Peter Thiel's CS183: Startup - Class 2 Notes Essay

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Here is an essay version of my class notes from Class 2 of CS183: Startup. Errors and omissions are my own. Credit for good stuff is Peter's entirely.

CS183: Startup—Notes Essay—Party Like It's 1999?

I. Late to the Party

History is driven by each generation's experience. We are all born into a particular culture at a particular time. That culture is like an extended dinner conversation; lots of people are talking, some lightly, some angrily, some loudly, some in whispers. As soon as you're able, you listen in. You try to figure out what that conversation is about. Why are people happy? Why are they upset? Sometimes it's hard to figure out.

Take someone born in the late 1960s, for instance. There was a lot going on then, culturally. But a toddler in the late '60s, despite having technically lived through them, essentially missed the debates on civil rights, Vietnam, and what the U.S. was supposed to look like. The child, being more or less excluded from the dinner table, would later find it hard to get a sense of what those discussions were like.

There is a keen analogue between the cultural intensity of the '60s and the technological intensity of the 1990s. But today's college and perhaps even graduate students, like the toddler in 1969, may have been too young to have viscerally experienced what was going on back in 1999. To participate in the dinner table conversation—to be able to think and talk about businesses and startups today in 2012—we must get a handle on the history of the '90s. It is questionable whether one can really understand startups without, say, knowing about Webvan or recognizing the Pets.com mascot.

History is a strange thing in that it often turns out to be quite different than what people who lived through it thought it was. Even technology entrepreneurs of the '90s might have trouble piecing together that decade's events. And even if we look back at what actually happened, it's not easy to know why things happened as they did. All that's clear is that the '90s powerfully shaped the current landscape. So it's important to get as good a grasp on them as possible.

II. A Quick History of the 90s

Most of the 1990s was not the dot com bubble. Really, what might be called the mania started in September 1998 and lasted just 18 months. The rest of the decade was a messier, somewhat chaotic picture.

The 1990s could be said to have started in November of '89. The Berlin Wall came down. 2 months of pretty big euphoria followed. But it didn't last long. By early 1990, the U.S. found itself in a recession—the first one in post WWII history that was long and drawn out. Though it wasn't a terribly deep recession—it technically ended in March of '91—recovery was relatively slow. Manufacturing never fully rebounded. And even the shift to the service economy was protracted.

So from 1992 through the end of 1994, it still felt like the U.S. was mired in recession. Culturally, Nirvana, grunge, and heroin reflected increasingly acute senses of hopelessness and lack of faith in progress. Worry

about NAFTA and U.S. competitiveness vis-à-vis China and Mexico became near ubiquitous. The strong pessimistic undercurrent fueled Ross Perot's relatively successful third party presidential candidacy. George H.W. Bush became the only 1-term President in the last thirty years. Things didn't seem to be going right at all.

To be sure, technological development was going on in Silicon Valley. But it wasn't that prominent. Unlike today, the Stanford campus in the late 1980s felt quite disconnected with whatever tech was happening in the valley. At that time, Japan seemed to be winning the war on the semiconductor. The Internet had yet to take off. Focusing on tech was idiosyncratic. The industry felt small.

The Internet would change all that. Netscape, with its server-client model, is probably the company most responsible for starting the Internet. It was not the first group to think of a 2-way communications network between all computers; that honor goes to Xanadu, who developed that model in 1963. Xanadu's problem was that you needed everyone to adopt it at once for the network to work. They didn't, so it didn't. But it became a strange cult-like entity; despite never making any money, it kept attracting venture funding for something like 29 years, finally dying in 1992 when investors became irreversibly jaded.

So Netscape comes along in '93 and things start to take off. It was Netscape's IPO in August of 1995—over halfway through the decade!—that really made the larger public aware of the Internet. It was an unusual IPO because Netscape wasn't profitable at the time. They priced it at $14/share. Then they doubled it. On the first day of trading the share price doubled again. Within 5 months, Netscape stock was trading at $160/share—completely unprecedented growth for a non-profitable company.

The Netscape arc was reminiscent of Greek tragedy: a visionary founder, great vision, hubris, and an epic fall. An instance of Netscape's hubris had them traveling to the Redmond campus, triumphantly plastering Netscape posters everywhere. They poked the dragon in the eye; Bill Gates promptly ordered everyone at Microsoft to drop what they were doing and start working on the Internet. IE came out shortly after that and Netscape began rapidly losing market share. Netscape's saving grace was its legally valuable antitrust claims—probably the only reason that a company that never really made money was able to sell to AOL for over a billion dollars.

The first three years after Netscape's IPO were relatively quiet; by late 1998, the NASDAQ was at about 1400—just 400 points higher than it was in August '95. Yahoo went public in '96 at a $350M valuation, and Amazon followed in '97 at a $460M valuation. Skepticism abounded. People kept looking at earnings and revenues multiples and saying that these companies couldn't be that valuable, that they could never succeed.

This pessimism was probably appropriate, but misplaced. Things weren't going particularly well in the rest of the world. Alan Greenspan delivered his famous irrational exuberance speech in 1996—a full 3 years before the bubble actually hit and things got really crazy. But even if there was irrational exuberance in 1996, the U.S. was hardly in a position to do anything about it. 1997 saw the eruption of the East Asian financial crises in which some combination of crony capitalism and massive debt brought the Thai, Indonesian, South Korean, and Taiwanese (to name just a few) economies to their knees. China managed to avoid the brunt of the damage with tight capital controls. But then in 1998, the Ruble crisis hit Russia. These were unique animals in that usually, either banks go bust or your currency goes worthless. Here, we saw both. So your money was worthless, and the banks had none of it. Zero times zero is zero.

On the heels of the Russian crisis came the Long-Term Capital Management crisis; LTCM traded with enormous leverage ("picking up nickels in front of a bulldozer"), ultimately blew up, and but for a multibillion dollar bailout from the Fed, seemed poised to take down the entire U.S. economy with it. Things in Europe weren't all that much better. The Euro launched in January 1999, but optimism about it

was the exception, strong skepticism the norm. It proceeded to lose value immediately.

One way to think about the tech mania from March 1998 to September 2000, then, comes from this insight that pretty much everything else was going insanely wrong before that time. The technology bubble was an indirect proof; the old economy was proven not to work, as we could no longer compete with Mexico or China. Emerging markets were proven failures, rife with cronyism and mismanagement. Europe offered little hope. And no one wanted to invest with leverage after the LTCM disaster. So, by the late '90s, a process of elimination left only one good place to put money: in tech.

Of course, proof by contradiction is a dangerous way to draw conclusions. The world is not always a logical place. So even if something's not A, B, C, or D, it doesn't necessarily follow that the truth is E; the set may not be as simple as A thru E. But while that's important to flag, indirect proof seems to have some purchase here. There's still a sense in which tech worked, or was seen as working, because nothing else did, or was.

III. The Mania: September 1998 – March 2000

A. Mania Generally

The Mania started in September of '98. Probably the best way to convey just how crazy things got is to tell people crazy stories about how crazy things got. Any tech entrepreneur from that time necessarily has scores of pretty insane anecdotes to tell. Certain common themes will run through them all: the times were extremely social. People *were* irrationally exuberant. It felt like there was money everywhere… probably because there was. And there was no shortage of very sketchy people running around the valley.

Admittedly, these themes reflect fairly superficial impressions. But we shouldn't quickly dismiss them for that; quite often, the surface of things is actually the heart of things. So anecdotes that reflect the short-lived bubble zeitgeist, in addition to being kind of bizarre and fun, are worth thinking about.

And, again, there's no shortage of anecdotes. There were 40-year-old grad students at Stanford who were trying to start dozens of rather wacky companies. Now, usually being a forty-something graduate student means you've gone insane. And usually, trying to start several companies at once is seen as unwise. But in late 1998, many people believed that to be a winning combination.

There were brunches at Bucks and dinners at Il Fornaio. There were billionaires from Idaho flying in giving money to anyone with an idea and a polished pitch. Fairly broke entrepreneurs racked up thousand dollar dinner bills and tried to pay in shares of their companies. Sometimes that even worked. It's easy to look back and see a lot of ridiculousness. But it wasn't all fluff; a great deal of activity happened in these social contexts. Launch parties became so important that someone put together an exclusive e-mail list that published rankings of the various parties going on that day.

People began to say and do pretty crazy things. Many business models adopted some weird dynamic where the more you sold or did, the more money you'd lose. It was like an SNL skit; a customer deposits $100 in pennies at the bank, and the bank loses money because it costs them more to sort through everything than that deposit is worth. But while a bank would recognize that and stop, the dot coms would say, without irony, "It's okay… we'll make it up in volume." Irrationality was rational when simply adding ".com" after your name more or less doubled your value overnight.

Yahoo grew to replace Netscape as the most hubristic tech company. By '97 it was largest Internet company in Silicon Valley. Yahoo encouraged PayPal in 2000 to think carefully about *who* to sell the company to, because you needed to know that the buyer was sound in a stock-for-stock sale. Yahoo thought itself an attractive buyer because it would pay out in Yahoo stock, which, according to Yahoo at

the time, "always goes up."

Great fortunes made in those 18 months. Plenty were lost. In 1997, Larry Augustin was deciding whether to close up VA Linux. He chose not to. In 1999, VA Linux went public at $30/share. It quickly traded up to $300, earning it the distinction of being the stock that went up more than any other on the first day of trading, ever. Since Augistin owned 10% of the company, he was worth about a billion dollars by the end of the day. People were saying that sometimes, lightning does strike twice; Augustin had previously declined an offer to be the third employee at Yahoo, which, of course, would have made him billions as well. But the VA Linux story took a turn for the worse; 6 month later, by the end of the lock-up period, the stock lost 90% of value. Anyone who didn't sell took another 90% hit over the following 6 months. Augustin ended up with 5 or 6 million dollars, which is still a lot of money. But it's not a billion.

All the parties, money, and IPO success stories made for lots of sketchy businesses. Those businesses were funded by sketchy VCs and run by sketchy entrepreneur-salespeople. Since everybody was running around saying pretty crazy things, it became increasingly hard to tell who was too sketchy and who wasn't. To avoid being drawn in by slick salesmen, Max Levchin developed what he called the aura test: you listen to someone for 15 seconds and then decide if he has a good aura. If so, you continue to listen. If not, you walk away. It's not hard to imagine that companies who employed some version of the aura test were more likely to survive the mania than those who didn't.

B. PayPal Mania

Since PayPal only got started in December of '98—fairly late in the tech boom—one problem it faced was the high likelihood of hiring the sort of sketchy people that seemed to be proliferating. The founders agreed that PayPal could not afford to hire sketchy people. So they just hired their friends instead.

PayPal's original idea involved beaming money to people over Palm Pilots. It was voted one of the worst 10 business ideas of 1999, which is saying a lot. The initial business model was hardly better; there was a sense in which PayPal had to raise money so it could raise more money so it could then figure out what to do with all that money. And, oddly enough, it was possible to raise an angel round on that model; one archetypical angel investor, during a pitch over Chinese food at Town & Country in Palo Alto, was utterly unconcerned with what PayPal did. Rather, he wanted to know one thing: who else was investing. Later, he consulted the fortune cookie. It told him to invest.

Among the first big breaks was landing a $4.5M investment from Nokia ventures. The problem, though, was that mobile Internet didn't quite work yet. Good interfaces were years away, and integration with handsets seemed to take forever. Much to Nokia's surprise, PayPal announced a pivot at the first post-investment board meeting. The new idea was simple: an account-based system where you could send money to anyone with an e-mail address. It was a good idea, but it seemed too easy. Surely, serious competition had to be working on that, too. So 1999 became increasingly frantic, since people knew they had to move quickly or fail.

PayPal's big challenge was to get new customers. They tried advertising. It was too expensive. They tried BD deals with big banks. Bureaucratic hilarity ensued. The turning point was when Luke Nosek got a meeting with the chairman and top brass at HSBC in London. Several old school bankers crowded into a large wood paneled conference room. They had no idea what to make of these California startup guys talking about the Internet. They looked so dazed and confused that they very well could have been extras who knew nothing about payments and tech at all. Luke, despite being on a life-extension calorie restriction diet, found a Häagen-Dazs. And over ice cream, the PayPal team reached an important conclusion: BD didn't work. They needed organic, viral growth. They needed to give people money.

So that's what they did. New customers got $10 for signing up, and existing ones got $10 for referrals.

Growth went exponential, and PayPal wound up paying $20 for each new customer. It felt like things were working and not working at the same time; 7 to 10% daily growth and 100 million users was good. No revenues and an exponentially growing cost structure were not. Things felt a little unstable. PayPal needed buzz so it could raise more capital and continue on. (Ultimately, this worked out. That does not mean it's the best way to run a company. Indeed, it probably isn't.)

Feb 16, 2000 was a good day for PayPal; the Wall Street Journal ran a flattering piece that covered the company's exponential growth and gave it a very back of the envelope valuation of $500M. The next month, when PayPal raised another round of funding, the lead investor accepted the WSJ's Feb. 16 valuation as authoritative.

That March was thoroughly crazy. A South Korean firm that really wanted to invest called up PayPal's law firm to ask where they could wire funds to invest. It promptly wired $5M without signing any documents or negotiating a deal. The Koreans absolutely refused to say where PayPal could send the money back. The attitude was simple: "No. You have to take it." PayPal closed its $100M round on March 31st. The timing was fortunate, since after that everything sort of crashed. PayPal was left with the challenge of building a real business.

The transition from 1999 to 2000 was much like Prince predicted it would be in his song "1999" ("Cause they say 2,000 zero zero party over, oops! Out of time! So tonight I'm gonna party like it's 1999!"). Perhaps he was right for the wrong reasons; we shouldn't make too much of that. But it turned out quite prescient. A rolling wave of collapse struck; marketing-driven e-commerce companies failed in the first half of 2000, and B2B companies failed in the second. The telecoms followed in 2001. If you had to pick what sector of economy was at absolute lowest in March 2000, it might have been be military defense companies. The NASDAQ was soaring. No one believed there would ever be another war. But then things reversed. The military defense industry would rise for most of the next decade.

IV. Hubris and Schadenfreude

In the aftermath of 2001 and 2002, enormous amounts of hubris yielded to Shadenfreude. People insisted that "we were right all along," and became culturally and socially depressed.

PayPal would survive this shift, but it was clear that it was a whole new world. The company broke even in 2001. It was able to solve some tough fraud problems and get a handle on its customer service problems. When it filed for IPO in late September 2001, PayPal became the first company to file after 9/11. This time, some 20 months after the rosy WSJ article, another article came out. It was titled "Earth To Palo Alto." It began:

> What would you do with a 3-year-old company that has never turned an annual profit, is on track to lose a quarter billion dollars and whose recent SEC filings warn that its services might be used for money laundering and financial fraud?
>
> If you were the managers and venture capitalists behind Palo Alto's PayPal, you'd take it public. And that is what they hope to do in an $80 million offering that will test the limits of investor tolerance and financial market gullibility.

It didn't get much better. The U.S., it concluded, "needs [PayPal] as much as it does an anthrax epidemic."

V. Lessons Learned

A. By The World

The key takeaway for most people was that the tech explosion of the late '90s was all a bubble. A shift back to the real economy was needed. If the expression in the '90s was "bricks to clicks," the 2000s demanded a return from clicks back to bricks. People got into housing and emerging markets. High profile investors like Warren Buffet avoided tech stocks in favor of old economy ones. Profit alone mattered in evaluating businesses. Globalization was favored over technology. The general sense was that the dot com crash taught us that the future was fundamentally indeterminate. That all prophets are false prophets. That we shouldn't believe anything people tell us, ever.

The only problem with those lessons is that they're probably all wrong. At their core are complex, reactionary emotions; they're driven by hubris, envy, and resentment against the '90s generally. When base emotions are driving, analysis becomes untrustworthy.

The reality is that people were right about lots of things in the '90s. The indirect proof that judged tech to be king was not weakened by the excesses that would come. There *was* a problem with the Euro. There *were* problems with war, crony capitalism, and overleverage. Tech did not work perfectly, and insofar as it didn't protective reactions against the bubble may be justified. But March of 2000 wasn't just a peak of insanity. In some important ways, it was still a peak of clarity as well.

B. By Silicon Valley

People in Silicon Valley learned that you have to do things differently to survive in the Schadenfreude world. First, you had to believe and practice incrementalism. Grand visions and moving quickly fell out of favor.

Second, your startup had to be "lean." You should not, in fact, know what you're going to do. Instead, you should experiment, iterate, and figure it out as time goes on.

Third, you should have zero advertising spend. If your growth isn't viral, it's fake.

Fourth, anti-social was the new social. People wanted to withdraw into a new antisocial modality. Google is the iconic cultural version of this; a product for people who'd rather interact with computers than people.

Fifth, product needed elevation over business development. In 1999, smart non-engineers were doing BD. In 2001, they were doing product. In the '90s, iconic CEOs were salespeople. E.g. Larry Ellison. In the 2000s, iconic CEOs were product visionaries. E.g. Steve Jobs.

Sixth, rapid monetization was to be distrusted. Better is a more protracted growth phase and later IPO. If you have company that's growing relatively quickly, you should probably reinvest profits and make it grow even more quickly.

Finally—and this was the overarching theme—you shouldn't discuss the future. That will just make you look weird and crazy, and, well, you just shouldn't do it.

Overall, the post-mania was one big strategic retreat that incorporated all of these elements. Which elements are right and which are wrong a is complicated question. But it's a question worth asking. Certainly there were good reasons for the retreat. But in many aspects it was probably overblown. Some elements make sense; why IPO early in an environment that, all of a sudden, is hostile to high-growth tech stocks? But others are questionable, at least as ironclad rules; should you never advertise? Never do BD/sales? Are you sure we can't talk about the future? We should be open to idea that some or much of the retreat—however necessary it was generally—was overreaction.

VI. Bubbles

The big legacy question from the '90s is: are we in a tech bubble?

Many people say yes. The Richter Scales' "Here Comes Another Bubble Video" below, done in October 2007, is strikingly undated in how people are thinking about things today.

Now we're back to the dinner conversation that people are stuck in. There are lots of good questions to ask about the conversation. But the question of bubble vs. no bubble is not one of them. Indeed, that's the wrong question at this point. Sure, one can string together some random data points that suggest things are frothy. More people may be doing CS at Stanford now than back in '99. Valuations may be creeping up.

But some data points on some froth hardly shows that the bubble thesis is accurate. And the weight of the evidence suggests it's inaccurate. Bubbles arise when there is (1) widespread, intense belief that's (2) not true. But people don't really believe in anything in our society anymore. You can't have a bubble absent widespread, intense belief. The incredible narrative about a tech bubble comes from people who are *looking* for a bubble. That's more overreaction to the pain of the '90s than it is good analysis.

Antibubble type thinking is probably somewhat more true. In other words, it's probably better to insist that everything is going to work and that people should buy houses and tech stocks than it is to claim that there's a bubble. But we should resist that, too. For bubble and anti-bubble thinking are both wrong because they hold the truth is social. But if the herd isn't thinking at all, being contrarian—doing the opposite of the herd—is just as random and useless.

To understand businesses and startups in 2012, you have to do the *truly* contrarian thing: you have to think for yourself. The question of what is valuable is a much better question than debating bubble or no bubble. The value question gets better as it gets more specific: is company X valuable? Why? How should we figure that out? Those are the questions we need to ask. Next class, we'll look at how we might go about thinking about them.