



Web 2.0: New World or Old Hype?

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Abstract: Web 2.0 was added to the complex vocabulary of the Internet in the first decade of the new millennia. It is a nebulous term which has been used to describe some of the most prominent recent entrepreneurial ventures of the Web; social networking such as MySpace and Facebook, user generated video with YouTube, the micro blogging service Twitter, and virtual worlds such as Second Life. The term, however, is controversial being described as “hype” by the founder of the Web, Sir Tim Berners-Lee. This article analyses what Web 2.0 means in the entrepreneurial context, drawing on a range of examples. The paper identifies a lack of revenue streams in Web 2.0 as a fundamental problem, drawing parallels with the dot com boom. A further contribution of the paper is the connection made to the rivalry of Google, Yahoo and Microsoft, who have provided exit opportunities for Web 2.0 entrepreneurs and funders, in the absence of a Web 2.0 IPO market.

Keywords: Web 2.0, entrepreneurship, revenue models.

1. Web 2.0: New World or Old Hype?

The executives of companies conducting business over the Internet have, conveniently, downplayed traditional measures of profitability and economic value. Instead, they have emphasized expansive definitions of revenue, numbers of customers, or, even more suspect, measures that might someday correlate with revenue, such as numbers of unique users (“reach”), numbers of site visitors, or click-through rates.¹

Michael Porter writing in 2001.

As we stated when we made our investment in Delicious, the question everyone asks is "What is the business model?" To be completely and totally honest, we don't yet know. The capital we are investing will go to making Twitter a better, more reliable and robust service. That's what the focus needs to be right now. We'll have plenty of time to figure out the business model and there are many options to choose from.²

The Venture Capital firm Union Square Ventures speaking in 2007 about their investments in Delicious and Twitter, both Web 2.0 companies.

Web 2.0 a further contribution to technology jargon, has entered the lexicon of e-commerce, entrepreneurs and funders. It is synonymous with many of the most popular recent innovations of the Internet; social networking, blogging, video

1. Porter (2001, p65)

2. Taken from <http://www.unionsquareventures.com/2007/07/twitter.html>

sharing, virtual worlds. As with many technology terms Web 2.0 means different things to different people. For its proponents it represents a new age, whilst the founder of the Web, Sir Tim Berners-Lee, dismisses it as mere jargon. The impact of Web 2.0 has been shown by the interest in the term by those involved in Internet entrepreneurship, with the comments of Union Square above striking just 7 years after the dot com meltdown. The influence of the Web 2.0 has also spread far wider than the dot coms with the broadcast media increasingly relying on user generated content, something which is seen central to Web 2.0, often in the form of video clips often taken from mobile phones.

1.1. Objectives and Structure

This paper aims to explain the relevance of Web 2.0 to entrepreneurship. It does so by comparing the phenomenon with the dot com boom which preceded it. It is structured as follows: Section 2 summarises the dot com boom and the key lessons which were drawn from it. Section 3 looks at what Web 2.0 means, both to those who coined the term and how it has been applied in the evolving Internet. Section 4 looks at a three short cases of companies associated with Web 2.0; Second Life the virtual world where people tale on avators or visual representations, Twitter the micro blogging service, and Zopa, the person-to-person financial exchange. Section 5 draws out the key lessons learnt so far and identifies questions for further research in this emerging area whilst Section 6 concludes.

2. The Dot Com Disease?

As many authors have recounted, the 1990s saw the dramatic rise of the dot coms. These Web based start-ups were seen by many analysts as representing a superior way of doing business. Taking advantage of the lower entry costs and the reach of the Web the dot coms emerged in most traditional markets and also in new markets enabled by the Internet such as portals, search and auctions. The funding environment was conducive to growth as venture capital funding in the United States grew from \$6.3 Billion 1995 to \$90 Billion in 2000 with angel funding in 2000 reaching \$40 Billion (Sohl, 2003).

These investors were attracted by the possible returns and early success stories such as Amazon (Kleiner Perkins), Yahoo (Sequoia Capital) and eBay (Benchmark Capital). A booming IPO market, along with ample opportunities for private sales, also provided easy exit opportunities for dot com investors along with further publicity for the industry. This is illustrated by the fact that over 70% of IPOs from the second quarter of 1999 to the first quarter of 2000 were Internet related raising over \$33 Billion (Richardson and Ofek, 2003). These stocks

usually rose sharply after the IPO enabling large profits to be made by the venture and angel investors, enabling large returns for venture capital funds. Benchmark's \$5 million investment in eBay realised a profit of 49,900% which became the record return in the period further fuelling the dot com boom (Himmelstein, 1999).

These returns led to increases in dot com funding, with greater investment from the venture firms already active and more funds investing in dot coms. The nature and size of venture capital investment was transformed, with increasingly large sums being invested at an earlier stage. This followed through the cycle with many companies going for IPOs before they had reached profitability. Indeed, as Foremski stated, companies could go from start-up to an IPO in 2 years compared to the traditional 5 years period for high technology start-ups (cited in Laffey, 2004). This led to firms having valuations which bore no reality to their profitability, or lack of it. A prime example of this was the \$4.9 Billion valuation eToys in August 1999, which had lost \$123 million in its last trading year, compared to the \$4 Billion valuation of Toys R Us which had made a corresponding profit of \$400 million (Laffey, 2004).

The subsequent collapse of the dot com sector was triggered by profit warnings from technology firms in April 2000. The dot com sector had always relied on financial confidence and once the market started to fall the great sell off ensued, funding dried up and many dot coms firms were declared bankrupt. Whilst there were successes amidst the gloom the same herd mentality which drove the boom led to a reassessment of the whole sector. As Hendershott said, dot coms were the "*black sheep of Wall Street*" (2004, p281) with funders and the whole financial community left with deep suspicions of Internet start-ups and their "new business models".

There were also more fundamental problems with the dot com approach. Day, Fein and Ruppertsberger (2003) distinguish between reformed markets, which existed before the advent of the Web, and breakthrough markets, those only possible through the Web. By definition in a reformed market, such as Banking, where customers' basic needs were being met the dot coms had to take market share away from the incumbents. However, these incumbents posed a difficult barrier as they had established brands, financial resources and large customer bases. As Day et al commented, there was no change in "the basic structure, functioning and purpose of the market" which helps to explain why Internet only banking has not been successful.

As Laffey (2004) points out, a number of problems with the dot com approach can be briefly noted.

- **Lack of scale** – In reformed markets dot coms had to build entire businesses from scratch against rivals who already had efficient systems. As an example multi-channel firms could promote their websites at no cost using their existing infrastructure whilst dot coms

had to grow awareness through advertising. In the field of distribution the dot coms lacked the scale to operate warehouses at optimal levels.

- **Costs of reaching customers** – Customers had to be lured away from established firms with discounts and promotions. In retail financial services, for example, established firms can cross-sell products to their existing customers, whilst dot coms have to obtain such business from scratch. Existing banks also have a pool of cheap finance from current account holders which can be recycled into loans.
- **Customer behaviour** – Customers took time to become content to use the Web to fully execute transactions and there are also the fears of fraud. The dot com model assumption that adoption would be quick and smooth was a false one.
- **Planning** – Some dot coms showed a clear inability to execute. A classic example was in the field of delivery to consumers which is expensive and has the added problems of managing timeslots, consumers not being available to take the products and the cost of returns.
- **The World Wide Wait** – The dot com model assumed broadband connection speeds for their customers, when the reality was dial-up. The best known example here was Boo.com, a clothing and sports good retailer, which closed down in May 2000.
- **Revenue models** – This was a particular issue with content based websites, such as news, email and search, as charging for content was difficult given that there are usually free alternatives. This generally led to a reliance on advertising, which fell off rapidly after it was seen as ineffective, although some dot coms used the *versioning* method described by Shapiro and Varian (1999)

2.1. After the Storm

Despite the dot com crash e-commerce has continued to grow and has become part of business and society. The exit of many dot coms and lack of venture funding helped those left in the market as this lessened competition and pressure on margins. Greater confidence in the medium has emerged aided by generational change, greater broadband adoption, an increased amount of time spent online, the increased online presence of well known high street retailers and the growth of dot com brands, international such as Amazon and national such as EBuyer and

ASOS in the UK. Google is now also the starting point for many consumers, whether they are buying online or researching to buy products in the high street.

As e-commerce has matured the clichés about its use have been shown to be simplistic. A distinction was made in the dot com era between low touch products – which are standard, for example, books and CDs – and high touch products – which vary in quality and need to be examined, or are of higher value/risk. Whilst for some consumers this may be true, and there are delivery advantages for books and CDs, in that they are often small enough to post through a door, a look at some e-commerce successes shows that a more sophisticated analysis is required. ASOS (short for *As Seen On Screen*), a UK dot com, specialises in selling copies of clothes worn by celebrities – hence its name. It announced that its profits had nearly doubled to £13.8 million when results were released in January 2008 (Reuters, 2009). Although clothing has to overcome the problems of delivery and returns, the inherent change in this company's products makes its Web based operations highly effective. In addition to this the success of Blue Nile, the online jewelry retailer, further illustrates the diversity of online shoppers. It is hard to think of a more important purchase than an engagement ring, the best selling product on their website. In short, e-commerce has moved on from the dot com boom, with dot coms having become an established part of business and society.

Investor interest in dot coms had been hit by the bursting of the dot com bubble, with venture capital finance hard to obtain and entry to the stock markets extremely difficult. Amidst the gloom, however, some credible firms had entered the public markets, with PayPal floating in 2001 and ASOS joining the London market in the same year. Interest in dot coms began to pick up again with the extremely successful IPO of Google in 2004 along with many smaller flotations, such as Salesforce.com and Blue Nile. The UK would also see a number of high profile gambling dot coms float on the London Stock Exchange with the largest, PartyGaming in 2005, raising nearly £1 Billion pounds.

In short, e-commerce is still growing: the dot com dream may have died, but there are still ample opportunities for dot com entrepreneurs.

3. What is Web 2.0?

The concept of Web 2.0 came from a brainstorming session between O'Reilly Media and MediaLive International in 2004. Tim O'Reilly, the founder of the O'Reilly Media, describes how this discussion focused around the future of the Web in the aftermath of the dot com bust, which they saw as a watershed (O'Reilly, 2005). They noted that the Web had continued to grow in importance after the downturn and had seen a constant stream of innovations. This justified, in the view of the discussants, the introduction of the term *Web 2.0*, which they initially explained by example as shown in Table 1, contrasting with what had gone before, which they termed *Web 1.0*. It is noted that some of these examples

are not Web applications, adding to the complexity. Author's additions are in italics.

Table 1: Examples of Web 1.0 and Web 2.0 (developed from O'Reilly, 2005)

Web 1.0	<i>Brief description</i>	Web 2.0	<i>Brief description</i>
DoubleClick	<i>Advertising network</i>	Google AdSense	<i>Targeted advertising based on the context of the webpage</i>
Ofoto	<i>Online photo storage and sharing</i>	Flickr	<i>Image and video sharing community with emphasis on interaction</i>
Akamai	<i>Provides content delivery networks. These mirror (copy) content of websites to enable faster download.</i>	BitTorrent	<i>Enables peer-to-peer file sharing</i>
mp3.com	<i>Digital audio standard</i>	Napster	<i>Peer-to-peer music sharing service</i>
Britannica Online	<i>Online encyclopedia developed by the publisher</i>	Wikipedia	<i>Needs no explanation</i>
personal websites	<i>Website set up by a person with their own content</i>	blogging	<i>Short for Web log. Series of chronological entries in text and other formats.</i>
evite	<i>Website for planning and organising events</i>	upcoming.org and EVDB	<i>Open calendars where users can search for events, add information and "social network"</i>
domain name speculation	<i>Purchasing of domain names to sell on</i>	search engine optimization	<i>The art of achieving high rankings in organic search results</i>
page views	<i>Number of times a page is viewed</i>	cost per click	<i>Advertising payment method whereby advertisers pay per visitor</i>
screen scraping	<i>Extracting information from a webpage in effectively "copy and paste" mode</i>	web services	<i>Sharing of applications and data in a structured way</i>
publishing	<i>Traditional one way media model</i>	participation	<i>Dynamic user involvement and community</i>
content management systems	<i>In the Web context manages development, consistency and updating of content of a website</i>	wikis	<i>Enables collaboration in web publishing</i>
directories (taxonomy)	<i>Categorisation of content in a hierarchy</i>	tagging ("folksonomy")	<i>User generated tags to classify content</i>
stickiness	<i>Attempts to retain users' through extensive content, functionality and personalisation.</i>	syndication	<i>Content is made available across a network of websites</i>

3.1. Principles of Web 2.0

The brainstorming session then teased out a number of principles which could help to set a framework for Web 2.0. These will be summarised with interpretation and examples.

Web as a platform

Database management is seen as key to the idea of Web 2.0. The example of Google is cited where the old model of software releases installed on local machines is replaced with free software which is continually used and improved. Google is described as a broker connecting webpages with users through its ability to search as much of the Internet as possible. This idea of connectivity can be seen clearly with social networking, blogging and video sharing.

The idea of remote software which is continually improved is probably best shown by Google's beta products, released at an early stage. Some Web 2.0 innovations do require software to be installed such as Second Life and Skype.

The concept of *the Long Tail* is also introduced, a term used to describe the selling of a wide range of niche items. This applies equally well to content with small websites making up the majority of the Web and minority terms doing the same for searches. Application of the Long Tail is illustrated by Google's ability to create advertising markets which catered to firms ranging from Coca-Cola to a small guest house, as advertising links are triggered by the user search, meaning a unique set of adverts appears for each search.

Harnessing collective intelligence

The survivors of Web 1.0 are seen as those firms which embraced the link structure of the Web and its users. Yahoo, though now seen as a business failure, was an innovator through its directory which checked websites for quality and organised them in a hierarchical directory. Such a system, however, was not scalable as the Web grew in size; Google then provided a better method of searching through its automated PageRank system which ranked pages by analysing which other pages linked to them. User involvement in value creation is also stressed with network effects creating value and representing barriers to entry, as with eBay and more recently with the person-to-person betting website Betfair. User generated content is a further extension of user involvement being a differentiator to websites such as Amazon with user reviews of products, but being fundamental to many Web 2.0 companies where user content is the product.

The social bookmarking websites Delicious can be seen as combining the link structure of the Web and user involvement. It takes the idea of bookmarking, a personal feature, to the Web with users adding websites that others can then access. The sites are given *tags* – descriptions – which help categorisation and search.

Data is the next Intel inside

The importance of database management was noted above, to which ownership of data is added. This is effectively about maintaining a barrier to entry. If data is created by users, then ownership relies on maintaining the network effects of a large enough user base. This involves providing a reliable infrastructure, innovation, and maintaining the trust of the user base. An example of this was shown by the negative reaction to Facebook's plans to use its members faces on adverts.

Discussion groups have sprung up attacking the new ad strategy. One, "My photos are MINE! NOT Facebook's! Change the Terms and Conditions", has almost 35,000 members, while around 12,000 people have signed up to "Facebook: Do not sell my private pictures! Change your terms of use, NOW!" (Mesure and Griggs, 2007)

A further interesting point on ownership is the ability to export data from social networking websites. The main social network websites partially open their platforms but they do not allow users full control over their data. This highlights a dilemma: offering flexibility (no switching costs) or maintaining lock-in (high switching costs).

End of the software release cycle

In Web 2.0 software is seen as a service (SaaS), not as a product. This follows on from the point in "Web as a platform" above, that software is not installed but used and improved. In the SaaS model the software is accessed remotely via the Web; examples being Google, Delicious, Facebook. Operations are crucial in this model, providing an effective and reliable service, that runs on a 24-7 basis. Treating users as co-developers is also stressed with the importance of ongoing experimentation on the website and evaluation of what is used and liked. Slightly different versions of a website can be presented to the range of users to test out which format work best.

Lightweight programming models

The simplicity of RSS is stressed as a lesson for the development of the Web, and is contrasted with the slower take-up of corporate Web services. O'Reilly also stresses syndication of data without controlling what happens to it and "design for hackability" – accepting that software will be reused/changed and actively encouraging it. This links well with the work of Berthon et al (2007). Developing complementary services is also highlighted – the common use of YouTube videos on other websites is a prominent example here.

Software above the level of a single device

Internet usage has moved from being predominantly desktop orientated to being multi-device: set top boxes, smart phones, gaming devices and so. It therefore

follows that software must reflect this. The U Commerce phrase introduced by Watson et al (2002; 2004) and applied to Web 2.0 in this Special Issue is an excellent frame of reference here.

Rich user experiences

This refers to the ability to recreate the richness of desktop software through remote applications. This is connected to the development tools available with Ajax (Asynchronous XML) allowing much faster use of webpages, through, for example, less reloading of content when a new page is requested. The issue of user experience is crucial for Web 2.0 companies which aim to replace desktop software. Prominent examples in this field are Salesforce.com, with its CRM software, and Google's applications which include the word processor, Writely.

4. Web 2.0 Short Case Studies

This section presents 3 short case studies which introduce major entrepreneurial efforts in the Web 2.0 arena; Second Life, Twitter and Zopa.

Short Case 1: Second Life

The cover of Business Week on May 1 2006 showed the Internet entrepreneur Anshe Chung along with the seemingly clichéd title "Virtual World, Real Money". However, the "entrepreneur's" picture on the cover page with the following text showed that this was something completely different to what had gone before.

She's fictional, lives inside an online game, but earns thousands of dollars there.
And she's not alone (Business Week, 2006).

Anshe Chung is an avator in Second Life, an online character linked to a real person, who became a millionaire in this virtual 3D world. She was created by Ailin Graef, born in China, and now a German citizen. Second Life users create their own avator using online tools and can then create virtual objects or services to use, or sell. These include anything available in our normal lives and anything else one can imagine; deck chairs, sunglasses, hotels, swimming pools, jewelry, parachuting and unsurprisingly sexual services, which are a prominent feature. Second Life has nearly 17 million residents of whom nearly 1.5 million have been active in the last 60 days (Second Life, 2009).

Second Life has its own form of currency known as the Linden Dollar, which can be converted in US Dollars, offering the opportunity for profit; the exchange rate on 2 February 2009 was \$1 = 290 Linden Dollars. This opportunity for profit

has spawned an entrepreneurial economy which in November 2008 generated \$33 million (US Dollars) of transactions between its users.

To obtain crucial network effects Second Life is free to join. However, applying the *versioning* tactic of Shapiro and Varian (1998), to own land and buy and sell users need to have a premium account which has to be paid for. In this way Anshe Chung paid \$9.95 and became a virtual property developer in Second Life, buying real estate, improving it and then selling some of her holdings to other users.

What is the background to this virtual world? Second Life was created in 2003 by Linden Lab, a San Francisco company founded in 1999 by Philip Rosedale. It has received funding from angel investors including Mitch Kapor and from venture capital firms including Benchmark Capital, Omidyar Network, Globespan Capital Partners, and Bezos Expeditions. Its fees come from sale of premium accounts, from selling land and islands, and from recurring land fees. Second Life can add land at will – one of the inherent advantages of a virtual world – although prime location is decided by the marketplace and there is a booming private market.

Can Second Life maintain its success in the future? The statistics above show that less than 10% of its citizens are active, involvement is time consuming and its scripting language is not easy to learn for the non-technical audience. However, it has embedded the spirit of capitalism as a motive for involvement and its clear revenue model has resulted in profitability. There are also no limits to involvement for its users and as a niche aspect of the Web it is an established phenomenon.

Linden Lab have expanded the services offered to users through the purchase of Xstreet SL and OnRez websites, which are both retailers of the virtual goods used in Second Life. Other virtual worlds exist and there is the related area of MMORG (massively multiplayer online role-playing game) where online games attract millions of players. World of Warcraft, with over 11 million players, owned ultimately by Vivendi, charges subscriptions from \$12.99 a month showing there is a large audience ready to pay for content.

Short Case 2: Zopa

Zopa is a UK based financial marketplace which connects people with money to lend to those who wish to borrow money. It was founded in 2004 and is has raised \$34 million from the venture capital firms Bessemer Venture Partners, Balderton Capital, Wellington Partners; from Tim Draper (the founder of Draper Fisher Jurvetson), and from the Rowland Family.

Its basic proposition is that by cutting out the Banks and their margin more attractive rates can be offered to both lenders and borrowers. Lenders and borrowers compete for business on the Zopa website by offering or requesting

finance with the terms (rate and length of loan). Zopa credit checks potential borrowers and only accepts those with low risks. Members are assigned to a marketplace depending on their credit rating which borrowers can then be aware of. Repayments are made via Zopa who take a commission from both parties with fines for late payment and debt recovery processes used if required (Zopa, 2009).

To reduce risk and bad debt Zopa does not cater for borrowers on incomes of less than £25,000 and offers optional repayment protection to borrowers. However, it does not cover its lenders for bad debt and to manage risk the funds of lenders are pooled together and then spread across loans made in £10 units to minimise the exposure. So for example, an individual may lend £1,000 via the Zopa marketplace which could be used to partially fund 100 separate loans. Zopa has drawn on traditional credit checking agencies to vet its borrowers and as part of its application process Zopa, in addition to the usual criteria, asks potential members if they have an eBay rating. This enables them to harness the network externalities of the much earlier marketplace.

Zopa has also created a community that taps into dislike of banks, something which has grown in the Credit Crunch. To quote a Zopa lender Stephan Ashby

Although I have lots of dealings with banks I am not a huge fan of them," he says. "The personalised nature of lending on Zopa appeals to me. You can see to whom you are lending and what they are planning to use the money for. I have nearly 400 borrowers and some of them have even sent thank you messages." (Ellson, 2006)

To succeed Zopa will need to lock-in the lenders and borrowers they have attracted as imitators enter the market. Being early to market with the brand recognition this gives is an advantage especially as trust is a major issue in this area. Network externalities are also an obvious feature of the Zopa marketplace as lenders provide the funds to be borrowed instead of a financial institution. To put it simply, simply if a borrower who requires money quickly visits Zopa and cannot obtain money, they will go elsewhere – probably visiting a traditional bank.

Such cases of lack of liquidity are inevitable as Zopa builds awareness of its marketplace. Its hope will be that it can quickly achieve strong enough network externalities to lock-in its members and lock-out the new entrants who will eventually appear.

By 2008 Zopa had facilitated loans of £27 million in the UK and stated it would become profitable in this market in 2008. It had expanded internationally into Italy, Japan and the United States but had to withdraw from the US due to poor credit worthiness of many of the population and regulatory issues (O'Sullivan, 2008).

In an environment where many large banks have lost credibility after huge losses linked to US sub-prime securities there may be an increasing demand for

social finance and the person-to-person model has worked with another dot com start-up Betfair (Pitt et al 2005, Laffey, 2005).

Short Case 3: Twitter

Twitter allows its 6 million registered users to state what they are doing now in less than 140 characters. These messages, known as “tweets” are available on the user’s Twitter page and can be delivered via text, RSS feeds, email, through Facebook and onto mobile phones. It has been termed a micro blogging service, and was made famous by Barack Obama’s use of it to provide continual updates in the 2008 Election Campaign. Twitter was founded by Jack Dorsey, Biz Stone and Evan Williams (a co-founder of Blogger) in 2006.

Twitter has no revenues and reveals on its website that it is loss making.

Twitter has many appealing opportunities for generating revenue but we are holding off on implementation for now because we don't want to distract ourselves from the more important work at hand which is to create a compelling service and great user experience for millions of people around the world. While our business model is in a research phase, we spend more money than we make. (Twitter, 2009)

It has received \$20 million in funding from Union Square Ventures Charles River Ventures, and angels, including Marc Andreessen, the cofounder of Netscape, and the well known investor Ron Conway, an early investor in Google.

Twitter has attracted huge attention, being seen as social networking “lite”, and its user base grew tenfold from April 2007 to April 2008 (Gustin, 2008). It has faced problems with its infrastructure, something which has always been evident with high growth content based dot coms. Costs are an issue too, with SMS updates incurring charges for Twitter which has hindered its growth internationally.

The main opportunity for exit for its investors and entrepreneurs until now has been acquisition, with Facebook entering unsuccessful negotiations to purchase Twitter in 2008. This possible exit route mirrors the pattern of other Web 2.0 start-ups with acquisition by larger technology firms being the norm.

5. Exit through Sale Not IPO

Web 2.0 firms in the main have focused upon growth in users, which ultimately is how they have been judged, at least for the period until 2009. The high profile exit route has been sale to larger Internet firms, with most prominently Google. Google with its large cash reserves has been trying to find new revenues sources, as it fears saturation in its core search markets. Its moves have also been

defensive in nature driven by its rivalry with MSN and Yahoo in search, with each firm trying to gain an advantage or control a key advertising space (For a discussion of this see Sharp and Laffey, 2008).

Revenue streams have focused on advertising and some form of versioning – for example Picasa charges for storage above a certain amount.

Table 2: High profile Web 2.0 exits.

Company	Description	Founded	Investors	Investment	Sold	Sale Price	Purchaser
MySpace	Social networking with a focus on music	2003	Intermix (internal)	N/A	July 2005	\$580 million	News Corporation
YouTube	Video uploading and sharing	February 2005	Sequoia	\$11.5 million	November 2006	\$1,650 million	Google
Delicious	Social bookmarking	2004	Included UnionSquare, Amazon	Information not available	December 2005	\$15-30 million est	Yahoo
Bebo	Social networking for teenagers	July 2005	Benchmark	\$15 million	March 2008	\$850 million	AOL
Skype	Internet telephony	August 2003	Draper, Fisher Jurvetson, Index Ventures	\$18.8 million		\$2,400 million	eBay
Picasa	Organising and sharing photos	October 2001	Idealab	Information not available	July 2004	Not disclosed	Google
Flickr	Organising and sharing photos	February 2004	Private investors	Information not available	March 2005	\$35 million est	Yahoo
Blogger	Enables individuals to keep a Web log (Blog) of chronological entries	August 1999	O'Reilly & Associates, Advance Publications, Jerry Michalski, and The Accelerator Group.	Information not available	March 2003	Not disclosed	Google

Source: Press releases, news features, company information.

Caulfield (2007) confirms this analysis stating that there had been no Web 2.0 IPOs in 2007, a year which saw 9 technology companies launch IPOs in the first quarter. He points to the acquisitions of Google and Yahoo's expenditure of over \$1.5 Billion on acquisitions from 2004-2007 as providing the exit opportunity for Web 2.0. It is noted that the social networking websites Xing (Germany) and

Mixi (Japan) have both floated on their respective stock markets, influenced by less restrictive accounting regulations (Caulfield, 2007).

However, whilst this gave the opportunity for a profitable sale for some entrepreneurs the experience of being absorbed into larger organisations was difficult. Dennis Crowley, a co-founder of Dodgeball, a mobile phone social networking service, stated “It’s no real secret that Google wasn’t supporting dodgeball the way we expected.....It wasn’t worth being that frustrated all the time – it was making us both crazy.” (Guardian, 2007)

The future of the Web 2.0 acquisition boom is extremely doubtful. The YouTube acquisition by Google seems to show a key Web 2.0 lesson: control of a busy website but no significant revenues. One of the lessons of the competition between Google-MSN-Yahoo in the search and portal markets has been that whilst MSN and Yahoo have more users, primarily through email, Google generates far more revenue per user (Sharp and Laffey, 2008). Over time, a website cannot sustain a high valuation simply through its number of users, unless a way of monetising them can be found. This was a clear lesson from Web 1.0.

6. Conclusion

The innovations described as Web 2.0 are about evolution of the Web and its users: changing technologies, software, infrastructure, the confidence that comes from greater use and simply generational change. Developers also have a more sophisticated range of tools available and one cannot judge the Web of even five years ago by the standards of today, as the tools available now are vastly superior. Users have also become an integral part of the development process in Web 2.0, with message boards in technical areas now seen by some as a superior form of support than company helplines.

Stroud (2008) places change in context by comparing the bemusement of those who do not use social networking websites to the reaction of adults to the emergence of text messaging in the 1990s. Many of these adults now use text messaging as a regular form of communication, illustrating that society can, and does, change through the introduction of new technology.

The Internet has now become ubiquitous with its reach extending through television, mobile phones and games consoles. Social networking now ranks along search and email as a key application. These innovations show that wide use does not necessarily translate into profitability. It took over a decade for the now standard method of funding search, paid search adverts, to become mainstream and email is a loss making requirement for a portal. Which of these routes will Web 2.0 take? That is the challenge for entrepreneurs and investors to solve, and will determine future entrepreneurial activities in the sector.

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