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- Convincing work in 'Silicon Valley'

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ABSTRACT

This article argues against Castells' (1996) assertion that the space of flows has taken over from the flow of places. The major logic behind the diffusion of knowledge in business clusters around the world is still one of place. In other words, networks based on physical proximity have a quality so far unmatched by networks based on technological mediation (especially Internet-based). Theoretically, the study instead chooses to reframe the perspectives of authors like Sennet (1998), Shapin (1998) and Saxenian (1994) to return to the category of place. Using the stories of 4 knowledge workers in Silicon Valley, the article shows how day-to-day business not only is based on tacit knowledge, but also is crucial to the formation of strategic agendas. These agendas are culturally prepared in Silicon Valley; an environment where business is conducted both day and night. The San Francisco "dot-com" party culture was a powerful site for some of the interviews. In the Internet economy, strategy is a day-to-day issue. The author spent one year in Silicon Valley and its environs, did more than 30 interviews and met with around 100 knowledge workers. The empirical material supports the thesis that place still is a powerful variable that explains regional variation in business life and efficiency, and spells out a theory of convincing work.

INTRODUCTION

Many look to California these days. Trends, lifestyle, business, culture, or recreation – California seems have an answer to it all. According to Michael Lewis in his best-selling book *The new new thing: a Silicon Valley story*, that came out in the spring of 2000, what happens in Silicon Valley is at the core of the American experience.

Even though Silicon Valley has been a media phenomenon since the mid 1980s, the end of the 1990s proved more intense, more glorious, and moved Silicon Valley into the moving and shaking of mainstream America. After years of recognition in the software industry, in special interest publications, famous business press case studies like the story of Hewlett-Packard, and a couple of regional innovation studies, now Silicon Valley has caught the interest of the general public. High tech has finally become a topic for journalism, there's books written about the dot-com lifestyle and boom-times, and there's the sense that the Goldrush is back. Business writers, journalists, historians and sociologists are drawn to Silicon Valley as their laboratory of preference. A recent article in *The Economist* reads "today's sharpest intellectuals are fascinated by Silicon Valley for the same reason that thinkers early in this century were intrigued by Henry Ford: the smell of huge amounts of money made in new ways".¹

Silicon Valley attracts entrepreneurs from around the world, and calls for an astounding number of software engineers and other types of skilled workforce. And people come from everywhere, though most significantly from Asia, to be part of the adventure. The Valley is the battlefield where everyone wants to be. It connects the other places, providing money, markets and management for the so-called "New Economy" – the economy of intangibles.

The New Economy is among the most hyped-up phenomena there is. In the *New Rules for the New Economy*, a Business Week best seller from 1998, former Wired editor Kevin Kelly writes:

"This new economy has three distinguishing characteristics. It is global. It favours intangible things – ideas, information, and relationships. And it is intensely interlinked. These three attributes produce a new type of marketplace and society, one that is rooted in ubiquitous electronic networks" (Kelly, 1998:2).

Not only is society new, and rooted in electronic networks, it might be the only thing that counts, according to Kelly. Towards the end of the book he writes: "the future of technology is networks. Networks large, deep, and wide" (p.160). Among his 10 radical strategies for a connected world, one is particularly interesting. Rule number 7: "From places to spaces: As physical proximity (place) is replaced by multiple interactions with anything, anytime, anywhere (space), the opportunities for intermediaries, middlemen, and mid-size niches expand greatly" (p.161).

¹ The Economist, October 30th, 1999:28.

The New Economy is a most ironic phenomenon. An economy where digital connections seem to bind everything together, but where the non-digital realities of day-to-day business bring people to one magic place – Silicon Valley. For, in fact, regardless of what draws them here, ambition, money, or the pursuit of happiness, an impressive number of people move to California to "be a part of it all". But in the Internet age, where work could be done "anywhere, anytime" as the Wireless Industry, helped by visionaries like Kevin Kelly are trying to tell us, why would there be such need to relocate? Is not the smell of money possible to recreate elsewhere?

The New Economy's visible presence in Silicon Valley, and adjacent areas, seems to be a contradiction in terms. Precisely for this reason, Silicon Valley provides excellent opportunities for research. What is a better place to question the thesis that powerful places are not so important anymore, that the globalising forces of the New Economy pushes what we would call disembodied knowledge, through networks that travel freely between places? This will be our task in the following.

PLACE VERSUS HYPERSPACE IN THE NEW ECONOMY

A lot has been written about Silicon Valley (Borsook, 2000; Hiltzik, 1999; Kaplan, 1999; Kelly, 1998; Lewis, 2000; Stross, 2000). However, Saxenian (1994) and Castells (1996) cover the main points.

Manuel Castells (1996:423) defines place as "a locale whose form, function and meaning are self-contained within the boundaries of physical contiguity". In his framework this means place is locked into local considerations and held together by a closely-knit culture. To him this means that place is a local category and belongs to the native experience - a sort of self-contained consideration, but nevertheless impossible to escape if locked into it. Castells says space is the concern of the elite, while the overwhelming majority of people live in places. This gives rise to his enthusiasm for Cisco and other high tech firms' computers-to-the poor programs.

Castells' opus magnum on the Network society "spatial proximity is a necessary condition for the existence of such milieux [of innovation]" (Castells, 1996:390), and "social networks...[ensured] the communication of ideas, the circulation of labour, and the cross-fertilization of technological innovation and business entrepreneurialism". In his later works, however, the integrity of a place is questioned. His approach has turned completely structuralist, and the space of flows rules the terrain. Thus, his real agenda is the following:

"our society is constructed around flows: flows of capital, flows of information, flows of technology, flows of organisational interaction, flows of images, sounds, and symbols. Flows are not just one element of the social organization: they are the expression of processes *dominating* our economic, political, and symbolic life" (Castells, 1996:412).

The space of flows consists of three material layers: a circuit of electronic impulses (like Internet), nodes and hubs (like Silicon Valley), and the spatial organisation of the dominant, managerial elite (continually unifying its symbolic environments, such as VIP lounges etc).

While space is the logic of high tech, Castells still admits that "the space of flows is made up of personal micro-networks that project their interests in functional macro-networks throughout the global set of interactions in the space of flows" (p.416). These macro networks are, to Castells, what really matters. In a more recent examination of the issue, Castells (2000:12) states: "The work process is interconnected between firms, regions, and countries, in a stepped up spatial division of labour, in which networks of locations are more important than the hierarchy of places". The space of flows, then, refers to the "technological and organizational possibility of organizing the simultaneity of social practices without geographical contiguity" (Castells 2000:14).

The other important student of the Silicon Valley phenomenon is Annalee Saxenian. Her major explanation for Silicon Valley's regional advantage is, in contrast to Castells, the close relationship between Stanford University and the local culture. Stanford was, and is, far more deeply integrated into regional surroundings than MIT, the comparable university in the Boston area. Stanford promotes collaborative relationships between small firms, and MIT orients itself towards Washington. Silicon Valley developed a distinct technical language, while Route 128 did not. Silicon Valley has an unusual spirit of co-operation in the electronics industry. Silicon's law firms knew venture capitalists and set up lunches for their engineer clients (Saxenian, 1994:41). There is a clear preference for local suppliers. Silicon Valley is where the "HP way" originated, a culture with little hierarchy and symbolic power trips, and based on teamwork and Management by walking around (MBWA). "This is a culture in which people talk to their competitors" (Saxenian, 1994:33). In addition, moving from job to job was seen as ok. In such an environment there was the shared understanding that everyone could be an entrepreneur, even reflected in the physical office and lab facilities. There is impermanence in the air, and in the buildings, around the facilities – they are ready to change (Saxenian, 1994:5).

If we take a closer look at these points, we find that most of them deal with the notion of culture as a shared identity. The Valley started out as a close-knit community where everyone saw that helping the other guy was beneficial to both parties. We also see that the Valley culture evolved through a series of success stories (Fairchild semiconductors, HP) that all had mythical elements. To Saxenian, Silicon Valley was built by people who disagreed about the way business was done on the East coast, who were motivated by creating something new, not by stimulating status quo. In addition, she points out the pragmatic element: "when things are right down the street, decisions get made quickly" "the most strategic relationships are often local because of the importance of timeliness and face-to-face communication for rapid product development" (p.5). Another place she states: "Geographic proximity

promotes the repeated interaction and mutual trust needed to sustain collaboration” (p.161).

The term Silicon Valley referred to what journalist Don Hoefler in 1971 observed as a tightly knit semiconductor community. “They eat at the same restaurants, drink at the same bars, and go to the same parties. Despite their fierce competition during business hours, away from the office they remain the greatest friends” (Saxenian, 1994:32, quoting Hoefler). The article that Hoefler wrote for a local publication got the mythology of the Valley going. Since then, even places like lunch joints and diners have become famous. The Wagon Wheel Bar in Mountain View is legendary for the exchange of both ideas and gossip (both of which are fundamental to the high tech innovation). Buck’s cafe in Woodside, according to Silicon Valley mythology, is where all the venture capitalists hang out for lunch. This, of course, makes sense since they are all located nearby.

The focus on mythological social hang-outs as a key ingredient to Silicon Valley business life has got a life of its own and is no longer an accurate account of how business is carried out. The places are more secluded now, there are many more choices on where to go, and the community is not as tied together as it used to. However, the venture capital community on Sand Hill Road in Palo Alto still defines the rules of the game. Home of giants like Kleiner Perkins and newcomer Benchmark capital (who backed eBay and Webvan), the Sand Hill crowd share boards and trade notes. Word spreads quickly in what Randall Stross in his book *eBoys* calls “the incestuous world of the venture guys” (Stross, 2000:12).

Saxenian does not claim “business is local” in a general sense. She does not say that there could be no innovation outside of geographically close-knit environments. Her argument only sharpens the attention to what a successful collaborating community means to the type of interaction (commercial or not) that takes place. And, she shows how this community is embedded in the way Silicon Valley works even when the larger international network is moving closer and closer because of the global aspects of the high-tech marketplace. In short, what matters is not geographical proximity per se, but how it is used.

Other contributions share Saxenian's basic perspective, albeit with different emphasis. Shapin (1998), Sennet (1998) and Locke (2000) also share the theme of the power of place. Their gut feeling is the same. While Shapin argues that transactions between places is valid for scientific inquiry, he states that no place is the same, nor can it recreate what has travelled to another place, even if it applies to standardised artefacts like a thermometer, or a book, or a map. It means something different because meaning is inscribed both in human beings and artefacts. The interaction of those two will always produce different interpretations. Where Saxenian argues that knowledge passes freely in Silicon Valley, but travels inside the hierarchy of Boston 128, she is essentially saying that place is something you create, something precious, a fragile thing. When Sennet points out how “portable social skills” is threatening to ruin the lives of knowledge workers in urban areas he is talking about the inherent quality of

social places, and how they differ from networking arenas. Finally, when Locke looks at the Internet he not only shows what is really going on, he also states that there is a "there". The Internet is a place, too. With all that entails.

Not only is the Internet a place, but knowledge work needs a place to unfold. In *The Corrosion of Character* Richard Sennet (1998) warns of the corrosive effects of a nomadic attitude to life, a life where moral value has no place. He has observed New York media people network, socialise and transfer the latest "buzz" both day and night. He calls their virtue "portable social skills", and states that this is alarming. Sennet, however, makes no secret about the importance of place in his argument. In one sense, he is concerned that place, which we could read into his concept of moral value, is disappearing. Conversely, we find that work, in his view, increasingly occurs everywhere, but certainly not anywhere. The locations where "buzz" occurs are few, and you have to be there. Locations change, but at one point in time they are certainly only present in one place. There, Sennet (1998) seems to argue that the shift to space, not place, as the interesting variable, is a process that will take longer time than Castells (1996) envisions and maybe even meet with strict cultural constraints.

In a stimulating article entitled "Real work in the virtual organisation", Tolmie et al (1999) show that the virtual claims are by no means settled. In their ethnomethodological study of the work of middle managers in a major UK retail bank, they found that managers favour face-to-face-interaction to update them, instruct them, or advice them (Tolmie et al, 1999:4). This indicates that an activity like monitoring is incidental to other activities and cannot be planned. The kinds of competencies performed in co-present indication rely upon social, interactional items such as how to tell a story, how to get attention, how to handle topic changes in a conversation etc. Tolmie et al (1999) finds that the shared relevance produced by such co-present behaviour are hard to reproduce virtually, and most likely will remain so. Thus, it is important to remember that the case study from Silicon Valley involves even more knowledge intensive endeavours than managerial and customer work. Here, what is at stake is a type of knowledge work practice that involves establishing a vision, a team and a board of advisors, in short, a start-up team where shared meanings are established *for the first time*.

Previous research in the sociology of science, as Shapin (1998) argues, has touched on the place issue. But where his approach points to the embodiment of knowledge, it fails to account for the places that these bodies occupy. The reason is an exaggerated interest in the portable artefacts, or the interaction between humans and portable artefacts, forgetting the non-portable properties of a place. Some of which is physical, such as climate, local scenery, be it vineyards or redwoods, some of which is cultural, such as the shared identity of a tribe, or an outcast, or an avant-garde. The interaction of all these elements is what constitutes the phenomenology of place. A place, then is a potential, but not a given, where the aim is to turn an encounter-space into a meeting-place. To find and build relationships. Not with "portable social skills" as Sennet (1998) has observed in New York City, but lasting community, and trust-based relations, developed through time and with place making in mind. It may

indeed be true of all humans, what Virginia Woolf wrote about women: we need a room of our own, or at least the faith that we can have it.

That science, or science-based innovation, owes anything to geographic sensibilities is somewhat of a "remarkable circumstance" (Shapin, 1998:5). Arguing the sacred nature of specific places is usually a topic dear to geographers, whose "spatial or local ... perspective on the natural sciences seems most difficult to sustain" (op.cit: 5), Shapin supports the case for place and the meaning of what he calls "scientific travels". If there is something science has been trying to avoid, he says, it is to let the idiosyncrasies of place explain different scientific trajectories taken by scientists in other nations or regions. If anything, this is why the "laboratory" and its "scientific conditions" are such a big deal in scientific methodology, distinguishing scientific from folkloristic, ideological from rational explanation.

But as the sociology of science has shown, through the works of Knorr-Cetina (1999), Latour (1987), Collins (1999) and others, the laboratory never was an objective playground. Indeed, to Shapin, these approaches show the local, situated and embedded nature of science: "that is to say ... that scientific knowledge is embodied, residing in people and in such material objects as books and instruments, and nowhere else, and that scientific knowledge is made by and through mundane – and locally varying – modes of social and cultural interaction" (op.cit: 6). The challenge, in Shapin's opinion, is to take the geographical sensibility still further, not only to understand how knowledge is made in specific places but also how transactions occur between places (op.cit: 7).

Shapin (1998) gives the example of Latour's concept of scientific travel. Latour, another prominent sociologist of science, shows that knowledge and technique travel insofar as they are institutionalised and standardised. The graph, the map and the book represent one set of vehicles for the efficient translation of relatively unmodified knowledge from place to place, the thermometer another. Instruments, when successful, take on a "life of their own", when they become recognised and "objective" measures. But the problem is that they represent different things in different locales. Such as how 10 degrees Celsius means decent Spring temperature to an inhabitant of coastal Norway, and "freezing cold" to someone from Southern California. Then there is the wind factor, the difference between dry and wet climate and the like. But a glance in the morning paper, whether in Saint Petersburg, Paris or Tokyo, reveals that the measure from a standardised thermometer still is the international way of giving people an idea of what the weather is like.

How is it possible to be one place, and influence the course of events in another? Latour (1987) says this about action at a distance: "how to act at a distance on unfamiliar events, places, and people? Answer: by somehow bringing home these events places, and people. How can this be achieved, since they are distant? By inventing means that (a) render them mobile so that they can be brought back; (b) keep them stable so that they can be moved back and forth without additional distortion, corruption, or decay, and (c) are combinable so that whatever stuff they are

made of, they can be cumulated, aggregated, or shuffled like a pack of cards. If those conditions are met, then a small provincial town, or an obscure laboratory, or a puny little company in a garage, that were at first as weak as any other place will become centres dominating at a distance many other places" (Latour, 1987:223). This is another way to understand the Silicon Valley phenomenon.

To sum up, the literature review lets us choose between the following assumptions:

- Place has lost its importance
- Place is ever more important

The second choice has two major tenets, firstly, the focus on place as a sort of moral anchorage, and secondly, that place and physical co-presence is necessary in the long run, both for innovation and well being.

The first assumption is supported by Castells (1996), who sees the power of place as fading because of the increasingly influential space of flows between major nodes in the network, such as the financial centres of megacities.

The second assumption is supported by Sennet (1998). To him, there is no such thing as innovation when the very foundations of society are shaken in a nomadic, restless status-game with no morals, no conviction, and ultimately, no character.

The other aspect of this could be analysed, looking to Latour (1987), Locke (2000), Saxenian (1994), and Shapin (1998). Their observations on the culture of Silicon Valley insist on the meaning of place and actions directly related to physical places. The sociologists of science (Latour, 1987; Shapin, 1998) watch the place-game from a theoretical stance, and argue the possibility of action at a distance. In their view, the laboratory is a place, not a space, but the possible importance of a particular lab is decided by the configuration of events mobilising, stabilising and combining the efforts of people and things in many places.

FIELDWORK

The problem facing us, in short, is to see whether space or place explains most of the variation in knowledge work practice observed across cities and regions. The case chosen was Silicon Valley, and its environs. Instead of focusing on global information flows like Castells (1996) does, or neatly comparing the "inside" of two innovative regions, like Saxenian (1994), I chose to look at insider/outsider dimensions in Silicon Valley reality. For this reason, the fieldwork had to allow for the interpretation of borderline phenomena, like knowledge immigrants, as well as innovation-based distinctions within Northern California.

To observe the inside of the Californian knowledge worker culture, I used ethnographic methods like participant observation (taking classes in entrepreneurship, going to one-day courses for start-ups, fairs, exhibitions etc.). I also did interviews

(with start-ups, venture capitalists, dot.coms, Human Resource Managers etc.). A major rule for all my work was to focus on things that only could be accomplished on site (not virtually, or from Europe). Thus I spent a lot of time "hanging out" in and around knowledge intensive environments. Apart from the interviews I made company visits both formally and informally, and I talked to workers also outside of the regular work context, a distinction I came to believe had no real meaning. I also took courses at Berkeley, talked to top faculty and students, and used the impressive library. The Berkeley environment is an integral part of "growing up digital" and has a profound impact on the possible impressions that give rise to entrepreneurial and academic aspirations.

Fieldwork also meant to "feel the culture", to go out, to approach venture capitalists, to work in Silicon Valley (I did some sporadic management consulting for a major hardware company). In short, I gained the totality of impressions from California: weather, networks, information flows, tech updates, and social life. One fascinating arena was dot-com parties and mixers, a recent phenomena in San Francisco where the young, single, urban part of the New Economy labour force get together for free beer and a snack, and some networking.

The companies I met with were The Design Company, Guru.com, Armada Global, Futureperf, Postcommunications, Scanaccelerator, Razorfish, Cisco, Berkeley Incubator, 3220 Sacramento Street, Formfactor, Campsix, Picostar, Santa Clara Software Business Incubator and It's-quick. In addition I talked to three venture capitalists and one angel investor (individual investors, who often are former entrepreneurs who invest "for fun"). In addition, I have met with around 100 software programmers, engineers, entrepreneurs and commentators on a more informal basis throughout the year. They were important to fill out the picture, to know that my observations were right on track, and that my case studies would cover the relevant issues. The major part of the work was accomplished during an academic stay as visiting research associate at UC Berkeley, California in 1999-2000.

In the following I will present my findings using four stories. This is done because I needed to highlight the power of place problem from cultural, physical, and epistemological angles. The choice of these, and not other parts of my field notes, is purely strategic in nature. I do not claim this angle represents Silicon Valley in any comprehensive way. On the other hand, I have picked stories that allow us to see issues around knowledge work that are seldom explored.

STORIES

The power of place is fragile; it has to be recreated every time. Place making occurs in face-to-face encounters, and is what knowledge workers in Silicon Valley do when they work. Now we will take a look at 4 stories that point to the fragility of place in, and around Silicon Valley. In contrast to Saxenian (1994) we will focus more on the place making at the rim of Silicon Valley, in adjacent areas like San Francisco,

Concord, Berkeley, and Livermore. These cities are part of the greater Bay-area. An outsider might think location within Northern California did not matter, but as we will see, this is not the case.

Silicon Valley consists of people with a certain mindset – goal-getters and high achievers with one thing else in common – the passion for technology. It has been said a lot of people who come to work in the morning believing that they work for Silicon Valley (Saxenian, 1994:37). In the following, we will take a closer look at what this means in the year 2000; well over 10 years after Saxenian did her fieldwork.

Every morning, the Silicon Valley worker logs on to the company Intranet, checks his email accounts (all integrated into one account), checks headlines on the major online newspapers, sends an email to the manager saying he is online. From this time on, ironically, time ceases to exist. Online reality has begun, a continuous process of events start occurring, ending only when the computer is turned off, or the doors closed and the worker is back in his bed. The virtual impressions overwhelms every knowledge worker to the extent that there is nothing outside the corporate network if he works in a large firm, or outside the entrepreneurial reality if he works for a start-up. His life consists in furthering the world of high tech, which incidentally has become the world of everyone in Silicon Valley, from dot-com children to homeless people competing for people's attention with low tech means, but technological pace. A knowledge worker's job is to make sure that Silicon Valley continues, that the industry blossoms, and that his firm is at the forefront of global technological discovery.

Workers of Silicon Valley spend their time, energy and effort in a constant interplay of spaces, mostly Internet-enabled. In fact, their time is lived through their screen. This is where they plan their meetings, get their instructions, send out their initiatives, organise meetings, and do a lot of their collaboration. In a way, it would seem they are entangled in technology to the extent that their own selves become immersed in the whole machinery that constitutes the network of events in Silicon Valley.

Given this technology empowered workplace reality, could we then automatically assume that their work is entirely given by the space of flows? In the following, we will take a look at work in the Internet age with the lens that ethnographic snapshots provide.

ROBERT'S STORY: BUILDING A CORRIDOR TO SILICON VALLEY

Robert Lattimore is President of Contra Costa Software Business Incubator in Concord, California. He helps an average of 21 firms who at any time are located in his incubator with strategy, financing and building a business culture. He is, according to himself, a "heavy lifter".

"There are some basic rules of the road [Sand Hill Road]. There are heavy lifters and light lifters. The heavy lifters want to build companies; they want to be part of the

whole process, from strategy to building a team and a business culture. This is the traditional Silicon Valley model. There's the sense that you have to have companies you can get to. Just get in the car and be there before lunchtime. The light lifters are the typical Wall Street guys. They just put in their money and let the spreadsheets do their job. They take no interest in the company as such".

Robert is fully aware of how local Silicon Valley innovation is. Concord is a city about 65 miles from Sand Hill Road in Palo Alto, home of the big and strong Venture capital firms. The most striking phenomenon of Silicon Valley is how everyone lets the venture capitalists rule the scene. They dictate the way people talk to each other. They decide who gets to go and who does not. They are allowed all sorts of liberties. VCs are nowadays the only visible group that sets the Valley apart from other innovative environments. No other region has so much capital and so many experienced investors on such a small place.

"Convincing them to get in the car and drive up to Concord is not easy. They just want to stay where they are. Most VCs have a limit of 50 miles distance to the firm they invest in"

The 50 miles limit reoccurs in most of my interviews with venture guys. It seems to be an established rule of thumb that things work this way.

The Silicon Valley model has its origins around Fairchild semiconductors, founded in 1957. This marks the birth of professional venture capital. A quite peculiar crowd of former engineers, occasionally scientists, with operative experience in high tech. The Valley model originally only had "heavy lifters" who took companies seriously, who looked after them, spent time on nurturing and growing them. Nowadays they work in teams where each of them have different sets of skills, "one might be a software guru, another a communications specialist, a third a networker who loves to go to cocktail parties and who knows all VCs in the Valley", according to Faruq Ahmad, venture capitalist at Charter Ventures Capital in Palo Alto. "Most VCs are not financial experts, he says, "and softer skills are becoming more important". The most important skill is to be able to build a team through tough times, although he admits: "ideally I want to visit the company, drink and give away smiles".

Now, the power of place and proximity as an enabler of communication is nothing new. It is striking, however, that a city like Concord, California is at the border of Silicon Valley and "the rest of the world", and clearly on the outside of that border, as well. Until the early 1990s there was only apple trees and peaches out there, but now the urban development has come a long way. Real estate is exploding, and everyone is acquiring property to be ahead of time, waiting for the boom to come, also out here. According to Robert Lattimore, there's an East Bay corridor in the making. An area adjacent to Silicon Valley where a gentler, more pleasant environment gives room to a different approach to business.

"It gives space to build a company culture without the pressure of the Valley model. But on the other hand, gatekeepers control destiny. The three-M's as I call them; money, management and markets all have their gatekeepers. Because of the 50 miles Venture line the East Bay corridor is clearly a disadvantage for money. But for angel investors the scene is a bit different. The "925 investors" (925 is the area code to most of the East Bay) are more experienced and more willing to put in the time to grow companies than before. For pre-seed and seed stage funding they are ok for most start-up companies. They often have links into major Venture guys, so that the next phase of funding happens" (Robert Lattimore).

Angel investors are interesting. Really, the common denominator of business angels is that they are individuals with money to invest, and with variable experience, often from high tech. Often they are former entrepreneurs, CEOs, consultants, between 40 and 55 years old, or just older people than your average "high tech crowd". Recently, as Lattimore points out, the angel scene looks more interesting. The angels in the Bay-area (the larger area around San Francisco Bay) are more organised and have more experience than ever. Some even invest as a group, and discuss investments on a weekly basis. One of these is the Angelsforum in Palo Alto (www.angelsforum.org).

Being at the border of Silicon Valley is sometimes a challenge: "Finding enough senior managers is a problem everywhere, but has almost become a competitive advantage out here, as more experienced older entrepreneurs are moving out here to live. But this is only recently. As for markets, it's almost impossible to grow a global company in the East Bay yet. There's not enough big companies around that lead the way, that drive the networks necessary for a global presence". Clearly, Lattimore is sensitive to the power of place, having worked for IBM as well as for a venture firm in Silicon Valley in previous jobs. To him the challenge becomes to exploit the advantages a Concord location can give.

DAN'S STORY: "RUNNING BERKELEY BUSINESS LIKE A SWEATSHOP"

Incubator inc. in Berkeley is a small building not very far from the university campus. The boss, Dan Worley, works hard for his companies. He calls it a "sweatshop approach". He has close relations with university graduates, and knows a lot of venture capitalists. Dan has spent a lot of time at Berkeley. A graduate of Haas School of Business at Berkeley, he says professors now pass him most of his deal-flow. His relations are mostly to the Computer and Information Science and Business departments. Dan enjoys working with students, spends a lot of time speaking at student events, in fact he was just there last week. 10% of his profits are donated back to the university. Dan works with 4 new teams every year, has an average of 7 deals a year, while the average company stays 6 months. "My place is like an old sweat gym", he says, "it consists of very much day-to-day work". And what does he do? He gives every-day attention to his companies, takes care of the space, handles some of

the customer relations, and looks for "bridge" financing. "We [incubators] are a funnel for VCs. The angels [angel investors] do it to spread risk".

One of Dan's companies is GetOutdoors.com, a portal for bicycles, boats and other outdoor products. The young entrepreneurs wanted to finance their venture with banner advertising, and direct retail. Since they came, Dan has suggested several strategic changes to their business concept. Now they are "the CNET of the outdoors" (CNET is the major portal for technology products, with the proud proclamation: "the source of computers and technology"). GetOutdoors.com now has "everything needed to go outdoors", and a completely refurbished business model. They no longer aim to take on the whole logistic processes of existing retailers but to act more as a middleman.

Watching for strategic change on a day to day basis, is part of the job. Taking care of whatever the business needs at the time, whether a small or large thing. Dan has good relations with Berkeley lawyers. "A lawyer is a gateway to investors and all sorts of clients", he explains. In fact, so important are these relations that you can not be without them. You have to be part of the buzz, "always be out there, attend plenty of forums, for example join the Fast Company of friends [a social club for magazine readers]. But about the traditional hangout – pubs, he says, "nobody has time". "I tend to go to the more structured events, like SDF Development Forum. Then there are the watering holes, for instance Bucks' cafe in Woodside.

Dan Worley provides a service that is place-bound. He spends most of his time on the phone trying to get venture capitalists interested in his companies, in meeting with these venture guys, or in strategy sessions with his companies. He would not dream of doing this elsewhere. This is where he knows his way around. This is where he has his contacts. Berkeley is his playground, his little place in the New Economy. It is a niche few can beat right now. Berkeley is small. You can get to most parts of the town without entering one of the many highways that penetrate the outskirts of the city. The proximity combined with a complex cultural environment of shared understanding dating back to the 1960s, in this case, provides an emotional glue, but is situated in pragmatic decisions about efficiency. Berkeley is a particular place. The atmosphere of the 1960s is still very much present. People are "alternative" in outlook, but business still goes on after some rhetoric precaution. Somehow the "Stanford complex" (that they envy their bigger brother across the bay) means a sense of togetherness, even between business and creative types.

Everyone else is in Silicon Valley or in the City (San Francisco). But being in Berkeley also has its disadvantages. He mostly works with Berkeley-affiliated people. He has to convince the venture capitalists to get in the car and cross the Bay Bridge.

Dan chose Berkeley as a niche because it was not taken, but also because he had the competitive advantage. He knows the place. His dense network of high tech and other types of knowledge workers (lawyers, investors, and advisors) are crucial to day-to-day strategic issues. The strategic elements that previously were shaped in long

processes of interaction between many organisational units is quickly established and re-established within New Economy, or Internet businesses. Business models change overnight, investments change the course of events, and rumours are a source of business.

To Dan, place definitely has not lost its relevance. Rather, place intensifies market relations that are crucial to the survival of a business, even a global one. Part of the reason, is that the Silicon Valley environs, has a density of suppliers unmatched by other regions, part of it is the 'stimuli' given by the surrounding support for business thinking. Sennets (1998) concern about the moral order formed our second assumption. Dan's culture entails no corrosion of moral character, if not the corrosion of family life. His life is entirely entangled in business, and there is no time for other concerns. On the other hand, the moral corrosion Sennet is afraid of lies in a loosening of social ties also among the workers. Dan's incubator seems close-knit and is built on community values from the local Berkeley environment.

NIKO'S STORY: "RELATIONSHIPS AT THE BORDERS OF SILICON VALLEY"

Saxenian (1994) pointed out the significance of the close relations between Californian universities and the high tech industry. In the following we will illustrate such a relationship, and how it can unfold.

This is the story of Niko, but we will begin with Homa. Homa Bahrami is a professor at Haas School of Business at Berkeley. In her course "Managing high tech knowledge workers" she has some real life business cases. There is also a group project with a major high tech start-up. In the spring of 2000 it was Formfactor. This start-up makes silicon wafers, a hardware product. They flag their ambition of 'connecting the semiconductor industry' through their patented Microspring technology. FormFactor, Inc. was founded in 1993 with the vision of revolutionising semiconductor test and electronic system packaging and assembly. FormFactor's Microspring™ contact technology solves fundamental problems limiting the performance and manufacturability of electronic products.

The group's contact with Formfactor started out with a presentation with the C.E.O., a question-and-answer session, some advice were given from students in the group, on-site visits followed, and in the end the group had presentations for the whole executive team. Niko, 27, is in charge of the overall strategic comments. He is German, insightful, and pleasant.

Then the ball starts rolling. Formfactor sees Niko as a possible employee. He goes to a couple of lunches and presents his ideas. He is hired after a few weeks. Then another student, Martin, cuts a deal with Formfactor. He starts working for them part-time. After a month I get involved. I go to several strategy sessions, providing advice on how to proceed with the company. In all of this, I suddenly realise an important

detail. Homa, our professor, is a business advisor to Formfactor. One thing leads to another.

The physical presence of Formfactor is important. Located in Livermore, an hour and a half from the City, or from Silicon Valley, they are outside of the main action. University relations then become crucial for hiring the best people. Berkeley is the closest university, but even so, the hour-or-so drive into the mainland of California is a little over average. Formfactor claims they have "out-of-the-box" thinking as an advantage, and that most of their employees do not like the City, or would not like to work in Silicon Valley. "We are a different kind of company", they claim with as much pride as everyone else does here in California. But is it possible that business culture changes with the environment?

STACEY'S STORY: "THE ROOFTOP CULTURE OF SAN FRANCISCO"

Stacey Foreman is chief of staff at the Industrial Standard, a newsmagazine of the Internet economy founded in 1998 by former Wired editor John Battelle. Targeted at the senior managers, who are into Internet strategy, or "e-strategists", the magazine attempts to provide the cultural glue to the main technology industry at any time. At this time this is the Internet business, but as Stacy Foreman says, "we are not tied to a certain technology, if the industry changes, we change". The Standard has in a short time established itself as the most serious Internet watchdog, both offline through the weekly 244 page magazine Industry Standard, and through their website www.thestandard.com – which also provides advanced research content as a separate service. To the editors of The Standard, the Internet is a business story, not a technology platform. "Internet was an industry that never had a touchstone", Stacey explains. But Standard has ambitions way outside covering a story. They want to become the main media for Internet strategy and knowledge sharing. For this, they need to become the most attractive brand for young people in the Internet generation (those born into the Internet related industry). Typical for the New Economy in San Francisco is that lifestyle is part of the work-place mindset. Companies are "fun", they allow employees to be relaxed again, after stress at home, maybe a little careless sometimes, but certainly try to make their workers "liberated" and excited.

"I'm passionate about the culture we've created. We have a chef onsite, we do kayaking with staff, we throw parties, and we have a masseuse and a free Monday morning breakfast. It's been exciting to see this grow from 3 to 360 on staff in only two and a half years".

Typical of an Internet company, they try to create an active and pulsating atmosphere around work. This is work inspired by passion. And ignited by the influx of young workers, many in their early twenties. In fact, available statistics show around 40 000 San Franciscans are employed in the digital economy, and around the same number commute to the city every day to take part in the show. Even given this input, Industrial Standard is extreme. Their focus on building an Internet culture is striking,

and really evident in the phenomenon called Rooftop party, the coolest networking event for Internet insiders in San Francisco, according to sources:

"We think of the Standard as a news participation magazine, not a watching one. We want to engage the people who are driving it. When we started our rooftop parties in 1998, it was to celebrate each new issue, and the party was a perk to our staff. It was a weekly hangout, an after-week happy hour. I recall our first Rooftop on April 27th 1998 we had 40 staff that each brought six invites that they thought were "right" for this event. It was an immediate success. Soon advertisers started calling and said, "I have to sponsor your party". Now people are calling me every day saying how can I get on the list? There are lines outside our doors, I have a database of invites, and we have 40 parties a year and 4-8 large offsite parties with 1000 people. It quickly became an arena for non-agenda networking, and now we have added a conference division".

Through the local virtual grapevine, the craigslist (www.craigslist.com), or the urban girly website SF girl.com, the young crowd of dot-comers can browse through the latest party buzz, or comment on last week's parties. These parties range from small invite-only gigs, to large raves, but never change their fundamental ingredients – free drinks and free networking.

Stacey Foreman is at the epicentre of the dot-com phenomenon. Her Rooftop parties are the most popular networking events in the city of San Francisco. This is not something you can take part in virtually; you have got to be there. I went, I saw, I was amazed. At first, I was shocked by the very casual nature of the party. Then by the discovery that "networking" occurred naturally, it was not forced. It had entered their cultural system, I am sure. The kind of conversations I overheard was casually interwoven interchanges of flirt, flings and technological frenzy. A lot of technical knowledge was assumed, even among strangers. A film director I met said: "I was convinced to come by my friend who works for an Internet company, but I almost did not come, because I thought I would be the only non dot-com here". And she was right. The outsiders were not there, but 1200 other young, urban, hip ones did not mind. As Sonya Prubotok of Campsix complains, or merely explains, I am not quite sure: "It is hard to find friends who don't work in dotcoms. We all do right now". Well, from a city of 1 million people this is hard to believe. Actually, media reports there is around 40 000. Rather we have to conclude this is a close-knit cultural environment.

The Rooftop culture has emerged because the knowledge workers of the Internet economy now reach a critical mass stage. They are visible in a city otherwise known for its gay and lesbian presence, artistic endeavours, and a thriving cultural intelligentsia. In short, they use the power of place to their own advantage, taking hold on the urban presence.

Now, what does this story tell us about the theoretical assumptions we started out with? From Stacey's story we can infer that place has not lost its relevance to the

Internet generation. We can also question whether Sennet's (1998) New York, with 'buzz' and corrosion of character, is true in San Francisco. It seems that networking in Northern California occurs in a different way. Here is more "we" and less "them", less distinctions and more community, reflecting Saxenian's (1994) previous observations about a culture of shared identity. To the third assumption, that physical co-presence might be necessary in the long run, we have to leave that one open. In the meantime, we conclude that co-presence leads to a transmission of social cues, jobs, gigs, relationships, and community-spirit to a degree unforetold in the visionary speak of cybertarians, be they Casells (1996) or Kelly (1998).

CONVINCING WORK

Robert, Stacey, Niko and Dan are not made-up characters. Their experience is typical for Silicon Valley. Robert shows us how the gatekeeper relations keeps Concord, 75 miles from Sand Hill Road, out of focus for the main "Venture Guys". Stacey is part of the larger cultural glue that San Francisco provides to the dot-coms. Her Rooftop parties are renowned throughout the city. They are the place to be and be seen. But also a place where business is going on. The story of Niko shows how one thing leads to another in the complex interchange of ideas, favours and projects – if you are the right person at the right time, *and at the right place*. Dan reminds us that working with start-ups is a physical process. His "sweatshop" approach to build companies is brash, American coach capitalism. But as for football practice, you have got to show up. No virtual work here.

Both incubator examples (Dan and Robert) illustrate the pragmatics of place for start-ups that need care and advice 24 hours a day 7 days a week. Their companies become different than the core Silicon Valley companies. This shows that in a very real sense, high tech work takes a place to unfold.

Together, these examples provide a window of opportunity. To understand the culture of circulation, the exchange of ideas, people, leads, projects, money and capital in a mixture of advanced capitalism and barter economy. Clearly, the one type of exchange could not exist without the other. The powerful pragmatics of place is a compound of the need for speed and for place making. Characteristic for Silicon Valley is pragmatic, quick decisions about capital investments with huge impact on the lives of many. But for this to happen, a lot of work has been carried out beforehand. Most entrepreneurs have learnt the lesson. It is all about drawing enough attention to your project, so that the best people can start working on it. Essentially, it is about what we call convincing-work and place making.

Convincing-work characterises what formerly was labelled knowledge work. But knowledge is such a broad term, and says nothing about the process in which work is conducted. Convincing work puts the emphasis on the action going on. Nothing gets done if you do not convince your team, your manager, your C.E.O., your customer, your venture capitalist, your media, and many others. Place-making, as we know, is

about making places, whether they be markets, work-places, regions, or face-to-face encounters, happen for ideas, concepts, projects and start-ups. No other place in the world is as good for those activities as Silicon Valley and the surrounding areas. But like volcanos, the further from the epicentre, the lower the heat.

Through the stories of Robert, Stacey, Niko and Dan we see the powerful pragmatics of place. Robert is a middle-aged incubator president in Concord, Stacey chief of staff at the Industry Standard - newsmagazine of the Internet economy in San Francisco, Niko is a German visiting researcher and Dan is in charge of Berkeley incubator. These are all people whose lives are heavily involved in Silicon Valley high tech. So involved that it is hard to imagine they could do anything else, anywhere else. They become embedded in their own place of work, regardless of their international links, their use of the Internet, their mobile phones, and their nomadic aspirations. For this reason, their inputs are crucial to understand the social and cultural context of knowledge work.

Together they illustrate the place-bound logic of innovation. Robert and Dan try to build companies, need to physically see them, and spend most of their day trying to get venture capitalists and customers to face-to-face meetings with these companies. Stacey works with a young, urban, party-loving networking crowd. Her rooftop parties are an essential part of keeping The Standard oriented, and positioned, in the industry.

Niko and Homa show us how physical co-presence and close links between high tech firm Formfactor and Berkeley University pushes interaction, and leads to complex sharing relationships. Just like other human relationships, one thing leads to another when you start interacting more closely.

Some of the lessons we can draw from our study are as follows: The Internet is a great nomadic work tool but has little business effect on virtual collaboration in the early phases of product development, or when starting up a new venture. While the examples given above are not the best to illustrate this, the trouble with virtual work was confirmed throughout my interviews. Again, this is among high-tech executives, who you would think would be the ones to make their own technology work. In another article I have spelled out this argument as "what the Net can't do!"

It is not true that the network society is about space, not place. Castells (1996) exaggerates the disembodiment of global business. Probably he would come to the same conclusion if he started doing interviews instead of looking at statistics of major global information flows. That these flows increase is true, but this fact provides no reliable measure for the experience of day-to-day business.

Contrary to the structuralist view, knowledge is embodied (Collins, 1999; Latour, 1987; Lie and Sørensen, 1996). It is socially generated through interaction in places where knowledge workers meet. In other words, the cultures of knowledge creation are no different than other cultures in that they are essentially social, not technical, or uniquely mediated through technology at a distance.

To sum up, (a) knowledge workers are social when they work (they want to work together, even if technology makes virtual work "possible"). (b) Socialising is working (networking events blur the boundaries between social time and work time). This is the aspect that Sennet is against, because he feels the "portable social skills" encouraged in such an environment take away from real relationships. People are pragmatic, lazy, laid-back, prefer "hot media" (talking, touching). (c) Knowledge workers are social even when they are off work. They want to hang out together. The Rooftop parties, dot-com mixers, launch events, cocktails, as well as the party listings on Craigslist.com (a privately driven online community for SF), www.sfgirl.com, and www.webgrrls.com is evidence of this. (d) Knowledge must be interpreted to be used (Polyani-point). Knowledge is nothing as such. It is the generative mechanisms that are interesting (Latour, 1987:220). (e) Silicon Valley is a great example of a knowledge working culture that becomes introvert in perspective, even though they are open to let others in. The Valley sticks to its own, want to culturally mould everyone into its model. The Venture guys described by Stross (2000) are perfect examples.

Where Silicon Valley stands at the intersection of worlds, connecting people, places, and information flows, we can well talk of a space of flows in the Castellan (1996) sense. But this is not enough. At the very same time, Silicon Valley stands on its own as an institutionalised cultural logic of innovation held up by a configuration of knowledge workers. In this picture, place has not lost its importance. Neither has the moral character of community-spirit. Nor has the necessity of physical co-presence. Where the world systems theory-laden globalisation pushers end up in cyberspace and visionary glee, reality is well in place.

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