**Lecture 3: Counterintuitive Parts of Startups, and How to Have Ideas**[Paul Graham](http://genius.com/artists/Paul-graham)

e of the advantages of having kids is that when you have to give advice to people you can ask yourself, "what would I tell my own kids?", and actually you'll find this really focuses you. So even though my kids are little, my two year old today, when asked what he'll be after two, said "a bat." The correct answer was three, but "a bat" is so much more interesting. So even though my kids are little, I already know what I would tell them about startups, if they were in college, so that is what I'm going to tell you. You're literally going to get what I would tell my own kids, since most of you are young enough to be my own kids.

Startups are very counterintuitive and I'm not sure exactly why. It could be simply because knowledge about them has not permeated our culture yet, but whatever the reason, this is an area where you cannot trust your intuition all the time. It's like skiing in that way - any of you guys learn to ski as adults? When you first try skiing and you want to slow down, your first impulse is to lean back, just like in everything else. But lean back on the skis and you fly down the hill out of control. So, as I learned, part of learning to ski is learning to suppress that impulse. Eventually you get new habits, but in the beginning there is this list of things you're trying to remember as you start down the hill: alternate feet, make s-turns, do not drag the inside foot, all this stuff.

Startups are as unnatural as skiing and there is a similar list of stuff you have to remember for startups. What I'm going to give you today is the beginning of the list, the list of the counterintuitive stuff you have to remember to prevent your existing instincts from leading you astray.

The first thing on it is the fact I just mentioned: startups are so weird that if you follow your instincts they will lead you astray. If you remember nothing more than that, when you're about to make a mistake, you can pause before making it. When I was running Y Combinator we used to joke that our function was to tell founders things they would ignore, and it's really true. Batch after batch the YC partners warned founders about mistakes they were about to make and the founders ignored them, and they came back a year later and said, "I wish we'd listened." But that dude is in their cap table and there is nothing they can do.

Q: Why do founders persistently ignore the partner’s advice?

A: That's the thing about counterintuitive ideas, they contradict your intuitions, they seem wrong, so of course your first impulse is to ignore them and, in fact, that's not just the curse of Y Combinator, but to some extent our raison d'être. You don't need people to give you advice that does not surprise you. If founders' existing intuition gave them the right answers, they would not need us. That's why there are a lot of ski instructors, and not many running instructors; you don't see those words together, "running instructor," as much as you see "ski instructor." It's because skiing is counterintuitive, sort of what YC is—business ski instructors—except you are going up slopes instead of down them, well ideally.

You can, however, trust your instincts about people. Your life so far hasn't been much like starting a startup, but all the interactions you've had with people are just like the interactions you have with people in the business world. In fact, one of the big mistakes that founders make is to not trust their intuition about people enough. They meet someone, who seems impressive, but about whom they feel some misgivings and then later when things blow up, they say, "You know I knew there was something wrong about that guy, but I ignored it because he seemed so impressive."

There is this specific sub-case in business, especially if you come from an engineering background, as I believe you all do. You think business is supposed to be this slightly distasteful thing. So when you meet people who seem smart, but somehow distasteful, you think, "Okay this must be normal for business," but it's not. Just pick people the way you would pick people if you were picking friends. This is one of those rare cases where it works to be self indulgent. Work with people you would generally like and respect and that you have known long enough to be sure about because there are a lot of people who are really good at seeming likable for a while. Just wait till your interests are opposed and then you’ll see.

The second counterintuitive point, this might come as a little bit of a disappointment, but what you need to succeed in a startup is not expertise in startups. That makes this class different from most other classes you take. You take a French class, at the end of it you've learned how to speech French. You do the work, you may not sound exactly like a French person, but pretty close, right? This class can teach you about startups, but that is not what you need to know. What you need to know to succeed in a startup is not expertise in startups, what you need is expertise in your own users.

Mark Zuckerberg did not succeed at Facebook because he was an expert in startups, he succeeded despite being a complete noob at startups; I mean Facebook was first incorporated as a Florida LLC. Even you guys know better than that. He succeeded despite being a complete noob at startups because he understood his users very well. Most of you don't know the mechanics of raising an angel round, right? If you feel bad about that, don't, because I can tell you Mark Zuckerberg probably doesn't know the mechanics of raising an angel round either; if he was even paying attention when Ron Conway wrote him the big check, he probably has forgotten about it by now.

In fact, I worry it's not merely unnecessary for people to learn in detail about the mechanics of starting a startup, but possibly somewhat dangerous because another characteristic mistake of young founders starting startups is to go through the motions of starting a startup. They come up with some plausible sounding idea, they raise funding to get a nice valuation, then the next step is they rent a nice office in SoMa and hire a bunch of their friends, until they gradually realize how completely fucked they are because while imitating all the outward forms of starting a startup, they have neglected the one thing that is actually essential, which is to make something people want. By the way that's the only use of that swear word, except for the initial one, that was involuntary and I did check with Sam if it would be okay; he said he had done it several times, I mean use the word.

We saw this happen so often, people going through the motion of starting a startup, that we made up a name for it: "Playing House." Eventually I realized why it was happening, the reason young founders go though the motions of starting a startup is because that is what they have been trained to do, their whole life, up to this point. Think about what it takes to get into college: extracurricular activities? Check. Even in college classes most of the work you do is as artificial as running laps, and I'm not attacking the educational system for being this way, inevitably the work that you do to learn something is going to have some amount of fakeness to it. And if you measure people’s performance they will inevitably exploit the difference to the degree that what you’re measuring is largely an artifact of the fakeness.

I confess that I did this myself in college; in fact, here is a useful tip on getting good grades. I found that in a lot of classes there might only be twenty or thirty ideas that had the right shape to make good exam questions. So the way I studied for exams in these classes was not to master the material in the class, but to try and figure out what the exam questions would be and work out the answers in advance. For me the test was not like, what my answers would be on my exam, for me the test was which of my exam questions would show up on the exam. So I would get my grade instantly, I would walk into the exam and look at the questions and see how many I got right, essentially. It works in a lot of classes, especially CS classes. I remember automata theory, there are only a few things that make sense to ask about automata theory.

So it's not surprising that after being effectively trained for their whole lives to play such games, young founders' first impulse on starting a startup is to find out what the tricks are for this new game. What are the extracurricular activities of startups, what are things I have to do? They always want to know, since apparently the measure of success for a startup is fundraising, another noob mistake. They always want to know, what are the tricks for convincing investors? And we have to tell them the best way to convince investors is to start a startup that is actually doing well, meaning growing fast, and then simply tell investors so.

Then they ask okay, so what are the tricks for growing fast, and this is exacerbated by the existence of this term, "Growth Hacks." Whenever you hear somebody talk about Growth Hacks, just mentally translate it in your mind to "bullshit," because what we tell them is the way to make your startup grow is to make something that users really love, and then tell them about it. So that's what you have to do: that's Growth Hacks right there.

So many of the conversations the YC partners have with the founders begin with the founders saying a sentence that begins with, "How do I," and the partners answering with a sentence that begins with, "Just." Why do they make things so complicated? The reason, I realized, after years of being puzzled by this, is they're looking for the trick, they've been trained to look for the trick.

So, this is the third counterintuitive thing to remember about startups: starting a startup is where gaming the system stops working. Gaming the system may continue to work, if you go to work for a big company, depending on how broken the company is, you may be able to succeed by sucking up to the right person; Giving the impression of productivity by sending emails late at night, or if you're smart enough changing the clock on your computer, cause who's going to check the headers, right? I like an audience I can tell jokes to and they laugh. Over in the business school: "headers?" Okay, God this thing is being recorded, I just realized that.

Alright for now on we are sticking strictly to the script. But, in startups, that does not work. There is no boss to trick, how can you trick people, when there is nobody to trick? There are only users and all users care about is whether your software does what they want, right? They're like sharks, sharks are too stupid to fool, you can't wave a red flag and fool it, it's like meat or no meat. You have to have what people want and you only prosper to the extent that you do. The dangerous thing is, especially for you guys, the dangerous thing is that faking does work to some extent with investors.

If you’re really good at knowing what you’re talking about, you can fool investors, for one, maybe two rounds of funding, but it's not in your interest to do. I mean, you're all doing this for equity, you're puling a confidence trick on yourself. Wasting your own time, because the startup is doomed and all you’re doing is wasting your time writing it down. So, stop looking for the trick. There are tricks in startups, as there are in any domain, but they are an order of magnitude less important than solving the real problem. Someone who knows zero about fundraising, but has made something users really love, will have an easier time raising money than someone who knows every trick in the book, but has a flat usage graph.

Though, in a sense, it's bad news that gaming the system stops working now, in the sense that you're deprived of your most powerful weapons and, after all, you spent twenty years mastering them. I find it very exciting that there even exist parts of the world where gaming the system is not how you win. I would have been really excited in college if I explicitly realized that there are parts of the world where gaming the system matters less than others, and some where it hardly matters at all. But there are, and this is one of the most important thing to think about when planning your future. How do you win at each type of work, and what do you want to win by doing it?

That brings us to our fourth counterintuitive point, startups are all consuming. If you start a startup, it will take over your life to a degree that you cannot imagine and if it succeeds it will take over your life for a long time; for several years, at the very least, maybe a decade, maybe the rest of your working life. So there is a real opportunity cost here. It may seem to you that Larry Page has an enviable life, but there are parts of it that are defiantly unenviable. The way the world looks to him is that he started running as fast as he could, at age twenty-five, and he has not stopped to catch his breath since. Every day shit happens within the Google empire that only the emperor can deal with and he, as the emperor, has to deal with it. If he goes on vacation for even a week, a whole backlog of shit accumulates, and he has to bear this, uncomplaining, because: number one, as the company’s daddy, he cannot show fear or weakness; and number two, if you’re a billionaire, you get zero, actually less than zero sympathy, if you complain about having a difficult life.

Which has this strange side effect that the difficulty of being a successful startup founder is concealed from almost everyone who has done it. People who win the one-hundred meter in the Olympics, you walk up to them and they're out of breath. Larry Page is doing that too, but you never get to see it.

Y Combinator has now funded several companies that could be called big successes and in every single case the founder says the same thing, "It never gets any easier." The nature of the problems change, so you're maybe worrying about more glamorous problems like construction delays in your new London offices rather than the broken air conditioner in your studio apartment, but the total volume of worry never decreases. If anything, it increases.

Starting a successful startup is similar to having kids; it's like a button you press and it changes your life irrevocably. While it's honestly the best thing—having kids—if you take away one thing from this lecture, remember this: There are a lot of things that are easier to do before you have kids than after, many of which will make you a better parent when you do have kids. In rich countries, most people delay pushing the button for a while and I'm sure you are all intimately familiar with that procedure.

Yet when it comes to starting startups a lot of people seem to think they are supposed to start them in college. Are you crazy? What are the universities thinking – they go out of their way to ensure that their students are well supplied with contraceptives, and yet they are starting up entrepreneurship programs and startup incubators left and right.

To be fair, the universities have their hand forced here. A lot of incoming students are interested in start-ups. Universities are at least de-facto supposed to prepare you for your career, and so if you're interested in startups, it seems like universities are supposed to teach you about startups and if they don't maybe they lose applicants to universities that do claim to do that. So can universities teach you about startups? Well, if not, what are we doing here? Yes and no, as I've explained to you about start-ups. Essentially, if you want to learn French, universities can teach you linguistics. That is what this is. This is linguistics: we're teaching you how to learn languages and what you need to know is how a particular language.

What you need to know are the needs of your own users. You can't learn those until you actually start the company, which means that starting a startup is something you can intrinsically only learn by doing it. You can't do that in college for the reason I just explained. Startups take over your entire life. If you start a startup in college, if you start a startup as a student, you can't start a startup as a student because if you start a startup you’re not a student anymore. You may be nominally a student but you won't even be that for very much longer. Given this dichotomy: which of the two paths should you take?

Be a real student and not start a startup or start a real startup and not be a student. Well, I can answer that one for you. I'm talking to my own kids here. Do not start a startup in college. I hope I'm not disappointing anyone seriously. Starting a startup could be a good component of a good life for a lot of ambitious people. This is just a part of a much bigger problem that you are trying to solve. How to have a good life, right. Those that are starting a startup could be a good thing to do at some point. Twenty is not the optimal time to do it.

There are things that you can do in your early twenties that you cannot do as well before or after. Like plunge deeply into projects on a whim that seem like they will have no pay off. Travel super cheaply with no sense of a deadline. In fact they are really isomorphic shapes in different domains.

For unambitious people your thing can be the dreaded failure to launch. For the ambitious ones it’s a really valuable sort of exploration and if you start a startup at twenty and you are sufficiently successful you will never get to do it.

Mark Zuckerberg will never get to bum around a foreign country. If he goes to a foreign county, it's either as a de-facto state visit or like he's hiding out incognito at George V in Paris. He's never going to just like backpack around Thailand if that’s still what people do. Do people still backpack around Thailand? That's the first real enthusiasm I've ever seen from this class. Should have given this talk in Thailand. He can do things you can't do, like charter jets to fly him to foreign countries. Really big jets. But success has taken a lot of the serendipity out of his life. Facebook is running him as much as he's running Facebook.

While it can be really cool to be in the grip of some project you consider your life's work, there are advantages to serendipity. Among other things, it gives you more options to choose your life's work from. There's not even a trade off here. You’re not sacrificing anything if you forgo starting a start up at twenty because you will be more likely to succeed if you wait. In the astronomically unlikely case that you are twenty and you have some side project that takes off like Facebook did, then you face a choice to either be running with it or not and maybe it’s reasonable to run with it. Usually the way that start ups take off is for the founders to make them take off. It's gratuitously stupid to do that at twenty.

Should you do it at any age? Starting a startup may sound kind of hard, if I haven't made that clear let me try again. Starting a startup is really hard. If it’s too hard, what if you are not up to this challenge?

The answer is the fifth counter intuitive point. You can't tell. Your life so far has given you some idea of what your prospects might be if you wanted to become a mathematician or a professional football player. Boy, it’s not every audience you can say that to. Unless you have had a very strange life indeed you have not done much that’s like starting a startup. Meaning starting a startup will change you a lot if it works out. So what you’re trying to estimate is not just what you are, but what you could become. And who can do that? Well, not me. for the last nine years it was my job to try to guess (I wrote "predict" in here and it came out as "guess"—that’s a very informative Freudian slip). Seriously it’s easy to tell how smart people are in ten minutes. Hit a few tennis balls over the net, and do they hit them back at you or into the net? The hard part and the most important part was predicting how tough and ambitious they would become.

There may be no one at this point who has more experience than me in doing this. I can tell you how much an expert can know about that. The answer is not much. I learned from experience to keep completely open mind about which start ups in each batch would turn out to be the stars. The founders sometimes thought they knew. Some arrived feeling confident that they would ace Y Combinator just as they had aced every one of the few easy artificial tests they had faced in life so far. Others arrived wondering what mistake had caused them to be admitted and hoping that no one discover it.

There is little to no correlation between these attitudes and how things turn out. I've read the same is true in the military. The swaggering recruits are no more than likely to turn out to be really tough than the quiet ones and probably for the same reason. The tests are so different from tests in people’s previous lives. If you are absolutely terrified of starting a startup you probably shouldn’t do it. Unless you are one of those people who gets off on doing things you're afraid of. Otherwise if you are merely unsure of whether you are going to be able to do it, the only way to find out is to try, just not now.

So if you want to start a startup one day, what do you do now in college? There are only two things you need initially, an idea and cofounders. The MO for getting both of those is the same which leads to our sixth and last counterintuitive point.

The way to get start up ideas is not to try to think of startup ideas. I have written a whole essay on this and I am not going to repeat the whole thing here. But the short version is that if you make a conscious effort to try to think of startup ideas, you will think of ideas that are not only bad but bad and plausible sounding. Meaning you and everybody else will be fooled by them. You'll waste a lot of time before realizing they're no good. The way to come up with good startup ideas is to take a step back. Instead of trying to make a conscious effort to think of startup ideas, turn your brain into the type that has startup ideas unconsciously. In fact, so unconsciously that you don't even realize at first that they're startup ideas. This is not only possible: Yahoo, Google, Facebook, Apple all got started this way. None of these companies were supposed to be companies at first, they were all just side projects. The very best ideas almost always have to start as side projects because they're always such outliers that your conscious mind would reject them as ideas for companies.

How do you turn your mind into the kind that has startup ideas unconsciously? One, learn about a lot of things that matter. Two, work on problems that interest you. Three, with people you like and or respect. That's the third part incidentally, is how you get cofounders at the same time as the idea. The first time I wrote that paragraph, instead of learn a lot about things that matter, I wrote become good at some technology. But that prescription is too narrow.

What was special about Brain Chesky and Joe Gebbia from Airbnb was not that they were experts in technology. They went to art school, they were experts in design. Perhaps more importantly they were really good at organizing people in getting projects done. So you don't have to work on technology per se, so long as you work on things that stretch you.

What kinds of things are those? Now that is very hard to answer in the general case. History is full of examples of young people who were working on problems that no one else at the time thought were important. In particular that their parents didn't think were important. On the other hand, history is even fuller of examples of parents that thought their kids were wasting their time and who were right.

How do you know if you’re working on real stuff? I mean when Twitch TV switched from being Justin.tv to Twitch TV and they were going to broadcast people playing video games, I was like, "What?" But it turned out to be a good business. I know how I know real problems are interesting, and I am self-indulgent: I always like working on anything interesting things even if no one cares about them. I find it very hard to make myself work on boring things even if they're supposed to be important. My life is full of case after case where I worked on things just because I was interested and they turned out to be useful later in some worldly way.

Y Combinator itself is something I only did because it seemed interesting. I seem to have some internal compass that helps me out. This is for you not me and I don't know what you have in your heads. Maybe if I think more about it I can come up some heuristics for recognizing genuinely interesting ideas. For now all I can give you is the hopelessly question begging advice. Incidentally this is the actual meaning of the phrase begging the question. The hopelessly question begging advice that if you’re interested in generally interesting problems, gratifying your interest energetically is the best way to prepare yourself for a startup and probably best way to live.

Although I can't explain in the general case what counts as an interesting problem I can tell you about a large subset of them. If you think of technology as something that’s spreading like a sort of fractal stain, every point on the edge represents an interesting problem. Steam engine not so much maybe you never know. One guaranteed way to turn your mind into the type to start up ideas for them unconsciously. Is to get yourself to the leading edge of some technology. To, as Paul Buchheit put it, "Live in the future." And when you get there, ideas that seem uncannily prescient to other people will seem obvious to you. You may not realize they're start up ideas, but you will know they are something that ought to exist.

For example back at Harvard in the mid 90s. A fellow grad student of my friends Robert and Trevor wrote his own voice over IP software. It wasn't meant to be a startup, he never tried to turn it into one. He just wanted to talk to his girlfriend in Taiwan without paying for long distance calls. Since he was an expert on networks, it seemed obvious to him that thing to do was to turn the sound into packets and ship them over the internet for free. Why didn't everybody do this? They were not good at writing this type of software. He never did anything with this. He never tried to turn this into a startup. That is how the best startups tend to happen.

Strangely enough the optimal thing to do in college if you want to be a successful startup founder is not some sort of new vocational version of college focused on entrepreneurship. It's the classic version of college is education its own sake. If you want to start your own startup what you should do in college is learn powerful things and if you have genuine intellectual curiosity that’s what you’ll naturally tend to do if you just follow your own inclinations. The component of entrepreneurship, can never quite say that word with a straight face, that really matters is domain expertise. Larry Page is Larry Page because he was an expert on search and the way he became an expert on search was because he was genuinely interested and not because of some ulterior motive. At its best starting a startup is merely a ulterior motive for curiosity and you’ll do it best if you introduce the ulterior motive at the end of the process. So here is ultimate advice for young would be startup founders reduced to two words: just learn.

Alright how much time do we have left? Eighteen minutes for questions good god. Do you guys have the questions?

Q: Sure we will start with two questions. How can a nontechnical founder most efficiently contribute to a startup?

A: If the startup is, if the startup is working in some domain, if it’s not a pure technology startup but is working in some very specific domain, like if it is Uber and the non technical founder was an expert in the limo business then actually then the non technical founder would be doing most of the work. Recruiting drivers and doing whatever else Uber has to do and the technical founder would be just writing the iPhone app which probably less, well iPhone and android app, which is less than half of it. If it’s purely a technical start up the non technical founder does sales and brings coffee and cheeseburgers to the programmer.

Q: Do you see any value in business school for people who want to pursue entrepreneurship?

A: Basically no, it sounds undiplomatic, but business school was designed to teach people management. Management is a problem that you only have in a startup if you are sufficiently successful. So really what you need to know early on to make a start up successful is developing products. You would be better off going to design school if you would want to go to some sort of school. Although frankly the way to learn how to do it is just to do it. One of the things I got wrong early on is that I advised people who were interested in starting a startup to go work for some other company for a few years before starting their own. Honestly the best way to learn on how to start a startup is just to just try to start it.

You may not be successful but you will learn faster if you just do it. Business schools are trying really hard to do this. They were designed to train the officer core of large companies, which is what business seemed to be back when it was a choice to be either the officer core of large companies or Joe's Shoe Store. Then there was this new thing, Apple, that started as small as Joe's Shoe Store and turns into this giant mega company but they were not designed for that world they are good at what they’re good at. They should just do that and screw this whole entrepreneurship thing.

Q: Management is a problem only if you are successful. What about those first two or three people?

A: Ideally you are successful before you even hire two or three people. Ideally you don't even have two or three people for quite awhile. When you do the first hires in a startup they are almost like founders. They should be motivated by the same things, they can’t be people you have to manage. This is not like the office, these have to be your peers, you shouldn’t have to manage them much.

Q: So is it just a big no no, someone has to be managed no way they should be on the founding team.

A: In the case were you are doing something were you need some super advanced technical thing and there is some boffin that knows this thing and no one else in this world including on how to wipe his mouth. It may be to your advantage to hire said boffin and wipe his mouth for him. As a general rule you want people who are self motivated early on they should just be like founders.

Q: Do you think we are currently in a bubble?

A: I’ll give you two answers to this question. One, ask me questions that are useful to this audience because these people are here to learn how to start startups, and I have more data in my head than anybody else and you're asking me questions a reporter does because they cannot think of anything interesting to ask. I will answer your question. There is a difference between prices merely being high and a bubble. A bubble is a very specific form of prices being high where people knowingly pay high prices for something in the hope that they will be able to unload it later on some greater fool. That's what happened in the late 90's, when VC's knowingly invested in bullshit startups thinking that they would be able to take those things public and unload them on other retail investors before everything blew up

I was there for that at the epicenter of it all. That is not what is happening today. Prices are high, valuations are high, but valuations being high does not mean a bubble. Every commodity has prices that go up and down in some sort of sine wave. Definitely prices are high. We tell people if you raise money, don't think the next time you raise money it’s going to be so easy, who knows maybe between now and then the Chinese economy will have exploded then there's a giant disaster recession. Assume the worst. But bubble? No.

Q: I am seeing a trend among young people and successful entrepreneurs where they don’t want to start one great company but twenty. You are starting to see a rise in these labs attempts were they are going to try to launch a whole bunch of stuff, I don't have any stellar examples yet.

A: Do you mean like IDEO?

Q: No, like Idealab, Garrett Camp’s new one...

A: Oh yeah. There's this new thing were people start labs that are supposed to spin off startups. It might work, that's how Twitter started. In fact, I meant Idealab, not IDEO, that was another Freudian slip. Twitter was not Twitter at first. Twitter was a side project at a company called Odeo that was supposed to be in the podcasting business, and you like podcasting business, do those words even grammatically go together? The answer turned out to be no as Evan discovered. As a side project they spun off Twitter and boy was that a dog wagging tail, people are starting these things that are supposed to spin off startups, will it work? Quite possibly if the right people do it. You can't do it though, because you have to do it with your own money.

Q: What advice do you have for female co-founders as they are pursuing funding?

A: It probably is true that women have a harder time raising money. I have noticed this empirically and Jessica is just about to publish a bunch of interviews on female founders and a lot of them said that they thought they had a harder time raising money, too. Remember I said the way to raise money? Make your start up actually do well and that's just especially true in any case if you miss the ideal target from the VC's point of view in any respect. The way to solve that problem is make the startup do really well. In fact, there was a point a year or two ago when I tweeted this growth graph of this company and I didn't say who they were. I knew it would get people to start asking and it was actually a female founded startup that was having trouble raising money, but their growth graph was stupendous. So I tweeted it, knowing all these VC's would start asking me, “Who is that?” Growth graphs have no gender, so if they see the growth graph first, let them fall in love with that. Do well, which is generally good advice for all startups.

Q: What would you learn in college right now?

A: Literary theory, no just kidding. Honestly, I think I might try and study physics that’s the thing I feel I missed. For some reason, when I was a kid computers were the thing, maybe they still are. I got very excited learning to write code and you can write real programs in your bedroom. You can't build real accelerators, well maybe you can. Maybe physics, I noticed I sort of look longingly at physics so maybe. I don't know if that’s going to be helpful starting a startup and I just told you to follow your own curiosity so who cares if it's helpful, it'll turn out to be helpful.

Q: What are your reoccurring systems in your work and personal life that make you efficient?

A: Having kids is a good way to be efficient. Because you have no time left so if you want to get anything done, the amount of done you do per time is high. Actually many parents, start up founders who have kids have made that point explicitly. They cause you to focus because you have no choice.

I wouldn't actually recommend having kids just to make you more focused. You know, I don't think I am very efficient, I have two ways of getting work done. One is during Y Combinator, the way I worked on Y Combinator is I was forced to. I had to set the application deadline, and then people would apply, and then there were all these applications that I had to respond to by a certain time. So I had to read them and I knew if I read them badly, we would get bad startups so I tried really hard to read them well. So I set up this situation that forced me to work. The other kind of work I do is writing essays. And I do that voluntarily, I am walking down the street and the essay starts writing itself in my head. I either force myself to work on less exciting things; I can't help working on exciting things. I don't have any useful techniques for making myself efficient. If you work on things you like, you don't have to force yourself to be efficient.

Q: When is a good time to turn a side project into a startup?

A: You will know, right. So the question is when you turn a side project into a startup, you will know that it is becoming a real startup when it takes over a alarming large percentage of your life, right. My god I've just spent all day working on this thing that’s supposed to be a side project, I am going to fail all of my classes what am I going to do, right. Then maybe it’s turning into a startup.

Q: I know you talked a lot, earlier, about you'll know when your start up is doing extremely well, but I feel like in a lot of cases it's a gray line, where you have some users but not explosive growth that is up and to the right, what would you do or what would you recommend in those situations? Considering allocating time and resources, how do you balance?

A: When a start up is growing but not much. Didn't you tell them they were supposed to read Do Things that Don't Scale? You sir have not done the readings, you are busted. Because there are four, I wrote a whole essay answered that question and that is to do things that don't scale. Just go read that, because I can't remember everything I said. It's about exactly that problem.

Q: What kind of startup should not go through incubation, in your opinion?

A: Definitely any that will fail. Or if you'll succeed but you're an intolerable person. That also Sam would probably sooner do without. Short of that, I cannot think of any, because a large percentage, founders are often surprised by how large a percentage of the problems that start ups have are the same regardless of what type of thing they're working on. And those tend to be kind of problems that YC helps the most not the ones that are domain specific. Can you think of the class of startups? That YC wouldn't work for? We had fission and fusion startups in the last batch.

Q: You mentioned that it's good advice to learn a lot about something that matters, what are some good strategies to figure out what matters?

A: If you think of technology as something that’s spreading as a sort of fractal stain. Anything on the edge represents an interesting idea, sounds familiar. Like I said that was the problem, you have correctly identified the thing I didn't really answer the question were I gave this question begging answer. I said I'm interested in interesting things and you said you were interested in interesting things, work on them and things will work out.

How do you tell what is a real problem? I don't know, that's like important enough to write a whole essay about. I don't know the answer and I probably should write something about that, but I don't know. I figured out a technique for detecting whether you have a taste for generally interesting problems. Which is whether you find working on boring things intolerable and there are known boring things. Like literary theory and working in middle management in some large company. So if you can tolerate those things, then you must have stupendous self-discipline or you don't have a taste for genially interesting problems and vice versa.

Q: Do you like Snapchat?

A: Snapchat? What do I know about Snapchat? We didn't fund them. I want another question.

Q: If you hire people you like, you might get a monoculture and how do you deal with the blind spots that arise?

A: Starting a startup is where many things will be going wrong. You can't expect it to be perfect. The advantage is of hiring people you know and like are far greater than the small disadvantage of having some monoculture. You look at it empirically, at all the most successful startups, someone just hires all their pals out of college.

Alright you guys thank you.