Startup = Growth

September 2012A startup is a company designed to grow fast. Being newly founded  
does not in itself make a company a startup. Nor is it necessary  
for a startup to work on technology, or take venture funding, or  
have some sort of "exit." The only essential thing is growth.  
Everything else we associate with startups follows from growth.If you want to start one it's important to understand that. Startups  
are so hard that you can't be pointed off to the side and hope to  
succeed. You have to know that growth is what you're after. The  
good news is, if you get growth, everything else tends to fall into  
place. Which means you can use growth like a compass to make almost  
every decision you face.  
RedwoodsLet's start with a distinction that should be obvious but is often  
overlooked: not every newly founded company is a startup. Millions  
of companies are started every year in the US. Only a tiny fraction  
are startups. Most are service businesses — restaurants, barbershops,  
plumbers, and so on. These are not startups, except in a few unusual  
cases. A barbershop isn't designed to grow fast. Whereas a search  
engine, for example, is.When I say startups are designed to grow fast, I mean it in two  
senses. Partly I mean designed in the sense of intended, because  
most startups fail. But I also mean startups are different by  
nature, in the same way a redwood seedling has a different destiny  
from a bean sprout.That difference is why there's a distinct word, "startup," for  
companies designed to grow fast. If all companies were essentially  
similar, but some through luck or the efforts of their founders  
ended up growing very fast, we wouldn't need a separate word. We  
could just talk about super-successful companies and less successful  
ones. But in fact startups do have a different sort of DNA from  
other businesses. Google is not just a barbershop whose founders  
were unusually lucky and hard-working. Google was different from  
the beginning.To grow rapidly, you need to make something you can sell to a big  
market. That's the difference between Google and a barbershop. A  
barbershop doesn't scale.For a company to grow really big, it must (a) make something lots  
of people want, and (b) reach and serve all those people. Barbershops  
are doing fine in the (a) department. Almost everyone needs their  
hair cut. The problem for a barbershop, as for any retail  
establishment, is (b). A barbershop serves customers in person,  
and few will travel far for a haircut. And even if they did, the  
barbershop couldn't accomodate them.   
[1]Writing software is a great way to solve (b), but you can still end  
up constrained in (a). If you write software to teach Tibetan to  
Hungarian speakers, you'll be able to reach most of the people who  
want it, but there won't be many of them. If you make software  
to teach English to Chinese speakers, however, you're in startup  
territory.Most businesses are tightly constrained in (a) or (b). The distinctive  
feature of successful startups is that they're not.  
IdeasIt might seem that it would always be better to start a startup  
than an ordinary business. If you're going to start a company, why  
not start the type with the most potential? The catch is that this  
is a (fairly) efficient market. If you write software to teach  
Tibetan to Hungarians, you won't have much competition. If you  
write software to teach English to Chinese speakers, you'll face  
ferocious competition, precisely because that's such a larger prize.  
[2]The constraints that limit ordinary companies also protect them.  
That's the tradeoff. If you start a barbershop, you only have to  
compete with other local barbers. If you start a search engine you  
have to compete with the whole world.The most important thing that the constraints on a normal business  
protect it from is not competition, however, but the difficulty of  
coming up with new ideas. If you open a bar in a particular  
neighborhood, as well as limiting your potential and protecting you  
from competitors, that geographic constraint also helps define your  
company. Bar + neighborhood is a sufficient idea for a small  
business. Similarly for companies constrained in (a). Your niche  
both protects and defines you.Whereas if you want to start a startup, you're probably going to  
have to think of something fairly novel. A startup has to make  
something it can deliver to a large market, and ideas of that type  
are so valuable that all the obvious ones are already taken.That space of ideas has been so thoroughly picked over that a startup  
generally has to work on something everyone else has overlooked.  
I was going to write that one has to make a conscious effort to  
find ideas everyone else has overlooked. But that's not how most  
startups get started. Usually successful startups happen because  
the founders are sufficiently different from other people that ideas  
few others can see seem obvious to them. Perhaps later they step  
back and notice they've found an idea in everyone else's blind spot,  
and from that point make a deliberate effort to stay there.   
[3]  
But at the moment when successful startups get started, much of the  
innovation is unconscious.What's different about successful founders is that they can see  
different problems. It's a particularly good combination both to  
be good at technology and to face problems that can be solved by  
it, because technology changes so rapidly that formerly bad ideas  
often become good without anyone noticing. Steve Wozniak's problem  
was that he wanted his own computer. That was an unusual problem  
to have in 1975. But technological change was about to make it a  
much more common one. Because he not only wanted a computer but  
knew how to build them, Wozniak was able to make himself one. And  
the problem he solved for himself became one that Apple solved for  
millions of people in the coming years. But by the time it was  
obvious to ordinary people that this was a big market, Apple was  
already established.Google has similar origins. Larry Page and Sergey Brin wanted to  
search the web. But unlike most people they had the technical  
expertise both to notice that existing search engines were not as  
good as they could be, and to know how to improve them. Over the  
next few years their problem became everyone's problem, as the web  
grew to a size where you didn't have to be a picky search expert  
to notice the old algorithms weren't good enough. But as happened  
with Apple, by the time everyone else realized how important search  
was, Google was entrenched.That's one connection between startup ideas and technology. Rapid  
change in one area uncovers big, soluble problems in other areas.  
Sometimes the changes are advances, and what they change is solubility.  
That was the kind of change that yielded Apple; advances in chip  
technology finally let Steve Wozniak design a computer he could  
afford. But in Google's case the most important change was the  
growth of the web. What changed there was not solubility but bigness.The other connection between startups and technology is that startups  
create new ways of doing things, and new ways of doing things are,  
in the broader sense of the word, new technology.   
When a startup both begins with an  
idea exposed by technological change and makes a product consisting  
of technology in the narrower sense (what used to be called "high  
technology"), it's easy to conflate the two. But the two connections  
are distinct and in principle one could start a startup that was  
neither driven by technological change, nor whose product consisted  
of technology except in the broader sense.   
[4]RateHow fast does a company have to grow to be considered a startup?  
There's no precise answer to that. "Startup" is a pole, not a  
threshold. Starting one is at first no more than a declaration of  
one's ambitions. You're committing not just to starting a company,  
but to starting a fast growing one, and you're thus committing to  
search for one of the rare ideas of that type. But at first you  
have no more than commitment. Starting a startup is like being an  
actor in that respect. "Actor" too is a pole rather than a threshold.  
At the beginning of his career, an actor is a waiter who goes to  
auditions. Getting work makes him a successful actor, but he doesn't  
only become an actor when he's successful.So the real question is not what growth rate makes a company a  
startup, but what growth rate successful startups tend to have.  
For founders that's more than a theoretical question, because it's  
equivalent to asking if they're on the right path.The growth of a successful startup usually has three phases:  
  
 There's an initial period of slow or no growth while the startup  
 tries to figure out what it's doing. As the startup figures out how to make something lots of people  
 want and how to reach those people, there's a period of rapid  
 growth. Eventually a successful startup will grow into a big company.  
 Growth will slow, partly due to internal limits and partly because  
 the company is starting to bump up against the limits of the  
 markets it serves.   
 [5]  
  
Together these three phases produce an S-curve. The phase whose  
growth defines the startup is the second one, the ascent. Its  
length and slope determine how big the company will be.The slope is the company's growth rate. If there's one number every  
founder should always know, it's the company's growth rate. That's  
the measure of a startup. If you don't know that number, you don't  
even know if you're doing well or badly.When I first meet founders and ask what their growth rate is,  
sometimes they tell me "we get about a hundred new customers a  
month." That's not a rate. What matters is not the absolute number  
of new customers, but the ratio of new customers to existing ones.  
If you're really getting a constant number of new customers every  
month, you're in trouble, because that means your growth rate is  
decreasing.During Y Combinator we measure growth rate per week, partly because  
there is so little time before Demo Day, and partly because startups  
early on need frequent feedback from their users to tweak what  
they're doing.   
[6]A good growth rate during YC is 5-7% a week. If you can hit 10% a  
week you're doing exceptionally well. If you can only manage 1%,  
it's a sign you haven't yet figured out what you're doing.The best thing to measure the growth rate of is revenue. The next  
best, for startups that aren't charging initially, is active users.  
That's a reasonable proxy for revenue growth because whenever the  
startup does start trying to make money, their revenues will probably  
be a constant multiple of active users.   
[7]  
CompassWe usually advise startups to pick a growth rate they think they  
can hit, and then just try to hit it every week. The key word here  
is "just." If they decide to grow at 7% a week and they hit that  
number, they're successful for that week. There's nothing more  
they need to do. But if they don't hit it, they've failed in the  
only thing that mattered, and should be correspondingly alarmed.Programmers will recognize what we're doing here. We're turning  
starting a startup into an optimization problem. And anyone who  
has tried optimizing code knows how wonderfully effective that sort  
of narrow focus can be. Optimizing code means taking an existing  
program and changing it to use less of something, usually time or  
memory. You don't have to think about what the program should do,  
just make it faster. For most programmers this is very satisfying  
work. The narrow focus makes it a sort of puzzle, and you're  
generally surprised how fast you can solve it.Focusing on hitting a growth rate reduces the otherwise bewilderingly  
multifarious problem of starting a startup to a single problem.  
You can use that target growth rate to make all your decisions for  
you; anything that gets you the growth you need is ipso facto right.  
Should you spend two days at a conference? Should you hire another  
programmer? Should you focus more on marketing? Should you spend  
time courting some big customer? Should you add x feature? Whatever  
gets you your target growth rate.   
[8]Judging yourself by weekly growth doesn't mean you can look no more  
than a week ahead. Once you experience the pain of missing your  
target one week (it was the only thing that mattered, and you failed  
at it), you become interested in anything that could spare you such  
pain in the future. So you'll be willing for example to hire another  
programmer, who won't contribute to this week's growth but perhaps  
in a month will have implemented some new feature that will get you  
more users. But only if (a) the distraction of hiring someone  
won't make you miss your numbers in the short term, and (b) you're  
sufficiently worried about whether you can keep hitting your numbers  
without hiring someone new.It's not that you don't think about the future, just that you think  
about it no more than necessary.In theory this sort of hill-climbing could get a startup into  
trouble. They could end up on a local maximum. But in practice  
that never happens. Having to hit a growth number every week forces  
founders to act, and acting versus not acting is the high bit of  
succeeding. Nine times out of ten, sitting around strategizing is  
just a form of procrastination. Whereas founders' intuitions about  
which hill to climb are usually better than they realize. Plus the  
maxima in the space of startup ideas are not spiky and isolated.  
Most fairly good ideas are adjacent to even better ones.The fascinating thing about optimizing for growth is that it can  
actually discover startup ideas. You can use the need for growth  
as a form of evolutionary pressure. If you start out with some  
initial plan and modify it as necessary to keep hitting, say, 10%  
weekly growth, you may end up with a quite different company than  
you meant to start. But anything that grows consistently at 10% a  
week is almost certainly a better idea than you started with.There's a parallel here to small businesses. Just as the constraint  
of being located in a particular neighborhood helps define a bar,  
the constraint of growing at a certain rate can help define a  
startup.You'll generally do best to follow that constraint wherever it leads  
rather than being influenced by some initial vision, just as a  
scientist is better off following the truth wherever it leads rather  
than being influenced by what he wishes were the case. When Richard  
Feynman said that the imagination of nature was greater than the  
imagination of man, he meant that if you just keep following the  
truth you'll discover cooler things than you could ever have made  
up. For startups, growth is a constraint much like truth. Every  
successful startup is at least partly a product of the imagination  
of growth.   
[9]  
ValueIt's hard to find something that grows consistently at several  
percent a week, but if you do you may have found something surprisingly  
valuable. If we project forward we see why.  
  
weeklyyearly  
1%1.7x  
2%2.8x  
5%12.6x  
7%33.7x  
10%142.0x  
  
  
  
A company that grows at 1% a week will grow 1.7x a year, whereas a  
company that grows at 5% a week will grow 12.6x. A company making  
$1000 a month (a typical number early in YC) and growing at 1% a  
week will 4 years later be making $7900 a month, which is less than  
a good programmer makes in salary in Silicon Valley. A startup  
that grows at 5% a week will in 4 years be making $25 million a  
month.   
[10]Our ancestors must rarely have encountered cases of exponential  
growth, because our intuitions are no guide here. What happens  
to fast growing startups tends to surprise even the founders.Small variations in growth rate produce qualitatively different  
outcomes. That's why there's a separate word for startups, and why  
startups do things that ordinary companies don't, like raising money  
and getting acquired. And, strangely enough, it's also why they  
fail so frequently.Considering how valuable a successful startup can become, anyone  
familiar with the concept of expected value would be surprised if  
the failure rate weren't high. If a successful startup could make  
a founder $100 million, then even if the chance of succeeding were  
only 1%, the expected value of starting one would be $1 million.  
And the probability of a group of sufficiently smart and determined  
founders succeeding on that scale might be significantly over 1%.  
For the right people — e.g. the young Bill Gates — the probability  
might be 20% or even 50%. So it's not surprising that so many want  
to take a shot at it. In an efficient market, the number of failed  
startups should be proportionate to the size of the successes. And  
since the latter is huge the former should be too.   
[11]What this means is that at any given time, the great majority of  
startups will be working on something that's never going to go  
anywhere, and yet glorifying their doomed efforts with the grandiose  
title of "startup."This doesn't bother me. It's the same with other high-beta vocations,  
like being an actor or a novelist. I've long since gotten used to  
it. But it seems to bother a lot of people, particularly those  
who've started ordinary businesses. Many are annoyed that these  
so-called startups get all the attention, when hardly any of them  
will amount to anything.If they stepped back and looked at the whole picture they might be  
less indignant. The mistake they're making is that by basing their  
opinions on anecdotal evidence they're implicitly judging by the  
median rather than the average. If you judge by the median startup,  
the whole concept of a startup seems like a fraud. You have to  
invent a bubble to explain why founders want to start them or  
investors want to fund them. But it's a mistake to use the median  
in a domain with so much variation. If you look at the average  
outcome rather than the median, you can understand why investors  
like them, and why, if they aren't median people, it's a rational  
choice for founders to start them.  
DealsWhy do investors like startups so much? Why are they so hot to  
invest in photo-sharing apps, rather than solid money-making  
businesses? Not only for the obvious reason.The test of any investment is the ratio of return to risk. Startups  
pass that test because although they're appallingly risky, the  
returns when they do succeed are so high. But that's not the only  
reason investors like startups. An ordinary slower-growing business  
might have just as good a ratio of return to risk, if both were  
lower. So why are VCs interested only in high-growth companies?  
The reason is that they get paid by getting their capital back,  
ideally after the startup IPOs, or failing that when it's acquired.The other way to get returns from an investment is in the form of  
dividends. Why isn't there a parallel VC industry that invests in  
ordinary companies in return for a percentage of their profits?  
Because it's too easy for people who control a private company to  
funnel its revenues to themselves (e.g. by buying overpriced  
components from a supplier they control) while making it look like  
the company is making little profit. Anyone who invested in private  
companies in return for dividends would have to pay close attention  
to their books.The reason VCs like to invest in startups is not simply the returns,  
but also because such investments are so easy to oversee. The  
founders can't enrich themselves without also enriching the investors.  
[12]Why do founders want to take the VCs' money? Growth, again. The  
constraint between good ideas and growth operates in both directions.  
It's not merely that you need a scalable idea to grow. If you have  
such an idea and don't grow fast enough, competitors will. Growing  
too slowly is particularly dangerous in a business with network  
effects, which the best startups usually have to some degree.Almost every company needs some amount of funding to get started.  
But startups often raise money even when they are or could be  
profitable. It might seem foolish to sell stock in a profitable  
company for less than you think it will later be worth, but it's  
no more foolish than buying insurance. Fundamentally that's how  
the most successful startups view fundraising. They could grow the  
company on its own revenues, but the extra money and help supplied  
by VCs will let them grow even faster. Raising money lets you  
choose your growth rate.Money to grow faster is always at the command of the most successful  
startups, because the VCs need them more than they need the VCs.  
A profitable startup could if it wanted just grow on its own revenues.  
Growing slower might be slightly dangerous, but chances are it  
wouldn't kill them. Whereas VCs need to invest in startups, and  
in particular the most successful startups, or they'll be out of  
business. Which means that any sufficiently promising startup will  
be offered money on terms they'd be crazy to refuse. And yet because  
of the scale of the successes in the startup business, VCs can still  
make money from such investments. You'd have to be crazy to believe  
your company was going to become as valuable as a high growth rate  
can make it, but some do.Pretty much every successful startup will get acquisition offers  
too. Why? What is it about startups that makes other companies  
want to buy them?   
[13]Fundamentally the same thing that makes everyone else want the stock  
of successful startups: a rapidly growing company is valuable. It's  
a good thing eBay bought Paypal, for example, because Paypal is now  
responsible for 43% of their sales and probably more of their growth.But acquirers have an additional reason to want startups. A rapidly  
growing company is not merely valuable, but dangerous. If it keeps  
expanding, it might expand into the acquirer's own territory. Most  
product acquisitions have some component of fear. Even if an  
acquirer isn't threatened by the startup itself, they might be  
alarmed at the thought of what a competitor could do with it. And  
because startups are in this sense doubly valuable to acquirers,  
acquirers will often pay more than an ordinary investor would.   
[14]  
UnderstandThe combination of founders, investors, and acquirers forms a natural  
ecosystem. It works so well that those who don't understand it are  
driven to invent conspiracy theories to explain how neatly things  
sometimes turn out. Just as our ancestors did to explain the  
apparently too neat workings of the natural world. But there is  
no secret cabal making it all work.If you start from the mistaken assumption that Instagram was  
worthless, you have to invent a secret boss to force Mark Zuckerberg  
to buy it. To anyone who knows Mark Zuckerberg, that is the reductio  
ad absurdum of the initial assumption. The reason he bought Instagram  
was that it was valuable and dangerous, and what made it so was  
growth.If you want to understand startups, understand growth. Growth  
drives everything in this world. Growth is why startups usually  
work on technology — because ideas for fast growing companies are  
so rare that the best way to find new ones is to discover those  
recently made viable by change, and technology is the best source  
of rapid change. Growth is why it's a rational choice economically  
for so many founders to try starting a startup: growth makes the  
successful companies so valuable that the expected value is high  
even though the risk is too. Growth is why VCs want to invest in  
startups: not just because the returns are high but also because  
generating returns from capital gains is easier to manage than  
generating returns from dividends. Growth explains why the most  
successful startups take VC money even if they don't need to: it  
lets them choose their growth rate. And growth explains why  
successful startups almost invariably get acquisition offers. To  
acquirers a fast-growing company is not merely valuable but dangerous  
too.It's not just that if you want to succeed in some domain, you have  
to understand the forces driving it. Understanding growth is what  
starting a startup consists of. What you're really doing (and  
to the dismay of some observers, all you're really doing) when you  
start a startup is committing to solve a harder type of problem  
than ordinary businesses do. You're committing to search for one  
of the rare ideas that generates rapid growth. Because these ideas  
are so valuable, finding one is hard. The startup is the embodiment  
of your discoveries so far. Starting a startup is thus very much  
like deciding to be a research scientist: you're not committing to  
solve any specific problem; you don't know for sure which problems  
are soluble; but you're committing to try to discover something no  
one knew before. A startup founder is in effect an economic research  
scientist. Most don't discover anything that remarkable, but some  
discover relativity.  
Notes[1]  
Strictly speaking it's not lots of customers you need but a big  
market, meaning a high product of number of customers times how  
much they'll pay. But it's dangerous to have too few customers  
even if they pay a lot, or the power that individual customers have  
over you could turn you into a de facto consulting firm. So whatever  
market you're in, you'll usually do best to err on the side of  
making the broadest type of product for it.[2]  
One year at Startup School David Heinemeier Hansson encouraged  
programmers who wanted to start businesses to use a restaurant as  
a model. What he meant, I believe, is that it's fine to start  
software companies constrained in (a) in the same way a restaurant  
is constrained in (b). I agree. Most people should not try to  
start startups.[3]  
That sort of stepping back is one of the things we focus on at  
Y Combinator. It's common for founders to have discovered something  
intuitively without understanding all its implications. That's  
probably true of the biggest discoveries in any field.[4]  
I got it wrong in "How to Make Wealth" when I said that a  
startup was a small company that takes on a hard technical  
problem. That is the most common recipe but not the only one.[5]  
In principle companies aren't limited by the size of the markets  
they serve, because they could just expand into new markets. But  
there seem to be limits on the ability of big companies to do that.  
Which means the slowdown that comes from bumping up against the  
limits of one's markets is ultimately just another way in which  
internal limits are expressed.It may be that some of these limits could be overcome by changing  
the shape of the organization — specifically by sharding it.[6]  
This is, obviously, only for startups that have already launched  
or can launch during YC. A startup building a new database will  
probably not do that. On the other hand, launching something small  
and then using growth rate as evolutionary pressure is such a  
valuable technique that any company that could start this way  
probably should.[7]  
If the startup is taking the Facebook/Twitter route and building  
something they hope will be very popular but from which they don't  
yet have a definite plan to make money, the growth rate has to be  
higher, even though it's a proxy for revenue growth, because such  
companies need huge numbers of users to succeed at all.Beware too of the edge case where something spreads rapidly but the  
churn is high as well, so that you have good net growth till you run  
through all the potential users, at which point it suddenly stops.[8]  
Within YC when we say it's ipso facto right to do whatever gets  
you growth, it's implicit that this excludes trickery like buying  
users for more than their lifetime value, counting users as active  
when they're really not, bleeding out invites at a regularly  
increasing rate to manufacture a perfect growth curve, etc. Even  
if you were able to fool investors with such tricks, you'd ultimately  
be hurting yourself, because you're throwing off your own compass.[9]  
Which is why it's such a dangerous mistake to believe that  
successful startups are simply the embodiment of some brilliant  
initial idea. What you're looking for initially is not so much a  
great idea as an idea that could evolve into a great one. The  
danger is that promising ideas are not merely blurry versions of  
great ones. They're often different in kind, because the early  
adopters you evolve the idea upon have different needs from the  
rest of the market. For example, the idea that evolves into Facebook  
isn't merely a subset of Facebook; the idea that evolves into  
Facebook is a site for Harvard undergrads.[10]  
What if a company grew at 1.7x a year for a really long time?  
Could it not grow just as big as any successful startup? In principle  
yes, of course. If our hypothetical company making $1000 a month  
grew at 1% a week for 19 years, it would grow as big as a company  
growing at 5% a week for 4 years. But while such trajectories may  
be common in, say, real estate development, you don't see them much  
in the technology business. In technology, companies that grow  
slowly tend not to grow as big.[11]  
Any expected value calculation varies from person to person  
depending on their utility function for money. I.e. the first  
million is worth more to most people than subsequent millions. How  
much more depends on the person. For founders who are younger or  
more ambitious the utility function is flatter. Which is probably  
part of the reason the founders of the most successful startups of  
all tend to be on the young side.[12]  
More precisely, this is the case in the biggest winners, which  
is where all the returns come from. A startup founder could pull  
the same trick of enriching himself at the company's expense by  
selling them overpriced components. But it wouldn't be worth it  
for the founders of Google to do that. Only founders of failing  
startups would even be tempted, but those are writeoffs from the  
VCs' point of view anyway.[13]  
Acquisitions fall into two categories: those where the acquirer  
wants the business, and those where the acquirer just wants the  
employees. The latter type is sometimes called an HR acquisition.  
Though nominally acquisitions and sometimes on a scale that has a  
significant effect on the expected value calculation for potential  
founders, HR acquisitions are viewed by acquirers as more akin to  
hiring bonuses.[14]  
I once explained this to some founders who had recently arrived  
from Russia. They found it novel that if you threatened a company  
they'd pay a premium for you. "In Russia they just kill you," they  
said, and they were only partly joking. Economically, the fact  
that established companies can't simply eliminate new competitors  
may be one of the most valuable aspects of the rule of law. And  
so to the extent we see incumbents suppressing competitors via  
regulations or patent suits, we should worry, not because it's a  
departure from the rule of law per se but from what the rule of law  
is aiming at.  
Thanks to Sam Altman, Marc Andreessen, Paul Buchheit, Patrick  
Collison, Jessica Livingston, Geoff Ralston, and Harj Taggar for  
reading drafts of this.  
  
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fail so frequently.Considering how valuable a successful startup can become, anyone  
familiar with the concept of expected value would be surprised if  
the failure rate weren't high. If a successful startup could make  
a founder $100 million, then even if the chance of succeeding were  
only 1%, the expected value of starting one would be $1 million.  
And the probability of a group of sufficiently smart and determined  
founders succeeding on that scale might be significantly over 1%.  
For the right people — e.g. the young Bill Gates — the probability  
might be 20% or even 50%. So it's not surprising that so many want  
to take a shot at it. In an efficient market, the number of failed  
startups should be proportionate to the size of the successes. And  
since the latter is huge the former should be too.   
[11]What this means is that at any given time, the great majority of  
startups will be working on something that's never going to go  
anywhere, and yet glorifying their doomed efforts with the grandiose  
title of "startup."This doesn't bother me. It's the same with other high-beta vocations,  
like being an actor or a novelist. I've long since gotten used to  
it. But it seems to bother a lot of people, particularly those  
who've started ordinary businesses. Many are annoyed that these  
so-called startups get all the attention, when hardly any of them  
will amount to anything.If they stepped back and looked at the whole picture they might be  
less indignant. The mistake they're making is that by basing their  
opinions on anecdotal evidence they're implicitly judging by the  
median rather than the average. If you judge by the median startup,  
the whole concept of a startup seems like a fraud. You have to  
invent a bubble to explain why founders want to start them or  
investors want to fund them. But it's a mistake to use the median  
in a domain with so much variation. If you look at the average  
outcome rather than the median, you can understand why investors  
like them, and why, if they aren't median people, it's a rational  
choice for founders to start them.  
DealsWhy do investors like startups so much? Why are they so hot to  
invest in photo-sharing apps, rather than solid money-making  
businesses? Not only for the obvious reason.The test of any investment is the ratio of return to risk. Startups  
pass that test because although they're appallingly risky, the  
returns when they do succeed are so high. But that's not the only  
reason investors like startups. An ordinary slower-growing business  
might have just as good a ratio of return to risk, if both were  
lower. So why are VCs interested only in high-growth companies?  
The reason is that they get paid by getting their capital back,  
ideally after the startup IPOs, or failing that when it's acquired.The other way to get returns from an investment is in the form of  
dividends. Why isn't there a parallel VC industry that invests in  
ordinary companies in return for a percentage of their profits?  
Because it's too easy for people who control a private company to  
funnel its revenues to themselves (e.g. by buying overpriced  
components from a supplier they control) while making it look like  
the company is making little profit. Anyone who invested in private  
companies in return for dividends would have to pay close attention  
to their books.The reason VCs like to invest in startups is not simply the returns,  
but also because such investments are so easy to oversee. The  
founders can't enrich themselves without also enriching the investors.  
[12]Why do founders want to take the VCs' money? Growth, again. The  
constraint between good ideas and growth operates in both directions.  
It's not merely that you need a scalable idea to grow. If you have  
such an idea and don't grow fast enough, competitors will. Growing  
too slowly is particularly dangerous in a business with network  
effects, which the best startups usually have to some degree.Almost every company needs some amount of funding to get started.  
But startups often raise money even when they are or could be  
profitable. It might seem foolish to sell stock in a profitable  
company for less than you think it will later be worth, but it's  
no more foolish than buying insurance. Fundamentally that's how  
the most successful startups view fundraising. They could grow the  
company on its own revenues, but the extra money and help supplied  
by VCs will let them grow even faster. Raising money lets you  
choose your growth rate.Money to grow faster is always at the command of the most successful  
startups, because the VCs need them more than they need the VCs.  
A profitable startup could if it wanted just grow on its own revenues.  
Growing slower might be slightly dangerous, but chances are it  
wouldn't kill them. Whereas VCs need to invest in startups, and  
in particular the most successful startups, or they'll be out of  
business. Which means that any sufficiently promising startup will  
be offered money on terms they'd be crazy to refuse. And yet because  
of the scale of the successes in the startup business, VCs can still  
make money from such investments. You'd have to be crazy to believe  
your company was going to become as valuable as a high growth rate  
can make it, but some do.Pretty much every successful startup will get acquisition offers  
too. Why? What is it about startups that makes other companies  
want to buy them?   
[13]Fundamentally the same thing that makes everyone else want the stock  
of successful startups: a rapidly growing company is valuable. It's  
a good thing eBay bought Paypal, for example, because Paypal is now  
responsible for 43% of their sales and probably more of their growth.But acquirers have an additional reason to want startups. A rapidly  
growing company is not merely valuable, but dangerous. If it keeps  
expanding, it might expand into the acquirer's own territory. Most  
product acquisitions have some component of fear. Even if an  
acquirer isn't threatened by the startup itself, they might be  
alarmed at the thought of what a competitor could do with it. And  
because startups are in this sense doubly valuable to acquirers,  
acquirers will often pay more than an ordinary investor would.   
[14]  
UnderstandThe combination of founders, investors, and acquirers forms a natural  
ecosystem. It works so well that those who don't understand it are  
driven to invent conspiracy theories to explain how neatly things  
sometimes turn out. Just as our ancestors did to explain the  
apparently too neat workings of the natural world. But there is  
no secret cabal making it all work.If you start from the mistaken assumption that Instagram was  
worthless, you have to invent a secret boss to force Mark Zuckerberg  
to buy it. To anyone who knows Mark Zuckerberg, that is the reductio  
ad absurdum of the initial assumption. The reason he bought Instagram  
was that it was valuable and dangerous, and what made it so was  
growth.If you want to understand startups, understand growth. Growth  
drives everything in this world. Growth is why startups usually  
work on technology — because ideas for fast growing companies are  
so rare that the best way to find new ones is to discover those  
recently made viable by change, and technology is the best source  
of rapid change. Growth is why it's a rational choice economically  
for so many founders to try starting a startup: growth makes the  
successful companies so valuable that the expected value is high  
even though the risk is too. Growth is why VCs want to invest in  
startups: not just because the returns are high but also because  
generating returns from capital gains is easier to manage than  
generating returns from dividends. Growth explains why the most  
successful startups take VC money even if they don't need to: it  
lets them choose their growth rate. And growth explains why  
successful startups almost invariably get acquisition offers. To  
acquirers a fast-growing company is not merely valuable but dangerous  
too.It's not just that if you want to succeed in some domain, you have  
to understand the forces driving it. Understanding growth is what  
starting a startup consists of. What you're really doing (and  
to the dismay of some observers, all you're really doing) when you  
start a startup is committing to solve a harder type of problem  
than ordinary businesses do. You're committing to search for one  
of the rare ideas that generates rapid growth. Because these ideas  
are so valuable, finding one is hard. The startup is the embodiment  
of your discoveries so far. Starting a startup is thus very much  
like deciding to be a research scientist: you're not committing to  
solve any specific problem; you don't know for sure which problems  
are soluble; but you're committing to try to discover something no  
one knew before. A startup founder is in effect an economic research  
scientist. Most don't discover anything that remarkable, but some  
discover relativity.  
Notes[1]  
Strictly speaking it's not lots of customers you need but a big  
market, meaning a high product of number of customers times how  
much they'll pay. But it's dangerous to have too few customers  
even if they pay a lot, or the power that individual customers have  
over you could turn you into a de facto consulting firm. So whatever  
market you're in, you'll usually do best to err on the side of  
making the broadest type of product for it.[2]  
One year at Startup School David Heinemeier Hansson encouraged  
programmers who wanted to start businesses to use a restaurant as  
a model. What he meant, I believe, is that it's fine to start  
software companies constrained in (a) in the same way a restaurant  
is constrained in (b). I agree. Most people should not try to  
start startups.[3]  
That sort of stepping back is one of the things we focus on at  
Y Combinator. It's common for founders to have discovered something  
intuitively without understanding all its implications. That's  
probably true of the biggest discoveries in any field.[4]  
I got it wrong in "How to Make Wealth" when I said that a  
startup was a small company that takes on a hard technical  
problem. That is the most common recipe but not the only one.[5]  
In principle companies aren't limited by the size of the markets  
they serve, because they could just expand into new markets. But  
there seem to be limits on the ability of big companies to do that.  
Which means the slowdown that comes from bumping up against the  
limits of one's markets is ultimately just another way in which  
internal limits are expressed.It may be that some of these limits could be overcome by changing  
the shape of the organization — specifically by sharding it.[6]  
This is, obviously, only for startups that have already launched  
or can launch during YC. A startup building a new database will  
probably not do that. On the other hand, launching something small  
and then using growth rate as evolutionary pressure is such a  
valuable technique that any company that could start this way  
probably should.[7]  
If the startup is taking the Facebook/Twitter route and building  
something they hope will be very popular but from which they don't  
yet have a definite plan to make money, the growth rate has to be  
higher, even though it's a proxy for revenue growth, because such  
companies need huge numbers of users to succeed at all.Beware too of the edge case where something spreads rapidly but the  
churn is high as well, so that you have good net growth till you run  
through all the potential users, at which point it suddenly stops.[8]  
Within YC when we say it's ipso facto right to do whatever gets  
you growth, it's implicit that this excludes trickery like buying  
users for more than their lifetime value, counting users as active  
when they're really not, bleeding out invites at a regularly  
increasing rate to manufacture a perfect growth curve, etc. Even  
if you were able to fool investors with such tricks, you'd ultimately  
be hurting yourself, because you're throwing off your own compass.[9]  
Which is why it's such a dangerous mistake to believe that  
successful startups are simply the embodiment of some brilliant  
initial idea. What you're looking for initially is not so much a  
great idea as an idea that could evolve into a great one. The  
danger is that promising ideas are not merely blurry versions of  
great ones. They're often different in kind, because the early  
adopters you evolve the idea upon have different needs from the  
rest of the market. For example, the idea that evolves into Facebook  
isn't merely a subset of Facebook; the idea that evolves into  
Facebook is a site for Harvard undergrads.[10]  
What if a company grew at 1.7x a year for a really long time?  
Could it not grow just as big as any successful startup? In principle  
yes, of course. If our hypothetical company making $1000 a month  
grew at 1% a week for 19 years, it would grow as big as a company  
growing at 5% a week for 4 years. But while such trajectories may  
be common in, say, real estate development, you don't see them much  
in the technology business. In technology, companies that grow  
slowly tend not to grow as big.[11]  
Any expected value calculation varies from person to person  
depending on their utility function for money. I.e. the first  
million is worth more to most people than subsequent millions. How  
much more depends on the person. For founders who are younger or  
more ambitious the utility function is flatter. Which is probably  
part of the reason the founders of the most successful startups of  
all tend to be on the young side.[12]  
More precisely, this is the case in the biggest winners, which  
is where all the returns come from. A startup founder could pull  
the same trick of enriching himself at the company's expense by  
selling them overpriced components. But it wouldn't be worth it  
for the founders of Google to do that. Only founders of failing  
startups would even be tempted, but those are writeoffs from the  
VCs' point of view anyway.[13]  
Acquisitions fall into two categories: those where the acquirer  
wants the business, and those where the acquirer just wants the  
employees. The latter type is sometimes called an HR acquisition.  
Though nominally acquisitions and sometimes on a scale that has a  
significant effect on the expected value calculation for potential  
founders, HR acquisitions are viewed by acquirers as more akin to  
hiring bonuses.[14]  
I once explained this to some founders who had recently arrived  
from Russia. They found it novel that if you threatened a company  
they'd pay a premium for you. "In Russia they just kill you," they  
said, and they were only partly joking. Economically, the fact  
that established companies can't simply eliminate new competitors  
may be one of the most valuable aspects of the rule of law. And  
so to the extent we see incumbents suppressing competitors via  
regulations or patent suits, we should worry, not because it's a  
departure from the rule of law per se but from what the rule of law  
is aiming at.  
Thanks to Sam Altman, Marc Andreessen, Paul Buchheit, Patrick  
Collison, Jessica Livingston, Geoff Ralston, and Harj Taggar for  
reading drafts of this.