CULTURE AS A UNIVERSAL VARIABLE OPPORTUNITY FLOW AND SELECTION PROCESS IN SILICON VALLEY

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Abstract: in Silicon Valley, new technology is considered to be second nature. Techies from all over the world go there to develop companies, solutions or projects related to it. To do this, they need to manage two processes simultaneously: first, to integrate a growing flow of entrants and possible partners and, secondly, to select limited options between multiple opportunities and potential matches. This article analyzes the way Silicon Valley professionals handle this double bind. Based on a survey in the region and conceptual tools inherited from the sociology of globalization, it sheds light on how they build up, use and communicate about "culture" as a measurable and assessable variable. On the one hand, promotion of Silicon Valley's "culture codes" increases the flow of entrants. On the other hand, from the techies' point of view, acceptance of these codes by newcomers makes the selection process easier and more rational.

Keywords: Silicon Valley, culture, technologies, world, conventions, networks.

> *Discussion between two men, in their 30s, in shirts, sitting side by side on the Caltrain (the commuter rail line serving the San Francisco Peninsula), one saying to the other: "much talk about the Valley presents common cultural traits and pushes you to adopt them".*
> Field Notes, June 2016

INTRODUCTION

In the preface to *Technoculture*, the authors warned against two drifts about technology: first, demonization, and second, blind enthusiasm (Penley, Ross 1991: XII). If we had to find a place on the planet where enthusiasm for new technologies is a "second nature" (Penley, Ross 1991: XII), it would be Silicon Valley. The "techies", an indigenous category that designates

professionals working for new technology companies, with varied though relatively high standards of living, describe it in interviews as the Tech "Mecca", "paradise", "Disneyworld" or "center of the world". All these qualifications identify a locality with an economic and symbolic power. They raise the question of the relationship between territory and power, and the role of culture and new technologies in that connection.

Several authors refer to the notion of "center" to account for the way in which spheres of economic influence have been structured over the past centuries from a city or a region. Historians Fernand Braudel and Immanuel Wallerstein have notably emphasized that the development of economies and world systems is based on "world cities" on the basis of their economic, legal, military and political supremacy (Wallerstein 1979). AnnaLee Saxenian and Christophe Lécuyer analyzed the rise of Silicon Valley (Saxenian 1994; Lécuyer 2005) as the epicenter of the innovation economy. The geographer Michael Storper compared the growth dynamic of Silicon Valley with the declining economy of Los Angeles (Storper 2015). In a different perspective, Silicon Valley has been described as the center of a larger network of economic activities, materials and information, including silicon mining quarries in Africa, assembly plants in Taiwan, and moderator outsourcing services in South Asia (Roberts 2019; Crawford 2021).

These studies remained relatively discreet about the cultural implications within this center. One could say that this is due to the diffusion of a global culture, linked to the domination of Silicon Valley, through its applications and services. After all, Stuart Hall considered that the domination of representations conveyed by the media tended to make "all forms of diversity" disappear because economic capital "would not care about where it operates" (Hall 1997: 29-31). In this extension, Anthony Giddens remarks that "the place is increasingly phantasmagorical: the various social theaters are completely penetrated and shaped by very distant social influences" (Giddens 1991: 25). However, the sociology of globalization has provided analytical frameworks that make it possible to interweave the issues of power, space and culture through the prism of new technologies. Space of flows and local practices have been

articulated through the concepts of "global circuits of goods" and "territorial embedding" (Dicken 1986). Elihu Katz and Tamar Liebes noted important differences in terms of perception and understanding of TV dramas broadcasted worldwide, such as *Dallas* (Katz Liebes 1990). Multiple cultural "collisions" have been observed (Robertson 1992: 131), which invites us to pay particular attention to "local cultures", including when these are influenced by media operating at international scale (Robertson 1995). To tackle this question, Arjun Appadurai emphasizes how migration and information technologies have transformed the composition and scale of these localities, both in terms of cultural identity and geographical boundaries (Appadurai 1996). From a different point of view, Saskia Sassen has shown that geographical dispersion of production is accompanied by a concentration of management, supervision, coordination, financing and service activities in "global cities", ensuring the coordination of global production networks (Sassen 1991). Manuel Castells develops three concepts – "informational capitalism", "networked society", "space of flows" – to explain how societies are increasingly dematerialized, internationalized and focused on communication activities (Castells 1998). He sees in the invention of the transistor and the creation of Silicon Valley the starting point of a new industrial age based on innovation, information control, flexibility and network organizations.

These works deal with two contradictory phenomena: the growing flow of people and information circulation at large and international scales, and the reinforcement of cultural differentiation in local spaces. This article aims to explore this contradiction based on a Silicon Valley survey in which Tech industry professionals were asked how they develop the flow of information, people and capital on the one hand, and select them within a territory on the other hand. The thesis is that to do so they intentionally build up "culture" as a variable, easily communicable, universally understandable, to facilitate measurements and comparisons in a growing stream of opportunities.

The first section presents the literature on Silicon Valley and how it explains its success through four types of arguments: the concentration of visionaries, special institutions, innovative organizations and the culture of the region. Noting the

usefulness and certain limitations of this type of argument, the second section focuses on how "culture" has been promoted in Silicon Valley and more generally in Tech as an intentional social construct through three different lineages. The third section presents the data on which the article is based. The article then examines the way in which techies are confronted with a double bind: the need to integrate an increasing flow of people, capital and information, and the desire to select opportunities within a local space. Faced with this challenge, a logic of flow confronting a logic of space, tech professionals leverage collectively "culture" as a variable, both communicable and measurable, in order to optimize their time and capital allocation with newcomers and their matches. They build up and use "culture" to simultaneously increase the flow of people as potential and commensurable entrepreneurial opportunities,.

SILICON VALLEY LITERATURE: AMBIVALENCE BETWEEN INTEGRATION AND DIFFERENTIATION

In the literature on Silicon Valley, we find four types of arguments explaining its growth and success. Despite their differences, the four subsets reflect an ambivalence between the unified character of Silicon Valley, and more generally, of high tech and differentiation logics. After a summary presentation of each of them, this section underlines how the notion of "culture" crystallizes more specifically this ambivalence.

The first type emphasizes the role of visionaries (McCray 2012; Berlin 2005; Berlin 2017). From Leland Stanford, founder of the eponymous university and governor of California in the mid-19th century, to Steve Jobs, identical traits are invoked: prescience, a mix of authority and charm, hard work and hard demands on partners and staff, thwarted parentage, and a messianic discourse presenting innovation and technology as the tip of the temporal arrow of progress. Journalists, most often from the West Coast, have fueled this narrative through portraits of internationally renowned local figures from Robert Noyce to Elon Musk. Even when it was with an acid tongue, they have nourished the Silicon Valley mythology, in

the anthropological meaning of the word, i.e., a story of the origins in which "fathers", "godfathers", "princes", "kings", "geniuses", "masters", and "gods" made history. By focusing *a posteriori* on selected "visionary" successes, these analyses also tend to legitimize the Darwinian view often expressed by tech workers, reducing the sum of past initiatives and failures to a few present successes. Moreover, the successes are presented as the singular expression of an innovative norm and a commonly shared entrepreneurial mentality within the region.

Trying to avoid this tropism, a second type of argument focuses on capital, economic and financial investment, and human and scientific capital circulating within a growing community of workers. In 2019, Silicon Valley accounted for 15 per cent of patents, 46 per cent of the country's "unicorns" and 40 per cent of investments in startups in the United States. An estimated 380,000 engineers and scientists lived there, 62 per cent of whom were born outside the country. One third of the region's 9 million inhabitants worked in the new technology sector at the start of the Covid pandemic in 2019, making it the leading industrial cluster in the world in terms of innovation. Since radio and transistors in the 1910s, historians shed light on how, over multiple technological waves, a transmission of knowledge and technical skills has been processed (Lécuyer 2005) thanks to a favorable institutional context. Some studies have emphasized the role of military funding, pointing out how Stanford has been an interface between different professional worlds such as academia, business, traditional industries and government agencies within a "military-industrial complex" (Leslie 2005). Further, the State of California encourages startups by keeping the cost ($200) and number of administrative filings (one document) required for a company launch at particularly low levels (O'Mara 2019). California's ban on non-competes spurred the rise of California's Silicon Valley and the comparative decline of Massachusetts' high technology corridor known as Route 128 (Gilson 1999). Legal rides governing employee mobility influence the dynamics of high technology industrial districts, encouraging rapid employee movement between employers and to startups. Indeed, California does not enforce post-employment covenants not to compete. As a

result, high technology companies in Silicon Valley gain from knowledge spillovers between firms. To explain the development gap between Silicon Valley and the Boston area, Kenney and Von Burg analyzed the economy of the existing firms and a separate economy of institutions that evolved to nurture new firm formation (Kenney, Von Burg 1999). To them, path-dependent and dominant design explanations are the key elements of these dynamics. This combination of factors would explain Silicon Valley's ability to reinvent itself, under the control of venture capitalists (Granovetter, Ferrary 2009). Despite their richness, however, these studies provide little information about production processes.

Attention to organizational forms may contribute useful elements to that particular inquiry. Indeed, some studies have explained Silicon Valley's success by the region's concentration of universities, technology parks, laboratories, hackerspaces and other organizational entities geared towards innovation. Taking the Xerox PARC research center (Turner 2006), the Y Combinator incubator (Stross 2012) or the Noisebridge hackerspace located in the heart of San Francisco's Mission District (Lallement 2015), these organizations would be to advanced capitalism what the factory was to Karl Marx, bureaucracy to Max Weber, or assembly lines to Charles Taylor. That is to say, modes of organization where value is created, where rationality resides, and where the dominant model of the advanced economies is invented and diffused. Work is said to be "collaborative", "agile", "fast", "liberated", "network-based"; learning is achieved by doing, versioning and projects; the "startup company" is emblematic. Beyond the few names often mentioned in the press, more than 14,000 companies were working in new technologies in 2019 (source: Crunchbase). Despite the empirical evidence, a contradiction can be found in this demonstration: in Silicon Valley, the actual work often extends beyond the boundaries of the organization, whatever its form (company, lab, incubator, etc.). The "network" that is so often celebrated and mobilized leads professionals to transcend the framework of their employer on a daily basis (Saxenian 1994). Working on external side projects and jumping from one job to another are quite frequent. The case of Twitter and its work

organization between developers and users is one striking example. Ignacio Siles shows the importance of feedback loops between developers and users over time, calling this a "remediation" process and "user agency" (Siles 2013). This production mode is based on networking relations that reach beyond the walls of a single organization (Powell 1990). From this point of view, Silicon Valley can be described as an organizational network, an innovative market or even a social field (Fligstein 2021; Windeler and Jungmann 2022). In this respect, the analytical solution could be to focus less on a certain type of organization and more on spirit, ethos (Weber 2002), and culture.

When questioned about the reasons for the region's uniqueness, people who work there often point precisely in this direction, the so-called "Silicon Valley culture" (Piscione 2013). Some studies lend empirical support to this indigenous argument, underlining the importance of collaboration systems between workers and small companies, within a decompartmentalized and non-hierarchical professional world, at the origin of the region's productive superiority over other industrial districts (Saxenian 1994). However, this culture has been reinforced and spread by back-and-forth movements of the numerous diasporas between Silicon Valley and their home countries, especially China (Wong 2003) and India (Saxenian 2006). This culture has been defined by the valorization of individual initiative, risk-taking, de-dramatization of failures, and creativity, in the continuity of counter-culture influence whose links have been studied by the media historian Fred Turner (Turner 2006, 2009, 2018). In the region, professional recognition thus proceeds from performance (Kenney 2000) but, in addition, people benefit the collective, a kind of legacy of back-to-the-land communities (Turner 2009). These approaches are in line with the works that have emphasized the growing importance of culture in management since the 1980s (Barley and Kunda 1992).

However, this way of framing the issue of work and organization frequently raises a paradox: from a theoretical point of view, culture, one of the most commonly used notions in literature and social sciences (Williams 1958), blends different analytical scales and repertoires, borrowed from organizational culture frameworks, neo-institutional analysis, sociology of

culture, or social movement theory (Morrill 2008). As an indigenous category, culture is partly reified, while at the same time being referred to a community of workers striving for permanent change. To speak of Silicon Valley culture, we need to specify, in addition to the description of its components, its modes of diffusion and socialization, especially since the region is not a homogeneous anthropological isolate: it is a differentiated social space, formally opened, where professionals from all over the world come to work. Sometimes they succeed, but at least half of them are going to fail from an investor perspective (which means creating value in their portfolio), and only an extreme minority will enter the elite group of 70 billionaires known in the region at the end of the 2010s. The issues in this literature are twofold. First, we can spot an indetermination of the notion of "culture" in these references. Culture has been used to define organization, work, mentality, etc. But on the one hand, "Silicon Valley culture" seems to have the capacity to integrate newcomers, and even to establish a professional identity (Delbecq, Weiss 2000). At the same time, tech workers are regularly subdivided on a cultural basis (English-Lueck 2017), both within the region – because of differentiated alumni network culture, diaspora (Wong 2006), company (Finkle 2012), technological or generation cultures – and outside the region, because of geographical cultural distinctions, starting with the classic opposition between Silicon Valley and the Boston area technological districts. In fact, the expression "Silicon Valley culture" is presented both as an integrative factor and as a differentiation argument. This being so, the dual question of socialization into this Silicon Valley culture, of the way it is endorsed locally and disseminated beyond the region's borders remains open. The following section aims to clarify these indeterminacies by specifically addressing how the notion of "culture" in Tech has been specifically framed through three distinct but related lineages.

CULTURE IN SILICON VALLEY: ART, FREEDOM AND COMMUNICATION

Based on the literature on "Silicon Valley culture", we can spotlight three underlying thematic subsets, each of which is based on an identification relationship between culture and a second term: culture and art, culture and freedom, culture and communication. This section presents these three subsets in order to understand how "culture" has been used for social constructs in the Bay area.

Curiously, however, culture has rarely been associated with artistic activities in Silicon Valley. Unlike New York with journalism (Christin 2020), Los Angeles with cinema (Powdermaker 1950), Miami with music (Rossman 2012), Silicon Valley has not been identified historically with a cultural industry. On the contrary, it has since the late 1990s been presented as underlying an economic crisis in cultural industries. Also, it is a second meaning of the term "art" that is historically and socially meaningful in Silicon Valley, as an art of craft (Sennett 2008). C. Lécuyer, in a history of Silicon Valley, highlights how groups of hobbyists manipulating, hacking and developing devices, overlapped technical and aesthetic criteria during the 1910s (Lécuyer 2005). The historian Leslie Berlin remarks how R. Noyce, notably co-founder of Intel, was praised since his childhood by friends then peers for his technical talents (Berlin 2017). More broadly, the maker movement has been an important part of the history of Silicon Valley since the 1970s, notably through the Survival Research Laboratories (SRL), an American performance group created in 1978, including Apple employees. From the beginning, its members have assembled giant machines together for performance purposes. The several hacker and maker spaces active in the region show that this tradition is still much alive. These spaces, like Noisebridge (Lallement 2015), an emblematic hacker space in San Francisco, are do-ocracy oriented: each member of the collective "makes" whatever he wants, according to his (or her) will. But legitimacy and social status within the group are related to "virtuosity" and the technical achievement of the product design. The Burning Man festival is also conceived as a do-ocracy. The founding

members of the leading organization have defined it as a "community of the arts" and a federation of "makers" from the end of the 1990s (Chen 2009: 34). There are multiple links and intersections between makers and tech workers, notably at Facebook and Google (Turner 2009). Employees attend the festival in large numbers every year and replicate within the company the ways of communicating and collaborating derived from the counterculture legacy: organizing by small communities, through projects, with symbolic rewards based on contributions for the good of the community. In this perspective, the arty-crafty pieces exhibited in the different buildings at Facebook headquarter are the incarnation of a specific management style in which the celebration of openness, creativity and freedom aims to develop employee productivity (Turner 2018).

This latter way of framing and using culture in workplaces overlaps with the second tradition, identifying culture and freedom at work. This theme has already been the subject of several works related to the new economy. Based on an analysis of the most popular management handbooks since the 1970s, L. Boltanski and E. Chiapello have revealed the stakes of a management reorientation: to preserve the capitalist system from critics, cultural antinomies and global collapse (Boltanski, Chiapello 1999). Andrew Ross (Ross 2003) studied over eighteen months Silicon Alley companies in New York. He described them as "maverick in their organization and permissive in their culture", because these workplaces allowed personal freedom and seemed to industrialize bohemia, encouraging employees to think outside the box and allowing companies to claim their most creative thoughts and ideas. These modes of production and work organization are directly linked to networks and communication service development, which have thus engendered a market economy considered as more open, wealthier and full of opportunities (Benkler 2006). Beyond this rhetoric, this celebration of "free culture" implies social mutations. Boltanski and Chiapello noted that the affirmation of the "New Spirit of Capitalism" marks the prevalence of an artistic critique valuing freedom over a social critique focused on economic exploitation. Andrew Ross points out that this increase of freedom at work has its drawbacks: 70-hour workweeks, lack of managerial

protection, oppressive shouldering of risk by employees, an illusory sense of power sharing, no end of emotional churning, and so on (Ross 2003). For Tiziana Terranova, the culture of freedom in the digital industry is in reality the manifestation of a "late capitalism" (Terranova 2000). In a well-known manifesto, Tim O'Reilly has explained the rewards for entrepreneurs who promote new cultural norms of freedom associated with the Internet, in terms of increasing profits and benefits from free work and free advertising (O'Reilly 2005).

The paradox is that this culture has diffused from localities, within intermediate spaces, where different categories of professionals (entrepreneurs, investors, lawyers, developers, sellers, data analysts, designers, etc.) interact. Gina Neff, in her study of networking spaces, has shown in particular how the multiplication of networking sessions reflects changes in the industry and the work organization (Neff 2005). Networking activity – and the will to develop new social network ties – are concentrated within narrow geographic clusters. Her study suggests that the networking events within the industry, such as cocktail parties, seminars, ceremonies and the like, are a means of accessing crucial resources within an industry where workers, independent and autonomous, confront uncertainty.

In our study, we've observed many times that to access these places and to interact and develop social capital efficiently, professionals need to learn, respect and master certain communication codes, codes that appear to be broadly shared. This article proposes to examine these codes by considering their ambivalence. They enable tech workers to develop flows of opportunities and at the same time to make comparisons between different potential allocations and apparatus. This ambivalence can be analyzed more precisely from the third subset previously mentioned about culture in Silicon Valley.

To better understand this ambivalence and the way in which culture is identified with communication, we can look at the development of communication and information theories within Silicon Valley. Robert Wiener has had a lasting influence on several generations of technologists (Turner, Larson 2015), originally because he distinguished himself from the mathematical theories of information developed by Ralph Hartley, C. E.

Shannon and W. Weaver. His book *Cybernetics or Control, and Communication in the Animal and Machine* (Wiener 1961) tackles the mathematical apprehension of signals circulating in communication systems. According to him, the sum of information in a system is the measure of its degree of organization, whereas entropy is the measure of its disorganization, the former being the positive of the other. In Wiener's eyes, the Second World War is the paroxysm of the entropy phenomenon: development of better communication systems could have been a means of preventing it. This belief, which will have extensions in the field of computer science and biology, is a common principle of a group of theorists known as the "Palo Alto School" or the "Invisible College", bringing together Ray Birdwhistell, Gregory Bateson, Edward T. Hall, Erving Goffman and Paul Watzlawick. They worked on the basis of the retroactive circular model developed by Norbert Wiener. According to the members of this informal group, communication must be studied by social scientists, following a systemic and multidisciplinary approach, open to linguistics and logic, in order to understand, describe and theorize interaction systems. They indeed considered communication as a process of interaction; human behavior corresponds to a resource in terms of information; and attention to the horizontal and vertical contexts of interaction reveals communication logics. This orientation has found concrete applications in Silicon Valley, based on several linages and entry points (Daub 2020). The first one was the Esalen Institute in Big Sur founded by Dick Price in order to create a "religion without religion" (Kripal 2011). Price has regularly invited "local" theorists such as F. Spiegelbel, Stanford University professor and historian specialized in eastern religions, G. Bateson, anthropologist and theorist of the "ecology of the mind", German psychotherapist Fritz Perls, father of the "gestalt therapy", Aldous Huxley to contribute to his reflections on drugs and ways to push back consciousness boundaries. Their discussions became the starting point of the "human potential movement", which takes as its premise the belief that through the development of their "potential", people can experience a life of happiness, creativity and fulfillment, and release their full potential (Anderson 2004). People linked to Esalen lie at the origin of

what has turned out to be the very influential Stanford *d.school*, which has played a determining role in the way "design thinking" has been conceived and enforced by large tech companies over the last decade (Miller 2017). The Ted conference organization, founded in 1984, is another intermediate space where a specific culture, equally sharable and differentiating, has been locally produced.

Even if this genealogy is too schematically and partially exposed, it affirms that in Silicon Valley, *culture* isn't just a common notion or even an indigenous category. It sheds light on local social construction and collective endeavor to promote special traits, such as art as technical craft, freedom as work organization, and communication as a system. This section does not aim to follow the different ramifications of these three traditions, but aims to resituate "culture" in its local context as a making process exploited by tech workers to associate and sort, integrate and select people as creative, social and economic opportunities.

DATA

To understand this paradox, this article is based on a survey conducted in Silicon Valley. Even if Silicon Valley is often presented as open and welcoming to innovators, the conditions of investigation are quite difficult: the cost of living is among the highest in the country, and access to companies is conditional on the signing of "non-disclosure agreements". Employees are instructed not to talk to outsiders without authorization from the public relations manager, and they are usually bound by confidentiality clauses when they leave their company. At the same time, companies try to put on a good show during site visits and "learning expeditions" open to executives from other industries, countries and regions of the United States. Workers are particularly enthusiastic about the Silicon Valley culture and the positive role of technology.

Much is made of this enthusiasm: speedy corporate expansion, the relative ease in meeting new and sometimes famous tech personalities, the fluidity of relationships, the fortunes

amassed by thirty-somethings, the tolerance of lifestyles and ways of thinking sometimes repressed in the rest of the country or abroad, such as LBTQIA+ rights, polyamory, recreational drugs, libertarianism, and transhumanism. The open, anything-goes mindset in the Valley engenders social conventions such as addressing new acquaintances by their first name and referring to people as "friends" after a single meeting.

To understand the specific role played by culture, observations were made in companies (43), meetups (38), pitch contests (28), hackatons (3), bootcamps (2), and conferences (5). These investigations were conducted respecting the demographic and organizational balance of the region, in other words according to Silicon Valley funding categories (crossed with information presented on the Crunchbase platform which compiles data on new technology companies): seed companies (most often without employees), Series A companies (optimization phase of developing traction levers, which implies technical recruitments, with a few dozen employees), Series B companies (focusing on business development with a team of 50 to 100 people), Series C companies (rapidly perfecting the business with a view to return on investment, with 100 to 500 employees), unicorns (companies valued at more than a billion dollars following fundraising, with 500 to 5,000 employees) and large companies (stock market listed, with several thousand employees).
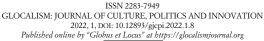
On this basis, 147 in-depth interviews were conducted with entrepreneurs, investors, lawyers, developers, designers, data analysts, journalists, public workers and researchers residing and working in Silicon Valley. It is interesting that the meetings proposed by people working in tech conform to strict time standards: 15, 30 or 60 minutes. This way of doing things reveals the orientation of sociability modes in the region: techies are indeed looking to expand their network and to select opportunities at the same time based on a strict and commonly known set of conventions, despite an expanding flow of newcomers.

SILICON VALLEY AS AN EVOLVING WORLD

Silicon Valley is known as an industrial district specialized in the production of new technologies. In this sense, from a sociological perspective it can be described as a "world", that is to say a network of interacting people making, supporting and distributing goods on a regular basis (Becker 1982). However, the world of Silicon Valley has the particularity of being fed by an expanding population flow, with crisis cycles and demographic contractions every ten years.

Since the first hobbyist clubs created there in the 1910s around a shared passion for radio (Lécuyer 2005), the Valley has experienced a demographic surge, interrupted by crises. Plus, the demographics reveal regular worker turnover. Before World War II, the Peninsula was home to only a few tens of thousands of engineers and technicians, mainly in Santa Clara County. It represented a technological employment pool five or six times smaller than the Boston area in the 1950s (Saxenian 1994: 2). Between 1975 and 1990, the number of jobs in the area grew three times as much as in Boston's Route 128 district. In 1992, there were 56,724 jobs in computer and data processing services, 45,590 in computer and office equipment, 26,297 in electronic computers, 16,105 in computer programming services, and 15,247 in pre-packaged software, mainly in Santa Clara County (Scott 2001: 139). Between 1990 and 2000, an average of 2,100 new technology companies were created every year (Zhang 2003). Three million people were employed in new technologies before the Covid pandemic (Lehman-Frisch 2019). Although the media employ homogeneous labels such as "tech workers" and "techies" (formerly "dotcomers" or "IT guys"), the population working in tech is actually quite heterogeneous, whatever the criteria used to analyze it (activity, standard of living, etc.): entrepreneurs, investors, lawyers, accountants, data analysts, designers, developers, product managers, sellers, customer support, PR and human resources people, service and gig workers, ranging from billionaires to people living near the poverty line. Yet, in the interviews and day-to-day observations, people act as if they are part of a professional

system in which interactions can engender opportunities and career evolution.

Since the 1970s, Silicon Valley has been seen as a job-hoppers' bastion, both for people regularly moving from one company to another and for a growing number of entrepreneurs from all over the world seeking financing. At the turn of the 2000s, the most sought-after venture capitalists reported receiving two hundred project applications and funding requests per month, about 2,500 per year (Ferrary 2001). In the mid-2010s, they were receiving about 100 requests a day, a four- or five-fold increase over 15 years. In the 2010s, the proportion of tech workers in the San Francisco workforce grew by one percent per year, a figure that concerns contractors, skilled tech workers, and hired service personnel. These workers come not only from the USA, but also and mostly from other countries: mainly from China, India, Europe. Moreover, business failure is particularly high: the various sources consulted indicate a mortality rate for companies of 50 per cent to 92 per cent after 5 years of activity. Among our respondents alone, one third of workers had left the region after 5 years. Silicon Valley workers must therefore manage human flows and professional opportunities. This flow management also extends to capital and information (Castells 1998), since techies are at the heart of an information ecosystem. Finally fully one third of venture capital in the United States is invested in the area.

Professionals perceive this influx of people, capital and information as potential "opportunities", in the economic sense of the term. Like the Wall Street traders studied by Abolafia in the 1980s, they try to optimize this flow, and draw benefits from it, through a centrality position in a growing chain of information (Abolafia 2001). However, like traders, techies have to sort and select a limited number of apparatus and investment options from this growing flow.

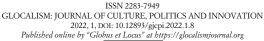## SORTING AND SELECTING OPPORTUNITIES LOCALLY

Indeed Silicon Valley professionals leverage three types of selections: geographic, organizational and technological. Regarding

these three dimensions, techies adopt a mode of representation and social strategies that intermix holistic philosophies and social Darwinism.

What's good here is that you're in a sector with this social Darwinist aspect, but we know that those who succeed could have failed. So you are part of this ecosystem. When you fail, you are part of the cells that failed, but you still belong to the system. So you can go on; you can go back; if you've sacrificed for the system, we're going to help you; if you've succeeded, you give back... Luck is a huge factor. In 2000, I had the vision of Facebook. But because I didn't meet the right persons, I didn't make it. I didn't take the chance to the end, because the secretary told me "Sorry, [x] can't see you". The guys who succeed, they are perseverant, for sure, but also lucky (interview with a serial entrepreneur and investor, in Silicon Valley since 1998).

From a geographical perspective, the inertia of "big players" and the entry strategies of "new players" fuel the physical elasticity and hierarchies within the region. On either side of the urbanized spine which is Caltrain and the 101 road, tech companies have spread out from the historic south to the north: San Jose (Intel founded in 1968), Palo Alto (PayPal in 1998), Redwood City (Oracle in 1977), San Mateo (YouTube in 2005), and so on, all the way to San Francisco where the latest wave of big companies (Twitter, Uber, Airbnb, etc.) is located. As a result, the industrial momentum internally feeds processes of both ascendancy and decline. At a time when the north of Silicon Valley became a rallying point for technological entrepreneurship in the 2010s, media investors such as Peter Thiel and Danny Rimer were pointing to the emergence of an IT "rust belt" in the south, the historical cradle of regional activity: "The closer you get to San Jose, the more of a Rust Belt it has become" (Rimer 2013). In addition to the question of where they want to be geographically based, workers need to decide into what type and size of organization they should move. Out of a total of 14,500 companies, a large majority employ fewer than 10 people; smaller proportions have less than 50 employees, or between 50 and 300, or between 300 and 1,000; only a handful employ more than 1,000. Employees of the "digital giants" capture most of the media attention even though they represent less

Tab. 1. *Breakdown of Silicon Valley new technology companies according to workforce size*

EMPLOYEES	COMPANIES
1-10	4,338
11-50	4,931
51-100	1,318
101-250	801
251-500	358
501-1,000	267
1,001-5,000	177
5,001-10,000	76
10,000+	105
NA's	2,197
Total	14,568

Source: Crunchbase.

than 10 per cent of jobs in the region. An overwhelming majority of the companies in Silicon Valley exist in relative anonymity from which only a breakthrough (usage boom, fundraising, buyout, IPO, etc.) is likely to release them. For the others, visibility is driven by work, networking, tweets, blogs, posts, and almost daily presence at events organized in companies or universities, with the aim of attracting the attention of investors and technology journalists. Whether they are entrepreneurs or employees, professionals have to arbitrate between these different options: working for a small startup with large (but uncertain) profit potential, or opting for an established company that will impose severe activity constraints and limited profits.

The selection imperative also involves deciding which technology category to promote. If a generation of new technologies builds on previous ones (Rieder 2020), these then tend to be relegated in the specialized media, the minds of investors, and the socio-economic space of Silicon Valley – even if they are still used and in fact crucial for the ecosystem. During the 2010s, venture capitalists' portfolio strategies lent high priority to artificial intelligence solutions, but low priority to hardware. Some sectors offer more financing opportunities, software for example, but these are also more competitive and more open to internationalization than a sub-sector such as energy. For

professionals, it is therefore a matter of selecting specialization categories and assessing the investment/potential success ratio which varies depending on the technological categories being considered: advertising, social media, fintech, edtech or agritech. Technologies are also the source of implicit and explicit hierarchies. Highly technical profiles, including software engineers, backend developers and data analysts, are the most in demand on the job market and are offered higher salaries than frontend developers and designers. Moreover, DevOp salaries vary depending on the contract (employee/contractor/gig worker), the company or the programming language skills, ranging from JavaScript ($80,000 on average per year for a first job) to C++ ($110,000 for an equivalent grade). At the same time, the average annual income of entrepreneurs is around $50,000 in a region where the costs of living, housing and schooling are at an all-time high in the United States (a household with two children and an income of $80,000 is considered to be living below the poverty line!).

Workers therefore try to sort and select options at three levels: they choose geographic sub-areas perceived as more promising and less pricy, types of companies by weighing potential gains and risks of loss, and technological sub-sectors that present different expectations and timeframes for profits. To do so, they must deal with two contradictory orientations: on the one hand, they seek to increase their number of encounters and interactions in order to broaden the spectrum of their opportunities; on the other hand, they are obliged to select limited options, because they cannot make an effective and lasting commitment to every opportunity. In order to do these two things in parallel, they work to build up, measure and evaluate "culture" as a variable.

CULTURE AS A VARIABLE

Professionals in the region try to increase the flow of opportunities while making choices within a territory that is unique in that half its population is foreign (Saxenian 2006). Newcomers frequently praise the quality of their welcome, and

indeed the welcoming process goes beyond the stereotype of the "cookie plate" offered to new neighbors. As part of this welcome, professionals help newcomers understand the conventions they must adopt in order to integrate successfully the so-called "ecosystem". And they do so in a free and seemingly disinterested manner, while in fact the diffusion of this culture densifies the influx of people, capital and information and thus their opportunity flow. The attention paid to conventions and their respect provides them with indicators that make selection process easier.

In a region where one in three people used to work in the tech sector at the end of the 2010s, openness and a sense of welcome are cardinal values. Workers say they are part of a "community". A European entrepreneur praises the quality and the welcoming effort that is a standard for tech workers:

I live in Palo Alto. It's still a place that is used to welcoming people. New people are really welcomed... the neighbors come with a plate of cookies, the neighbors block the street on Sunday so that everyone meets. My daughter at Palo Alto public high school made paintings with the kids in the corner so that they eat with her... It's really nice (interview with an entrepreneur, in Silicon Valley for 5 years).

The community spirit is based on a series of factors: being part of the same technology production industry, similar migratory paths, access to a social ascension movement, shared suffering associated with geographical remoteness from home countries and relatives, the wealth gap between tech workers and people in other sectors in the region, civility of proximity, tolerance spirit, ease of meeting people, and the endless search for new collaborations. Foreign techies having experienced religious or sexual discrimination and even acts of violence in other parts of the world frequently declare that they value the spirit of inclusion, tolerance and multiculturalism (Kymlicka 1995) found in Silicon Valley.

Here it's very easy to be a foreigner. You don't care what color your passport is; you don't care what color your skin is. It's easier to be black or Muslim here than in London or Paris; it's easier to be gay than in the rest of the country. Tolerance is even sometimes a bit rigid

in its implementation. But that's good. As for feminism. Companies like Google are pushing these causes (interview with a former executive, in Silicon Valley since 1984).

Far from the aggressiveness of Wall Street and City traders (Abolafia 2001), the values of openness and empathy are defended and promoted, even in the managerial recommendations of large companies. Internally, Google has highlighted studies revealing the higher productivity of teams with a larger proportion of women and workers from "minorities", and it praised empathy in management guide.

While minority expression is celebrated, ostentatious signs of wealth are uncommon and socially sanctioned. The menus of local restaurants where investors and entrepreneurs meet remains unsophisticated and moderately priced; sandals and cargo shorts have become the signature of renowned entrepreneurs such as M. Zuckerberg (CEO of Facebook), R. Hoffman (co-founder of LinkedIn) and P. Graham (co-founder of Y Combinator). Palo Alto's homes are still of the same standard as the rest of the country, even though immensely rich people such as Steve Jobs, Mark Zuckerberg and Jan Koum (co-founder of WhatsApp) have lived there.

This partial concealment of outward signs of wealth can be seen as a desire to preserve harmony in a social world marked by asymmetry of success and differences in origin and migratory paths. In a detailed, scholar book about Silicon Valley, C. Lécuyer recalls how wage differentials weakened team cohesion and led to costly departures during the 1940s and 1950s from companies whose development depended on highly qualified workers, before management schemes such as stock options were developed (Lécuyer 2005: chap. 5).

This concern for blurring differences also favors collaboration both within and between companies (Saxenian 1994). Newcomers and visiting observers are regularly struck by the openness and collaborative practices in comparison to other technological hotbeds, such as Boston or major European cities, which, according to respondents, are still marked by a so-called "classic" business culture. Collaboration engenders greater dynamism and reactivity than in other industries, while

establishing partnerships with the latter, notably with two districts often presented as rivals: Wall Street (Hwang 2020) and Hollywood (Scott 2006). Geographer Allen J. Scott refers to Silicon Valley as a "locational cluster": the comparative advantages in terms of collaboration potential favors local productivity and global integration into a broader exchange system (Scott 1995). This argument echoes the work of A. Marshall who presented inter-organizational collaboration as the main factor of dynamism in the cutlery industry in Sheffield and the metal industry in Birmingham (Marshall 1879).
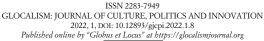
While this valorization of collaboration is classic, the question of socialization of workers to this collaborative culture remains relatively enigmatic. It appears all the more remarkable that, unlike in other cities marked by pluralism such as Dubai (Le Renard 2021), the culture of Silicon Valley is characterized by a form of normative consistency. Several authors have underscored the cultural homogeneity of Silicon Valley (Saxenian 1994; Turner 2006; Marwick 2013). However, this culture is also typified and disseminated through books, conferences, courses, tweets, posts on blogs and social networks (Alexandre, Coavoux 2021). Sometimes identified with the Web 2.0 movement, this culture is found in Silicon Valley before and after the age of the blog. More generally, it consists in making explicit what is implicit in many social circles, codes that must be respected in order to fit in.

Indeed, a series of studies have highlighted the way in which access to social worlds by outside members is subject to high entry and information costs. The "etiquette" of the court of Louis XIV (Elias 2006), the "rules of the game" of the Parisian literary space of the mid-19th century (Bourdieu 1996), the "tricks of the trade" in social sciences (Becker 1998), the "laws of the street" of Chicago's South Side (Venkatesh 2008) and the manners of the "super rich" in the 16th *arrondissement* of Paris (Pinçon-Charlot, Pinçon 2007) constitutes the principles of what Georg Simmel called "secrecy societies" (Simmel 1906). The German sociologist emphasizes that secrecy has the effect of giving value to their content, that revelations of this secrecy tend to demonetize them and be perceived as a betrayal by the secrecy group's members. Simmel thus considers that there is a

fixed "quantum" of secrecy in every society. There is consequently an impetus to acquire the entry traits necessary to be fully accepted by others in a silent socialization process (Lahire 2002), partly naturalized, and controlled by insiders and gatekeepers. If the rules remain implicit in many socio-professional fields, it is because these secret social codes ensure the coherence and solidarity of social worlds from the external point of view, and they structure the hierarchies within them. Knowledge of the game rules is the condition for entry, maintenance and elevation within the milieu (Elias 2006), and for this reason it constitutes a capital to be preserved, sometimes fiercely. In Silicon Valley, the rules of the game are the object of a collective communication and transmission effort, apparently free and disinterested. Table 2 provides both a summary and an example of how a set of basic principles is presented, spread and referred to as "Silicon Valley culture".

These conventions are based on practical knowledge of the world of work, validated by half a century of economic sociology studies, without the professionals in the sector ever referring to it or seeming to know it. The primacy of the strength of weak ties for finding a job (meaning that people find a job indirectly via a member of their network), is what makes networking the cardinal activity of Silicon Valley (Granovetter 1973). Selective pairing, or the tendency to peer-to-peer association on the basis of quality of work or equivalent level of recognition within systems of close collaborations such as a duo or trio of company co-founders (Jovanovic 1979), is an example. This eventually engenders a form of isomorphism whereby companies seek to imbibe the values of their reference sector (Hannan Freeman 1988). These different elements constitute the "Silicon Valley culture",which professionals sees as variables, understood as a fixed and objectifiable entities. As in the North American sociology of the 1950s and 1960s, this "variables paradigm" or "language of variables" (Abbott 1991: 215), through the analysis of causality based on the examination of the relations of dependence between variables, confers a "scientific" dimension to particular, reductive and fixist divisions of the social world. The "Silicon Valley culture" is presented as universal

Tab. 2. *Silicon Valley Culture*

BE ON TIME	People don't know much about you, if anything at all. To mitigate this issue, they will use any signals to hint something about you. And people are hungry for signals. Late? In one fell swoop, you are sending three messages: 1) *You are not organized*. Would you do business with messy people? And don't pretend the traffic was awful on the 101. Of course, it was. Use Waze! 2) *You don't respect me*. "Sorry, my previous meeting was longer than expected". Which *actually* means: "You probably have a meeting right after me, but I don't care about *your* schedule". Not appreciated. 3) *I can't trust you*. When we scheduled the appointment, we had a deal. You just broke it.
SAME-DAY EMAIL	Signals: *You are on top of things*; *you are fast*. And that's good. What the senders had to say matters to you. You gave them a *feeling of importance*.
INTRO	An introduction should be a *win-win* for all parties, the "introducer" (the nodes of a social network have value) as well as the "introduced parties" (successful people can only afford to exchange some of their limited time for value). You *cannot compel* someone to make an introduction, or to be introduced to someone else. It is counter-productive (you may bring *pain* instead of *value*).
COMMUNICATION RULES	People have very limited time. Your communication must be succinct (3 points, 5 lines max), crystal-clear (no PhD in philosophy required to understand you), and precise (data). A 3-bullet email rule (Michael Seibel): What do you do? (2 lines) Why is it exciting? (2 lines) What do you want? (1 line)
POTLACH	This is the essence of Silicon Valley's culture. It means that if you do something good, something good will happen to you. It's the foundation of the *Pay-It-Forward* attitude. It translates into this question that everyone you see for the first time will ask: "How Can I Help You?"
TEMPORAL FRAME	15/30/60. The difference lies in the substance of the item(s) to be discussed. If things and decisions can be wrapped up in 30 minutes, why should you request (and block) a 1-hour slot in the other person's agenda? If you request a "30-minute meeting", you show that you presumably *know* how the system *works*. You earn free points.
LANGUAGE	An accent is OK. Not speaking English is not OK. To thrive, you must be able to express yourself properly, with nuance and accuracy. Improving your English must be a priority from Day 1. Otherwise, you *will* face discrimination at some point of your journey (pretty quickly actually).
DATA	Nothing is better, clearer, more objective and comparable than data.
STORYTELLING	The most effective way to engage with people and raise awareness. Way to sell. A good story connects your point to something bigger. Could be a mission, could be an emotion, could be a journey. But whatever it may be, it must engage the other person. A story is a well-designed script. It is a missile with a precise target.

Source: Romain Serman, *Silicon Valley Etiquette*, Manners Matter Blog, 3 October 2016.

and rational by tech workers because they seek to develop integration. To do so, they decontextualize certain features of an object (meaning here cultural traits of newcomers), reduce historicity and diversity to measurable, comparable, and assessable indicators (Fabiani 2003).

Indeed, the explicitness and publicity of conventions offer a practical, cognitive resource for professionals in the region. As can be seen from table 2, the publicized principles tend to optimize the procedural efficiency of collaborations within an open professional group whose coherence is based on a common adherence to technological entrepreneurship: time savings, symmetry of communication formalism, attachment to objectification, role of data, emotional rhetoric based on chiseled life stories, etc. Professionals do not seem to consider them as secrets to be kept but as work conventions, understood in the sense given to this term by Howard Becker, i.e., rules that govern professional practices and that must be "known by all or almost all" within a collaborative production unit or social world (Becker 1982: 66). At the same time, professionals pay particular attention to how these conventions are, or are not, respected by the potential collaborators they encounter. At the most general level of analysis, as formalized by the economist Frank Knight in his book *Risk, Uncertainty and Profit* (Knight 2009), this attention corresponds to an evaluation process aimed at reducing the uncertainty surrounding the quality of a potential associate. Due to high personnel turnover and the influx of newcomers, they cannot use the indices commonly employed in social universes, such as reputation (Becker 1982: chapter 11). They therefore consider the formal respect of conventions as a quality indicator of the impetus insofar as it reflects different properties: seriousness, rigor, speed of understanding, etc.

In doing so, established professionals adopt two seemingly contradictory practices. First, they spend a significant amount of their time on blogs, conferences, and speeches delivering "Silicon Valley secrets" in a seemingly disinterested manner, in accordance with Web 2.0 principles. They thereby contribute to lowering the cost of information and socialization for newcomers. In parallel, they work to select partners and collaborators to maintain a preferential place in the production chain and maximize their chances of success. Publicizing agreements increases the volume of opportunities; evaluating compliance with these agreements is a rational way of deciding with whom to associate.

They contribute to the epistemological unity of Silicon Valley marked by metrological realism. The common denominator in Silicon Valley is indeed the belief in the ability of data to represent a reality. Professionals do seek the "right numbers". French sociologist A. Desrosières noted that this attitude is in the tradition of the "realistic metrological model of the natural sciences. Reality exists prior to its observation, just as the North Star existed long before all astronomers" (Desrosières 2001). In Silicon Valley, professionals tend to relegate constructivist epistemologies, starting with those conveyed by social sciences, and to exclude conventionalist systems of representations, which constitutes a paradox in a universe where the production of conventions is a central activity. The constructivist taboo in Silicon Valley states the strength of the historical mission that workers collectively recognize: to establish universalist means of communication, information, and organization.

The stability of the consensus surrounding its moral status transcends the incessant wrangling, controversy, and value conflicts about what separates good and evil (tech, companies, people, information, etc.) in the region. Indeed, the density of moral oppositions within Silicon Valley, between technologies (good tech/bad tech) or between companies (good company/bad company, dark startup/white startup), is transcended by a logic of temporal threshold between what is (bad) and what is to come (good). This temporalization of moral boundaries confers a virtue and justifies the pursuit of solutions that seem outside this universe as inconceivable, incongruous or immoral, such as colonization of Mars, asteroid ore extraction, death of death, or more prosaically work automation, data management tools, performance measurement instruments, and so on.

Transhumanism is not debated here. Problems that humanity has solved with religion or politics. Here we're tackling them with technology, and I have the impression that there is no debate about it. […] The other day, I was with a guy I really like and he said: I can't wait to have my brain in the cloud. And the guy was serious. It wasn't a provocation (interview with an entrepreneur, in Silicon Valley since 2014).

The universal dimension of this "Silicon Valley culture", even as labor conventions, constitutes the lowest common denominator of the cosmopolitan population of workers. The universalization of the notion of "community" illustrates particularly the ambiguities of this local production system going global: the community is a privileged form of social organization within Silicon Valley (Turner 2006). The production of services with a global vocation tends to spread these formats whose practical meaning is understandable from a particular local context. The architecture of LinkedIn, for example, provides some features well beyond those of Silicon Valley users, yet based on their practices: "recommendations", "celebrations", "connections" to develop one's network, "sharing" publications, and more. All of these are professional conventions in force in the region. More generally, the architecture of the various social networks that have emerged (LinkedIn, Facebook, Twitter, Snapchat, Instagram, etc.) enforce ways of communication that respond to local motivations with universal pretensions: make encounters easier, make weak and ephemeral links predominant, see other people as opportunities, while at the same time facilitating selections via recommendations and validation by peers.

CONCLUSION

Silicon Valley is a local industry promoting services, products, and values through them at global scale and with universal ambition. In this process, the "culture" of the region plays a determining role. Silicon Valley professionals must resolve the tension between the needs for integration and selection. They seek to increase the flow of information, capital, and people while expanding their spectrum of opportunities. They work to identify, objectify, and disseminate the work conventions that are most likely to favor the integration of new population flows, in order to increase the volume of opportunities. They use the term "culture" to designate a set of variables whose communication allows newcomers from other states or countries to adapt effectively and quickly to a previously unknown and changing

social world and technological environment. Integrated professionals seek to provide the communicative means for these outsiders, with their heterogeneous ways of doing things, to integrate them quickly and effectively. They therefore work in a way that make "culture" an explicit product, a set of stable, communicable, and measurable conventions. In this perspective, new technologies are not a central element of culture, but an end in itself. The paradoxical character of Silicon Valley, both supportive and selective, based on integration and selection, corresponds to a system of collectivization of immaterial resources and individualization of material resources. A limited series of principles ensures the coherence of an unstable and heterogeneous social whole. If Silicon Valley can thus operate as a factor of cultural homogenization, it is because of the embedding of some of the local cultural properties in the services promoted on an international scale. Silicon Valley thus represents both a space of integration that favors Durkheimian forms of solidarity based on an increasing division of labor, and a space of selection characterized by a form of social Darwinism that justifies competition and selection effects. The products and services tend to spread this universalist "culture" beyond the frontiers of the region with technologies. In doing this, professionals dialecticize the contradictory relationship between flows and territory, which lies at the heart of the conflicting processes of globalization.

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