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Idiomedia: The rise of personalized, aggregated content

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Introduction

> We are very early in the total information we have within Google. The algorithms
> will get better and we will get better at personalization. (Eric Schmidt, CEO
> Google, cited in Daniel and Palmer 2007)

> The future of media is not distribution, it's aggregation. (Jarvis 2006)

Thirty years ago, prominent cultural critic Raymond Williams accepted a job as Visiting
Professor at Stanford University. Fresh off the boat from his hometown in Cambridge and
'still dazed from a week on an Atlantic liner' (Williams 2003, 92), he found himself in
Miami for the night and decided to watch a film on TV. Williams considered this medium
to be an important cultural form, and had been writing a monthly review on TV for the
BBC weekly journal *The Listener*. According to his own arguably apocryphal account of
the experience, he was quickly interrupted by a commercial break, and another, and
another. He found it striking that someone at the station had actually sat down and
planned these breaks; the film had obviously not been made to be interrupted in this way.
Things didn't get any easier for him:

> Two other films, which were due to be shown on the same channel on other
> nights, began to be inserted as trailers. A crime in San Francisco (the subject of
> the original film) began to operate in an extraordinary counterpoint not only with
> the deodorant and cereal commercials but with a romance in Paris and the
> eruption of a prehistoric monster who laid waste New York. (92)

Williams realized that this was a sequence in a new sense: it was a planned composite of
pieces whose reception as a whole was a distinct emotional and psychological
experience, a 'single irresponsible flow of images and feelings' (92). The word 'flow',
which he used to describe his experience, has since become one of the most powerful
critical concepts in film and television studies. For Williams, the night in Miami became
a defining moment, crystallizing the full implications of flow, replete with
commercialism, textual overloading, and distinctive consequences for reception (White
2001, 103). The word itself, evoking the rush of water in a stream, also captures the
temporal character of the broadcast experience: it is first and foremost a sequence in time,
ephemeral and evanescent. Flow became the central experience of his theory of television
and public broadcasting; for Williams, station programming is not just a mechanical task,

it is a planned act of assembly and juxtaposition. Television is also a creative act for the viewer; these disparate elements appear linked to each other through associations made in each viewer's mind, across the divisions into different programs and sequences; the viewer *remembers* what she has already seen and connects it to what she experiences now. It is this larger composition or aggregation of elements that shapes our cultural experience of television.

When Williams wrote his book *Television: Technology and Cultural Form* in 1974, the act of TV programming happened once for each broadcast; the flow was then transmitted to millions of lounges across the country. The sequences were assembled by human beings, and although each viewer may have interpreted them differently, the content each viewer received was the same. I will be suggesting that Williams' concept of flow is still useful to us, but that we have entered an era of content personalization; there is not one but literally *millions* of media flows, assembled or 'aggregated' for each individual. We have entered an era of content-based filtering across millions of Web feeds, of on-demand video transcoding, behavioural metrics and user profiling. Increasingly, digital content is produced on demand based on your current location; it is shaped by your social network and what they are recommending; it is predicted based on your personal Google search history or what you've been writing about in your webmail account. This personalized flow is substantially different from the early web, where content did not change based on the user's purchasing history or social network; personalization was confined to choosing which links to follow or what to download. I argue that we must consider aggregation to be an act of production, and develop a critical framework for understanding it. A new term is needed to describe these customized media flows: I will be suggesting the term 'idiomedia'. By idiomedia I mean one's own personal aggregation of content: individual and unique in the sense of the root word idiolect, but also dynamic and constantly adapting to its environment in the sense of the biological cell, idioblast. This term is meant to embrace the larger stream of media each individual receives on their device; it refers not simply, or not only, to the form of the aggregated content itself (e.g. an RSS feed or a video),[1] but to the phenomenological *experience* of this personalized flow.

Before I proceed it is important to define what we mean by aggregation and personalization. At a basic level, *aggregation* means bringing objects together; these objects can be news stories, videos, web links, or pictures, for example. On the web, this collection usually takes the form of a group of bookmarks or headlines (e.g. search engine results or an RSS feed) but it is increasingly taking the form of a personalized web portal or a video stream. As Caroline McCarthy observes, some portals have links that are handpicked by a team of editors, and others (like NowPublic, Mixx or Digg) rely entirely on user contributions of headlines, multimedia and commentary (McCarthy 2007). Aggregators can be human beings - someone who collects a group of links or articles together - but they are usually pieces of software. Sydney-based cultural critic Chris Chesher defines an aggregator as:

> A piece of software that regularly connects with any number of previously selected information sources ('subscriptions' or 'feeds') to download metadata such

as headlines and descriptions. It then presents this summary to users in compact form. (Chesher et al. forthcoming <u>2009</u>)

An aggregator in this sense is obviously different from Williams' station programmer: for a start, a software client collects material that is uniquely relevant to you, based on criteria you have nominated. It is similar to the production of broadcasting flows, however, in that it is an act of assembly and juxtaposition - and it is similar to the phenomenological experience of broadcasting flows in that myriad discrete elements are received as a single aggregate, and the elements appear linked to each other through associations formed in the user's mind. Williams' concept of 'flow' also implies *retention* related to the experience: the user remembers prior segments and connects these mentally to successive segments in time. A similar activity takes place when a web user watches a compiled video stream, or when she browses stories in a personalized news portal; she connects the elements to each other and there is an overall 'coherence' to the experience.

A crucial aspect of these millions of different content flows is that they change over time. This may seem pedestrian, almost trivially true, yet it is an important point - and one in which companies like Amazon and Google invest millions of dollars per year.<u>2</u> The content on my mobile device, for example, changes according to what time of day it is, where I am in space and what I have recently been searching for or purchasing on it. It is currently displaying a list of updates on my personal RSS feed because matching articles have been posted; this is a constantly changing list of blog posts and videos on topics I am interested in. It is also displaying the weather in the suburb I'm walking around in and the network coverage in that area. Later on today, I will be using a location-based service on this device to find restaurants in my area, and I will not need to tell this application where I am because it will already be aware of that. With every step, I emit a smog of data; my journey is being archived too. Every few seconds, my device pings the network and receives a response; my location zone is then recorded, and can be used to customize data for me in real time. Even the advertisements in my webmail system have been selected for me based on the content of my recent emails,<u>3</u> and the Google search results I receive are customized by my own search history and the feeds I currently subscribe to (many web users don't even realize Google does this). The various media being delivered have a unique meaning for me at the time; the flow is peculiar to me as an individual who is currently in North Melbourne and interested in vegetarian food, Buddhism, and BuzzMachine; it is idiosyncratic. How can we gain critical purchase on the experience of this personalized media flow?

On-demand video is a good place to start. Personalized video is often advertised as having a seamless experiential flow after the segments have been aggregated, comparable to television in its quality, but without the 'annoyance' of changing channels trawling for entertainment (Dempski <u>2002</u>). Although this claim is debatable - the technology is nowhere near as well developed as broadcast television - the comparison to real-time broadcast flows is interesting. Personalized newscasts are compiled from shorter program segments and advertisements, based on either user preferences or browsing history, using technology called on-demand video transcoding. The MyNews video rendering engine,

for example, compiles a newscast based on both preferences and user history. It also compares the 'quality of the experience' to broadcast flows:

> The end result is a news program that includes only the stories that are of interest to the viewer. The compilation is customized, but the snippets are blended together such that the quality of the experience is the same as any single produced show. (Dempski 2002)

For all the advertising hyperbole, we should remember that these videos have been aggregated, and that aggregation is *an act of selectivity*; some news stories, and some videos, are necessarily forgotten. What is most interesting (and potentially dangerous) about these personalized flows is that although they are marketed as individualized and unique - a news program that includes 'only those stories that are of interest to the viewer' - they are at once iterable, mass produced and apersonal in the sense that they have been selected for you by a machine. This is the mechanization of cognitive decision making. As US critic Cass Sunstein puts it, software agents 'filter in, and they also filter out, with unprecedented powers of precision' (Sunstein 2001a). There is a politics to aggregation - whether this is done by a human agent or a software client, even if it appears as a unified whole (e.g. a compiled video stream or web portal).

As Derrida puts it in *Echographies of Television*, we are spectralized by electronic media, captured in advance; the media that flow onto our devices have a certain wholeness and immediacy to them, but this is deceptive:

> This living present is not at all live; this total image is in fact nothing of the sort. There may be a certain 'sensual' immediacy in its reception, but it only appears this way: images can be cut, fragment of a second by fragment of a second … There is also, if not an alphabet, then at least a discrete seriality of the image or images. (Derrida and Stiegler 2002, 59)

This is due in part to our essential relation of technical incompetence to its mode of operation, for even if we know how it works, 'our knowledge is incommensurable with the immediate perception: we don't see how it works' (117). But we should not lose our critical relation to the artefact produced; we should try to think how and why the media have been selected and assembled in this way, and what has been lost or discarded in the process. For Derrida, the 'actuality' of real-time media is always a matter of 'artifactuality', involving selection, assembly, and hierarchizing, amounting to a 'fictional fashioning' (3). In the case of personalized media flows, this will start with acknowledging that the flows have been produced, and that they are convenient precisely because of the decision making that has already taken place. When you visit a personalized news portal, a software aggregator has decided in advance which articles matter and which don't.

We already have a critical culture in relation to broadcast media which acknowledges the selectivity and decision making behind station programming. We have radio, film and television schools which teach students how to produce, cut, discriminate and edit; we

have critical and theoretical tools with which to assess the reception and experience of film and television for audiences. I suggest that we approach personalized media flows in a similar fashion, and that this approach must seek to understand how these flows are received and experienced as well as the technologies that enable them. What are the technical alternatives to corporatized personalization - the community radio stations of aggregators? What are the cultural implications for public knowledge, for the privacy of personal data? Although I don't have room to explore them here, there are deep implications for privacy with respect to the personal data used for aggregation - data like search histories, or the keyword content of your emails. These data are collected by companies like Google and Amazon for the express purpose of personalizing their search results and book recommendations.4 We should begin our critical approach by acknowledging that aggregation is an act of production in the same sense that programming a television show or editing a newspaper is an act of production, and it requires scrutiny. It's just that it is usually done by a software agent, not a human being, so it is a step we easily lose sight of. We should be vigilant against this blindness, because aggregation is the key technology behind personalization.

Although the term 'personalization' has been used to describe all manner of things from downloading a wallpaper to customizing your cellphone, in this article I mean *information that has been aggregated for you*, based on who you are, where you are, and what you are interested in at the time. The concept has been explored by Cass Sunstein, Professor of Law at the University of Chicago, who refers to 'filtered' news in his work, meaning digital news content that has been tailored and delivered to the individual based on his/her preferences (2001a, 2005). Sunstein was one of the first theorists to write about personalization, and identifies potential problems in his book on the topic, *Republic.com*. In this book he argues that personalization may weaken democracy because it encourages users to read and listen only to what interests them, thus cutting themselves off from any information that might challenge their beliefs (2001b). Nicholas Negroponte famously advocated a personalized news portal in his 1995 book *Being Digital*, which he called 'The Daily Me' (153). New media theorist Lev Manovich identifies a new form of content - micro-media - to describe the atomized, bite-sized digital media like SMS, RSS feeds and blog posts that can be recombined or 'remixed' on different platforms (2000). As I see it, none of these terms capture what is happening to digital media at the level of Raymond Williams' 'flow'; what we are for the moment calling the level of *personalized content aggregates* - the 'single irresponsible flow of images and feelings', the sequence of customized media for each individual.

We are no longer only in an age of 'hyper' media or even 'multi' media; a new term is needed - a term which captures the nature of these idiosyncratic flows, and the selectivity which has taken place in each instance. As blogger Nico Flores suggests:

> All of this can be seen in a more coherent light if we think of aggregation as a creative act, and of aggregates as a form of content with its own idiom. (Flores, On Demand Media blog, comment posted 13 April 2005)

I think this is a key concept, and for this reason I suggest the term 'idiomedia' to describe these personalized media flows. This term is useful for two reasons; firstly, the concept emphasizes that the overall experience of the linked pieces is an important critical element, and I think we need descriptive purchase on this phenomenon. There has been much good work done understanding digital media from the perspective of its component parts, modular media elements which are then remixed (Manovich's term; 2001, 30) or earlier media which are remediated (Bolter and Grusin's term; 1999) into a new form or medium. Useful as these concepts are, I think we also need a way to understand these larger sequences as cultural phenomena, and the phenomenological experience of the linked elements. Secondly, 'idiomedia' emphasizes that the flow of media has been created specifically for you as an individual with a unique history and particular interests; it has been selected for you in advance, an audience of one.

For Cass Sunstein, this means that we are a nation of citizens who increasingly read only what we want to read, who are no longer informed on topics that are of public benefit; we are exposed only to topics that we are interested in. Sunstein is deeply critical of the increasing personalization of digital media; he argues that 'general interest intermediaries' - like newspapers and broadcast TV for example - are essential if we are to have an informed citizenry (Sunstein 2001b, xx). These intermediaries provide common experiences but also *unanticipated* encounters with news and with dissenting opinions: while you are flipping to the social pages, you may accidentally see the headlines on the World News page. These are the 'street corners' of public knowledge. For Sunstein, the increasing personalization of digital media is dangerous; it will lead to a nation of people who choose to read only about Paris Hilton and the iPhone, who choose to talk to other bloggers who already agree with them, rather than watch the news.

Sunstein warns that this will mean the death of serendipity - of browsing library stacks and accidentally finding new books, of browsing newspapers and being confronted with important articles. As citizens, we have an *obligation* to expose ourselves to new material. In an interview with NPR News, Sunstein comments:

> If it turns out that we're talking mostly to people we agree with, something's gone wrong … there's a kind of obligation for citizens to leave their echo chambers at least some of the time and seek out dissenting opinions. (Sunstein 2005)

As many bloggers have observed - most notably Jeff Jarvis at BuzzMachine (who, it should be declared, has built a business around content aggregation) and Steven Johnson - although this argument is seductive, it is flawed. Many of the electronic writing forms developed specifically for the web and for personalization are built around that idea people want to stumble upon new material.5 Blogging is a prime example of this; it is much more likely that I will follow a link on someone's blog post to a new and possibly dissenting piece of information than that I will 'accidentally' read a newspaper article as I'm flipping past the Sport section. As Steven Johnson notes on his self-titled blog:

> Do these people actually use the web? I find vastly more weird, unplanned stuff online than I ever did browsing the stacks as a grad student … Thanks to the

connective nature of hypertext, and the blogosphere's exploratory hunger for finding new stuff, the web is the greatest serendipity engine in the history of culture. (Comment posted to blog, 11 May 2006)6

Sunstein has a point though: if the media being delivered to our devices are tailored to us as individuals, and the forums we visit are part of specialized interest groups, if even the book recommendations we see are filtered by our purchasing history and the news by our browsing history, then perhaps we risk losing something. For Sunstein, what we are losing is the public forum: a platform for shared experiences. As he sees it, personalized media encourage us to walk around in our own echo chambers, listening to our own voices or the voices of peers who are interested in similar topics. Without shared platforms like newspapers, a 'heterogeneous society will have a more difficult time addressing social problems and understanding one another' (Sunstein 2005).

Although Sunstein's objections are valid at a common-sense level, they are not particularly useful if we wish to develop a critical culture in relation to personalized media. Sunstein is mourning the death of the Fourth Estate, the passing of traditional news media platforms. Although it is important to mark this passage, this is not the end of our task as theorists; I have been arguing that a critical culture would begin by acknowledging that aggregation is an act of production, and that it consequently involves selectivity, the automation of decision making. What has been lost or forgotten in this deceptively seamless experience, what has been written out? With respect to real-time media, writes Derrida, 'we must learn, precisely, how to discriminate, compose, edit' (Derrida and Stiegler 2002, 59), and if not then we must at least develop an awareness that this living present is in fact reconstituted. This does not mean, however, mourning the death of an era - as though we were even able to halt the progress of personalization technologies. This means understanding more about the technologies at both a technical and a phenomenological level, and scrutinizing their seamless integration into our lives. Without this understanding, we not only lose our critical positioning but we also lose our relationship to the future.

Acknowledgements

Notes

1. An RSS feed is a web format used to publish frequently updated works.

2. In a 1998 interview, Amazon CEO Jeff Bezos said: 'Both through accepting preferences of customers and then observing their purchase behavior over time … you can get that individualized knowledge of the customer and use that individualized

knowledge of the customer to accelerate their discovery process'
(http://www.commonwealthclub.org/archive/98/98-07bezos-qa.html).

3. This is, of course, Gmail and also the Google Reader - owned by Google.

4. Unfortunately I do not have room to explore these privacy implications here. The interested reader could start with Lawrence Lessig (1999), a legal scholar who offers a framework for thinking about what privacy means and how it can be regulated, and a recent book from Daniel Solove (2006), also a legal scholar, which looks at the technologies used for collecting information and how the definition of privacy changes in a networked environment.

5. There is even a website called StumbleUpon, which brings you news and new material you may not be aware of (http://www.stumbleupon.com/).

6. http://www.stevenberlinjohnson.com/2006/05/can_we_please_k.html

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