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EXPLOITING FLUENCIES: EDUCATIONAL EXPROPRIATION OF SOCIAL NETWORKING SITE CONSUMER TRAINING

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Abstract

The idea of the digital native was based on abstraction; when we look in detail at the digital activities of high-school and college students, we see deskilling and consumer training rather than information literacy or technical fluency. Yet that training is still training, and may be adaptable in such a way that it can become a literacy—in, for example, the way militaries have mobilised skill-sets produced through gaming. We too can and should mine the narrow and profit-driven consumer training that emerging adults have undergone for kinds of inquiry and critical engagement for which they may have inadvertently been given tools and training. In this article, we will analyse the structures of Facebook to see what sorts of consumer training it produces, and suggest avenues for the educational expropriation of that training. First, we take an inventory of categories of consumer training, analysing each and identifying exploitable elements within each. Following this, we suggest activities and assessment structures exapting these literacies and habits to educational ends. Many of these structures involve direct employment of Facebook in coursework, but others identify assignments, projects, and approaches which draw upon SNS consumer training but do not themselves employ Facebook.

Keywords: Facebook, instructional design, phenomenology, consumer training, pedagogy

The myth of digital nativity

The term digital native was first coined by Marc Prensky in a 2001 edition of *On the Horizon*. He defined digital natives as people who have spent their lives engaged in technologies such as computers, video games, the internet, and mobile phones. Their exact birth year varies among scholars, but in general these are kids who were born after 1980. In 2001, Prensky pointed out research that indicates that as a result of this lifelong immersion in technology, the brain structure and thinking patterns of digital natives is quite different from the digital immigrants (those born prior to the technology explosion). In 2009 edition of *Innovate*, Prensky readdressed his 2001 publication, suggesting that as we progress further into the 21st century, the line between digital natives and digital immigrants becomes more blurred, and that we should focus our attention on what he labels as digital wisdom. "Digital wisdom is a twofold concept, referring both to wisdom arising *from* the use of digital technology to access cognitive power beyond our innate capacity and to wisdom *in* the prudent use of technology to enhance our capabilities" (Prensky, 2009, p. 1).

   Since the Prensky (2001) article, there have been a great many discussions and debates surrounding the idea of the digital native. Digital natives cannot be determined by their birth year alone. Children born in developing countries, where even electricity is

scarce cannot be considered digital natives. But even in wealthy countries, where children have access to technologies, there is a divide between those who use them effectively and those who do not (Palfrey & Gasser, 2008). Hargittai (2010) pointed out that while 81.2% students whose parents are considered highly educated own personal laptops, only 55.1% of students whose parents have less than a high school education own a laptop, and that parental education also plays a role in the skill level of the student. Hargittai and Hinnant's (2008) study tells us that college students who have daily access to the internet vary in knowledge based on their socioeconomic status, parental education, race, and gender. University students come to us from all types of backgrounds, some are digitally literate, but many are not.

Even among those of the 'digitally native generation' who are digital natives, though, the idea that digital nativity would itself automatically imply digital literacy/fluency, information literacy/fluency, or digital wisdom, is based on too simplistic an understanding of the cognitive and behavioural environment to which "digital natives" are native. "The digital" is not a single thing, and the digital landscape is not uniform. Skills developed in one sort of digital environment or practice may not be more broadly applicable. Even the phrase "digital native" is, in this way, a kind of fallacious equivocation, implying transitivity of skills and understanding across radically disparate kinds of activity. The digital native's familiarity with seeking out information on Google in no way implies her familiarity with search engine algorithms, metadata, or the assessment of online sources; the digital native's relative comfort in maintaining personal relationships online does not translate into fluency in maintaining privacy on social networking sites (SNS).

Now, to be sure, there are some general truisms about life online that cut across a great swath of the everyday practices of digital natives, and these truisms can help us reform our pedagogy. We need to teach students the way that they can learn, not in the traditional ways that we and prior generations learned in the past. Generation Y emerging adults, or Millennials as they are often called, prefer fast, parallel learning. They are multi-taskers, and it is rare to find one who prefers working in silence. "Unlike most digital immigrants, digital natives live much of their lives online, without distinguishing between the online and offline" (Palfrey & Gasser, 2008, p. 4). They prefer to participate actively in their learning process. "Kids who have grown up digital expect to talk back, to have a conversation" (Tapscott, 2009, p. 126). Tapscott (2009) points out that in the United States today, we generally follow the Industrial Age mode of pedagogy, and this is not effective for Millennials who are used to fast paced environments and must be prepared to become lifelong learners. Universities have tried to keep up with new and changing technologies by doing things like giving all students a laptop, installing Smart Boards in every classroom, providing wireless internet access at every location, and making equipment like iPads, cameras, and e-readers available for students and faculty to borrow, although practices of effective use have sometimes lagged behind the availability of these resources.

Access to the internet has drastically changed the way that we find and use information. Digital natives are "grazers," who do not sit and read the newspaper from cover to cover each day, but read bits of information from various sources throughout the day and night (Palfrey & Gasser, 2008). They interact with the information much more than digital immigrants, by participating in online discussions, blogs, posting on Facebook and Twitter. In 2008, Barack Obama employed Chris Hughes to organise his online presence. "Obama had by far the largest Internet presence of the candidates" (Tapscott, 2009, p. 252). The campaign changed the way that Millennials, who were described by Mark Bauerlein (2008) as "the dumbest generation," participate in politics. It is quite possible that they are actually learning and engaging with information more

than digital immigrants, when the information is presented to them in a way that is innate to them (Palfrey & Gasser, 2008).

This is all quite valuable. In addition to drawing on these most generic informational habits inculcated by life online, though, we can also take a more focused look at the specific environments to which "digital natives" are native, in order to see what specific literacies and fluencies have been developed and fine-tuned prior to their arrival in our classrooms. By doing so, we may be able to identify new cognitive 'strong points' to draw upon in our coursework.

Consumer training and Millennials

One barrier to proper appreciation of the meaning of digital nativity has been the focus on the importance of developing informational habits within a *digital* environment to the exclusion of recognition of the importance of developing informational habits within a *market* environment. In our online informational lives we represent constant sources of profit through advertising microtransactions, and online environments are often strongly determined by market forces. The fluencies developed among digital natives, then, are likely to be those that best support the profitability of the private interests at work in the digital environments to which they are native. We might call this "consumer training," since it's a purposeful development of habits of use which maximise the value of the user qua consumer to the corporation that owns the informational environment in question. We expect, then, that digital natives will be fluent in sharing and building relationships, but not as fluent in navigating privacy settings; that they will be very capable of finding appealing information for a given Google search, but not that they should be well aware of or comfortable considering how Google determines which results to display, distinguishing between 'sponsored results' (ads) and other results, or thinking through other informational distortions like Google bombing, spamdexing, and filter bubbles.

Consumer training is further supported by processes of deskilling that introduce dependency on profit-based informational environments. Just as the presence of spell-checking in our word-processors has presumably led to underdevelopment of spelling skills in digital natives (and perhaps a slow atrophy among digital immigrants as well), so too does trust in Google presumably lead to underdevelopment of informational assessment skills. We see, for example, that when users are asked to answer questions using a Google search, they are much more likely to use the first couple of hits rather than later results—and that users continue to favor those first hits even when they are presented with a 'doctored' set of results, in which the top ten search results are given in inverted order (Bing et al., 2007). It is hard to say, of course, how much we are losing our *ability* to critically and independently assess sources for the relevance and value of their information—but it is easy to say that, in practice, we are at a minimum simply *choosing not to do so*, and placing trust in Google's algorithm to do so on our behalf.

Worse yet, users who have been in this way deskilled view themselves as highly capable. According to Barefoot (2006), very few students entering college are able to distinguish between fact and fiction information that is available online, despite having grown up surrounded by technology. While students are used to using Google and other web search tools, Brey-Casiano (2006) points out that much of the information that is found is misleading or wrong. The Educational Testing Service (ETS) created and conducted a test, the Information and Communication Technology (ICT) Literacy Assessment Core Level, to analyse college and high school students' information literacy skills (Foster, 2006). The test measures the ability to "retrieve, analyze, and communicate information available online" (Foster, 2006, p. 36). Of the 3,000 college

students and 800 high school students that took the test presented in Foster's (2006) study, 13 percent were considered to be information literate. ETS found that when searching a database, half of students were able to weed out invalid results, and that in regards to web sites, students were not successful at identifying web sites that contained biased information. ETS concluded that "many students were unprepared for college work" (Foster, 2007, p. 40). Many students feel that they adequately understand how to find and analyse information on the internet, while librarians feel that they are lacking in these skills (Antell & Huang, 2008).

While the specific literacies or fluencies developed in our market-driven digital informational environments may be characterised more so by consumer training and deskilling than by substantial understanding and information independence, these are still habits, behaviours, and skills that we may be able to draw upon as educators. Corporations have made digital natives native to their consumerist environments by appropriating users' personal and informational desires, turning them to support profits along with user needs and intentions. We can expropriate that appropriation—we can seize upon the skills developed in users for the sake of profit and turn them instead towards education. To see how this might be accomplished, let's consider a case study that will illustrate and motivate the project of this kind of educational expropriation.

A motivating case study: military expropriation of consumer training

Militaries have been engaged in expropriation of consumer training obtained in video games for many years now. While it is military use of content-based consumer training that is probably best known, the lesser-known use of hardware- and interface-based consumer training is both less problematic and more useful to us, as educators, in thinking about ways in which we might similarly adopt a programme of expropriation of student consumer training.

By way of contrast and background, it is worth providing a snapshot of military expropriation of content-based consumer training. What may come immediately to mind is the FPS (first-person shooter), which from its inception has had a strong military theme as a genre—for example, *Wolfenstein 3D*, in which the player guns down Nazi soldiers in an attempted prison escape and faces a "final boss" of a cyborg Adolf Hitler. More recent examples include the *Doom* series, the *Medal of Honor* series, the *Quake* series, the *Halo* series, and the *Call of Duty* series, among a great many others.

While these may be the most prominent example of consumer-training through entertainment that might be adaptable to military action, militaries have appropriately recognised that the consumer-training provided through these games provides a very poor basis for expropriation, training consumers in the ecstatic glee of universal and heedless violence. While some games do require some amount of diplomacy, discrimination between combatants and non-coms, stealth, and scrupulous care to escape injury, for the most part FPSs emphasise shooting everything that moves, and utilise game-mechanics of multiple lives, restarts from save points, virtual bodies that can survive unimaginable violence, and magically health-restorative items. For these reasons and others, militaries have sought to create their own games, whose content and mechanics might better serve as the basis for expropriatable consumer-training. In the U.S. context, most prominent of these are the *America's Army* series, developed by the United States Army and released in Xbox, arcade, and mobile versions—but even these games have been subject to widespread criticism from outside and from inside of the military (Anderson and Kurti, 2009; Schulzke, 2013).

Militaries continue to explore content-based forms of consumer training that may be expropriatable—for example, a recent solicitation of proposals to develop games that

will "portray the political, military, economic, social, informational and infrastructural conditions" (Beidel, 2011, p. 36), or DARPA's (Defense Advanced Research Projects Agency) GFTs (Games for Training), in which "more often than not, [the solution is] don't shoot, talk instead" (Chatham, 2007, p. 37). There is reason to believe that constraining user choices in such a way to require and incentivise desirable behaviour, even if completely successful—a seemingly impossible ideal—would still result in consumer training difficult to appropriately utilise. Frank (2012) points out that a basic problem is what he has called "gamer mode," in which the gamer focuses on discovering the game mechanics at work in order to "game the game."

Consumer training in hardware and interfaces seems much easier to unproblematically expropriate. Surely the familiarity we have with radar displays from film and gaming gives us a kind of literacy, making a green blip on a screen informative and transparent to those who have not undergone submarine training of any sort. Here, of course, it is the entertainment industries which have copied the military interface, but militaries are increasingly choosing to design their interfaces after the fashion of those developed by the entertainment industries, in order to take advantage of the literacies and ontologies in which consumers have already been trained. By focusing on literacies and haptic/kinetic skill sets—much more content-neutral forms of training, compared to those previously discussed—useful training can be expropriated and placed within new contexts in which they can be beneficially employed.

Defense contractor Raytheon, for example, used "the same technology that drives *Halo* and *Splinter Cell*" to develop its Universal Control System for UAVs (Unmanned Aerial Vehicles)—Mark Bigham of Raytheon is quoted as saying "Gaming companies have spent millions to develop user-friendly graphic interfaces, so why not put them to work on UAVs? . . . The video-game industry always will outspend the military on improving human-computer interaction" (Hambling, 2008). Unbranded or knock-off Xbox controllers (Hambling, 2008) have been observed in use by UK and US soldiers, to control UAVs and SUGVs (Small Unmanned Ground Vehicles) (Strauss, 2007; Brooks, 2012).

These skills and literacies do clearly translate. While, undertstandably, there is little information provided directly by the militaries employing this kind of expropriation of consumer training in interfaces, Mary Cummings, a former Navy fighter pilot and MIT professor of Aeronautics and Astronautics reports that "We have shown in two different studies that, with only three minutes of training, people can fly a UAV in a surveillance task and not crash" (Brooks, 2012).

We present these examples as a motivating case study. If the interfaces and ontologies of game system controllers and screen-displays can be effectively expropriated for military use, what forms of consumer training can we, as educators, look to similarly expropriate? In answering this question, we turn to consumer training on SNS, for several reasons. First, even if digital nativity is a myth, it is clear that there is a process of consumer training at work in our online lives. It is reasonable to ask not only how this training is a form of deskilling, but also how it is a form of literacy. Second, in asking what specific online spaces the so-called digital native is native *to*, the most prominent places, as numerous studies have shown (e.g. Weigley, 2013), are Facebook and Google properties (including YouTube). It seems to be common sense to turn first to these places. Third, while looking at the educational implications of consumer training on Google is clearly valuable, others have already begun this work (e.g. Colón-Aguirre and Fleming-May, 2012; Georgas, 2013; Leibiger, 2011; Sorensen & Dahl, 2008; Vaidhyanathan, 2011). Hence, it is appropriate and useful to turn to SNS, and Facebook most especially, for this study.

Elements of SNS consumer training

Facebook is the most commonly used social networking site, with over 900 million active users worldwide. 751 million Facebook users are using Facebook mobile products monthly (Facebook, 2013). According to a 2010 report published by the Pew Research Center's Internet & American Life Project, 72% of American young adults, ages 18-29 are using social networking sites, and that number is rising (Lenhart et al., 2010). They are also more likely to use a laptop or mobile device than a desktop computer: 93% of this age group now has a mobile phone, and 55% go online via their phones (Lenhart, et al., 2010).

College students are familiar and comfortable with using Facebook in their every-day lives. While our purpose here is to identify ways that literacies developed on SNS can be used in pedagogy—uses which need not actually involve using SNS as a platform—one prominent way in which these literacies can be used is by using the SNS platform itself. Towner and Muñoz (2010) conducted a survey to examine the potential for using Facebook as a teaching tool. Sixty percent of students surveyed indicated that they access Facebook more often than their web courseware and 36% stated that Facebook was easier to use than their web courseware (Towner & Muñoz, 2010). While a little over half of the students indicated that Facebook should not be used for instructional purposes, 79% agreed that using Facebook in a class would allow students to learn from each other. This brings us back to the idea that Millennials are social learners, and that perhaps we can utilise Facebook in a way that will allow students to collaborate and learn from each other in an environment that is second nature to them. Towner and Muñoz (2010) also discovered that students are already using Facebook informally to help classmates and share information about classes.

To identify the elements of consumer training which may be expropriatable in SNS use, we must start with a phenomenology of SNS use. In order to identify the small-scale frameworks of thought and use which may be easily portable—as motivated by the success of military interface training expropriation relative to more content-based training expropriation—this will take the form of a microphenomenology or postphenomenological analysis in Ihde's sense (as in e.g. 1976; 1990); more a "unit operations" approach rather than a system operations perspective, in Bogost's (2006) sense.

A full phenomenology is far beyond the scope of this paper, but it seems to us that a preliminary phenomenology, sufficient for our purposes here, should begin from a set of categories of user training as follows, organised approximately from the more concrete to more abstract:

1. Social informatics
2. Interactions
3. Audience construction
4. Identities
5. Incentives
6. Ambient awareness

It can be expected that these terse headings are uninformative on their own; the phenomenological analysis of each in turn will, however, make clear what elements of experience are identified under each. We also must take care to note that the phenomenological analysis here, both in breaking down the user experience into these categories rather than others, and in the analysis of each category, is not aimed towards phenomenological completeness or even a well-rounded view of the user experience,

but is aimed instead more narrowly towards those elements of user phenomenology which seem to us to be potentially educationally expropriatable.

Social informatics
Information on SNS is organised through an indiscriminate intermixing of posts from persons and corporate entities inhabiting a variety of social positions relative to the user. Posts by family, friends, and social media brand identities appear in an undifferentiated[1] feed, organised neither by content nor point of origin, resulting in a sometimes disorienting panoply of emotional, social, and informational relevancies (and irrelevancies).

The user experience of the feed, then, is of a different nature than, for example, scrolling through posts on a blog, online news site, or online magazine. In these cases, the user experiences ordering and selection of topics as intentional and reflective of some sort of more-or-less unified individual or corporate evaluative and valuational process. The question to the user in pursuing further details from this informatic structure is one of consumption: about what do I wish to know more? The informatic structure of the SNS feed is social—crowdsourced curation, so to speak, rather than reflective of editorial voice or some other unified set of criteria—and so the user sorts the information presented in terms not only of interest in content, but also in terms of social relevance. A post from a node with which we have little connection may be investigated based on content; conversely, a post whose content is of no otherwise significant interest may be pursued based on social connection with the node. Most of us do not care to watch videos of everyone's children, and it is certainly not the case that we choose to watch those of e.g. our nieces because they are universally interesting or objectively impactful.

This results in a form of social informatics, in which information appears to the user in an undifferentiated amalgam of a variety of sources, and is filtered by the user for consumption based upon both content and internodal connection.

Interactions
Internodal interactions facilitated by SNS are both scalable and multiplex (Kapferer, 1969)—that is to say, users move smoothly between different kinds of interactions with differing levels of publicity and differing levels of content-richness. Interactions afforded by SNS may be directed towards nodes (sending gifts, messaging), towards posts (likes, comments), and towards networks (shares, posts, checking in)—and these affordances are frequently supplemented by interactions taking place outside of SNS, as for example in follow-up email contact or later face-to-face conversation. These interactions, then, take place along different spectrums: from least to most content-rich approximately as follows

like or share → comment → post → message → email → offline conversation

and from least to most intimate approximately as follows.

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[1] Undifferentiated from the user perspective, at least. Facebook, for example, does differentially display posts based on prior interactions, paid promotion, and other criteria, but the algorithm used is neither public nor transparent to the user, and users may be unaware that there is a differentiation to the ordering and mere appearance of posts from different nodes within their network.

These spectrums are neither parallel nor orthogonal to one another, but multiply intersecting and intertwined.

With scalability of interaction, there is formed a constant openness to expanding or contracting exposure and intimacy between nodes. Mutual exchange of likes can build a connection between weak ties (Granovetter, 1974) that scalable communicative affordances allow to seamlessly expand and deepen through more substantive interaction. Demands of self-performance along with others can also be de-escalated through this smooth scalability—the comment left unreplied-to, for example, quickly scrolls off our screens both literally and figuratively—as distinct from in-person communication, in which a comment demands an immediate and in-kind reply, the failure to do so resulting in an awkward silence which is itself information-rich and has an unavoidably significant although perhaps ambiguous relevance to current and ongoing interaction.

Multiplexity, similarly, allows users to manage interpersonal connections by engaging in communications with differential levels of social obligation. A post serves as a generalised invitation to all individuals within the user's network to appoint themselves as among the intended recipients, providing a low bar to entry in conversation and no obligation to reply. An at-mention in a post provides both intimacy and obligation, perhaps even forcing users into interactions which they might otherwise avoid, in order not to appear rude in a semi-public sphere—a social circumstance having more the character of face-to-face communication in terms of obligation than even the private message or email.

Communicative affordances which appear in scalable and multiplex spectrums create a dynamic in which the degree and kind of relationship between nodes is constantly in play; in which expansion and contraction are constant options, and the degree to which one produces or accepts obligation to interact, and at what level of intimacy, are subject to constant negotiation.

Audience construction

Scalability and multiplexity train users in specific modes of negotiating and constructing internodal connections, but several of these communicative modes construct *audiences* rather than specific connections—most notably posting, sharing, and commenting. While posting and sharing are clearly public within the user's specified network, it is nonetheless clear that many posts—perhaps all posts—are relevant to one or another aspect of the user's identity, and thus have a "proper" audience of those members of the network whose connection with the user is mediated by that identity. The status update which speaks of the user's love for his spouse on the occasion of their anniversary may be public to his network, and yet may appear overly intimate to many weak ties within that network—indeed, not only may this appear as oversharing to e.g. the former student, but should that former student choose to reply, this may appear to the poster himself as intrusive or inappropriate.

Audience, then, is constructed in two ways, and at two points: through code and through norms, and at the points of transmission and of receipt. At the point of transmission, we may choose to make something available to the public, to friends only, or to some specified collection of nodes—and yet such specification is rarely fully and purposefully arranged for a given communication, and the communicants held in mind in the communicator's communicative act are surely nearly always fewer and more

specific than those to whom the communication is made available. Sometimes, of course, this constitutes a kind of oversharing, but often it functions as an invitation to expand connections. When posting something political, for example, the user may have in mind her fellow activists, and yet her failure to exclude others from access to the communication can usually be more properly read as an invitation to her wider community to think about and become concerned with the issue.

This is transparent enough at the point of receipt. Users regularly exercise civil inattention (Goffman, 1971b) regarding communications which they feel norms dictate they are not the proper audience of, despite that the poster did not exclude them from receipt through code. The choice to respond is a construction of self as part of the proper audience, and the like or comment represents an assertion of a sort of internodal connection for which it would be within the range of social norms to be party to the conversation opened by the post or share. This construction may be unwelcome or inappropriate, as in cases like the coworker who chooses to respond to an in-group communication ("It was great to see my sisters X, Y, Z at the protest Saturday!") by taking issue with the group's politics, or the parent who forceably reminds his child of the slippage between intended and actual recipients by commenting on party pictures.

Through audience construction in code and in norms, as senders and as receivers, SNS users are trained in literacies of "environments that are both *privately public* and *publicly private*" (Papacharissi, 2010, p. 142), including the civil inattention demanded by in-group communications available to outsiders, and the construction of self as a proper member of the audience to a given communication through the like, comment, or share.

Identity

We have already addressed much of relevance to identity construction and performance in the preceding. Multiplex scalable interactions and the indiscriminate intermixing of our communications in the feeds of intended and unintended audiences within our SNS networks provide intense training in identity management. Presentation of self (Goffman, 1971a) must be engaged in on SNS with simultaneous relation to our multiple constitutive communities (Sandel, 1982). Users pursue various strategies of identity performance, ranging from a confrontational assertion of one aspect of self even among persons who may be uncomfortable with or uninterested in that self-aspect, to a meticulously curated lowest-common denominator self, carefully constructed to fit simultaneously into all constitutive communities. Rarely, though, do users choose these extremes—and yet more rarely do users choose them or any particular in-between on a permanent or even consistent basis. More often users modulate constantly between strategies, and display aspects of self in different ways at different moments to different constituencies, forming what has been helpfully described as akin to a burlesque fan-dance (Jurgenson & Rey, 2013), in which the play of revealing and concealing produces intimacy even in a semi-public communicative context. The constant shift between back- and front-stage self-performances (Goffman, 1971a) allows for different forms of inclusion and intimacy in relationships to take place in a private way, despite their public setting. Indirect communication and practices of social steganography (boyd & Marwick, 2011)—in which a message is "hidden in plain view" by making references only properly interpretable by members of an in-group— supplement these strategies and allow for nuanced socially multimodal self-performances which may be simultaneously front- and back-stage to different audiences.

Through simultaneous self-performance among multiple constitutive communities, SNS users are trained in a kind of *double consciousness*, in which interactions must take place within the perspective of multiple, often contradictory aspects of self—the user is e.g. gay *and* Southern *and* manly *and* Christian . . . This training in self-understanding is

concurrent with training in managing information flows, creating public private moments and private public moments, and the fan dance of intimacy.

Incentives

Most incentive structures mobilised in SNS rest simply and directly upon basic human desires that are supported by SNS rather than being created or substantially transformed by SNS. An incomplete but indicative list might include building relationships, maintaining personal connections, maintaining and strengthening professional contacts, fun, play, hanging out, and passing time. While the phenomenology of such incentives and activities would be interesting, and while the ways in which such incentives and activities are altered by SNS would be valuable to explore, both are beyond our scope here, for in these cases SNS are largely determined by these incentive structures rather than themselves determining them.

There is, however, at least one significant form of incentive structure that is brought about through SNS consumer training which is a significant addition to or alteration of incentives within non- or pre-SNS sociality. Along with the cultural ascension of Facebook has also come the cultural prominence of the kinds of casual games well suited to the Facebook platform. These games, often called "social games" despite often having much less a social component than many other kinds of games, have been adopted by demographics not otherwise engaged in gaming, and often in remarkably addiction-like ways. Distinctive features of many such "social games"—perhaps best, but certainly at least most famously exemplified by Zynga's *Farmville*—are a quick cycle from action to reward, a requirement to return to the game regularly, and periods of imposed inactivity in which the opportunity to play is withheld. Taken together, the user often experiences a strong imperative to take advantage of every opportunity to play given, in order to maximise future opportunities for play. Gaming then becomes a means to its own possibility, and the question of whether the play is enjoyable falls by the wayside.

A similar short-circuited reward structure also appears within SNS themselves. The reformulation of social interaction into microtransactions produces an addiction-like effect:

Every ping could be social, sexual, or professional opportunity, and we get a mini-reward, a squirt of dopamine, for answering the bell. "These rewards serve as jolts of energy that recharge the compulsion engine, much like the *frisson* a gambler receives as a new card hits the table," MIT media scholar Judith Donath recently told *Scientific American*. "Cumulatively, the effect is potent and hard to resist." (Dokoupil, 2012).

Users experience constant small rewards by checking in and checking back frequently and, conversely, experience anxiety about opportunity costs when unable to do so—this anxiety increasingly being described as "FOMO" ("fear of missing out") (Zimmer & Carson, 2012).

These social microtransactions provide incentive structures not only through opportunities and opportunity costs, but also through logics of validation and accumulation. By transforming a moment of social exchange into a virtual object—a shared picture, status update, news article, or so on—a pseudo-commodification takes place. We see the social object enter into networked sociality, resulting in varied degrees of responses, and are gratified by large numbers of likes and shares, seemingly for its own sake. Brands and users post questions, asking members of their network to "like" the post if they agree with answer #1, and to "share" if they agree with answer #2, an activity which seems to place the churn of activity and the frisson of "reach" above any quality of content. Activity provides its own variety of social validation in a "circuit of

drive" (Dean, 2010), and users caught up in the cycle of feedback are pulled towards trying to make their expressions, ideas, and images "go viral."

Through these incentive structures, distinctive of SNS consumer training, users are brought into sometimes near-constant quick cycles of activity and response through microtransactions requiring frequent low-level engagement for frequent low-level social rewards.

Ambient awareness

The final aspect of the phenomenology of SNS use that we will here address has been described as "ambient virtual co-presence" (Horst et al., 2007; Ito & Okabe, 2005b). Through frequent SNS posts or SMS messages, often of little inherent or individual interest or value, users are able to maintain a feeling of proximity and connection. Users find value in knowing what others in their network are up to, even though what they are up to may not be of any particular interest. This is partially connected to FOMO, but extends further—through ambient virtual co-presence we gain a feeling of social connection which extends beyond the mere alleviation of anxiety about possible social disconnection. This virtual co-presence is significant enough an aspect of SNS use that some prominent behaviours, e.g. sharing photographs of one's lunch, can hardly be made sense of unless it is understood that these forms of "sharing" are intended as relational actions, not informational exchanges (Wittkower, 2012).

In ambient virtual co-presence, users obtain a feel for the texture of life of those in their networks, and a background awareness of recent events in the lives of their connections. Through these means, the user is virtually co-present along with others. This is paralleled by a different form of ambient awareness, in which others are virtually co-present along with the user. This form of ambient awareness, which we may call "potential being-with," is nothing but ambient virtual co-presence viewed from the other end: the user, before sharing an anecdote about their day or a photograph of a misused apostrophe, is of course aware of the ambient virtual co-presence that their connections will experience, and so, when experiencing the to-be-shared experience, experiences it as in prospective retroactive virtual community with others.

Taking virtual co-presence and potential being-with together—and considering that we ideate virtual co-presence and potential being-with regarding communities, networks, groups, and pages, as well as individual users—a complex picture of ambient awareness emerges. SNS users, when fully trained in the habits of ambient awareness, carry their networks around with them in constant potential retroactive virtual co-presence—users experience everything around them as in principle sharable, thus, not only "alone together" (Turkle, 2011), but (potentially virtually) together, even when "alone."

Avenues of educational expropriation

With this incomplete phenomenology of consumer training on SNS in place, we are able to consider some ways in which these skills, literacies, and habits may be expropriated by educators. These considerations are intended to be suggestive and exploratory rather than exhaustive and conclusive—these few examples are meant to illustrate and exemplify how consumer training may be expropriated, not to identify universal or preferred methods of doing so. We expect that the reader is likely to gain more by considering how her own objectives and environment could be well served by alternate forms of expropriation than by considering wholesale adoption of the assignments and exercises here described.

We will begin with an in-depth example, describing an innovative process we have already implemented that takes advantage of many of the identified forms of consumer

training. Following this, we will consider a variety of other kinds of possible avenues of expropriation. It should be emphasised that we wish to consider here ways in which consumer training on SNS can be mobilised, which does not necessarily require actually using SNS in course activities—although, of course, the use of SNS may often aid in the transfer of relevant skills and habits.

In a course currently offered by one author of this paper, in which the other author is an embedded librarian, we have implemented a modified version of an annotated bibliography assignment. Students are to join a Facebook group, into which they post links to material relevant to our course, accompanied by a 100-word annotation, in which they present the linked material and discuss its relevance to course readings or classroom discussion. Students receive course credit for each annotation, but also receive additional credit if one of their classmates uses their post as a source in their paper. It is explained to students that the intention of this additional credit is to encourage them to find material that's as relevant as possible, and to write annotations which make the source as approachable and adaptable to coursework as possible. In this way, a collaborative and collective resource is created, proving students having difficulty thinking of paper topics with a rich set of peer-recommended areas of interest, and allowing 'clusters' of research topics to emerge, as students share topics of interest to them and influence their peers to begin to pay attention to and think about related issues.

This process uses consumer-trained social informatics to curate crowdsourced research materials. Students are able to have scalable and multiplex interactions: they may set their privacy settings, picture, and even name so that they are more or less easily recognisable in offline settings. We have seen students with previous offline relationships like and comment on one anothers' posts online, students choose to conceal their identity online entirely and remain silent in class, and students who did not previously know one another follow up in-person on online interactions—and conversely, follow up on in-person conversations by online posting of annotated bibliography sources. Though current research trends show that students prefer not to mix their academic and social lives (Educause, 2013), our experience is that when given the opportunity to use Facebook in place of Blackboard or a similar course management system (CMS), students responded positively. Surveys indicated that our students found that the use of the Facebook group for both the annotated bibliography assignment, and for communicating with the professor and embedded librarian was either "very useful" or "useful" in comparison to using Blackboard, and 92.3% of students did not have concerns in regards to privacy, given that interaction took place only through group membership and that students were encouraged to lock down privacy settings. The general consensus among students was that they are already logged into Facebook for much of the day, so it was convenient for them to post and check the class Facebook group in lieu of logging into our university CMS.

In addition to drawing upon training in social informatics, interactions, and audience and identity construction, this also provides the distinct microtransation incentive structure of liking and sharing, in three ways. First, in a literal sense: even though the student may not have any pre-existing or continuing relationship with their classmates, it is safe to assume that when one of them likes, comments on, or shares a post, this positive peer reinforcement is validating in the same sort of way as it would be within recreational Facebook use among an intentional community of friends. Second, the small scale of the assignment provides for a quick cycling and pervasive action-reward cycle between student and instructor, allowing for a great many points of contact at a

low opportunity cost for the instructor.[2] Third, the desire for reach, influence, and virality can also serve as a motivation to students, as they see some posts get a robust response (several peer likes, maybe being brought up in class on the following day) while others fall relatively flat.

Finally, we expect that, among some more active students at least, ambient awareness can be mobilised. This, more so than any other aspect of the assignment and process, could be especially educationally valuable; even transformative. If, over the course of the semester, students become accustomed to bringing their classroom network along with them as potentially retroactively co-present in current experience, they will begin to encounter ever more aspects of everyday life along with the question 'how would this fit into class X?' We find it difficult to imagine a more desirable educational outcome, for this means that students will have, over a period of months, developed a habit of using course materials as a mode of interpreting their experience in pervasive ways and in quotidian, non-academic settings. Such is the ideal of education in critical thinking and enlightened reasoning.

Other possible avenues to consider might be:

- Scalable involvement in collaborative projects. Rather than assigning students to groups, assign projects to virtual or physical spaces, allowing students to self-organise into groups and act between and across projects. Depending on the exact design approach, this could draw on training in *social informatics*, *interactions*, and *audience construction*.

- Students could create course-specific profiles variously attached to different interest groups, topics, or projects within a course, allowing for multiplex interactions and fluid involvement in groups of common concern among peers. This organizational structure could use training in *social informatics*, *interactions*, *identities*, and *ambient awareness* to structure, motivate, and coordinate collaborative work.

- Peer assessment or peer "badging." Students might be given a certain number of points in the course, or badges (e.g. Best In-class Questions, Team Player, Best Online Comments) worth points, that they give to peers to recognise and reward valuable peer contributions to student learning. This sort of reputation economy would draw on training in SNS *incentive structures*, *interactions*, and *social informatics*.

- In-class use of online polling (e.g. Poll Everywhere) to introduce quick cycling of feedback, drawing on training in *incentive structures*, and multiplexibly scalable into full class discussion, small group discussion, or backchannel chat on a course Facebook page or using a course hashtag on Twitter.

- Use of social gaming trained *incentive structures* to allow students to move flexibly upwards through a hierarchy of tasks rather than working through a set list of assignments in order. For example, some assignments may "unlock" at a certain student point count, requiring students to 'level up' through foundational work (a short paper on methods, for example, or assembling outlines and lit reviews) towards higher-level and synthetic work, determining their own path and progress.

- Use of QR codes to develop games for campus-wide learning objectives, such as a freshman orientation program. This could create an *ambient awareness*, where the interactive game would allow them to feel connected to the university and the other

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[2] Facebook posts were graded once or twice per week. Students were told that when their post had been "liked" by the instructor, this indicated that the grade had been entered into and would be visible in the online course management system's gradebook.

students participating in the game across the campus, and could perhaps have benefits for academic success and retention rates.

- Many university organisations or classes require study or observation hours. The creation of a "Foursquare" type of game—possibly but not necessarily actually using Foursquare—would allow students to check in via their mobile devices, and allow students to become the mayor of a specific location, such as the library, a lab or a study room, and to earn academically-relevant badges This would draw on the *identities* and *incentive structure* elements of consumer training, and as students check in to various locations they would take ownership of being a part of that learning community
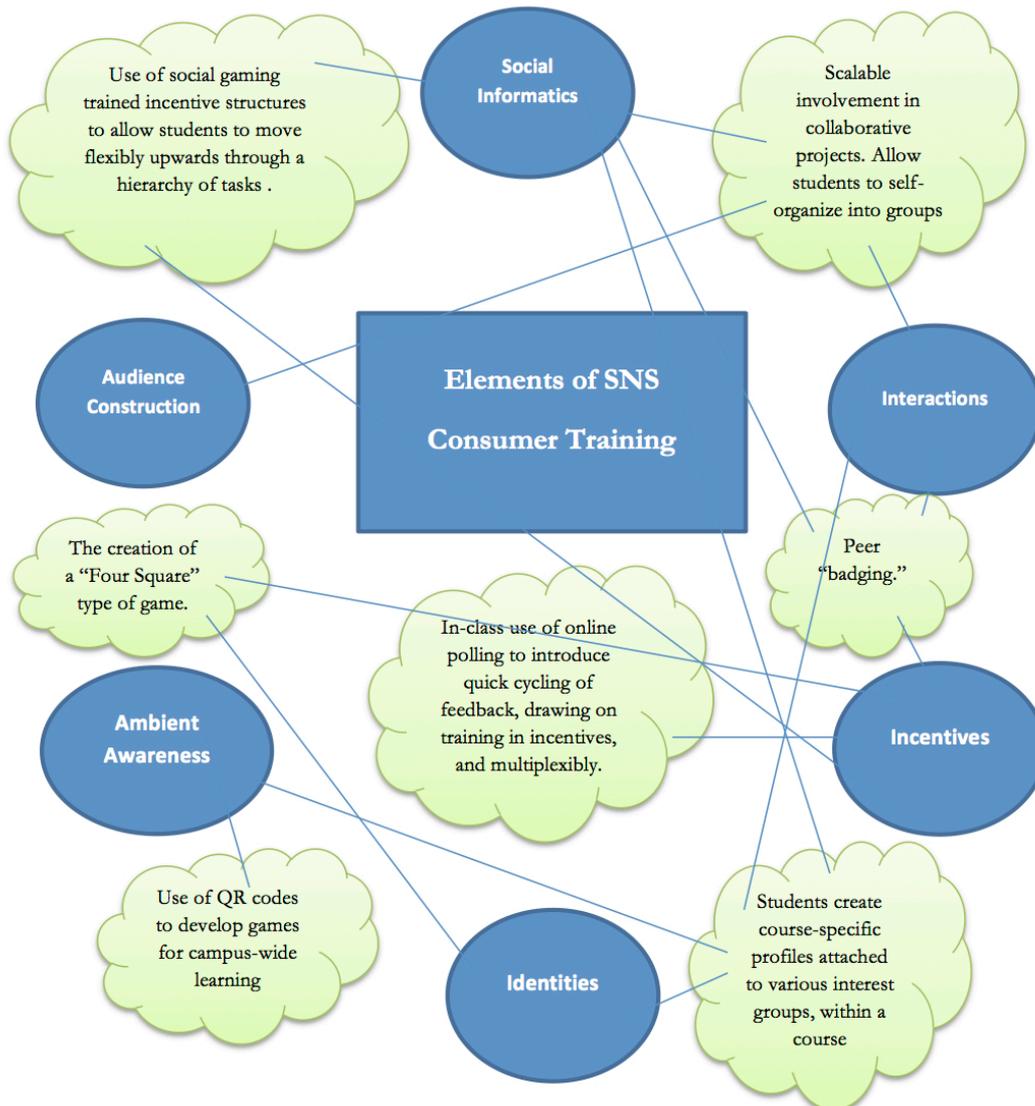
Figure 1. Visualisation of the interconnections between possible forms of expropriation

Concluding comments

We hope to have presented a method, a set of resources, and a sampling of applications that can be modified to meet the needs of a variety of classroom situations. We do not expect that each will be useful to every reader, but we hope that the reader will find one or the other of use—if not the method of educational expropriation of consumer training, then perhaps the insights in digital nativity illustrated by the phenomenology of

SNS consumer training; and if not the SNS phenomenology, then perhaps the concrete assignment and activity structures. The number of college students that use SNS sites such as Facebook is steadily on the rise, as is the number of students that have easy access to mobile phones and tablets (Educause, 2013). The opportunity for educators to make use of the consumer training that these readily available technologies provide cannot be ignored and can make for a much more meaningful and relevant educational experience for students of today.

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