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Business Models of the Web 2.0: Advertising or the Tale of Two Stories

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Abstract: Web 2.0 services have experienced a very strong growth in the last 4 years, and now account for a large part of the global internet audience. The development of these services comes with a deep transformation in Web uses which may prefigure the future of media in an ultrabroadband world. The perennial nature of Web 2.0 services crucially relies on their capability to build profitable business models. Today, advertising is the main source of revenue for Web 2.0 sites; however advertising revenues are weak and disappointing, especially related to their audience. The aim of this paper is to provide an economic understanding of the situation and to investigate the strategies of economic players (site managers, ad networks and ad servers) in order to improve advertising revenues on Web 2.0 sites. We present two different stories about the effect of internet on advertising, specific problems encountered on Web 2.0 sites and effective ways to monetize Web 2.0 audiences. Each story builds upon a different theoretical framework: the economic analysis of advertising and the socio-economic approach to worlds of production.

Key words: advertising, online advertising, Web 2.0, internet, conventions

The phrase Web 2.0 has been coined to describe a new generation of Web sites, whose content is provided and organized by its users. Web 2.0 services provide users with tools for sharing content online and interact with each other. It refers to a broad range of services; we include in this category User Generated Content sites (video and photo sharing), blogs and social news sites (including social recommendation tools such as Digg and Delicious), and Social Network sites (such as MySpace, Facebook, Bebo, etc.).

The development of these services comes with a deep transformation in Web uses which may prefigure the future of media in an ultrabroadband world. In May 2008, Comscore counted 4.1 billion videos viewed on Youtube.com and 703 million on Myspace.com, in the USA only. Also in the USA, according to Comscore, average visitor spent 242 minutes on

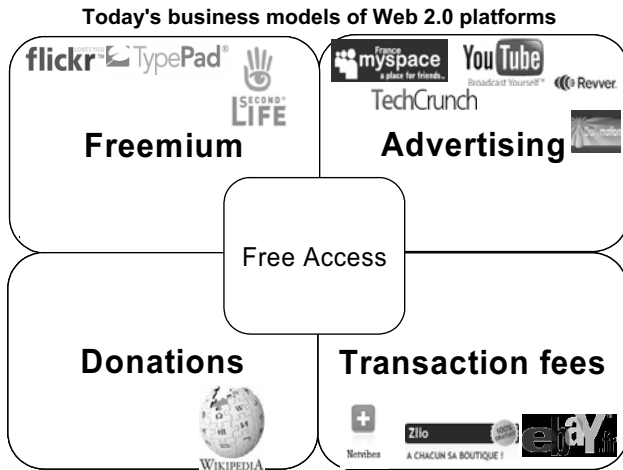
Myspace.com (versus 161 on Facebook.com) in February 2008¹. To sum up, Web 2.0 uses are extensively and intensively massive. They generate important data traffic. Moreover, this traffic is getting more symmetrical since (user generated) content uploading and sharing consume ascending traffic. Along with HD IP TV, VoD or cloud computing, Web 2.0 services clearly contribute to make ultrabroadband deployment an attractive issue. An attractive one, maybe, but a profitable one²?

From an economic point of view, Web 2.0 services have two main features. First, technical and financial barriers to entry are low: setting-up a Web 2.0 service does not require strong investments or elaborated technological tools. Second, network externalities are very strong: the utility of the service increases with the number of users, since more people mean more opportunities of interactions around contents (AGUITON & CARDON, 2007; KATZ & SHAPIRO, 1985). As a consequence, most of the competition between the services relies on the ability to reach a critical mass of users. This configuration provides strong incentives to offer users free access to the service. Therefore, viable business models must be built around free access to content and principal services; economic strategies mostly depend upon the sites' ability to monetize their growing audiences.

To understand the business models of Web 2.0, we must consider these services as multi-sided platforms (ROCHET & TIROLE, 2003). Web 2.0 services are strategic agents who organize the relations between heterogeneous groups. These platforms are able to internalize the indirect externalities between the different actors. They do not price the service they provide to its marginal cost (EVANS, 2003). On the contrary, in order to build a sustainable service, platforms subsidize some stake-holders by charging others. The business models of these services result from the choices made by the platforms in their subsidization and pricing strategies. Obviously, the economy of the Web 2.0 is based on the subsidization of the audience: Web 2.0 sites always give free access to their services and content. It is possible to identify four different monetization means around this free access.

¹ Comscore counted 68 millions unique visitors on Myspace.com (US, feb. 2008, up 4% from feb. 2007) and 32,4 millions on Facebook.com (up 94%).

² The overall economic value of ultrabroadband remains uncertain (see this issue of C&S). Web 2.0 sites' advertising revenues (which are the subject of this article) may either be considered as a direct source of revenue for telecom operators if their Web services are vertically integrated, or as an indirect positive externality through the additional utility conferred to broadband subscribers.



Web 2.0 sites can organize cross-subsidies between heavy users and ordinary ones; this is often called freemium (free+premium). The use of the service is free, but users may pay to accede to advanced functionalities. The photo-sharing service Flickr sells "pro accounts" with unlimited upload capacity.

Other Web 2.0 services, such as Wikipedia, rely on a non-market philosophy, and build their sustainability on the donations of the most engaged users.

Some platforms organise cross subsidies from goods and service providers towards the audience. In this model, the platform drives its users towards related goods and services, such as photo printing or music selling, on which it charges a transaction fee. More indirectly, platforms can collect information about users' preferences and sell it to retailers for marketing use.

Last but not least, most of the services attempt to sell their audience product to advertisers. When dealing with advertising on Web 2.0, actors and analysts face the following statements:

- most of these services have experienced a very strong growth in the last 4 years, and now account for a large part of the global internet audience³. Moreover, there is a lot of available data about these audiences;

³ According to Alexa, five of the ten largest audiences of the Internet are Web 2.0 services: Youtube.com (3); Facebook.com (5); Myspace.com (7); Wikipedia.com (8); Blogger.com (9)

- nevertheless, the price rates of ads on Web 2.0 sites are very low, and advertisers are reluctant to advertise on Web 2.0 sites. The overall revenues of Web 2.0 sites are often weak and disappointing, especially related to their audience.

The aim of this paper is to investigate the strategies of economic actors (site managers, ad networks and ad servers) in order to improve advertising revenues on Web 2.0 sites. We present two different (and partially complementary) stories about the effect of internet on advertising, specific problems encountered on Web 2.0 sites and effective ways to monetize Web 2.0 audiences. These stories rely on different theoretical frameworks.

The first story draws from the economic analysis of advertising. It finds its roots in the long time dispute between supporters of the Harvard view (according to whom advertising is mostly persuasive and thus anticompetitive) and supporters of the Chicago view (who argue that advertising, as a source of information, has a positive effect on welfare). Internet is commonly described as an effective way to improve matching and thus reinforce the informative dimension of advertising. In the context of Web 2.0, targeting (through the use of contextual and behavioural profiling tools) is introduced as the best (if not the unique) way to improve advertising revenues.

However, the standard view tends to underestimate the diversity of advertising formats and the potential of innovative models to contribute to Web 2.0 advertising revenues. The second story builds upon the Convention School framework, which underlines the plurality of the worlds of production inside a market (SALAIS & STORPER, 1993). It allows us to observe the emergence of two alternative models in online advertising: one addresses high value niche content through an editorialized intermediation; the other, often referred to as social media marketing, consists in using the viral nature of social ecosystems to spread brand images and ads. These new models, though offering high revenues, are still unstable and under-equipped.

In order to identify the different worlds of the online advertising, we analysed the directory of the French online ad networks. We examined the type of services that they offered, their efficiency measurement tools, their pricing models, and more generally the story they tell about their business. This was completed by several case studies of French and US ad networks.

■ Web 2.0 advertising: the conventional story

As advertising became through the 20th century a prominent feature of modern economy, an important literature has emerged in economic theory (BAGWELL, 2001). In this section we show that economic analysis of advertising furnishes an interesting reading grid to observe recent trends in online advertising.

Economics of advertising: a brief survey

When surveying the economic analysis of advertising, two main issues hold our attention: i) the classical distinction between the two main roles played by advertising, initiated by Marshall (1919); ii) the recent development of the "Coasean analysis of marketing" (GOLDMAN, 2006).

Persuasive versus informative advertising

For a start, we shortly recall the main arguments of the long time dispute between economists on the effect of advertising on consumer's sovereignty (and, thus, on competition and welfare). This dispute played a major role in the structuring of the economics of advertising as a research area (BAGWELL, 2001).

On the one hand, the Harvard View, developed by thinkers such as CHAMBERLIN (1933), KALDOR (1950) or GALBRAITH (1958), holds that advertising is mostly persuasive and thus anticompetitive. First, advertising creates "artificial" product differentiation, tricking consumers to believe that products are different although in reality fundamentally identical. Secondly, advertising changes tastes (preferences) and creates brand loyalty (DIXIT & NORMAN, 1978). As a consequence of both effects, the advertised product faces a less elastic demand, which is theoretically associated with higher prices.

On the other hand, supporters of the Chicago view argue that advertising's main function is to inform consumers, thus having a positive effect on competition and welfare. As a direct source of information, it helps to match buyers and sellers who incur search costs (STIGLER, 1961). According to TELSER (1964), advertising is an important information channel for entrants and thus a sign of market competition. Indirectly, advertising spending is a means by which firms signal their type to

consumers (NELSON, 1974). Even when advertising does not directly communicate the characteristics of the product, it can still communicate them implicitly. Advertising spending or reactivated product-experience memory increases consumers' level of information.

Interestingly, empirical investigation does not lead to believe that one effect of advertising overcomes the other. Rather, there is evidence of a coexistence of persuasive and informative advertising, even within the same market. LEFFLER's empirical contribution (1981) reveals the dual nature of pharmaceutical advertising: to inform physicians about the existence of new products and their characteristics; to persuade consumers to buy well-established products through "brand-name" recall. Moreover, various advertising effects can be associated with different formats: classified and comparative text ads promote the informative dimension of advertising; images and slogans promote the persuasive one.

Advertising: a problem of matching?

Recent theoretical works have tried to go beyond the controversy. BECKER & MURPHY (1993) build upon the idea that the same ad may not have the same effect on two different consumers. Advertising is a complement to the advertised product and may, as a good or a bad, either increase or lower consumer's utility. If a consumer values "social prestige", advertising and the advertised product are complementary goods, thus both increasing consumer's utility. The consumer will even be ready to pay for it. On the contrary, if advertising is a bad, consumers will have to be paid (or forced) to consume it. Most TV or magazine ads are consumed because consumers are paid with the programs they go with.

One of the ambiguous effects of advertising on utility is attention consumption. This issue was only recently investigated in the literature (VAN ZANDT, 2004; GOLDMAN, 2006). From a Coasean perspective, the problem is that marketers do not fully internalize the utility consumers derive from advertising (COASE, 1960). They tend to overexploit consumers' attention⁴, and thus produce a negative externality. Indeed, they certainly

⁴ SIMON has clearly identified the tension between information and attention, in a limited rationality world: "what information consumes is rather obvious: it consumes the attention of its consumers. Hence a wealth of information creates a poverty of attention, and a need to allocate that attention efficiently among the overabundance of information sources that might consume it" (1971).

reach consumers who derive a positive utility from advertising (through information, social prestige or even entertainment), but also keep annoying consumers who derive only negative utility from advertising (no useful information, attention consumption). Moreover, since they do not internalize the price of the attention they consume, advertisers tend to spend too much on advertising. This problem was suggestively explained by the advertiser John Wanamaker, who said: "Half the money I spend on advertising is wasted. The trouble is, I don't know which half". To sum up, the problem of advertising is essentially a problem of matching.

Internet advertising and Web 2.0

Our aim is now to show that economic analysis of advertising is relevant to observe and interpret recent trends in internet advertising and especially Web 2.0. First, both persuasive and informative modes of advertising can be found on the internet, materialized through display ad and search ad formats. Secondly, as Web 2.0 questions the effectiveness of display format, advertisers focus their efforts on matching improvement in order to increase their revenues.

The two paradigms of internet advertising

Online advertising appeared in 1994 as the Web site Hotwired displayed a banner linking to the AT&T site. From then on, online advertising spending grew quickly and accounted in the United States for \$8,2 billion in 2000 (Internet Advertising Bureau, IAB ⁵). In 2006, online advertising spending reached \$16,9 billion in the United States (IAB) and \$24,5 billion worldwide (ZenithOptimedia). Interestingly, the IAB has developed a conventional classification in order to distinguish different online advertising formats. We focus on the two main formats: display (associated with rich media) and search ⁶.

The first one is associated with the display of banners, rich media, in a standardized way, on Web pages. Pricing is based on a page-view audience measure (CPM: cost per mil). This format favors huge and concentrated

⁵ <http://www.iab.net>. All IAB data are consolidated and used as a reference within the industry.

⁶ Other formats (Classified advertising; e-mail marketing) account today for less than 25 percent of Internet advertising (IAB). Contrary to display and search, they are not used on Web 2.0 sites.

audiences associated with "premium" content (portals and large "quality" sites). In 2001, display (associated with rich media) accounted for more than two third of internet advertising spending (IAB). By 2006, the share had fallen to 33 percent.

The second advertising model, which is commonly associated with Google's AdWords and AdSense programs, relies on the automatic matching between targeted messages (sponsored links), and consumers' intentions (expressed with key words). Pricing is based on clicks (CPC: cost per click). In 2001, search advertising (which was in its infancy) accounted for 4 percent of internet advertising spending (IAB). By 2006, the share had reached 42 percent.

Obviously, the two main advertising formats roughly correspond to the economists' distinction between persuasive and informative advertising. According to HOLLIS (2005), display and search formats are to be associated with the two different paradigms that have characterized the way the effectiveness of online advertising has been assessed: brand building and direct response. From a marketing analysis point of view, the two paradigms are complementary, because they intervene at different stages of the purchase process. From a (normative) economic analysis point of view, persuasive image display should be reduced while informative targeted text messages should be favored. Interestingly, this happens already at the macro level, since the second form captures most of online advertising investments and growth. EVANS (2008) shows the growing importance of matching tools in display advertising as well; he thinks that they should reduce the negative externalities associated with persuasive advertising. Can this statement be extended to Web 2.0 sites?

Web 2.0: the failure of the Display model and the rise of targeting

Both main advertising formats are used on Web 2.0 sites. In particular, banners are displayed on pages of most of Web 2.0 sites: Myspace, Facebook, Flickr, Dailymotion, etc. However these sites have difficulties to sell their inventory to advertisers. Reported average CPM on Social Networking and UGC sites is very low (\$0.1 to \$0.5 ⁷). Three main reasons

⁷ Sources: *Wired*, April 2008.

http://www.wired.com/techbiz/it/magazine/16-04/bz_socialnetworks;
Inside Facebook, april 2008.

<http://www.insidefacebook.com/2008/04/27/what-cpm-is-your-app-making-data-from-facebook-developers/>

are put forward by market professionals (platform managers and advertisers) in order to explain the weakness of price rates of display ads on Web 2.0 sites:

- User-generated-content quality is by definition very unequal and on average low; advertisers are reluctant to see their ads associated with non "premium" content.
- Contrary to Web portals, Web 2.0 audiences are extremely divided over a large number of Web pages; this configuration prevents advertisers from reaching a large and collective audience within a short period of time; moreover, abundance of inventory creates a scarcity problem: platform managers cannot raise prices without space scarcity.
- Viewers's attention (and thus their level of exposure to ads) is not the same on Web portals (available, divided) and Web 2.0 sites (focused on the community and actions, such as "adding a comment", "uploading a content", etc). As a consequence, Web 2.0 users' exposure to banner ads is slightly smaller.

How do Web 2.0 players try to overtake the difficulties they meet when monetizing their audiences? Internet is commonly described as an effective way to improve matching, and thus reinforce the informative dimension of advertising. Indeed, it provides marketers with the tools and data they need to reach "good" consumers and avoid annoying uninterested (i.e. "bad") consumers.

This point is crucial to understand the way many Web 2.0 players try to overtake the difficulties they meet when monetizing their audiences. In this specific context, targeting (i.e. improved matching) is introduced as the best (if not the unique) way to improve click-through rates, and thus monetization rates. Two main arguments are put forward by professionals in order to justify the development of targeting in the (display) ad delivery process. First, (behaviorally) targeted ads are expected to be more relevant to viewers, whatever the content associated with the ad; more relevant ads are supposed to be more effective in harnessing one's attention. Secondly, (socio-demographically) targeted ads are expected to be addressed in priority to certain audience segments; increased competition between advertisers to reach more valuable targeted groups should mechanically raise price rates.

Web 1.0 and news portals' CPM rates are usually at least ten times superior. For instance, Wired.com reports an average CPM of \$13 on Yahoo.com.

Thus, Web 2.0 companies are massively investing in targeting and data management tools. In February 2007, Fox Interactive Media, Myspace's parent company, bought the ad targeting firm Strategic Data Corp. Six month later, Myspace announced the launch of its "self-serve hyper targeted advertising network". This tool enables advertisers to select from a number of ad targeting factors such as geographic, demographic, and various user interest categories. Similarly, after the failure of its "Beacon" program, Facebook modified its social ads program to refocus on targeting.

■ Advertising on Web 2.0: 4 models of intermediation

The online advertising market is heterogeneous

Standard economic theory of advertising thus provides an explanation to the rising part of search advertising in the online advertising market. It also forecasts its final domination in the long run: the improvement of profiling and matching tools should keep on reducing the negative externalities of advertising, and make non-targeted advertising progressively disappear. As far as Web 2.0 sites are concerned, profiling should allow sites to better allocate their inventory, increase efficiency through targeting, and thus raise the prices.

Our claim is that this vision correctly describes the general trend of the advertising market, but needs to be qualified, especially when it comes to advertising on Web 2.0. Two intuitions support this need for qualification. First, it is very unlikely that brand interest for addressing collective audiences is bound to disappear completely. Large brand communication should gain little from profiling, and we find no evidence that the "Superbowl effect" – the better valuation of large collective audiences – should disappear. Secondly, the different nature of users' attention on Web 2.0 sites, which harms the efficiency of traditional advertising formats, opens at the same time opportunities for the emergence of new forms of intermediation between advertisers and eyeballs.

These intuitions are confirmed by a deeper observation of the French market for online advertising. The analysis of the ad-networks directory⁸ shows that the competitive positioning of some online ad networks is not in line with the general analysis of advertising detailed in the first section. Some ad networks set up alternative formats of intermediation between advertisers and eyeballs: their products, pricing methods and competencies are not centered on automatic matching through profiling.

The standard view thus needs to be put into perspective, thanks to a broader theoretical framework that allows to account for the diversity of the intermediation models. Following the French School of Conventions, we argue that the online advertising market is constituted of different "worlds of production", organized around distinct modes of coordination (SALAIS & STORPER, 1993; EYMARD-DUVERNAY, 1989). Each world of production relies on a set of rules and conventions; these conventions define the quality of products, standard measures of efficiency, and pricing models. In this perspective, the growth of a world of production organized around profiling techniques and click-through efficiency ratios is not contradictory with the persistence or the development of other ways of addressing advertisement to audiences.

Four worlds of production

From the empirical material, we observe that ad-networks can be differentiated according to two main dimensions: the significance of the content that is associated with ads, and the degree of standardization of the ad distribution process. Drawing our inspiration from SALAIS & STORPER (1993) and HORN (2004), we represent four worlds of online advertising organized around these two axes.

The first axis deals with the nature of the association between the content of a Website and the advertisement that is displayed on this site. For some of the ad-networks, associating brands and advertisement with "premium content" is part of their definition of the quality of the service. Their brochures insist on the fact that clients should see their brand displayed on Websites with high quality standards; just as luxury goods only advertise in high-standard magazines, these ad-networks guarantee that brands will not be associated with ugly, low-standard or questionable contents. On the

⁸ Syndicat des Régies Internet: Annuaire des régies Internet (2007).

contrary, this definition of quality is not a stake in other ad-networks' definition of service. The latter insist on their ability to target the right people through their centres of interest; they display the related ads without making any difference between high and low standard contents. With Google AdSense for example, the ads are distributed on related content Websites, thanks to a system of content matching: live hip-hop music ads will be displayed on Websites dealing with live music and with hip-hop. If the advertiser can choose the keywords he wants to associate his ad with, he cannot discriminate between the sites that match these keywords.

The second axis, which was already at the basis of Salais and Storper's typology, deals with the degree of standardization of the ad-distribution process. On the one hand, some ad-networks offer a very standardized and industrialized service. The advertisers can choose between a limited set of options (thematic packages, ad-format) or define parameters (keywords, expected click-through rate); with these initial inputs, the service runs automatically. For example, large ad-networks such as Orange offer a choice between 8 thematic packages (automobile, sport, shopping, women, young, cinema, "power"⁹). On Google AdSense, advertisers are strongly constrained by the text-only message format. On the other hand, other ad-networks offer more personalized products, such as "page dressing", "movie-banner", "advertorial", "sponsoring and product placement", "viral products", "co-branded page", "sponsored articles", etc. In the catalogues of the ad-networks offering these products, the price are not standardized, but only provided on the basis of an estimate. These services rely much more on human intermediation between the site, the ad-network and the advertiser; they define together the nature of the insertion of the ad into the content of the site. This type of advertising relies also much more on creativity, and is less constrained by standardized formats.

As a result, we can represent the online advertising market on a four-square diagram.

⁹ The "Power" package offers to advertise on large audiences pages, such as the Orange portal's homepage.

	Addressing people through "premium" content	Addressing people through any kind of content
Standardized process	Classic Model: Display Format <i>Products:</i> banners, rich media <i>Audiences:</i> Large and centralized audiences; "premium" contents (online press, portals) <i>Example on the French Market:</i> Orange, TF1, Lagardère active	Matching Model: Search Format <i>Products:</i> contextual ads <i>Audiences:</i> Long Tail of small audiences, search engines <i>Example on the French Market:</i> Google (AdWords + AdSense), Yahoo, Microsoft
Human and creative intermediation	Editorialization <i>Products:</i> display, Web page packaging, product sponsoring, page sponsoring, advertorial <i>Audiences:</i> niche "quality" audiences <i>Example on the French Market:</i> Influence, HiMedia	Social Media Marketing <i>Products:</i> building and animating spaces in Social Networking Sites (SNS) <i>Audiences:</i> divided audiences on SNS sites <i>Examples:</i> MySpace France, advertising agencies

In the two upper squares, we retrieve the classic opposition between display ad and search ad that we described earlier.

Display advertising delivers image and video banners in standardized formats ("skyscraper", "medium rectangle", "large banner", "video banner", "transparent flash", "overlay", ...) to attract the reader's attention. Prices are based on the quantity of displays, measured by page views (Cost per mil, plus retail for large volumes). In this world, high prices are associated with large collective audiences (such as a portal's homepage) and "premium" content (quality and prestigious Websites). Net CPM are indeed higher on home pages than on pages deeper in the site; and higher on established brands – established newspapers' sites, for example – than on less institutional Websites. As a consequence, display ads perform poorly on Web 2.0 sites, where content is user-generated and audiences are divided.

Search advertising delivers text ads (typically 10 words) associated with the intention of the search, or with the context of the page visited. This market is dominated by Google, followed by Yahoo and Microsoft. Advertisers define some keywords to indicate the topics and intentions they want to be associated with. Prices are based on the number of clicks, and efficiency is measured in terms of click-through-rates (CTR). As for display, search-ad is less efficient on Web 2.0 sites than on classic Websites: the

average CTR is much lower¹⁰. The most plausible explanation is that, on Web 2.0 sites, users are engaged in a communication activity; their search engine queries seldom express consumption intentions. The two lower squares define alternative advertising formats. They emerge as possible answers (alternative or complementary to new profiling techniques) to the poor efficiency of classic advertising formats on Web 2.0 sites.

Some ad-networks specialize in the selection and editorialization of Web 2.0 contents. On the one hand, they select some user-generated content and some amateur producers according to quality standards, in order to create niches of "premium" Web 2.0 content. The advertising spaces of these quality niches, guaranteed by the ad-network, can be more easily sold to advertisers. For example, ad-networks such as *Influence* in France or *Federated Media Publishing* in the USA introduce themselves as "blogger agents", signifying that they try to recruit the best talents and represent their interests towards advertisers. On the other hand, these ad-networks offer more personalized services to advertisers: through page dressing, advertorials, colour customisation of the banners, etc., ads are integrated more smoothly in the page. These niche markets are rewarding: CPM provided by these ad-networks are from 5 to 10 times higher than on the average Web 2.0 CPM. Similarly, bigger Web 2.0 sites try to build "quality" spaces (e.g. YouTube "Screenroom", Dailymotion "Motionmakers" program) that can be sold at a better price to advertisers, through specific formats. To sum up, this advertising format recreates "premium" content areas inside Web 2.0 thanks to human intermediation.

In the last square, characterized both by creative intermediation and indifference towards content, we place a range of emerging advertising formats often referred to as "social media marketing". Instead of placing ads around contents, these advertising formats try to take part in the interactional games and conversations that take place on Web 2.0 sites. By building a MySpace Page or a Netvibes "Universe", by sponsoring a Facebook group, by creating a sub-space inside Flickr, by opening video channels on YouTube and Dailymotion, advertisers try to place their brands and products inside the social games of Web 2.0 sites. They reach the reticular audiences of Web 2.0 by offering them contents and interaction opportunities, and try to benefit from the viral nature of the sites. Most of the times, these services

¹⁰ Google recently announced that its search deal with MySpace needs to be re-negotiated because of very low CTR on search-ads: "we have found that social-networking inventory is not monetizing as well as expected" (G. Reyes, Google CFO, Jan. 31, 2008).

are not provided by ad-networks, but by the Web 2.0 sites themselves or by creative/media agencies. They rely highly on creativity, since playing the social games requires original content and human intervention. These formats are still emergent and under-equipped; in particular, they lack efficiency measures. There are also questions about their scalability: how much place can Web 2.0 sites leave to brands without upsetting the ordinary social game?

■ Conclusion

This article has examined the business models of Web 2.0 services, and focused on strategies of economic actors in order to improve advertising revenues on Web 2.0 sites. We have presented two different stories about the effect of internet on advertising, specific problems encountered on Web 2.0 sites and effective ways to monetize Web 2.0 audiences.

The conventional one builds upon the economic analysis of advertising and presents targeting (through the use of contextual and behavioral profiling tools) as the best strategy to improve advertising price rates. In the long run, technical change and increasing scarcity (and thus economic value) of attention should lead to the generalization of profiling tools and to the domination of the *Search* matching model (personified by Google's AdSense and AdWords programs) over the online advertising market. The "conventionalist" one, which draws from the Convention School framework, emphasizes the plurality of advertising formats and the potential of innovative models to contribute to Web 2.0 advertising revenues. First, contrary to the normative economic view, which postulates the superiority of informative advertising over persuasive advertising, the conventionalist approach argues that each format can be associated with its own world of production, quality standards and pricing tools. It is unlikely that brand building through collective audiences is bound to disappear. Secondly, alternative advertising formats emerge as a possible answer to the poor efficiency of classic advertising formats on Web 2.0 sites: editorialization and social media marketing. Interestingly, besides their investments in profiling tools, Web 2.0 services such as Myspace.com, Facebook.com or Dailymotion.com insert such formats within their advertising offer. Questioning remains about the ability of Web 2.0 services to equip these formats with placing, measuring and pricing tools in order to reach greater scalability. This will require further empirical investigation.

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