimed at updating Vancouver's information on *OpenStreetMap*. Alongside monthly in-person meetings, the group used to chat regularly on a dedicated *Slack* channel about upcoming events, funding opportunities and new socially oriented initiatives. As I started attending *Social Tech Vancouver* events regularly, I became interested in understanding what function this meetup had for its participants.

Graham launched *Social Tech Vancouver* as a way to satisfy his need to engage in forms of social activism using his technical skills. The monthly meetings were also the occasion for him to work on side projects and engage in the kind of technical problem solving he so much enjoyed at the onset of his career in the digital industry:

> When you become the kind of person who's in a really senior role, so much of it is focused on administrative work. For example, [as a to Director of Project Operations at Bloom] I was interviewing people all the time and trying to manage up by providing condensed insights to my bosses, and trying to onboard new employees with the culture deck and that kind of things. I became removed beyond my liking from really getting to connect with people, build relationships, build culture together. I became removed from working closely with clients, from problem solving, from technical problem solving especially.

Whether it was mastering a new data visualization software, or learning about data hypercubes, Graham understood side projects as an opportunity to cultivate technical skills, something he considered to be important for anyone in managerial positions in order to "stay relevant" in the industry. This kind of expertise was useful, he believed, also beyond its technical value. Demonstrating some sort of familiarity with the latest technologies also meant being able to "gain the respect and understanding of the teams that I'm working with". In Graham's words, technical skills represented the axis around which identities are articulated and hierarchies are established within networked production teams (Fisher, 2008). He deemed technical skills as crucial especially for people in senior positions, who are often removed from the nitty-gritty daily operations

and who need to learn and stay updated about “cutting edge stuff”. As a Director of Project Operations at *Bloom*, he used to keep his technical skills up to date by organizing and participating in knowledge transfer activities like workshops and pair programming, a coding practice where two people work on the same code simultaneously and that is meant to increase the quality of work and to foster knowledge dissemination (Shore & Warden, 2008, p. 74). Now that he was in-between jobs, meetups offered him similar opportunities, although it required much more effort and self-discipline to find relevant events to attend among the hundreds taking place every week in Vancouver:

> You have to be self-motivated to find these events. They are not coherent set of events, you need to be a self-direct learner, to say "I have to go there" and find the gaps and gather resources.

Working on socially oriented projects was, in Graham’s view, an effective way to practice new skills in a useful and productive way. Moreover, doing it in a *Meetup* group instilled a sense of accountability and responsibility that he felt necessary to stay committed to the project and deliver a quality product at the end.

Participating in *Social Tech Vancouver* fulfilled another function that my participants considered important: building a portfolio of professional experiences. As I learnt talking to Daniel, Bianca and Eddie at the mastermind group, developing a portfolio was a vital component of tech professionals’ employability. In this respect, the *Social Tech Vancouver* group projects offered the perfect opportunity to develop new skills as well as to extend one’s portfolio, often communicated publicly through personal websites or professional social media platforms such as LinkedIn. Knowing from previous interviews how important a portfolio is for a digital and new media professional, I asked Graham what was his perspective on it and if there were other factors such as education degrees, influencing one’s ability to manage and tame the unpredictability of flexible work. I was particularly eager to hear his opinion on this issue because he was, at the time, actively looking for jobs and in his past role as Director of Project Operations at *Bloom* he was responsible for interviewing and onboarding new employees:

> Experience is at the first place. Not anything else. That's the reason why I want to extend my portfolio. I feel like I gained a lot of depth of knowledge working and being part of Bloom. But just even having one logo [on your portfolio] might not be impressive: I have to build a portfolio. If you look at other professionals' portfolio, you see they showcase all their projects and

> companies they worked with. And even if the projects were like "one week project", but the credibility is there. Unfortunately that's how it works.

Echoing a sentiment already expressed by Eddie and Daniel, Graham's words offered an insight into the preoccupation of tech professionals in a constant state of flux. Despite his six years of experience, of which one was in an executive position, he felt the urge to extend his portfolio as a way to signal his ability to stay on the edge of technological advancements.

Interestingly, the *Social Tech Vancouver* meetup was not only an opportunity to engage in project work. It was, in itself, a project. Two out of the three organizers in charge at the time I attended the group featured their role on their LinkedIn profile. To them, their job experiences and their experience managing the *Meetup* group were equally relevant in the constitution of their professional portfolio. Not all organizers, however, understood their participation in *Social Tech Vancouver* as an opportunity to expand their CV. This was the case of Rebecca, a senior front-end developer at a local start-up and one of the organizers of *Social Tech Vancouver*. When asked about her motivations to volunteer as an organizer at *Social Tech Vancouver*, she replied:

> You asked if I spend my time outside of work developing myself, my skills, and technology? No. Absolutely not. There's more to life than that, and it's helpful to stay connected with people outside of tech and remind yourself of what real problems are like.

Although technical proficiency and an extensive portfolio are key elements for workers' employability, being on the cutting edge is not a priority just for unemployed professionals like Graham, I found out. People working regular and fulfilling jobs also felt the urge to experiment with new technologies. Cora's story provides a good example.

A front-end developer, originally from Germany, Cora was the leader of the *OpenStreetMap* group project. She had a past of digital activism as a contributor to several open-source projects. She was among the people who asked technical questions about the *Meetup Archiver* during my presentation at the October's meeting. After the event, she reached out to me via email after asking if she could access the *Meetup* data:

> I am interested in the data you gathered around Meetup. However, I can't promise that I will find the time to do something cool and sharable with it. If

> you can, I would like to talk about it. Are there any evenings in the next week that we could meet?

We met two weeks after the event to talk about data and *Meetup* API. On that occasion, she also agreed to be interviewed. When we spoke, she was happily employed at a local software company operating in the in the human resource sector. “I work with HTML, JavaScript, CSS. I make the buttons work on the website”, she said, making fun of her job. She really enjoyed her work and the fact that it pushed her to solve new technical challenges every day:

> I really love web design. I really love developing. I really love problem solving. Honestly, they could stop paying me for two months and I would not notice. […] I am not really there for the money but because I love the job and getting things done. It's a small team, but bigger than anything I experienced in open source. And that is to me awesome. This feeling of belonging there.

I asked her to tell me about her job, and about the aspects of it that she liked the most. She was part of a team of engineers working on the company’s main product: an online platform for managing employees and measuring their productivity. Her job involved implementing new functionalities as well as identifying and solving bugs. The company relied on user stories, a tool used in *Agile* software development I had some familiarity with thanks to my previous interviews with Daniel (see Daniel’s story in Chapter 5), and on a ticketing system as a way to plan the development of the software and organize the work of the engineering team. User stories provided a plain description of what a new functionality should have done, while the ticketing system distributed the work to employees and kept track of everyone’s contribution to the codebase. At work, Cora felt challenged, in a positive way, with new problems. Every day, the ticketing system assigned Cora a list of new tasks to address. To make sure the workload was distributed evenly among the engineering team, the company measured each ticket in “points”:

> We have points allocated to change like a typo. “We found a typo, we want to fix it”. That's a one [point]. Two is anything that touches logic because it requires testing. We need to make sure it still works with anything else. Two [point] is half a day of work or less. A three point [ticket] would be a day of work, roughly.

The process involved Cora taking charge for a ticket, creating a copy of the codebase for development and testing purposes (her personal “branch”), perform the

required interventions on her branch and, at the end of each task, merge her branch back into the codebase in order to make the change official. At that point, she could mark the ticked as “Solved” and move to the next one. Even though not all tickets were fun to solve, she found her work stimulating and creative: “I don’t know, it feels almost like a videogame”. The creative aspect of her job was not about developing new stories or designing new interfaces, as I wrongly assumed when I tried to understand what creativity meant for a front-end web developer. Product designers and product managers were responsible for these tasks and she was only marginally involved in decisions involving knowledge about the customer or of the market. Talking to her, I discovered how translating a set of requirements into a code capable to perform the functionality described in the user story required a good dose of creativity. To Cora, creativity meant finding or, better, developing an unknown answer to a well-defined problem. All the while pursuing elegance and efficiency which, in her case, meant reducing the need for repetitive tasks:

> If a ticket says "We found that this button does not work so we now need to fix it in all the 1000 places where this button is used", the challenge is not to change all those 1000 buttons. The actual challenge is to change all these buttons at once. If you see yourself facing lots of repetition, then I think you are doing software development wrong.

Interestingly, her passion for her job was not matched by an equal enthusiasm about the product she was working on. From the way she talked about her company and its platform, she seemed at times skeptical about the actual value of the product she was contributing to build. She even mentioned how the platform could have been used to micro-manage employees and develop systems to measure and rank people based on their productivity.

> It [the platform] should facilitate growth; at least this is how we handle it. I have seen a couple companies using it more for "Ok, how is your wage gonna change? How are you performing?" while for us it is more "How happy are you? How much are you reaching your own goals?"

Despite the palpable skepticism about the ends pursued by the platform, her job afforded her the possibility to engage in a form of problem solving and collaborative work that she had never experienced before, not even as a contributor to large and distributed open-source projects. These aspects were what made Cora love her job despite, or regardless of, the company’s mission. I then asked about the motivations that pushed

her to start the *OpenStreetMap* project. She told me she enjoyed working on open standards, something she could rarely do at work, and how much working on that project felt like contributing to keep the original spirit of the internet alive. In other words, she felt contributing to make the internet an open space meant to be accessible to everyone. As she started talking about open-source projects, it became evident the distance between this work and her daily job. Volunteering for *OpenStreetMap*, she felt that what she was doing, not only how she was doing it, was important and fulfilling. Moreover, she emphasized how the skills she was learning while working on the *OpenStreetMap* project could have contributed to her future career:

> It is really rewarding to learn about these technologies, especially if it is an open standard that you can apply to all sort of projects or even to your next employer. It's not that you are building this for just this one project, but it is something you can basically find a job for anywhere in the world. Yeah, it feels like a lot of power.

Cora, an immigrant herself, knew well the importance of being equipped with portable skills, skills that can be applied to different contexts and that are not tied to a specific corporate technological infrastructure. Volunteering as an *OpenStreetMap* contributor, she wanted to make the map a little better and hoped to cultivate skills she could reuse in the future.

Overall, my experience participating in the *Social Tech Vancouver* group allowed me to get to know a group of people genuinely willing to engage in socially relevant projects and to get involved with a local community that they felt increasingly distant and alien. At the same time, as Melissa Gregg (2014) also pointed out, these forms of hacktivism reaffirm the idea that issues of public concern can be solved through interventions carried out by a moderately representative group of volunteers willing to develop technological patches to systemic problems. All the while normalizing even further practices of free, sacrificial labor which are already well-entrenched and accepted in the digital and new media industries (Ross, 2004, 2009). As a participant in the Social Tech group, I tried to understand individuals' motivation and report their experiences. While previous works associated these forms of tech gatherings to early career workers, young unemployed trying to move from "the periphery of paid employment" (Nardi et al., 2002) toward stable forms of employment, my experience told me a slightly different story. The people I interviewed and who I met at events were not only the stereotypical youthful entrant into the workforce hungry for professional experiences and, therefore,

more prone to self-exploitation. People in senior positions, unemployed people with years of experience under their belt, and people with fulfilling and stable jobs were also part of the cast of characters I had the chance to meet. The stories of Cora and Graham emphasized how important it is, even for experienced workers, to constantly curate and communicate their professional experiences as a way to find a new job, or as a way to prepare the ground for a career change. In addition, portfolios of experiences signaled their ability to "stay relevant" in an industry that is constantly rushing to new technologies and new skills. As experienced net-workers, they learnt how to "surf" the technological turbulence to generate forward motion (Kelly, 1998, p. 114).

6.2. YVR Instructional Designers: Meetups as occupational communities

The release of the *Meetup Archiver* was an important milestone in my research journey. Thanks to the *Meetup* API, I was able to collect and store gigabytes of data about past and future meetups taking place in Vancouver. As a flaneur wandering through database tables, my exploration of the *Meetup* data was not aimed at answering a specific question, but was, rather, driven by curiosity about the history of meetups in Vancouver. Slicing, filtering, and visualizing events data in an attempt to evade the protocological parameters (Snodgrass & Soon, 2019) prescribed by *Meetup* API, I tried to access and visualize the less visible and less known *Meetup* groups active in Vancouver. One such visualization displayed all *Meetup* groups operating in Vancouver and sorted them based on the regularity of their past events and their incremental monthly growth rate. Sifting through the hundreds of groups (n=558) returned by the *Meetup* API, I focused on those with a relatively low participant count, limited growth rate and future events in the calendar. Through these parameters, I set out to identify *Meetup* groups with a long and established history, but which, at the same time, never achieved the level of popularity needed to be featured on *Meetup*.com homepage or to be included in the newsletter that *Meetup* sent regularly to all users and promoting up and coming groups. Identifying and participating in these groups, I hoped to gain insights into different kinds of meetup events, as opposed to those hosted by popular, more mainstream groups. A group that satisfied all my search criteria was the *YVR Instructional Designers* group. The group was founded in 2015 by Carl, an experienced eLearning specialist working out of the Vancouver office of an US-based IT company.

The group met every first Thursday of the month at the new facilities of a local college in the southern section of the Metro Vancouver area. As soon as I joined the group, I received Carl's automated welcome message on my *Meetup* inbox:

> Thank you for joining the Vancouver Instructional Designers Meetup. This group is open to everyone who is interested in elearning and defining what that looks like in this ever-changing world. We invite trainers, coders, learners, teachers, Flash addicts, captivate curious, videographers and anyone who might have input.

I then signed up to the very next event the group had in calendar, titled "The world of consulting". I arrived early and secured a seat in what looked more like a boardroom than a classroom. The approximately 15 chairs placed around the large desk at the center of the room quickly filled with participants, with some latecomers sitting in the back of the room. Unlike previous events I attended, this meetup was very small and intimate. Even more than in the case of *Social Tech Vancouver*, at this event I had the impression that everyone knew each other. The audience was slightly older, and more formal, than the other meetups I attended. As Carl looked busy setting up the AV equipment, people seemed to enjoy winding down after a day at work. Unlike many other groups, the events of the YVR Instructional Designers Meetup group did not have a hosting sponsor (the group met in the same meeting room kindly provided by the college) and did not feature scheduled networking moments. Each monthly meeting was focused on a specific topic and they all featured presentations from group members and, sometimes, by invited speakers.

Sitting right next to me that night was Eddie, a young instructional designer working at *Wharfedale*, a local insurance company, who later became my main informant in the group (you may remember him as a participant to the mastermind Group described in Chapter 5). As Carl finished setting up the projector, he invited everyone who wanted to share updates and news with the group to take the stage. Noticing a handful of "new faces" in the room, Carl also asked newcomers to introduce themselves to the group. Being one of them, I introduced myself as a PhD student from Simon Fraser University studying *Meetup* groups and their role in the Vancouver tech industry.

Three presentations from three speakers followed. Since the topic of the night was "The world of consulting", the three speakers talked about the challenges of working as freelance eLearning consultants. Although the presentations were meant for an

audience of eLearning specialists and instructional designers, the issues addressed by the speakers were very similar to those affecting digital workers and new media professionals more in general. For example, the first presenter talked about the importance for instructional designers to market themselves and how having a website and securing “speaking gigs” was an effective way to build a reputation and land new clients. The second speaker instead struck a chord with the audience as he addressed some of the problems and frustrations that eLearning consultants experience in their everyday work. Showcasing examples from some of his recent collaborations, he talked about the barriers that consultants often face when assisting a business, especially large businesses, in changing or updating their training procedures and technologies. He stressed how being a consultant meant to him more than just giving advices. It also involved accompanying companies and their management on a transformational path often riddled with frictions and obstacles. He then showcased some of the techniques he used to communicate his services to clients and how these were useful in courting high level managers and overcoming some of the resistance that large companies often have toward change. Lastly, the third speaker, an instructional designer working remotely for a Dublin-based software company, addressed the problem of workspace and work-life balance. She shared her experience as an eLearning editor working from home and talked about the pros and the cons of remote work. She discussed the challenges of setting boundaries between personal and work time, personal and work space, as well as the “fear of missing out” about what is going on in the organization. To my question about her way to cope with the fear of missing out, she mentioned a series of activities she regularly did I order to “stay relevant” within the company and in respect to larger industry trends. These included attending conferences, reading “obsessively”, maintaining an active Twitter presence, taking courses on online platforms such as Lynda.com, listening to podcasts and connecting with people on LinkedIn.

The presentations offered interesting insights into the working lives of eLearning specialists. However, what set this event apart from the other ones I attended were the room dynamics. Despite Carl’s best efforts at keeping the event on track, presentations turned quickly into debates, with people asking questions and starting conversations with the presenter and other participants. Participants took notes on their laptops or notebooks, laughed, hummed, and commented at almost every slide. At the end of the presentation, we had half an hour to chat and continue the conversation around some of

the topics addressed by the speakers. It wasn't the unscripted, chaotic small talk which I often witnessed at other events. It was a proper, productive, debate involving all participants. People used this moment to talk about issues they experienced at work, vent frustrations, and offer advice to other participants. My impression, as a newcomer, was that the group offered participants the possibility to engage with other people who could understand their problems and offer informed advice. Before leaving, I thanked Carl for hosting the event. In thanking me joining the group, he invited me to evaluate the possibility to present at one of the next meetings. An unspoken rule of the group was, I found out, for participants to also be speakers at the events. Not being an instructional designer myself, I told him I was going to think about a topic that could have been of some interest to the group. Carl agreed and we promised to talk about it again in the following meetings. After that initial event, I started attending the meetup regularly and participating in the group's *Slack* channel.

Subsequent events confirmed my initial impressions about the group. One month, we had a conversation about the role of virtual and augmented reality in eLearning. The presentations covered technological aspects of virtual and augmented reality (what is needed, how much the equipment costs, etc.), theoretical differences between augmented, mixed and virtual reality and applications in educational contexts. Carl brought two virtual reality headsets and invited everyone to try them. He showcased some projects he had developed for fun and showed us the tools he used to create them. Another month, we talked about eLearning platforms, and compared the different solutions available on the market. At the event, participants offered me an historical overview on eLearning and debated about the impact of technology on eLearning aesthetic and practices throughout the years. Specifically, how eLearning moved from desktop to mobile thanks to the diffusion of smartphones and how Adobe Flash, once the main technology used to deliver instructional contents in a video format, was being substituted with fast paced, short, "YouTube-style" (as Carl defined them) videos. In the last meeting I attended, we talked about the challenges of working on multiple, simultaneous, projects. The presenter showcased a series of tools for organizing tasks, setting deadlines, and keeping oneself accountable. He also explained how he productively relied on online digital marketplaces such as Fiverr and Upwork to outsource part of his work to remote gig-workers. Every meeting was filled with useful information, even for a non-technical person like myself, and served as a moment for

instructional designers and eLearning specialists to share tricks of the trade and advice, to reflect on their profession as well as to talk about the problems they faced at work.

The more I observed the Instructional designer group, the more I started thinking about it as the contemporary counterpart of Van Maanen and Barley's concept of occupational communities (Van Maanen & Barley, 1984). These are understood as groups of professionals who define themselves in relation to their work and who consider themselves to be engaged in the same sort of work. These groups are not just about work, but blend professional and personal relationships, work and leisure (Van Maanen & Barley, 1984). In his ethnography of Xerox technicians, Julian Orr relied on the concept of occupational community to describe how Xerox service technicians defined their subjectivity in relation to their job. The occupational community was a moment for Xerox repair people to share "war stories" and establish their position as a skilled technician. These groups were in a dialectical relation with Xerox's managerial apparatus. On the one hand, technicians were defined by the corporate's managerial structure, which created the figure of the repairperson as the human appendix to machines and made them responsible for ensuring the smooth functioning of Xerox's copiers. On the other hand, the technician, as a form of subjugated professional subjectivity, organized in informal communities to affirm and defend laborers' skills in response to corporate's attempts at deskilling service work. Starting from a professional subjectivity created in the first place by the corporate organigram, the occupational community developed its own canons for determining what it meant to be a good service worker, regardless and in spite of corporate rules. Admission into the occupational community was not granted *ex-officio*. Being part of the community involved contributing to it by sharing experiences and knowledge.

The *YVR Instructional Designers* meetup group seemed to provide a similar function to its participants. Each meeting was an opportunity to get to know new technologies and to see how other professionals approached eLearning projects for their clients. The group offered the kind of support that participants were unable to find in their everyday jobs, either because of being self-employed or because they were the only instructional designer within their organization. The latter was the case of Eddie who, as discussed in Chapter 5, was the sole person responsible for creating training materials and keeping them up to date and organized within *Wharfedale*'s Learning Management System. Or, similarly, the case of Gregg, an instructional designer employed at a branch

of Vancouver's public transit agency and in charge of the agency's eLearning program. Besides casual and short-term collaborations with external consultants (curiously, one of such contractor was also a member of the group), he used to be the only instructional designer in his office and the *Meetup* group was a rare opportunity to connect with other professionals in his field. Following van Maneen and Barley's theorization of occupational community (1984), the *YVR Instructional Designers* meetup clearly offered professionals the possibility to share their "war stories". These usually pictured the eLearning specialist as a heroic figure amidst a grueling environment unable to appreciate the value of their work. Through their war stories, participants shared ways to address problems and navigate unfriendly corporate environments or mysterious new markets. The stories featured practices that were situated (Suchman, 2007) within technological and managerial context and that were, therefore, largely invisible to the untrained eye (e.g. colleagues, clients, bosses) and could be appreciated only by those who embedded into the eLearning culture. The tales served as both a way to share solutions and a celebration, not so much of the individual, but rather of the instructional designer as a profession.

The YVR *Instructional Designers* meetup differed from Orr and van Maneen and Barley's communities in one fundamental aspect: the absence of a clearly defined force or institution creating the figure of the instructional designer in the first place. Unlike Orr's case, there was not a corporation defining what an instructional designer is or does, and a managerial structure which the community opposed. The instructional designer appeared, instead, as a subjectivity open to multiple positions created in relation with, and in opposition to, many different organizations. For example, the in-house instructional designer was constituted in different ways compared to the freelance consultant. The former was defined by a managerial organigram, the latter, instead, was defined in relation to the multiple projects she was involved with. Likewise, these two professionals faced different problems: the in-house instructional designer did not have to worry about marketing her services while the freelance had to be responsible also for the administrative aspects of her work. The commonalities between them prevailed over their differences and allowed them to recognize each other as colleagues and to form a shared understanding of what it meant to be a good instructional designer.

The *YVR Instructional Designers* meetup was meant to be a moment for eLearning professionals to come together. It was never meant to be an organ of

representation for tech workers. However, it offered me a vision of how resistance in the start-up episteme might look like. Resistance against the risk taking, privatized, and flexible professional subjectivities normalized by the epistemic regularities of the start-up. A form of resistance that is multiple, strategic, fragmented, and that allows its participants to see each other as colleagues, to empathize with each other's problems, without asking them to put aside their differences and their sense of individuality. The group's relation to the start-up episteme was ambiguous too. If on the one hand participants tried to find and share creative solutions to the problems created by the start-up way of working (namely, the need to constantly update skills, build a portfolio, and find new projects), on the other hand they sometimes furthered the logics of the start-up episteme. Case in point is the promotion of labor crowdsourcing practices. Instead of being socialized and discussed within the occupational community as a problem to oppose and resist, labor crowdsourcing was promoted as a solution for eLearning consultants. As in a Ponzi scheme, independent workers were therefore invited to transition from being corporate appendixes, marginalized nodes within flexible and fleeting networks of production, to become themselves the center of subnetworks of labor supply —a transition facilitated by the availability of digital marketplaces such as Fiverr and Upwork. Nevertheless, the group's resistance to the start-up episteme differed significantly from the kind of escapist dreams epitomized by the stories of Daniel, Bianca, Eddie, and Kenny (see Chapter 5), and emerged as an unintended consequence of this group of professionals coming together. To understand how resistance might play out in the start-up episteme, in the next section I analyze the work or the *Urban Worker Project*, an organization advocating in support of flexible tech and creative workers. Unlike the *YVR Instructional Designers* and the *Social Tech Vancouver Meetup* groups, this organization was intentionally working to reform the organization of labor in the digital and new media industries.

6.3. Urban Worker Project

The *Urban Worker Project* is an initiative advocating in favor of freelancers' rights and organizing local events aimed at equipping independent workers with the skills required to stay afloat in the labor market. This group is, in many ways, very different from the *YVR Instructional Designers* and the *Social Tech Vancouver*. It is not a *Meetup* group, it does not have members, it does not host regular meetings and it is not an

occupational community in the Barley and Van Maneen acceptation of the term (1984). Despite these differences, the role this organization plays for independent workers is to some extent similar to that of occupational communities. Just like occupational communities, the UWP represents an opportunity for the democratic rationalization of start-up episteme. A space for the subjugated professional subjectivities of the start-up episteme to come together and to overcome the limits of start-up labor. Unlike *Meetup* groups, whose critical role is a side effect of organic interactions among professionals sharing a common technical background, the UWP mission is explicitly political. The stated mission of the organization is to "advocate for a better future for independent workers", their actions are therefore deliberate and calculated. However, their organization bears the imprint of the start-up episteme. The UWP structure is fluid, lean and built to scale, its actions are tactical and fleeting. These are the motives, I argue, that made the organization popular among independent workers.

6.3.1. A better future for independent workers

The first time I heard about the UWP was in March 2018, when Simon Fraser University hosted one of their events. After the event, I contacted the organizers and arranged an interview with the founder, Andrew, and the Vancouver local organizer, Sonya. A few months later, I sat down with them to talk about why and how this organization was born and how it was supporting freelance workers across Canada.

I met Sonya at a local coffee shop in the Downtown East Side, and together we called Andrew, who was joining us via phone from Toronto. I began asking them to explain to me how and why the UWP was born. The idea of creating the UWP came to Andrew in 2009 when, after nearly 30 years working as a musician, he and his wife were both freelancing in the media industry. Because of a series of unfortunate events, they experienced firsthand what it means to be independent workers without health coverage, without sick leave and with limited access to the proverbial social safety net. This was when Andrew decided to leave his career as a freelancer and to advocate for the rights of workers with nonstandard forms of employment. In 2009, two years after the release of his last solo album, he was nominated by the New Democratic Party (NDP) as the candidate for the Davenport electoral district. In 2011, he defeated the Liberal incumbent candidate and became a member of the 41st Canadian Parliament. A position he held for four years, until his defeat in the 2015 elections.

The *National Urban Workers Strategy Act* (Bill C-542, Cash, 2013) was among the initiatives he pursued in the House of Commons during his mandate. The Bill addressed “inequities in taxation and access to social support mechanisms, including employment insurance”, and urged the federal government to establish a legal framework to discipline nonstandard forms of employment. Andrew was also part of several other initiatives in support of non-traditional workers, including the extension of the protections entailed by the *Canadian Labour Code* (Minister of Justice, 2021) to interns. Even though the *National Urban Workers Strategy Act* (Bill C-542, Cash, 2013) never became a law, Andrew continued to advocate for flexible workers’ rights even after losing his parliamentary seat in 2015.

The UWP was created in 2016 and was aimed at understanding which were flexible workers’ most pressing needs and, subsequently, developing a series of initiatives to address them. Instead of advocating for the extension of current welfare measures, Andrew believed that an economy based in a large part on-nonstandard forms of employment needed welfare measures that differed from “the social safety net of the post-war era”. The UWP was, in this respect, a laboratory through which to experiment and deploy concrete actions supporting freelancers and raising awareness about nonstandard workers’ problems. At the time of the interview, the UWP agenda entailed two main areas of action: online advocacy campaigns and “Skillshare” events.

On the advocacy front, Sonya was busy working on the “Indie Worker Wage Theft” campaign, an online initiative aimed at assessing the economic impact of late payments on freelancers’ income. The initiative, promoted on social media channels such as Twitter and Facebook, invited freelance workers to fill out a survey and publicly to share their experiences with late paying clients. Using the hashtag *#PayMeWhatYouOweMe*, the campaign was trying to mobilize enough people, and collect enough data, to put pressure on the government to act on issues pertaining nonstandard workers. The Indie Worker Wage Theft was only the latest of a series of similar initiatives promoted by the UWP in the past. Previous ones included the ”What is your Top Issue?” (Urban Worker Project, n.d.) and “Fairness for Contract Worker” (Urban Worker Project, 2016) campaigns. Both relied on social media platforms to collect workers’ stories and to raise awareness about flexible workers’ rights. These campaigns were not simply aimed at promoting the cause of freelance workers into the public discourse, they had political implications too. For example, the findings of the

“Fairness for Contract Worker” initiative were submitted to Ontario’s Changing Workplaces Review, and urged the provincial government to develop a new policy framework that considered “the unique challenges and experiences facing contract, temporary and freelance workers who currently work outside the traditional employer/employee framework” (Urban Worker Project, 2016, p. 8).

The second kind of actions promoted by UWP were Skillshare events, full day events dedicated to freelancers and gig workers. At Skillshare events, freelancers had chance to learn from experienced independent workers how to best manage the thorniest aspects of freelancing, such as tax filing, financial planning, personal marketing and branding, rate setting, and invoicing. These administrative tasks represent a form of invisible, free labor performed systematically by independent workers in order to be able to work (a problem also highlighted by Daniel in Chapter 5). Through Skillshare events, UWP was trying to reduce the negative impact that this part of the work was having on freelancers’ personal businesses. As Sonya recalled, the event helped independent workers to learn from the experiences of other independent workers: “these people tend to work alone, and so these events allow people to come together and meet each other and help each other the best they can.” Sonya conceived Skillshare events as more than just full day workshops. She described them as “community building” initiatives allowing freelancers to “learn about what's happening in the industries or the trends around precarious work.” Ultimately, Skillshare events represented affordable and convenient “personal development opportunities”, in Sonya’s words, aimed to “empower communities”, providing freelancers with the “right skills and knowledge and networks.” In other words, Skillshare events provided, in a pre-packaged and curated way, the elements which I also identified, through participation to different *Meetup* groups, as central to digital and new media workers’ employability: skills, knowledge, and business connections.

According to Sonya and Andrew’s rough estimate, around 70% of the participants to the 2018 Vancouver Skillshare event hosted at Simon Fraser University were women: “I don't know if there's more women now compared to men, but we're definitely seeing more women than we've ever seen before.” Seventy percent was a surprising number to me, especially compared with the other kinds of events and groups I attended throughout my investigation. According to Sonya, the women’s predominance at Skillshare events was attributable to the progressive substitution of full-time

employees with contract workers. A phenomenon, Sonya remarked, particularly visible in the information industry and, more specifically, in communication jobs. As a result, many female professionals working advertising, marketing, public relations, and copywriting jobs found themselves filling, as contractors, the same kind of role they previously had as employees. This tendency was even more evident in Vancouver compared to other cities in which they held Skillshare events. According to Andrew, this was because of Vancouver's industrial history. As discussed in Chapter 4, the development of the motion picture industry in the 1980s and 1990s served as a springboard for the affirmation of Vancouver as a multimedia production hub (e.g. graphic design, visual effects, animations, digital marketing, etc.) a sector that, historically, has always relied on flexible and networked forms of production (AC Nielsen & DJC Research, 1999, p. 4; New Media B.C., 1999). Therefore, Skillshare participants in Vancouver were not only the stereotypical young, go-getter, entrepreneurial digerati workers (Fisher, 2008). Older people, oftentimes transitioning from a salaried job to independent work, made up a relevant share of the audience.

According to Sonya and Andrew, the demographic composition of Skillshare attendees was a surface reflection of a deeper system of discrimination: on the one hand, those who engaged in independent work by choice and, on the other, those who did it by chance. Andrew described the former as the category of people who can afford to decide to engage in a risky, entrepreneurial career. The archetype participant within this category is mostly male, transitioning out of a stable career, experienced, and in high paying sectors such as Information Technology. A perfect example of an "entrepreneur by choice" is Kenny, the organizer of the Mastermind Group described in Chapter 5, who quit his job at Google first, and Facebook later, to pursue a career as a digital nomad and e-commerce entrepreneur. Andrew described this category of independent workers as the poster child of the gig economy: millennials ditching the corporate career and formal education in favor of independent, fulfilling professional careers as consultants or entrepreneurs. While the latter category, the independent workers by chance, paints a less polished picture of freelance labor. People in this category ended up working as freelancers or contractors because of a lack of a better alternative. To these workers, freelancing represented the last resort before unemployment. Some them, instead, maintained a full-time job and worked on "side gigs" to make ends meet. Based on her experience as a community organizer in

Vancouver, Sonya witnessed an increase in the number of people forced into freelancing. A tendency that she attributed to a deterioration of working conditions in regular jobs (low wages, no health benefits), combined with a housing crisis which has rendered the city unaffordable to many (Lee, 2019). Together, these two elements would have pushed more people to freelancing as the main, or complementary, source of income:

> I think we're definitely seeing a lot of people who are having some side gigs. I mean we don't have Uber or Lyft here yet [the interview took place in July 2019, Uber and Lyft launched in Vancouver in January 2020], but once that happens, I definitely think it'll be more apparent, we'll see a growing number of people doing that.

Andrew agreed and argued that more than technological advancements, and more than millennials' supposed quest for freedom, the cause behind the expansion of independent work should be sought in the debasement of regular jobs:

> There doesn't appear to be any room for advancement for what, $12 and hour or $14 an hour? So I think that part of the problem is the self-worker is basically saying, "Yeah, I am choosing independent work, but not because it's really the way I want to work, but because the stuff that's out there is really lousy"

To these people, the UWP offered help in the form of affordable training (tickets for the Vancouver event were by donation, with a suggested amount of $35) and networking opportunities. Recognizing that going to events and establishing relations with potential partners and clients represented actual work for independent workers, the UWP created and ran Skillshare events as a way to efficiently provide learning and networking opportunities. The UWP did the curatorial job of selecting speakers (independent workers themselves), organizing sessions, and delivering them in a convenient and time-efficient one-day seminar, thus saving independent workers the effort to scout *Meetup*.com to find opportunities for meeting potential clients and learning new skills. An effort which emerged as one of the main challenges for freelance workers also in my conversation with Graham, the organizer of *Social Tech Vancouver*.

My last round of questions for Andrew and Sonya was about UWP relations with trade unions. Most of their initiatives dealt with issues that have been central in past union struggles (e.g. access to health benefits, maternity and parental benefits, unemployment insurance, etc.). However, the way the UWP pursued these issues was

new and apparently disconnected from initiatives carried out by nascent freelance unions (e.g. UNIFOR's Canadian Freelance Union and Canadian Media Guild's Freelance branch). Moreover, all UWP communication materials used to promote their initiatives invited people to "Join the Movement". However, the UWP had neither members nor a governance structure. The team, I found out during the interview, was composed of Andrew and by a handful of community managers, like Sonya, responsible for organizing events at the local level. The only way for people to participate in the UWP was by filling surveys, joining their social media channels, and attending Skillshare events. As an organization (sometimes also described as a movement), the UWP seemed to lack the structure and the procedures routinely employed to guarantee accountability and representativeness (e.g., a statute, by-laws, and policies). Andrew replied to my doubts saying that their initiatives ran in parallel to those organized by trade unions, and that they had also received economic support from one of them. However, the plan for the UWP was not to become a union. As a single-issue organization, the UWP's sole focus was, and would always be, to creatively find ways to make independent work better. An approach that opened the UWP to critiques from the left, especially from those who argued that these kinds of tactical, non-systemic, interventions could provide an incentive to render work more flexible and precarious. On the other hand, this approach allowed the UWP to operate in a "totally different workplace reality", Andrew argued. A reality that seemed impermeable to traditional trade unions and characterized by countless and multiple relations among individuals, *qua* businesses, instead of classic employer-employees hierarchical relations.

The conversation with Andrew and Sonya and the analysis UWP online and in-person initiatives were revealing of a new form of organizing taking place within the start-up episteme. This was a form of organizing that conformed to the regularities of the episteme and that, for this reason, was intelligible to the people it was trying to mobilize. Through online petitions and the Skillshare event format, and its replication across local chapters, the UWP was able to constitute itself as a hub within networks of independent workers. This strategic position was achieved, and in turn allowed, the UWP to act as a catalyzer for independent workers' subjugated knowledges and experiences. From this position, the UWP ordered and problematized (Callon, 1986) freelancers in ways that made them visible to the public opinion and policy makers, and that rendered their experiences useful to other independent workers. The UWP conformed to the start-up

epistemic regularities in the way it acted a platform in the transactional sense of the term (Steinberg, 2019): a model for organizing, mediating, and disciplining. As a platform, it performed a form of infrastructural work that made visible otherwise invisible subjugated professional knowledges and subjectivities. The use of the word “project” in their name is also evocative of the initiative’s transient and mutable nature. Under this light, the lack of a membership and governance structure are not limitations of the UWP but are, rather, two distinctive features allowing the organization to pivot and swiftly engage in new initiatives.

6.4. Epistemic regularities in meetups: Launch, test, fail, repeat

My initial understanding of meetups changed significantly as I moved into my investigation of the Vancouver start-up community. My understanding of meetups is now more ambiguous than it was at the beginning, and accounts for the multiple ways this form of socializing is constituted and experienced by participants and organizers. At the onset of my research, I thought of these events as genuine and spontaneous expressions of grassroot movements. Although this is certainly true for some *Meetup* groups, the more events I attended, the more I was able to appreciate how the organization of meetups followed some clearly identifiable principles and best practices.

These insights surfaced also during interviews with members of the *Vancouver Organizer Meetup Group*— a closed *Meetup* group dedicated to experienced *Meetup* organizers created by the *Meetup’s Organizer Outreach Office*. A member of the group described meetups as the “ultimate marketing channel“. To these organizers, the *Meetup* platform, and meetup events, were an opportunity to establish themselves, or their companies, as authorities within specific sectors or niches. Examples of this use of *Meetup* included a venture capital firm organizing a group on blockchain and a business incubator hosting a group on start-up entrepreneurship. In this context, the epistemic regularities of the start-up were visible in the way few organizers launched and ran hundreds of groups simultaneously only to identify promising niches to move into. Such trial-and-error approach to community building represented also one of the challenges I faced during my initial exploration of *Meetup.com*. As discussed in Chapter 2, when searching for relevant groups to follow on *Meetup.com*, I was confronted by the sheer number of abandoned groups. At first, I thought of them as groups that, for some

unknown reason, never took off or whose organizers ran out of motivation or resources too soon. After interviews, I realized how these groups were the outcome of a calculated use of *Meetup*. A use that embodied the kind of agnostic, iterative experimentation, Ries' *loop build-measure-learn loop* (2011), characteristic of the start-up episteme. The outcome was the proliferation of empty groups, launched and quickly abandoned by organizers using meetups as a promotional channel.

Another instance of such calculated and professionalized use of *Meetup* can be found looking at how more experienced, and established, national and international organizations relied on local meetups groups to build their authority. The already mentioned *Social Tech Vancouver* meetup, for example, developed as a local chapter of Code for Canada, a nonprofit organization which provided the event format to Graham and his friends, as well as the resources and the guidance needed to bootstrap the group. A strategy not too dissimilar from the one used by the already mentioned *TechStars*, the start-up accelerator that every year mobilizes aspiring entrepreneurs worldwide around events such as *Startup Week* and *Startup Weekend*. As discussed in this chapter, these events represent not only a way for independent workers to overcome, or at least mitigate, some of the challenges posed by flexible, precarious labor. Whether it's Code for Canada, *TechStars* or *Weekend Warriors* (discussed in Chapter 2, also an emanation of a global network of events), these organizations rely on meetups, and on the *Meetup.com* platform, to mobilize people for the construction of a network of local groups with the aim of extending their influence and gaining relevance in specific niches. *TechStars* is probably the most successful organization I encountered that pursued this strategy. Thanks to their two signature events, *Startup Week* and *Startup Weekend Hackathon*, and to meetups scattered across the globe, *TechStars* is today an influential institution representing the blurred world of start-up entrepreneurship and regulating its access to local agencies and corporations (Prashantham & Kumar, 2019). For example, thorough their *startup ecosystem* model (Feld, 2012; Hathaway & Feld, 2020), a model to "produce, retain, and attract high-growth start-ups on a regular basis" (TechStars, n.d.), promoted by *TechStars* and welcomed by local governments as a convenient and effective means to reboot local economies in disarray (Hochberg, 2016).

Meetups are also an enormous reservoir of invisible, free, and immaterial labor. This is the labor provided by volunteers, who donate their time to manage groups,

moderate online discussions, and host in-person meetings, and the work of participants, who animate and contribute to the success of these groups. Their work is invisible because it is conducted behind the scenes at live events or embedded into the *Meetup* platform. It's free labor because it is almost never compensated. Or, at least, not monetarily compensated. Organizers and participants' labor is compensated by a currency that, for independent workers, has become as important as fiat money: visibility. As discussed in the case of the *Social Tech Vancouver*, participating in a meetup is a chance to be exposed to new encounters, to learn new skills and to engage in new projects. Organizing meetup events, instead, signals a certain level of insideness and can constitute a form of work experience to showcase in portfolios and resumes. The collective work expressed by meetups organizers and participants is also a form of immaterial labor. This form of work involves all the activities not usually recognized as such, for example the "kinds of activities involved in defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and, more strategically, public opinion" (Terranova, 2000). In Lazzarato and Terranova's conceptualization, immaterial labor is virtual and potential labor, it is produced collectively, but only part of it is selectively channeled into actual labor and, therefore, compensated. In the context of the start-up episteme, the actualization of the immaterial labor produced by the collectivity of meetup organizers and participants follows the epistemic regularities of the start-up. The City of Vancouver and the *Vancouver Economic Commission*, for example, actualized the immaterial work produced by meetup organizers and participants, coopting part of it to give body to their *Vancouver Entrepreneur* and *Startup City* initiatives (*Report - Vancouver Entrepreneur Initiative*, 2014; Vancouver Economic Commission, 2015). Similarly, a local start-up accelerator actualized part of the immaterial labor produced by *Meetup* groups to portray Vancouver as a thriving digital ecosystem to potential investors.

Not all groups, however, respond to the epistemic regularities of the start-up. Throughout my investigation, I encountered groups that were expressions of grassroot local initiatives. They were, like many others, run by volunteers. They were accountable only to their participants, and they did not have affiliation of any sort with organizations. The *YVR Instructional Designers* was an excellent representative of this kind of groups. Free from the logics of the start-up episteme, the group provided participants the opportunity to reflect on their conditions and to develop a sense of belonging that cut

across employment conditions and roles. Together with the *Urban Worker Project*, these groups represented fleeting sites where the subjugated knowledges and subjectivities created by the start-up episteme could come together and organize a response to epistemic forms of organization and control. Unlike the escapist dreams of the digital nomads discussed in Chapter 5, the work of these organizations could open spaces of reflexivity, allowing individuals to question their professional subjectivity and counter the episteme from which they originated.

Chapter 7. Conclusions

Seven years after attending the *Bootstrap Collective* hackathon, I can now reflect on my experience as a participant in the Vancouver digital and new media industry, chart the implications of the start-up episteme, and plan the future development of this research. The original intent of my inquiry was to understand the discourses informing the organization of work in new media and digital start-up companies. However, shortly after entering the field, I realized how discourses about entrepreneurship, work flexibility, and professional agility that were often displayed, celebrated, and performed by aspiring entrepreneurs, were all but limited to early-stages high tech companies. Through the concept of episteme, defined as a transcendent system of regularities across discourses, I showed how the start-up has transitioned from being a managerial discourse prescribing operations in early-stage companies, to become a frame of reference for how independent workers and salaried employees alike conduct themselves within and outside the workplace. As a "free-floating modifier that [conveys] a cluster of meanings, including flexible, innovative, lean, disruptive, and poised to scale" (Schulte, 2018, p. 6), the start-up repurposes technological and managerial metaphors to justify and naturalize practices of self-discipline. These originated as a critique against the limits of industrial capitalism (for example, lack of opportunities for personal growth, deskilling and disempowerment) and, contextually, have introduced new forms of inequality and alienation. These include the need to constantly update one's technical skills, the individualization of economic risk, and the necessity to continually pursue new projects as a way to differentiate such risk. The implications of the start-up model to organize work are neither strictly personal nor limited to the new media and digital industries. Indeed, work is an essential component of identity, a form of expression and an opportunity for actualization; however, the way work is organized, divided, delegated, outsourced, and protected has implications that extend beyond the personal. The way we work shapes professional cultures, influences the geographies and the images of our cities, as well as shapes global flows of capital and people. Through the concept of the start-up episteme, I was able to delineate the cultural hinterland within which these transformations are normalized as formally rational and efficient and, more importantly, to foreground the fleeting spaces of critique in which the start-up, as a series of regularities across discourses ordering our lived experiences, can be questioned and reformed.

7.1. The start-up as a managerial discourse

The first time I experienced the start-up episteme was in the form of a managerial discourse disciplining production processes in early-stage ventures. This is a discourse that is still permeated by concepts developed in the New Economy era (see section 3,2 for an overview of these concepts). Ideas such as emergence, bottom-up organization, edge of chaos, and positive feedback have been, and still are, employed to describe the economy as a system ruled by increasing returns, to justify the transition from hierarchical organigrams to flexible networks of production, and to favor lean planning methodologies over long-term strategic models. As I have discussed in Chapter 3, the ultimate failure of dot-com companies to achieve the economic results foresaw by early theorists of the New Economy (Arthur, 1996; Coyle, 1997; Kelly, 1998), represented all but the end of the start-up as a managerial discourse. In Foucault's terms, the dot-com stock crash was a point of diffraction (Foucault, 1972, p. 69) that led to the incorporation of ideas and concepts from lean production, *Agile* development, and design thinking into the start-up managerial discourse. This moment coincided with the transition from a teleological conception of start-up (i.e., start-up as a bounded phase in the corporate lifecycle) to start-up as a perpetual mode of being. In the transition, the start-up also became a mode of conduct, an instrument of self-discipline. To address this shift, I want to return to my fieldwork materials.

Among my participants, those who experienced working firsthand in the promethean phase of a new venture, a stage in the life of a company characterized by experimentation and informal production methods, had fond memories of those times. Bianca, for example, described the *start-uppie* phase at CTLR+ as a moment when "everyone did what they felt was the right thing to do, rather than what they were supposed to do." Similarly, Eddie, the instructional designer employed at a large insurance company, had good memories of his first job at an eLearning start-up in which he had a chance to freely decide how much time to dedicate to learning new things. In Boltanski and Chiapello's (2007) definition of the term, the start-up as a managerial discourse represented a form of "artistic critique" (p.38) to capitalism and encouraged people to organize their own work in ways that prevented the replication of the industrial era's forms of alienation (e.g., atomistic division of labor, deskilling of the workforce). Combined with the mediating and decentralizing capabilities of digital technologies, the

start-up managerial discourse seemed to fulfill the prophecies of techno soothsayers (e.g., Tapscott, 1999) who saw the affirmation of knowledge as a factor of production and in the diffusion of digital networks the harbinger of a new industrial revolution. Or, in the words of Lash and Urry (1994), the slimming of managerial structures seemed to open a space for the affirmation of a “reflexive worker” (p.122), a subject responsible for both the conceptualization and the execution of their own job. Employees at start-up companies could not only reclaim their autonomy at work but could also have fun doing it. Working at a start-up company meant, for several of my participants, an opportunity to experience the “crazy vitality” of capitalism (Thrift, 2005, p. 1). As Eddie remembered of his start-up days: “It was so much fun. There's something that just attracts you to that kind of life. It's hard to describe. Even if it's a failure, it just feels like I got something really valuable, more valuable than money.”

Through the words of my participants, the imprint of the dot-com era is still very visible in present day start-up managerial discourse, at least judging by the way it emphasized the importance for workers to be responsible for the organization of production processes and on how prominent the values such as independence and self-reliance remain. On the other hand, my interviews revealed just how transient this state of empowerment, real or perceived, is. Whether it was because of an acquisition or because of a shift to a more mature stage of the company lifecycle, nearly all participants described how the organization of labor emerging from the promethean phase of a start-up at some point had to be *really* subsumed to the logic of scalability. In the experiences of my participants, this passage meant formalizing their professional subjectivities into clearly defined roles, introducing standard operating procedures, and splitting the planning from the execution of work. This was the case of Daniel, the front-end designer I met at the Mastermind group, who quit his job when the start-up he was working for was acquired by a larger company. The new organization of labor privileged control and predictability afforded by waterfall-inspired managerial methods over the *Agile* mindset that Daniel perceived as essential to his craft. Or, very similarly, the case of Bianca, who left *CTRL+* when her job changed from figuring out what to do, to executing definite tasks and reporting to the leadership team - now the only corporate organ endowed with the task of taking decisions. Or again, the case of Graham, the organizer of the *Social Tech Vancouver* meetup. In his case, being promoted from an operative to an executive position (Director of Project Operations) meant losing touch

with the company's people and culture. In his own words, he became removed from "really getting to connect with people, build relationships, build culture together." But it was not just about losing a perceived feeling of empowerment in this transition, their jobs lost the projective dimension which, in the past, had allowed them to experiment with new technologies, learn new skills, and imagine a different professional future. Disempowered and with limited access to learning opportunities, the majority of my participants decided to embark on independent careers as solopreneurs, consultants, freelancers, and digital nomads.

7.2. The start-up as a mode of conduct

In the aftermath of the dot-com bubble burst, the lean turn of the start-up managerial discourse downscaled the idea of start-up and turned it into a calculated entrepreneurial exercise available not just to new ventures but also to individuals; managerial literature presented the start-up no longer as a game reserved to the kind of heroic entrepreneurs and mythical innovators worshipped by Thiel (2014). Following Ries' idea of lean entrepreneurship (2011), start-up became a calculated experiment, a framework, upon which everyone, from independent workers, to side-hustlers, to venture-backed entrepreneurs, could rely on to build a sustainable, scalable, business. At this point, start-up transcended its teleological acceptation, i.e., start-up as synonym for early-stage ventures, to become a mode of conduct for individuals. The start-up path to transcendence is reflected in the proliferation of business and self-help books repurposing managerial concepts as instruments for the constitution of new professional subjectivities. Gillebeau's *The $100 Start-up* (2012), Ferris' *4 Hour Workweek* (2007), and LinkedIn cofounder Reid Hoffman's *The Startup of You* (Hoffman & Casnocha, 2012), all urged people to "think and act like you're running a startup: your career" (p.8). If the dissolution of managerial structures really created the ground for the affirmation of the reflexive worker, as Lash and Urry (1994) seemed to suggest, then in my case that ground was quickly ordered by the epistemic regularities of the start-up.

The ordering and disciplining power of the start-up episteme can be seen in the way the people I encountered during my research, once freed from their "corporate handcuffs", as one participant described them, valued learning and project-based work as a way to advance in their independent careers. Learning in this context had a double meaning. On the one hand, learning meant developing new, almost always technical,

skills. This is a kind of “learning by doing and by failing” (Kenney, 2000, p. 177) that took place through project work, as in the case of side projects and volunteer work. The *OpenStreetMap* project carried out by the participants of the *Social Tech Vancouver Meetup* group is an example of a learning opportunity conveyed in the form of volunteer project work. This is a kind of learning that many professionals indicated as essential to stay relevant in their respective fields. The case of Daniel accepting a job simply to have the chance to learn about blockchain technologies is emblematic of the importance of updating one’s technical skills in order to stay on the edge of technological development and, therefore, employable. This kind of learning was essential also for salaried employees, especially for those whose work lacked (or lost) the projective dimension which would have allowed them to tinker with new technologies and learn new skills. Such was the case of Cora, the frontend developer leading the *OpenStreetMap* project at *Social Tech Vancouver*, who saw that project as a form of activism and as an opportunity to learn new open standard technologies not employed at the company she was working for.

In addition to this technical, operative, learning, there is another form of learning which takes place through project work, a kind that does not involve technical skills but rather their administration and their management. It would be unfair to treat this form of knowledge as a synonym for soft skills such as “leadership, intuition, vision and the like” (Thrift, 2005, p. 41). Instead, this learning involves developing a form of *savoir*, i.e., a “system of rules that escapes the consciousness of thinking subjects and nonetheless defines a particular space of possibilities for them in a given historical context” (Tiisala, 2015, p. 656). This self-management knowledge (savoir) reflected the epistemic regularities of the start-up and was essential to the way my participants conducted themselves strategically in order to stay relevant in their field. It entailed, for example, becoming aware and intentional about which technical skills to learn, which niches to move into, how much to invest in a project, which risks to take and which ones to avoid. The difference between technical skills and this form of self-management savoir follows the distinction that managerial literature makes between the skills needed to work *in* a business as opposed to the knowledge needed to work *on* a business (Gerber, 2015, p. 97; Gillebeau, 2012, p. 133). The former refers to the skills dealing with the execution of the tasks involved in the day-to-day operations of a business, while the latter, instead, is a higher-level kind of knowledge that allows individuals to constitute themselves as

independent economic agents and to become strategic about how to invest their own resources (whether this is capital or labor) into projects. From this perspective, then, independent labor in the start-up episteme seems to offer workers, now responsible for both their technical skills and their management, the opportunity to reconstitute their own unalienated professional subjectivity. In practice, however, the space of maneuver within which individuals can freely and reflexively manage themselves appeared to me as already ordered by the epistemic regularities of the start-up. These offer workers guidance about how to constitute themselves in ways that conform to start-up values, thus limiting their freedom of self-determination.

The way in which the start-up worker is predicated into existence by a form of knowledge that reflects epistemic regularities is what sets the start-up worker apart from previous conceptualizations of self-managed individuals, e.g., Ross' no-collar worker (2003) and Fisher's digerati entrepreneur (2008). The reflections of epistemic regularities can be found, for example, in the way my participants approached every new project as a cycle toward (self-) validation. As MVPs (Ries, 2011, p. 77) cycling through test-measure-learn loops, my subjects described their work as endless experiments aimed at validating, or rejecting, a business hypothesis and, sometimes, even lifestyle choices. For instance, living abroad or changing life habits in order to baseline (reduce living expenses at the bare minimum), were evaluated through the same iterative logic employed to measure the validity of a technical project. The opportunity to approach every work experience as a small experiment toward validation rendered high risks projects relatively more approachable and helped my participants to cope with the uncertainty of their working, and sometimes living, conditions. Moreover, charting their future as a series of small experiments made it easier for my participants to abandon projects whenever these failed to achieve the desired results, and to start working on more promising ones before it was too late. In other words, to "pivot" (Ries, 2011, p. 149) their careers and, to some extent, their lives. The story of Kenny is, in this respect, evocative. Figuring himself as a project in search of validation, he decided to quit his career at Facebook and moved to Indonesia. Besides fulfilling a personal need for change (he mentioned being tired of working in Dublin as one of the motivations for dropping out of his corporate career), moving to Bali was for him an opportunity to extend his "runway" (Ries, 2011, p. 180) thanks to "geoarbitrage" (Ferriss, 2007, p. 113). Reducing the expenses at bare minimum, he was then able to expose himself to as

many projects as possible, testing and iterating his way toward economic stability and professional fulfillment. A fulfillment that nevertheless seemed always beyond the horizon and that did not depend on any project's actual success or failure. Paradoxically, successful projects were described just as unfulfilling as unsuccessful ones (see Kenny's description of his first business in section 5.1 and, conversely, Eddie's description of his first start-up job in section 5.1.3). Successful projects are, in the words of Bianca and in the experiences of Kenny, useful only in the way they provide resources for more experimentation. This points to what I identify as one of the main differences between the workers of the start-up episteme and previous conceptions of the neoliberal, self-entrepreneurial subject. In the start-up episteme, a condition of professional actualization is never achieved because it is in the constant the state of experimentation that people experience fulfilling work. The subject positions of the start-up episteme are, therefore, unstable and meant to be constantly supplied with investments of labor and capital in order to avoid idling into oblivion. On the contrary, in their rest state, the subjectivities of the start-up episteme have no substance and purpose. Therefore, devoting time, energy, and capital towards multiple projects is not only an exercise in economic risk reduction (by means of differentiation), but it is also an investment meant to maintain the subject in a state of constant movement.

The effects of epistemic regularities on practices of self-management are not limited to the recursive, iterative and self-correcting trajectories of my participants' work experiences. In 1998, Kelly was already describing careers in the network economy as "patchworks of vocations" (1998, p. 108) and, in the same year, Sennett (1998) was releasing his analysis on work and professional identities in which he analyzed the short-term, flexible and always in flux careers of modern capitalism workers. In large part, my interviewees embodied Sennett and Kelly's description of modern knowledge workers. As the ideal inhabitant of Boltanski and Chiapello's "projective city" (2007, p. 107), their careers also developed along a narrative path made of many segments, each of which represented individual experiences developed in different projects. What set my participants' descriptions of their careers apart from previous account of network workers was their non-linear and exponential conception of progress. As discussed in the archaeological analysis of the start-up episteme in Chapter 3 (section 3.2), scale has always been a central issue in the start-up managerial discourse. For quite some time before the dot-com bubble burst, scalability was the *condicio sine qua non* for a

company to even be considered a start-up (Kelly, 1998, p. 26). The transposition of scalability from the corporate to the subjective level manifested in the way my participants envisaged their professional future as radically different from their present, instead of a linear continuation of it. The same decision to embark on an independent career was often an attempt to accelerate their growth beyond the linear – at best – opportunities offered by their salaried jobs. In response, some companies implemented innovative career development programs in an attempt to retain the most valuable workers. Rebecca, the co-founder of the *Social Tech Vancouver* who we met briefly in Chapter 6 (section 6.1.1), told me how the company she was working for (one of the most brilliant stars in Vancouver's tech firmament) adopted a two-track career advancement model allowing engineers to progress either as managers or as individual contributors. The former is the natural progression for experienced engineers who, once they have reached a certain level of experience, can become team leaders and move into managerial roles. The latter, instead, is a position reserved to engineers who prefer to mature into an operative role. As individual contributors, they are not part of a team, but, instead, move from team to team depending on the project they decide to take on and enjoy a considerable degree of freedom in so doing[11]. Besides rare exceptions, Rebecca being one of them, many of my respondents quit their jobs or launched side-projects when they realized their full-time job could not guarantee the kind of growth they were seeking. In other words, they tried to recuperate the projective dimension of their work by bootstrapping the cycle of professional experimentation. The stories of Eddie, Bianca, and Kenny analyzed in Chapter 5 (section 5.1) provide good examples of this kind of attitude.

The issue of scale is relevant because it proves, once more, how the supposed reunification of planning and execution in independent labor is apparent rather than substantial, due to the pervasiveness of epistemic regularities of the start-up, now turned into instruments of self-management. In planning their careers, independent workers mentioned the importance to seek scalable projects by finely calibrating the efforts invested working *in* projects versus the amount spent working *on* projects. Developing scalable projects, i.e., projects capable to generate returns more than proportional to the amount of work, time and resources invested into them, meant to my participants

[11] This two-track model was originally developed by Google as part of their re:Work research on human resources and people analytics (https://rework.withgoogle.com/).

becoming proficient enough in a specific skillset, but, at the same time, being able to maintain an alterity relation to one's work. Alterity in this context entails relating to each project from a position of quasi-otherness, to treat each professional experience as an attempt at creating a scalable system of capital accumulation without becoming a constitutive and essential part of it. Those who fail at doing so would end up tangled in the operations of work (the working *in*), instead of scaling it and seeking new and potentially more profitable projects. A consequence of alterity is that work experiences are evaluated not so much on the basis of what they are or entail (i.e., the substantive content of work), but instead on their ability to become independent revenue generating systems. In practice, scalability required my participants to intentionally withdraw from the operative part of their projects, the *working in*, and to figure themselves as external to it, the *working on*. Therefore, it should not have been a surprise to learn how often independent workers outsourced part of their work to other independent workers. Specifically, the part of the work that was not scalable was often outsourced though digital marketplaces to gig and remote ghost workers (Gray & Suri, 2019) in the Global South. These workers were denied the same freedom and flexibility that my participants valued so much and were instead controlled through narrow job descriptions (also known as Standard Operating Procedures, SOP) (Soriano & Panaligan, 2019). An effective way to describe the relation of alterity to one's work is through the words of Bianca, who aptly described her projects as "assets" to manage, develop, and trade. Treating these assets from a position of otherness in the same way as a stock trader figures themselves as external the companies they trade, my participants were able to stay in motion and open to new projects, thus furthering the experimental cycle in which they could express themselves as workers of the start-up episteme.

To address the implications of such alterity relation with one's work on professional subjectivities, I want to go back to the case of Kenny. Kenny quit his corporate job at Facebook to become a skilled and successful web publisher. However, he neither considered himself a web publisher, nor did he aspire to become one. He saw himself as an entrepreneur of, literally, himself. What he considered to be his unique skills were not about publishing websites and selling online advertising, even though he had years of experience in this field thanks to his previous jobs in the advertising divisions of Google and Facebook; quite the opposite, these skills were incidental and just happened to constitute the operative part of his job in the early days of his

independent career. The pursuit of scale imposed the outsourcing of those skills to remote workers operating through online and digitally mediated platforms for subcontracting (e.g. Upwork, Fiverr, etc.) and managed by Standard Operating Procedures. What Kenny considered to be his distinctive skills, and the source of his professional identities, were the skills needed to conduct himself as a business, i.e., his ability to create, launch and manage in other words to bootstrap, projects in a lean and *Agile* manner.

This condition of alterity with one's work is peculiar, especially considering that most of the people I met decided to venture into an independent career as a way to achieve realization at work. Once freed from corporate handcuffs, the perceived need to pursue scalable projects and to remain in a constant state of movement drove my participants to actualize their creative, infinitely malleable, and purposive labor in ways that determined a scission between themselves, the products of their work, and the production processes employed to produce them. Therefore, alterity is not only the force propelling the cycle of constant experimentation, but it is also the ultimate form of alienation in the start-up episteme. An alienation that urges independent workers to do what they love, while contextually to treat their work as a revenue-generating asset that exists outside and independently of them. Lastly, I want to point out how alienation does not stand in opposition to satisfaction. Even though alienated from their work, my participants enjoyed this way to organize their labor. Playing the start-up game was fun, thrilling, and challenging, especially compared to their previous corporate careers. In this respect, their alienated working conditions did not prevent them from engaging in fulfilling work. Satisfaction, I discovered, was achieved in developing the skills and the experiences needed to successfully manage scalable projects regardless of the substantive content of those projects.

In conclusion, I want to expand the focus of the analysis and address the causes behind my participants' perceived need to pursue scalable projects. It would be unfair to characterize my participants as the stereotypical lens of the go-getter, heroic entrepreneur. It would also be very partial to attribute the pervasiveness of the start-up episteme, of which scalability is one crucial element, to the popularity of managerial and self-help literature and concepts. Indeed, capitalism's "cultural circuit" (Thrift, 2005, p. 5) plays a fundamental role in the promotion and the mythization of start-up self-entrepreneurship but, alone, is only part of the story. The other part of the story behind

the popularity of start-up-inspired techniques of self-management is attributable to a deterioration of regular working conditions. The people I interviewed were vocal about the lack of growth opportunities offered by their jobs. Despite all the efforts they put into updating their knowledges and to expanding their technical skills, for some of them (see Bianca and Eddie in sections 5.1.2 and 5.1.3 respectively), there was no corporate ladder to climb, there was no room to grow as professionals. To these people, the start-up episteme offered the possibility to escape the corporate rat-race and to build their own ladder to realization, one rung at the time, one project at the time. Not only, in the possibility to build scalable assets, my participants saw an opportunity to accelerate their careers beyond linearity. Instead of building their own ladder, my participants were trying to build a trampoline, knowing that every project could potentially skyrocket their careers, or send them right back to where they started.

The stories I collected at the Mastermind groups and professional meetups are only a portion of all the experiences I heard throughout my investigation. While many of my participants decided to become entrepreneurs, digital nomads, or solopreneurs, many others ended up freelancing because of lack of better alternatives. These are the people who Andrew of the *Urban Worker Project* described as the “freelancers by necessity”, to whom independent labor represented the last resort before unemployment. They are, however, also affected by the regularities of the start-up episteme. As I experienced firsthand in the development of my research protocol and associated technologies, sometimes adhering to epistemic regularities is the only way to render oneself visible and intelligible to others. To all these people, whether they are experienced consultants or unemployed professionals transitioning out of a stable job and venturing into freelancing, the start-up offers a way to think about their work, a way to constitute themselves in relation to it, and a method for navigating the uncertainty of independent labor. This is a way to think about work that urges people to approach every project as a small entrepreneurial experiment and that frames failure as a precondition for success. In doing so, it justifies conditions of constant precarity, in which every failed project is a step toward economic and professional realization. A realization that most of the people I met, however, never achieved.

7.3. Occupational communities in the start-up episteme

In my interpretation of episteme, I mentioned Foucault's anti-essentialists conception of the individual. In his original conception of episteme, there was no outside, no space for reflection and therefore no ground on which to construct a critique to the "implicit systems which determine our most familiar behavior without our knowing it" (Foucault interviewed in Simon, 1971, p. 201). If the start-up really is a mode of conduct pre-ordering the space for realization created by the loosening of bureaucratic forms of production, then it is hard not to be pessimistic about the possibility to escape such a pervasive system of self-administration. Furthering the concept of artistic critique developed by Boltanski and Chiapello (2007, p.38), my participants described withdrawing from regular employment as a necessary step on the path toward professional realization and personal freedom. Whereas sabotage, the conscientious withdrawal of efficiency (Veblen, 2001, p. 5), was the paradigmatic form of resistance in industrial capitalism, in modern capitalism dropping out seemed to be the ultimate form of critique against an organization or labor preventing individuals from achieving realization through work. Yet, when individuals decide to escape, both symbolically and materially, regular forms of employment, they reconstitute themselves in ways that reflect the regularities of the start-up.

Critique, however, is still possible. As discussed in Chapter 6, collective forms of resistance, and efforts for the democratization of the start-up episteme, can take place thanks to the informal work of occupational communities (Van Maanen & Barley, 1984). These are fleeting and mutable groups in which the subjugated knowledges created by the start-up episteme can come together and share tactics for overcoming the problems they face in their work. The fact that the critical function of these groups is incidental and tactical rather than intentional should not deter from considering them as capable to reform the start-up way of working. My experience as a participant to *the YVR Instructional Designers Meetup* group points to the possibility for people to come together and defend their technical expertise, and professional subjectivities, against attempts to deskill and devalue their work. The group offered participants the possibility to recognize each other as peers thanks to the mediating role of technical knowledge and regardless of their employment conditions. The work of the group was the closest attempt at professional self-determination that I witnessed in the course of my fieldwork.

The group was not, however, immune to the regularities of the start-up episteme which found their way into the group. For example, in the way participants sometimes repurposed, rather unproblematically, ideas of deskilling and crowdsourcing as a way to streamline the work of eLearning consultants involved in multiple projects. Moreover, as much as the group worked collectively, their efforts were not mutual in the way they were beneficial exclusively to participants and not to eLearning designers more in general.

If occupational communities can play a critical role in the start-up episteme, other forms of sociality can help flexible and start-up workers to navigate the uncertainty of the labor market. I am referring here to the work of groups such as the *Social Tech Vancouver*. These are groups that, regardless of the specific niche they occupy, offer material support to start-up workers. In particular, they allow participants to enhance or maintain their employability by providing opportunities for engaging in new projects, expand their networks and acquire new skills. Even so, a significant amount of hidden and unaccounted work is required of the individuals who are now given the responsibility to search for events, select the most promising ones to attend and invest time and resources to demonstrate their "technical skills and immaterial qualities of employability" (Gregg, 2014, p. 84). Moreover, an unquantifiable amount of work goes into the organization of these groups. This is not only free, unaccounted, labor, it is also a form of immaterial labor which organizations and companies selectively compensate as a way to pursue their institutional goals. This was the case of *TechStars* and the *Vancouver Economic Commission* leveraging on the work done by the most active *Meetup* groups on start-up entrepreneurship in the city (e.g., the *Bootstrap Collective*) to portray Vancouver as a vibrant hub for innovation and creativity to potential investors.

What the future of these groups will be and whether they will be able to become more than just informal gatherings for specialized workers is still to be understood and requires further investigations. The work of groups such as the *Urban Worker Project* (and other international organizations such as the *Tech Worker Coalition*, *Game Workers Unite* and *Smart Coop*) point to the possibility to constitute new models of representation that repurpose the same epistemic logic of the start-up and employ them as an instrument of reformation. The extent to which these forms of representation can be truly democratic and politically relevant is, however, still questionable. On the one hand, tech meetups counteract some of the losses that workers experienced in the passage from a corporate job to flexible labor. The critical role of informal gatherings is

made possible thanks to the mediating role of technical knowledges. As in the case of the *YVR Instructional Designers* group (see Chapter 6.2), technical skills provide a common ground allowing individuals to relate to each other regardless of specific working conditions. Technical skills create the occasion for the subjugated knowledges of the start-up episteme to come together, to recognize each other as peers and to reflexively take steps toward the reformation of their working conditions. This is critical, especially as technical knowledges are more and more devalued by a way of working which requires individuals to outsource them in order to stay mobile. On the other hand, informal gatherings of tech workers question the start-up episteme in a way that is problematic.

It is problematic in the way the voluntaristic and informal nature of occupational communities does not always allow systemic form of discrimination to surface. To the already overworked population of independent workers, meetups are as essential as expensive. Searching for relevant groups, participating to events, contributing to groups, and maintaining an active presence is not just a matter of personal marketing and self-promotion. These are activities that independent workers must do in order to be able to work, just like administrative tasks. As seen in section 6.1.1, this usually involves updating one's skills and expanding one's portfolio of experiences. However, meetups represent a significant investment of resources (time and labor), that not everyone is in the position to afford.

Failing to acknowledge the systemic role that informal and grassroots groups of professionals have in supporting and training Vancouver's population of skilled workers –on which the Vancouver digital and new media industries rely and benefit from– can only polarize the independent workers population even more.

7.4. Epilogue

The COVID-19 pandemic radically changed the rhythms of the Vancouver's digital and new media industry. In-person meetings were suspended at the onset of the pandemic, and they have not resumed at the time of writing. All meetings moved online, a transition that *Meetup* tried to support by offering tools to facilitate organizing, finding, and attending online events. The *YVR Instructional Designers Meetup* group shut down in early 2020; participants still interact on a *Slack* channel but Carl, the organizer,

decided that it was no longer worth maintaining the *Meetup* group active. The *Social Tech Vancouver* group has also moved their meetings online. They hosted a handful of events in 2020 which, surprisingly, had attendance levels far above those of in person meetings. Vancouver's main event, the *Startup Week*, also had to go virtual in 2020. Beyond the most immediate consequences, the forced transition to remote work imposed by the pandemic raises important questions about whether it will still be worth to live and work in a top-tier digital hub in the future. Or if, on the contrary, the normalization of remote work in the digital and new media industries will provide further incentives to slim the corporate organigrams down and expand companies' reliance upon gig, on-demand, and remote forms of work. With hybrid models (a combination of remote and in-person work) extolled as the future of work (Alexander, De Smet, & Langstaff, 2021), tech giants are quickly embracing the opportunity to scale down their in-person operations by allowing their employees to work from everywhere[12]. Whichever is the case, I am confident that the analytical lens offered by the start-up episteme can prove to be useful to understand how people will navigate the uncertainty of networked and mediatized forms production, especially in an unprecedented scenario such as the post-pandemic one.

In this last page of my thesis, I want to go back to what I have stated several times about the role of individuals within the episteme, and I wish to make the point in the most reflexive way possible. As I am about to complete this manuscript, I have been thinking about how the start-up episteme works through us to reconstitute the conditions of its own existence. In the case of my participants, their descriptions of personal and professional realization through work were attuned to the regularities of the start-up episteme. They themselves represented the kind of restless professional subjectivities predicated into existence by the start-up as a managerial discourse and as a mode of conduct. The impossibility for most of my participants to achieve self-actualization as independent workers was not so much a failure of the individual, rather, it was a logical consequence of an organization of labor premised on the imperative to stay in motion in order to remain relevant and open to new projects. This is a conception that, as discussed in Chapter 3, emerged after the dot-com crash, when the start-up left its teleological phase, start-up as a transitory phase toward the achievement of an end, to

[12] Mark Zuckerberg declared that Facebook aims to become "the most forward-leaning company on remote work at our scale" ("Build for the World, From Where You Are," n.d.).

become a permanent mode of being: start-up as a means and as an end in itself. Now coupled with ideas coming from design thinking, lean production and *Agile* programming, the start-up mode of being allowed my participants to experience the vertigo of being caught in an endless experimental spiral and to design and test professional and lifestyle choices. All the while legitimizing an organization of work in which, as Neff (2012) convincingly showed, economic and entrepreneurial risk are distributed and individualized through networks of independent workers.

As someone about to venture into a new phase of my career, I see myself reflected in the portrayals I have made of my participants in these pages. Talking to people, attending events, and participating to professional groups I was able not only to get a glimpse into the subjectivities of the start-up episteme, but also to see my experiences reflected in them. Observing, collecting, and analyzing the stories of other people allowed me to become reflexive about my own work, and to appreciate how the academic subjectivity I strive to inhabit is predicated into existence by regularities not too dissimilar from those I observed in the field. Just like my participants, I am also strategic in the way I conduct myself professionally, in the way I position my work and in the way I evaluate potential research avenues. I am also developing a vision of my past as a succession of segments, each one representing a work experience, and I similarly fantasize about a future radically different from my present. I engage in sacrificial labor too, as this is expected from aspiring academics still wandering at the periphery of stable employment.

In many ways, the academic world in which I have been living over the past seven years is far more similar to the world of start-up entrepreneurship that, on the contrary, appeared to me so distant and for this reason so appealing at the beginning of my investigation. The speed at which my life has cycled through cycles of test-measure-learn loops has been significantly slower than that of my participants –in this respect, my personal entrepreneurship experiment was not as lean as theirs). As in the case of my participants, awareness about my position was achieved talking, working, and engaging with others. As a member, although transient, of several communities of start-up workers, I was able to carve out a space of reflexivity from which to base a critique of the episteme which, I hope, I have expressed throughout these pages. Having spent time within these communities also reassures me about the potential of informal gatherings of professionals to be not only expressions of free and immaterial labor, but to defend and

reconstitute professional subjectivities, regardless of their difference and multitudes, against the alienating regularities of the start-up episteme.

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Appendix

Interview data

Pseudonym	Date (MM/DD/YYYY)	Location	Profession
Sarah	3/9/2018	Coffeeshop	Consultant
Joseph	3/9/2018	Coffeeshop	Entrepreneur
Kevin	4/16/2018	SFU, Burnaby Campus	Software Developer
Eddie	4/17/2018	Remote	Employee
Daniel	4/24/2018	Fabrik coworking space	Freelancer
Herbert	5/23/2018	Launch Academy	Networker
Daniel	6/13/2018	Fabrik coworking space	Freelancer
Claude	6/19/2018	The Profile coworking space, Gastown	Student
Robert	7/4/2018	Venture capital firm office	Venture Capitalist
Sophie	7/18/2018	CTRL+	Education Operations
Rose	7/18/2018	CTRL+	Education Manager
Anthon	8/29/2018	Oakridge Centre	Entrepreneur
Stephan	8/30/2018	Remote	Entrepreneur
Roman	8/31/2018	Remote	Civil Servant
Bianca	9/19/2018	CTRL+	Education Operations
Cora	11/6/2018	Seawall	Software Developer
Bianca	11/14/2018	Private home	Digital Nomad
Sonya	11/21/2018	Coffeeshop	Activist
Dylan	11/28/2018	Coffeeshop	Unemployed
Rebecca	12/12/2018	Bench Accounting	Software Developer
Andrew	12/14/2018	Remote	Activist
Bianca	1/16/2019	Remote	Digital Nomad
Graham	1/23/2019	Harbour Centre	Unemployed
Eddie	1/24/2019	Remote	Employee
Dalilah	2/1/2019	Harbour Centre	Unemployed
Kenny	2/6/2019	Fairmont Hotel Vancouver	Digital Nomad
Sarah	3/9/2018	Coffeeshop	Consultant