Education and the Social Web. Connective Learning and the Commercial Imperative

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Abstract

In recent years, new socially-oriented Web technologies have been portrayed as placing the learner at the centre of networks of knowledge and expertise, potentially leading to new forms of learning and education. In this paper, I argue that commercial social networks are much less about circulating knowledge than they are about connecting users (“eyeballs”) with advertisers; it is not the autonomous individual learner, but collective corporate interests that occupy the centre of these networks. Looking first at Facebook, Twitter, Digg and similar services, I argue their business model restricts their information design in ways that detract from learner control and educational use. I also argue more generally that the predominant “culture” and corresponding types of content on services like those provided Google similarly privileges advertising interests at the expense of users. Just as commercialism has rendered television beyond the reach of education, commercial pressures threaten to seriously limit the potential of the social Web for education and learning.

Introduction: New Learning in a 2.0 Web

Web 2.0 and online social networking have been the subject of sustained and lively interest among practitioners and promoters of educational technology for some time. Provocative labels like “connective learning” (Downes, 2006), “e-learning 2.0” (Downes, 2005), “education 2.0” (Selwyn, 2008), and “social Learning 2.0” (Anderson and Dron, 2007) have been used to characterize what is seen as the radical potential of these services for learning. The implication, of course is that these technologies will introduce radically new “versions” of learning and education, rendering previous forms obsolete –just as a new release of an application superannuates the old. Social networking is so central to these new versions of education that a new “connectivist” theory of learning has come to be closely associated with them (Downes, 2006). This is a theory in which “knowing” itself is seen to be “defined by connections” making “learning primarily a network forming process” (Siemens, 2006, p. 15). Like other technical innovations before them, these new forms are described in terms of the liberation of learners from traditional constraints, as allowing them...
go beyond the classroom, to network “with peers worldwide,” and ultimately, to “take control of their own learning” (Downes, 2005 n.p.).

These visions are above all associated with the “personal learning environment,” a term coined early in the 2000’s, and typically illustrated through diagrams similar to, but generally more complex than, the one provided here (see Figure 1). In a technical sense, as the figure indicates, these learning environments are constituted through loosely defined collections of Web 2.0 and social networking applications to access and manage a wide range of learning communities and contents.

The personal learning environment is envisioned as a set of applications and services –to a large extent, logos and brands-- organized around a single user, according to his or her learning and informational preferences and needs. The learner is seen as interfacing with these services and this information either through standard desktop software (e.g. a browser and RSS feed aggregator), or as having these services integrated through an online portal of some kind. The services thus organized around the learner typically include YouTube and Flickr, MySpace and Facebook, as well as blogs and other environments. Through these services, the user is to be connected with teachers, mentors and other learners: “It’s just you, your community, and the Web, an environment where you are the centre and where your teachers --if there are any-- are your peers” (2005 n.p.).

At the same time, some advocates of these approaches to learning have been raising concerns about the commercial nature of many of these services. Recent moves by Facebook, and Google and Verizon’s proposal to restrict “network neutrality” in the US have led, as of late, to more cautious reflection. An article in the Economist (2010) speaks of the restrictions presented by Facebook, Google and others as representing the “web’s new walls,” warning that together with government controls, commercial forces are leading the Web to “los[e] some of its openness and neutrality.” Fans and advocates are also seeing the danger signs. Steve Greenberg has observed, for example, that “You are not Facebook’s customer. You are the product that they sell to their real customers - advertisers. Forget this at your peril” (2009, n.p.). In an article on “the Great Web 2.0 Swindle” (2010), Lamb and Groom expand on Greenberg’s statement by saying that

This simple reality underlies almost all considerations having to do with these tools, whether we're talking about the persistence of online resources, the ownership of personal data, or whose interests will be served as these online environments continue to evolve. To use these tools is to reinforce, however indirectly, the "advertised life," the incursion of commoditization ever deeper into human thought and interaction. The question is whether there is a role for higher education to promote "safe spaces" free of this influence. (p. 55)
In this paper, I answer this last question in the negative, and I justify my answer using terms very similar to those of Greenberg, Lamb and Groom. I work toward the conclusion that advertising interests affect the very structure of services like Facebook, making “safe spaces” for education--free of commercial influence—effectively impossible to define and sustain.

As Lamb, Groom and others make clear, the business model of commercial social networks is based on advertising, assisted by the data collection, as well as powerful tracking and analysis capabilities. Without these powerful surveillance functions Facebook, Gmail, Yahoo, Blogger, YouTube and Picasa would simply cease to exist. I discuss this advertising function by borrowing from theories of media ideology and hegemony developed some time ago by Raymond Williams and Todd Gitlin. These theories show how advertising in media like TV and newspapers subtly shapes the form and potential of these media; and although new online services are obviously different in character from older media, I argue that advertising in social networks similarly constrains them. And just as the constraints presented by commercialized forms and contents rendered educational television a failure decades ago (e.g. Ofiesh, 1968), similar structural issues threaten to sharply limit the potential of much newer social media for education and learning, however these are conceived.

**The Media Business Model: Bringing Eyeballs to Advertisers**

It is important to recall that a corporation like Google (which owns Blogger, YouTube and Picasa) isn’t hosting blogs, videos and photos, aggregating RSS feeds, or otherwise connecting its users out of a sense of charity or largesse, or even based on projections of future profits. Facebook, Google and other Web 2.0 and social networking services are making enormous sums right now from the users and advertisers they attract, and they are in aggressive competition to do this more efficiently (apparently even if it means threatening cherished principles like network neutrality; Kiss, 2010). Facebook is reported to have made $500 million from advertising in 2009 and is estimated to earn $1.5 billion in 2010 (Ostrow, 2010; Kirkpatrick, 2010). (As for Google, in the first quarter of 2010 alone, it earned over $2 billion from its advertising programs [Adsense, 2010].) This speaks to “commercial imperative” which I argue, has a mutually exclusive relationship to connectivist and “2.0 approaches” to learning that is both subtle and powerful.

The absence of references to advertising (and also to tracking and analysis) in many discussions of the personal learning environments is surprising given the proliferation of logos and brands of commercial services in them; it is doubly surprising given the visibility and ready access that these services provide to their marketing functions and features. Images of the pages offering these marketing services, again from Facebook and Google, provide an excellent starting point for my analyses.

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1 In an article titled “The Failure of Educational Television,” Olfeish argues presciently that “Commercial television has been living the life of virtual luxury while educational television has existed in a climate of genteel poverty. Unable to bid for the skills and talents of commercial media specialists and masters of the communication process, educational television has transfer… [a] dull system of [classroom] pedagogy handed down intact from Rabbinical times. It has been transmitted to viewers without any recognition that many viewers very often find dogfood and soap commercials more attractive and stimulating” (15, 16).
Figures 2 and 3: Marketing controls or services provided by Google (left) and Facebook (right). The Google page is publically available: https://www.google.com/adsense/static/en_CA/Publishertools.html. Specific steps are required for registered users to access the Facebook screen.\footnote{While logged into Facebook, go to \url{http://www.Facebook.com/Ads}, and select “Create an Ad.” You will be asked to “design” the appearance of your ad (by providing a link and text); you will subsequently be able to access the screen shown above, allowing you to choose the target market for your ad. (The third and final step involves setting the time-range and bid for the pricing of the ad, but the user is not required to complete this screen.)

The options on the Google page, left, address content creators specifically as publishers who, like print or electronic broadcasters of old, earn their keep by delivering ads with their published, content to audiences. (Pages for advertising on Twitter use the same categories and language; e.g. see \url{http://adcause.com}). These pages promise these content publishers that they can “drive direct sales revenue,” “maximize yield” “monetize content” through Google’s ad services and they emphasize how this is done specifically by “targeting” particular advertising audiences. These pages cover advertising options for a range of publishing contexts or fora, including Google search results and blog pages, RSS and Twitter feeds, as well as the old medium of TV.

Google uses complex, hidden algorithms to target ads in precise ways based on detailed tracking and analysis of user searchers, the content of Web pages and emails, and a wide range of other information. Users of blogging services, such as Google’s own Blogger, are then free to host ads targeted in this way on their pages (receiving small payments for every user who clicks on one), and the users of Google’s other services (such as Gmail and Picassa) are constantly exposed to them. The Facebook screen, right, shows much more simply and explicitly how such precise
targeting is possible. It is based on detailed demographic information that users provide when they create an account on the service. This information includes location, age, marital status and educational background, place of work, and also “likes and interests.” Advertisers can then search based on all of these parameters, selecting a very precisely defined audience to serve as a target for the Facebook ads. The screen shown above indicates that there are 11,720 Facebook users to be targeted in British Columbia who are between the ages of 18 and 40, who have indicated an interest in “learning” and “earning money,” and who also speak English. (Readers of a more technical bent should check out the Facebook Query Language page, which for example allows a developer to retrieve “the notes [a] current user has written” or “detailed information about a user's family [http://developers.facebook.com/docs/reference/fql/].)

Because advertising is the *raison d'être* of services like Google and Facebook, it also provides the basis for the design, organization and maintenance of all of these other services and functions. Google and Facebook obviously design and structure their services in ways to attract users, but as businesses, they cannot do so at the expense of advertisers. In fact, as a corporation, Google is legally bound to maximize its profits; and its first allegiance is to the source of those profits, advertisers, rather than to the users whose activities they host. As I will show later, the complex structures and organization of information in these services is not so much about tradeoffs between users and advertisers, as it is about reconciling the interests of the former to the less flexible priorities of the latter.

This way of understanding advertising and Web 2.0 draws on critiques of television (and the role of advertising in it) that were articulated decades ago. In his 1980 analysis of network news coverage of politics in the 1960’s, Todd Gitlin describes the situation rather succinctly: the goal of these media organizations, he says, is to sell a product, and the product that “the networks sell is the attention of audiences; their primary market is the advertisers themselves” (p. 280). The primary market of Google and Facebook is their advertisers, and the product they are selling to these advertisers is the eyeballs of their users. In the days of network television dominance, the way that media organizations would “improve” the product of audience attention is to include the largest numbers with the greatest spending power, or as Gitlin explains, to “assemble the largest and richest possible audiences, for whose attention advertisers will pay the highest rates” (p. 280). They do this by tailoring their programming or content, which serves merely as a pretext for the real business of bringing eyeballs to advertisers.

One thing that is different today is that there is no one monolithic audience that forms a generic product to sell to advertisers. Instead, there are a great variety of what one could call “audience-products” that advertisers can choose between. As the page from Facebook, above, clearly illustrates, audiences can be very precisely defined or targeted by advertisers. In fact, this page from Facebook, is essentially a way in which its *real* customers, its privileged “premium users,” are able to customize the product being sold to them –much in the same way that customizers might customize a t-shirt or a new car on a seller’s website. The business of media organizations was, and remains, bringing eyeballs to advertisers. But now, the eyeballs or audience-product being sold is pinpointed with incredible precision and control, in ways that would be completely unimaginable to earlier generations of advertisers. (Google and other Internet advertisers do something similar, but less visibly, by selecting the appearance of specific adds on the basis of keywords appearing in search terms, email messages, blog postings, and RSS feeds.)
An obvious objection to be raised at this point is that Facebook or Google, unlike television, do not have significant control over the content that is used to assemble audiences for advertisers. Although commercial media content is pervasive on YouTube, in Facebook and on blogs (see any day’s top stories selected by readers on [http://digg.com](http://digg.com)), users have a clear choice regarding the kinds of content that they wish to view and disseminate. Online, I can choose whatever friends, interests and feeds that I like, and I can even generate my own multimedia compositions (although only a small percentage do). But with a television, I can only choose between options that executives in some far-away place have pre-selected for me.

However, to say that it is all about content, and that content is controlled by corporate interests offline but in users’ hands online, is to miss a central point. It is important to consider the complex and subtle but very effective ways in which advertisers’ interests shape online social contexts. This is hinted at in Greenberg’s and Lamb’s comments, and is developed in a slightly different way in Raymond Williams’ 1974 critique, *Television: Technology & Cultural Form*. In fact, Williams’ text requires only minor revision to speak to the situation of commercial Web services today:

> The sponsorship of programmes [read: web and feed content] by advertisers has an effect beyond the separable announcement and recommendation of a brand name. It is, as a formula of communication, an intrinsic setting of priorities: a partisan indication of real social sources. ...to see international news brought courtesy of a toothpaste [today: Netflix or HP] is not to see separable elements, but the shape of a dominant cultural form. The insertion of advertisements in un-sponsored programmes [read: user content] is a different formula; it has had, as we shall see, extraordinary effects on television as a sequential experience, and has created quite new visual rhythms. Indeed it is possible to see television of this kind as a sequence in which the advertisements are integral rather than as a program interrupted by advertisements. (pp. 66-67)

Williams is making the point that the relationship between content and advertising is subtle and insidious, and that it is slightly different in the case of content “made for TV” than for its non-commercial counterpart. In programming that is tailor made for commercial breaks, content and ads are melded into “a dominant cultural form;” and in other programming, ads and content oscillate in a sequence or rhythm of mutual dependence. In the case of the social Web, a far-reaching but intrinsic setting of priorities is evident here also: by their very presence, advertisements show what is really important in a particular Web context. They indicate the “real social sources,” the true reason for the content provided; and their operation in otherwise non-commerical programming is registered in terms of *sequence*, *rhythm* and *flow*. But what is important for the similarly non-commercial content of the social Web is *informational design*, *architecture*, and *algorithm*. As I explain below, this is how advertising interests are rendered inseparable from what the user sees and is able (or not able) do on a social Web service.

**Algorithmically-Defined Audiences**
This is perhaps easiest to illustrate with the example of Facebook, but it applies also to a wide range of services—and generally the more “social” their emphasis, the clearer the influence. Users of Facebook are sure to have been struck by the numerous and varied ways in which it cultivates gregarity and interaction, the way in which it relentlessly structures and supports sociality and connection. Looking at my Facebook page, I am not only asked “what’s on my mind,” I am also asked whether I might know users who are currently not friends, I am requested to help a friend find other friends, I am told which friends have become friends of others, and I am recommended to visit pages that my friends have liked or recommended. It is common to observe that the term “friend” itself is emptied of meaning by this incessant use and quantification; but the point here is to see how Facebook is very carefully and consistently structured to support certain kinds of interaction and attention, and to exclude others.

Facebook exemplifies a way of generating and circulating information that encourages the expansion of interconnections between users (rather than discretion and selectivity), that fosters the disclosure of concerns of favourable interest to those already in relation (rather than the articulation of internal dissent and difference), that facilitates the expression of likes and invitations (but not dislikes and disinclinations), and that foregrounds every new friendship and connection (while suppressing news of severance and deletion). Facebook is in this sense above all *convivial*. This is a term whose meaning and etymology both suggest a celebration of togetherness, as would happen at a social event like a feast. Expressions of reservation, nuance and qualification are made difficult if not impossible; and negativity, in both its everyday and dialectical senses is avoided. There are few if any invitations to express dislike or disinclination to the items appearing on one’s homepage and there are even fewer ways to note that which is “not”—to register an absence, to observe an omission or to be faced with exclusion in general. This is all the result of myriad and careful design decisions: algorithms for selecting likely candidate friends, for identifying friends in need of further connections, and for featuring appropriate items “liked” by others. Of course, at the same time, any of these calculated processes of selection, identification and foregrounding also necessarily involves exclusion, suppression and elimination of other possibilities. However, these “negative” processes are relegated to the software behind the system, and are not readily accessible to users; all one sees is more and more potential friends, and ongoing opportunities for conviviality.

Many Facebook controversies, such as ones over the precise kinds of information provided by the newsfeed (in 2006), and the difficulty of controlling detailed privacy settings (in May 2010), show how this design approach serves a business model rather than placing users in control. One very recent controversy is connected with Facebook’s “Like” button, which has a similar function to “Digg” buttons in the blogging world. This function can be applied not only to Facebook, but to any page on the Web—and the number of uses on the Web has doubled every month since the feature was introduced. The controversy arises from the possible addition of a corresponding “Dislike” button. One Facebook page advocating the “Disklike” feature has over three million fans, and Facebook creator, Mark Zuckerberg has mused that this capability may be added in the future. A recent popular-press article on the subject begins by explaining the significant advantages for advertisers presented by Facebook’s “Like” button:

one obvious benefit is that it lowers the psychological barrier to connecting with commercial entities on [a] site... [users] imply [that they] “Like” that brand’s page,
resulting in higher engagement. Another is that it increases clicks for web publishers [generally] (Cashmore, 2010, n.p.)

Gregarious behaviour is rewarded on Facebook, so seeing others’ approval of a resource will draw ever more attention to it. However, the article explains that a Dislike button has none of these advantages; it argues that such a feature would only lead to

significant tension between Facebook, brands, and web publishers. Imagine if Facebook users could not only choose to "Like" Coca-Cola, but were also provided the option to "Dislike" the brand. Would Facebook become a more appealing place for brands to spend their marketing budgets and ad dollars ... or a less appealing one? Now imagine that websites could add "Dislike" buttons to their pages. Would web publishers rush to add this option, desperate for the negative feedback from their visitors? (Cashmore, 2010, n.p.)

To provide the option of expressing dislike for a brand like Coca-Cola or to disapprove of a newspaper report or an article like this one is contrary to Facebook’s business interests. As a result, users are deprived of even the most rudimentary affordance for expressing disapproval or dissent. So what then are possibilities offered to education by these services? Who is in control of this rudimentary but important design decision? And what does it mean to be deprived of a “Dislike” option? The dynamics here are rather reminiscent of what television of a bygone era had to offer: In both cases, you can either watch (i.e. “Like”) the products and lifestyles being showcased, or simply walk away. We know that users and viewers generally choose the former, allowing their “control” or interests to be reconciled to the preponderant priorities of advertisers –in return for convenience and an entertaining conviviality.

It is not necessary to focus exclusively on Facebook to appreciate the consequences of the repression of dissent, difference and disconnection that is intrinsic to these networks. Digg uses a similar “thumbs up” icon to tally the popularity of Websites and blog posts, and also generally omits the option of indicating a negative response. A similar dynamic is at play with the social networking enabled by Twitter, in which you are only actively informed of new subscribers to your communications, never being explicitly notified about those who have unsubscribed, and where you can forward a comment (“retweet”) but not reply to or rebut it. The conclusion to the report on “Like” and “Dislike” buttons in Facebook cited above can be adapted to apply to the Twitter and many other social media: “Like buttons” similar to many other connective features of social networks, “are about connection; Dislike buttons are about division.” Just as other services systematically avoid division and relentlessly push for connection, it is safe to conclude with the article that “Facebook will never add a Dislike button” (Cashmore, 2010). Similarly, other services will also systematically exclude possibilities for the expression of dissent and difference. User or learner control will always be marginalized when it comes to structures and features that are of interest to advertisers.

**Conclusion: Connectivist or Commercial Priorities?**
Despite the current prominence of social-psychological and connectivist theories, it is easy to make the case that learning is just as much about division as it is about connection. In fact, the consistent pattern of suppressing division, negativity and interpersonal dissent that is central to the business model of social networking services runs counter to some of the most common models and recommendations for online student interaction and engagement. These include constructivist models of collaborative knowledge building (e.g., Scardamalia, 2006), communitarian models of collaborative inquiry (e.g. Garrison, 2005), and commonplace advice asking students to critically compare and contrast differing views and experiences. Opportunities for social selectivity, discretion, privacy and detachment are an important precondition for the acts of disclosure and mutual critique, falsification and validation central to these models. Interaction in these models (and in the technologies used to support them) unfolds in ways that support much more nuanced expressions of agreement, consent or difference than what is possible using designations such as “like,” “digg” or even “dislike” or “unfriend.” And such selectivity and discretion –the “safe spaces” hoped for by Lamb and Groom-- are rendered structurally impossible in convivial, commercially-contoured environments like Facebook or Twitter. These services, by design, clearly serve interests and priorities other than (and in many cases opposed to) those of learning. If anything, they represent a new way of selling viewers to advertisers, rather than a “2.0” version of social or connective learning or education. Knowledge is not exclusively embodied in ever growing networks of connection and affiliation, and it does not just occur through building and traversing these proliferating nodes and links. Education is clearly a social process, but it is probably much closer to an ongoing discussion or debate than an extended feast or celebration with an ever-expanding network of friends.

The advertising, tracking and analysis functions of commercial social media present, as Raymond Williams says, “a formula of communication, an intrinsic setting of priorities” (1974, p. 66). The difference separating these priorities from those of education is clear in terms of the form of social networks, if not also in some aspects of its culture and content. It only remains to be seen whether this dynamic renders commercial social networking services as fully unsupportive of educational ends as commercial television has long been.

Suppression of discretion, division, negativity and interpersonal dissent runs counter to some of the most common models for online student interaction and engagement.
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I have deliberately omitted reference to not-for-profit services and sites (e.g. Wordpress, Wikipedia and collections of open educational resources) that are also frequently referenced in diagrams and discussions of the personal learning environment. My focus in this paper is on commercial services; I have discussed the significant, positive potential of open educational resources and not-for-profit Wiki services elsewhere (e.g., see: Friesen & Hopkins, 2008; Friesen, 2009).