Web 2.0

November 2005Does "Web 2.0" mean anything? Till recently I thought it didn't,  
but the truth turns out to be more complicated. Originally, yes,  
it was meaningless. Now it seems to have acquired a meaning. And  
yet those who dislike the term are probably right, because if it  
means what I think it does, we don't need it.I first heard the phrase "Web 2.0" in the name of the Web 2.0  
conference in 2004. At the time it was supposed to mean using "the  
web as a platform," which I took to refer to web-based applications.  
[1]So I was surprised at a conference this summer when Tim O'Reilly  
led a session intended to figure out a definition of "Web 2.0."  
Didn't it already mean using the web as a platform? And if it  
didn't already mean something, why did we need the phrase at all?OriginsTim says the phrase "Web 2.0" first  
arose in "a brainstorming session between  
O'Reilly and Medialive International." What is Medialive International?  
"Producers of technology tradeshows and conferences," according to  
their site. So presumably that's what this brainstorming session  
was about. O'Reilly wanted to organize a conference about the web,  
and they were wondering what to call it.I don't think there was any deliberate plan to suggest there was a  
new version of the web. They just wanted to make the point  
that the web mattered again. It was a kind of semantic deficit  
spending: they knew new things were coming, and the "2.0" referred  
to whatever those might turn out to be.And they were right. New things were coming. But the new version  
number led to some awkwardness in the short term. In the process  
of developing the pitch for the first conference, someone must have  
decided they'd better take a stab at explaining what that "2.0"  
referred to. Whatever it meant, "the web as a platform" was at  
least not too constricting.The story about "Web 2.0" meaning the web as a platform didn't live  
much past the first conference. By the second conference, what  
"Web 2.0" seemed to mean was something about democracy. At least,  
it did when people wrote about it online. The conference itself  
didn't seem very grassroots. It cost $2800, so the only people who  
could afford to go were VCs and people from big companies.And yet, oddly enough, Ryan Singel's article  
about the conference in Wired News spoke of "throngs of  
geeks." When a friend of mine asked Ryan about this, it was news  
to him. He said he'd originally written something like "throngs  
of VCs and biz dev guys" but had later shortened it just to "throngs,"  
and that this must have in turn been expanded by the editors into  
"throngs of geeks." After all, a Web 2.0 conference would presumably  
be full of geeks, right?Well, no. There were about 7. Even Tim O'Reilly was wearing a   
suit, a sight so alien I couldn't parse it at first. I saw  
him walk by and said to one of the O'Reilly people "that guy looks  
just like Tim.""Oh, that's Tim. He bought a suit."  
I ran after him, and sure enough, it was. He explained that he'd  
just bought it in Thailand.The 2005 Web 2.0 conference reminded me of Internet trade shows  
during the Bubble, full of prowling VCs looking for the next hot  
startup. There was that same odd atmosphere created by a large   
number of people determined not to miss out. Miss out on what?  
They didn't know. Whatever was going to happen—whatever Web 2.0  
turned out to be.I wouldn't quite call it "Bubble 2.0" just because VCs are eager  
to invest again. The Internet is a genuinely big deal. The bust  
was as much an overreaction as  
the boom. It's to be expected that once we started to pull out of  
the bust, there would be a lot of growth in this area, just as there  
was in the industries that spiked the sharpest before the Depression.The reason this won't turn into a second Bubble is that the IPO  
market is gone. Venture investors  
are driven by exit strategies. The reason they were funding all   
those laughable startups during the late 90s was that they hoped  
to sell them to gullible retail investors; they hoped to be laughing  
all the way to the bank. Now that route is closed. Now the default  
exit strategy is to get bought, and acquirers are less prone to  
irrational exuberance than IPO investors. The closest you'll get   
to Bubble valuations is Rupert Murdoch paying $580 million for   
Myspace. That's only off by a factor of 10 or so.1. AjaxDoes "Web 2.0" mean anything more than the name of a conference  
yet? I don't like to admit it, but it's starting to. When people  
say "Web 2.0" now, I have some idea what they mean. And the fact  
that I both despise the phrase and understand it is the surest proof  
that it has started to mean something.One ingredient of its meaning is certainly Ajax, which I can still  
only just bear to use without scare quotes. Basically, what "Ajax"  
means is "Javascript now works." And that in turn means that  
web-based applications can now be made to work much more like desktop  
ones.As you read this, a whole new generation  
of software is being written to take advantage of Ajax. There  
hasn't been such a wave of new applications since microcomputers  
first appeared. Even Microsoft sees it, but it's too late for them  
to do anything more than leak "internal"   
documents designed to give the impression they're on top of this  
new trend.In fact the new generation of software is being written way too  
fast for Microsoft even to channel it, let alone write their own  
in house. Their only hope now is to buy all the best Ajax startups  
before Google does. And even that's going to be hard, because  
Google has as big a head start in buying microstartups as it did  
in search a few years ago. After all, Google Maps, the canonical  
Ajax application, was the result of a startup they bought.So ironically the original description of the Web 2.0 conference  
turned out to be partially right: web-based applications are a big  
component of Web 2.0. But I'm convinced they got this right by   
accident. The Ajax boom didn't start till early 2005, when Google  
Maps appeared and the term "Ajax" was coined.2. DemocracyThe second big element of Web 2.0 is democracy. We now have several  
examples to prove that amateurs can   
surpass professionals, when they have the right kind of system to   
channel their efforts. Wikipedia  
may be the most famous. Experts have given Wikipedia middling  
reviews, but they miss the critical point: it's good enough. And   
it's free, which means people actually read it. On the web, articles  
you have to pay for might as well not exist. Even if you were   
willing to pay to read them yourself, you can't link to them.   
They're not part of the conversation.Another place democracy seems to win is in deciding what counts as  
news. I never look at any news site now except Reddit.  
[2]  
 I know if something major  
happens, or someone writes a particularly interesting article, it   
will show up there. Why bother checking the front page of any  
specific paper or magazine? Reddit's like an RSS feed for the whole  
web, with a filter for quality. Similar sites include Digg, a technology news site that's  
rapidly approaching Slashdot in popularity, and del.icio.us, the collaborative  
bookmarking network that set off the "tagging" movement. And whereas  
Wikipedia's main appeal is that it's good enough and free, these  
sites suggest that voters do a significantly better job than human  
editors.The most dramatic example of Web 2.0 democracy is not in the selection  
of ideas, but their production.   
I've noticed for a while that the stuff I read on individual people's  
sites is as good as or better than the stuff I read in newspapers  
and magazines. And now I have independent evidence: the top links  
on Reddit are generally links to individual people's sites rather   
than to magazine articles or news stories.My experience of writing  
for magazines suggests an explanation. Editors. They control the  
topics you can write about, and they can generally rewrite whatever  
you produce. The result is to damp extremes. Editing yields 95th  
percentile writing—95% of articles are improved by it, but 5% are  
dragged down. 5% of the time you get "throngs of geeks."On the web, people can publish whatever they want. Nearly all of  
it falls short of the editor-damped writing in print publications.  
But the pool of writers is very, very large. If it's large enough,  
the lack of damping means the best writing online should surpass   
the best in print.  
[3]   
And now that the web has evolved mechanisms  
for selecting good stuff, the web wins net. Selection beats damping,  
for the same reason market economies beat centrally planned ones.Even the startups are different this time around. They are to the   
startups of the Bubble what bloggers are to the print media. During  
the Bubble, a startup meant a company headed by an MBA that was   
blowing through several million dollars of VC money to "get big  
fast" in the most literal sense. Now it means a smaller, younger, more technical group that just   
decided to make something great. They'll decide later if they want   
to raise VC-scale funding, and if they take it, they'll take it on  
their terms.3. Don't Maltreat UsersI think everyone would agree that democracy and Ajax are elements  
of "Web 2.0." I also see a third: not to maltreat users. During  
the Bubble a lot of popular sites were quite high-handed with users.  
And not just in obvious ways, like making them register, or subjecting  
them to annoying ads. The very design of the average site in the   
late 90s was an abuse. Many of the most popular sites were loaded  
with obtrusive branding that made them slow to load and sent the  
user the message: this is our site, not yours. (There's a physical  
analog in the Intel and Microsoft stickers that come on some  
laptops.)I think the root of the problem was that sites felt they were giving  
something away for free, and till recently a company giving anything  
away for free could be pretty high-handed about it. Sometimes it  
reached the point of economic sadism: site owners assumed that the  
more pain they caused the user, the more benefit it must be to them.   
The most dramatic remnant of this model may be at salon.com, where   
you can read the beginning of a story, but to get the rest you have  
sit through a movie.At Y Combinator we advise all the startups we fund never to lord  
it over users. Never make users register, unless you need to in  
order to store something for them. If you do make users register,   
never make them wait for a confirmation link in an email; in fact,  
don't even ask for their email address unless you need it for some  
reason. Don't ask them any unnecessary questions. Never send them  
email unless they explicitly ask for it. Never frame pages you  
link to, or open them in new windows. If you have a free version   
and a pay version, don't make the free version too restricted. And  
if you find yourself asking "should we allow users to do x?" just   
answer "yes" whenever you're unsure. Err on the side of generosity.In How to Start a Startup I advised startups  
never to let anyone fly under them, meaning never to let any other  
company offer a cheaper, easier solution. Another way to fly low   
is to give users more power. Let users do what they want. If you   
don't and a competitor does, you're in trouble.iTunes is Web 2.0ish in this sense. Finally you can buy individual  
songs instead of having to buy whole albums. The recording industry  
hated the idea and resisted it as long as possible. But it was  
obvious what users wanted, so Apple flew under the labels.  
[4]  
Though really it might be better to describe iTunes as Web 1.5.   
Web 2.0 applied to music would probably mean individual bands giving  
away DRMless songs for free.The ultimate way to be nice to users is to give them something for  
free that competitors charge for. During the 90s a lot of people   
probably thought we'd have some working system for micropayments   
by now. In fact things have gone in the other direction. The most   
successful sites are the ones that figure out new ways to give stuff  
away for free. Craigslist has largely destroyed the classified ad  
sites of the 90s, and OkCupid looks likely to do the same to the  
previous generation of dating sites.Serving web pages is very, very cheap. If you can make even a   
fraction of a cent per page view, you can make a profit. And  
technology for targeting ads continues to improve. I wouldn't be  
surprised if ten years from now eBay had been supplanted by an   
ad-supported freeBay (or, more likely, gBay).Odd as it might sound, we tell startups that they should try to  
make as little money as possible. If you can figure out a way to  
turn a billion dollar industry into a fifty million dollar industry,  
so much the better, if all fifty million go to you. Though indeed,  
making things cheaper often turns out to generate more money in the  
end, just as automating things often turns out to generate more  
jobs.The ultimate target is Microsoft. What a bang that balloon is going  
to make when someone pops it by offering a free web-based alternative   
to MS Office.  
[5]  
Who will? Google? They seem to be taking their  
time. I suspect the pin will be wielded by a couple of 20 year old  
hackers who are too naive to be intimidated by the idea. (How hard  
can it be?)The Common ThreadAjax, democracy, and not dissing users. What do they all have in   
common? I didn't realize they had anything in common till recently,  
which is one of the reasons I disliked the term "Web 2.0" so much.  
It seemed that it was being used as a label for whatever happened  
to be new—that it didn't predict anything.But there is a common thread. Web 2.0 means using the web the way  
it's meant to be used. The "trends" we're seeing now are simply  
the inherent nature of the web emerging from under the broken models  
that got imposed on it during the Bubble.I realized this when I read an interview with  
Joe Kraus, the co-founder of Excite.  
[6]  
  
 Excite really never got the business model right at all. We fell   
 into the classic problem of how when a new medium comes out it  
 adopts the practices, the content, the business models of the old  
 medium—which fails, and then the more appropriate models get  
 figured out.  
  
It may have seemed as if not much was happening during the years  
after the Bubble burst. But in retrospect, something was happening:  
the web was finding its natural angle of repose. The democracy   
component, for example—that's not an innovation, in the sense of  
something someone made happen. That's what the web naturally tends  
to produce.Ditto for the idea of delivering desktop-like applications over the  
web. That idea is almost as old as the web. But the first time   
around it was co-opted by Sun, and we got Java applets. Java has  
since been remade into a generic replacement for C++, but in 1996  
the story about Java was that it represented a new model of software.  
Instead of desktop applications, you'd run Java "applets" delivered  
from a server.This plan collapsed under its own weight. Microsoft helped kill it,  
but it would have died anyway. There was no uptake among hackers.  
When you find PR firms promoting  
something as the next development platform, you can be sure it's  
not. If it were, you wouldn't need PR firms to tell you, because   
hackers would already be writing stuff on top of it, the way sites   
like Busmonster used Google Maps as a  
platform before Google even meant it to be one.The proof that Ajax is the next hot platform is that thousands of   
hackers have spontaneously started building things on top  
of it. Mikey likes it.There's another thing all three components of Web 2.0 have in common.  
Here's a clue. Suppose you approached investors with the following  
idea for a Web 2.0 startup:  
  
 Sites like del.icio.us and flickr allow users to "tag" content  
 with descriptive tokens. But there is also huge source of  
 implicit tags that they ignore: the text within web links.  
 Moreover, these links represent a social network connecting the   
 individuals and organizations who created the pages, and by using  
 graph theory we can compute from this network an estimate of the  
 reputation of each member. We plan to mine the web for these   
 implicit tags, and use them together with the reputation hierarchy  
 they embody to enhance web searches.  
  
How long do you think it would take them on average to realize that  
it was a description of Google?Google was a pioneer in all three components of Web 2.0: their core  
business sounds crushingly hip when described in Web 2.0 terms,   
"Don't maltreat users" is a subset of "Don't be evil," and of course  
Google set off the whole Ajax boom with Google Maps.Web 2.0 means using the web as it was meant to be used, and Google  
does. That's their secret. They're sailing with the wind, instead of sitting   
becalmed praying for a business model, like the print media, or   
trying to tack upwind by suing their customers, like Microsoft and   
the record labels.  
[7]Google doesn't try to force things to happen their way. They try   
to figure out what's going to happen, and arrange to be standing   
there when it does. That's the way to approach technology—and   
as business includes an ever larger technological component, the  
right way to do business.The fact that Google is a "Web 2.0" company shows that, while  
meaningful, the term is also rather bogus. It's like the word  
"allopathic." It just means doing things right, and it's a bad   
sign when you have a special word for that.  
Notes[1]  
From the conference  
site, June 2004: "While the first wave of the Web was closely   
tied to the browser, the second wave extends applications across   
the web and enables a new generation of services and business  
opportunities." To the extent this means anything, it seems to be  
about   
web-based applications.[2]  
Disclosure: Reddit was funded by   
Y Combinator. But although  
I started using it out of loyalty to the home team, I've become a  
genuine addict. While we're at it, I'm also an investor in  
!MSFT, having sold all my shares earlier this year.[3]  
I'm not against editing. I spend more time editing than  
writing, and I have a group of picky friends who proofread almost  
everything I write. What I dislike is editing done after the fact   
by someone else.[4]  
Obvious is an understatement. Users had been climbing in through   
the window for years before Apple finally moved the door.[5]  
Hint: the way to create a web-based alternative to Office may  
not be to write every component yourself, but to establish a protocol  
for web-based apps to share a virtual home directory spread across  
multiple servers. Or it may be to write it all yourself.[6]  
In Jessica Livingston's  
Founders at  
Work.[7]  
Microsoft didn't sue their customers directly, but they seem   
to have done all they could to help SCO sue them.Thanks to Trevor Blackwell, Sarah Harlin, Jessica Livingston, Peter  
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