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WEB 2.0

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Does "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?

Origins

Tim 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 tradeshow 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 "throng of geeks." When a friend of mine asked Ryan about this, it was news to him. He said he'd originally written something like "throng of VCs and biz dev guys" but had later shortened it just to "throng," and that this must have in turn been expanded by the editors into "throng 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. Ajax

Does "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. Democracy

The 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 Users

I 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 Thread

Ajax, 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.

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