

**EMERGING TRADITIONS IN NEW MEDIA**  
**Human machines and the bias of communication**

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**Abstract**

*What is a media tradition? This paper inquires into the possibility of there being media traditions in new media. In posing the question in relation to new media, extra issues arise. "Old" media, by their very nature, are saturated with traditions. This essay contends that many of these have made their way into the new media, almost without being noticed. To develop the analysis, the distinctive structure of the internet is explored as a composite multimedia platform (it is such because it has visual and audio aspects). This is achieved first by examining the work of Lewis Mumford, and then by using Harold Innis's idea of spatial or temporal bias to guide the inquiry. After this, the ideas of media platforms and formats are used to develop a sense of emergent traditions in new media.*

What is a media tradition? Much has been written on the word medium.<sup>1</sup> But what of tradition? Like the word medium, it is from Latin, meaning to hand something over (*trado* – I hand over, I yield, I bequeath, I entrust to, I tell, I betray). The related word *traditio*, a noun like tradition itself, meant surrender or teaching. These strangely ambivalent meanings resonate in the descended modern English word-field (tradition, treason, traitor). Handing something to someone else seems simple – but it involves a surrendering of claim as one generation takes over from the next. Williams (1976) makes the useful observation that from the sixteenth century, tradition in English implied respectability (p. 319). But again ambivalence enters – for, as Girard (1990) says, by 1800, tradition stands for old and obsolete, to be contrasted unfavourably with the ideal of innovation (p. 12). Paradoxically, therefore, understanding what is new in today's new media involves a deep understanding of how 'traditional' these new forms are – and how, in many ways, they stand in the main line of development of civilisation itself.

At the heart of 'new media' is the internet, and it will be central to this inquiry. But what is the internet? It certainly takes many forms. To start with, purely technological explanations are insufficient. Just as Mumford (1963, 1966) insisted the first machines in history had human components, so today the internet is a fused yet volatile combination of technology and human behaviour. Once this step is taken, it then becomes possible to explore the specificity of the media of communications themselves. Most obviously, this is done by working through the tradition of media theory inaugurated by Harold Innis and

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<sup>1</sup> Many media text books point out that the word medium comes from the Latin noun *medium* – the middle or in between (though few point out that the word also meant the public, or that the related adjective *medius* had as one of its meanings ambiguous or ordinary) (see for example, Williams 203).

Marshall McLuhan. Then, this paper teases out concepts that are resident in new media themselves, in order to make sense of them. For reasons of scope, just two of these concepts will be examined – the idea of new media platforms on the one hand and of new media formats on the other.

These three sets of inquiries are valuable in themselves, but more sense can be made of them even at this stage if it can be seen how crucially they are *interrelated*. In this sense, the order of presentation is itself significant. The first inquiry is so because it is also a grounding of the entire inquiry – new media, like old media before them, are *composite in nature* – they are made up of technological and human parts. This insight of Mumford's was based on his observations of the first machines of antiquity, but they apply just as well to communications today. While showing this does not involve trawling through antiquity, it does entail a more modern kind of history of key tools like the search engine and hypertext. It involves understanding how multimedia social networking systems are also partially human machineries standing in a tradition of emergence, maturity, transformation, and obsolescence. Once this nexus is established and shown to be applicable to new media, a second kind of inquiry becomes possible. This concerns internet traditions in a quite different sense, namely, in terms of the bias of communication, which is to say, as a *multimedia* structure.<sup>2</sup> Essential to this task is the work of Innis (1951, 1972a), McLuhan (1987), and Ong (1982). These writers are sometimes dismissed as technological determinists – but their value lies in the fact that they paid close attention to *the specificity of the medium as such*.<sup>3</sup> Such inquiry is far more valuable than any sociology of the media, provided it is situated within the Mumford-style analysis of human-technological relations. There remains a third step – this consists in sketching terms of discussion drawn from the new media's self-descriptions (the notions of platforms and formats). What follows, then, is unfolded

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<sup>2</sup> Kress, van Leeuwen, and a host of educationalists call this multimodal communication. This is not the place for a critique of this literature. Suffice to say the word "mode" was already heavily laden with useful meanings (mode: kind of thing, mode of address – communication theory, mode in linguistics, mode – statistics). Mode and mood also overlap as grammatical terms. Using the term to distinguish between colour, text and sound is perverse.

<sup>3</sup> Joshua Meyrowitz has called these "first-generation" media theorists because of their simple rules of thumb and their pioneering work (52). They remain valuable precisely because of their attention to first principles of media per se.

according to the logic of the layers of tradition itself. This paper contends that there *are* new media traditions, and *also* that – and this is the key paradox – only in the process of understanding how these traditions themselves stand in a long line of civilization and technics, it is *then* that what is truly new about new media can be revealed.

### **The Tradition of Human-Machines**

When tourists stand in awe of the ancient monuments, they imagine the machines used to create and to shift the materials heaped up and organised before them. But they miss the best evidence of the machine that mattered most: the human group itself. In his *City in History* (1966) and his *Technics and Civilisation* (1963), the great urbanist, Lewis Mumford showed how civilisation itself was founded in human practices and organisation. When techniques of pulling on ropes and pulleys were developed, they embodied groups of men and women acting in concert. Taking the example of the pyramids, Mumford (1966) writes

The vast army of priests, scientists, engineers, architects, foremen, and day labourers, some hundred thousand strong, who built the Great Pyramid, formed the first complex machine, invented when technology itself had produced only a few simple “machines” like the inclined plane and the sled, and had not yet invented wheeled vehicles (p. 76).

As Jacques Ellul (1973), another writer in this tradition pointed out, the organisational ensembles of Roman soldiers scattered their opponents. The discipline of the soldiers consisted in training – and this was the vital difference between their force and that of their opponents (Ellul, 1973, p. 30). Civilisation – and its monumental architecture – was the result of all these processes. Yet these “human-machines” as Mumford called them in shorthand are no longer visible – all that is left is the evidence of the monuments themselves (1966, p.76). The lesson of that time to our own time is clear – the human part of the machine is paramount.

Mumford called the human dimension of technology *technics*. Even today, all machines (even the most automated) have human dimensions. The first machines were almost entirely human. Such machines are best then examined in terms of what they *do*. If all the

ancient human-device combinations were machines, they surely had *purposes* because machines are created and used for a reason. The sleds and planes and humans formed a building machine to create pyramids, the Roman legions in fixed groups formed fighting machines with devices like the phalanx to spear through enemy lines. In our time, Myspace and Friendster are communication machines – standing in a tradition that tells us much about what kind of society produced them.

Not only do communication machines have human components, but also, many of the technological components are themselves surprisingly old. In this context, Michel Serres (1995) remarks:

So let's put the question differently: What things are contemporary? Consider a late-model car. It is a disparate aggregate of scientific and technical solutions dating from different periods. One can date it component by component: this part was invented at the turn of the century, another, ten years ago, and Carnot's cycle is almost two hundred years old. Not to mention that the wheel dates back to Neolithic times. The ensemble is only contemporary by assemblage, by design, its finish, sometimes only by the slickness of the advertising surrounding it (p. 45).

There is no doubt Serres is correct – yet with the computer in the 1980s, the internet in the 1990s, and the latest social software of the 2000s, we behave as if struck dumb by utter innovation. What Serres says of the car is also true of the computer, the internet, the search engine, and so on. This brings us to the way in which traditions of technics, refined over many years, are layered into the technology itself.

### **The Case of Hypertext**

To explore how tradition makes its way into technology, I return to the now neglected, but yet still basic unit of internet navigation – hypertext.<sup>4</sup> We take it for granted now, but it needed to be invented and devised. In this respect, hypertext has a far longer history

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<sup>4</sup> It is worth describing hypertext for those who have stopped thinking about it. This is Jakob Nielsen's description:

“The simplest way to define hypertext is to contrast it with traditional text like the book. All traditional text, whether in printed form or in computer files is sequential, meaning there is a single linear sequence defining the order in which the text is to be read. First you read page one. Then you read page two. Then you read page three....Hypertext is *nonsequential*. There is no single order that determines the sequence in which the text is to be read” (1).

than is widely realised – well before it was digitised, it was manually, then mechanically, deployed. Before it was technics, it had first to be conceived. Most attribute it to Coleridge’s vision of a system of indexing by association in his *Treatise on Method* (Snyder, 1996, p.20). Then the systematisation of Mumford-style technics was needed. Snyder (1996) also sketches a twentieth century history that shows just how long a modern version of hypertext has been around:

Vannevar Bush, director for the Roosevelt administration...envisioned a memory machine, which he called the memex, to manage the large volume of scientific information available at the time...Bush traced the main problems of information retrieval to inadequate indexing and categorising systems. He imagined a machine that would transcend the storage and retrieval limitations of print technology by allowing users to gain access to and to search huge amounts of information...Like the imagination it would operate by association, and therefore better accommodate the way the mind works. Memex users would be able to browse through information by creating “numerous trails” (Bush 1945) of their own associative links (p.23).

Not long after this, in the 1960s, Ted Nelson named the idea of hypertext as “non-sequential writing” – a text that branches allowing choices to the reader (p. 24). In honour of the opium-induced genius of Coleridge, he called it Project Xanadu. The possibilities of hypertext were explored academically by George Landow, who still maintains a site that explains its workings.

Bush learnt from those who went before him.<sup>5</sup> He makes a point of crediting Gottfried Leibniz, the seventeenth century philosopher, whose mechanical calculator “embodied

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<sup>5</sup> Vannevar Bush’s article itself predicted six things: a Cyclops camera (so-called because it would record what the wearer sees – and could be developed instantly in dry processing), microfilm that could reduce a library to the scale of something to be stored in a desk, speech recognition machine (vocoder), a logic machine, and the above-described memory extender, Memex (87). Because Bush was careful to work using evidence of what existed in the 1940s (for instance the vocoder is based on prototype devices (the Voder and the Stenotype) that could produce speech when keys were struck) (94-95), his predictions are surprisingly relevant to today’s suite of products in the fields he identifies. We do not wear cameras (yet), but phones are worn – and they can take pictures. We have dry printing, though it still has some way to go. Microfilm has come and gone – pdf surely performs the task he imagined. Voice recognition software means we can speak to a machine and text will appear. This exists, and it seems we are finally beginning to use it. Search engines are logic machines (they are software rather than stand alone devices, and we have seen the directness of his predictive role in the emergence of hypertext. More recently, Microsoft’s programme MyLifeBits has been described as a “Memex of sorts” – though the question of how one searches images and audio still defies resolution (Unit Structures).

most of the essential features of recent keyboard devices” (Bush, 1991, p. 87). As Bennett’s primer on logic puts it, Leibniz’s device could

add, subtract, multiply, and divide; it is said that once perfected it could even take square roots! Most of us probably first encountered a four function calculator with a square root key in the 1960s, very nearly three hundred years later (2004, p.148).

Leibniz is also associated with the computer itself. In particular, his work on universal languages led him to the famed binary basis of all computing in 1679:

Binary notation is used in exactly this way in a modern digital computer. A bit, the smallest unit of data in a computer, stands for binary unit and has a single binary value, either 0 or 1. Bytes are made up of bits, usually eight of them. If you have a file on your computer that is 28 KB in size, the file contains 29 kilobytes, or 28,000 bytes of data (Bennett, 2004, p. 148).

Contrary to what many imagine, technics and technology interact not just in hypertext, but “all the way down.” Hence, the internet of linked PCs is at once new and old at the same time. Some might recall an image of the Game and Watch, a console game sold in 1980. As Dan Kaufman wryly pointed out, “Next time you see someone play a Nintendo DS [a game console], keep in mind that almost the exact same exterior design was used 25 years ago” (2007, p. 8). To be sure, those who play on the aforesaid game console would not be happy to swap; a cosmetic similarity is just that – an appearance. But the point remains: old structures persist, and some of what persists is not merely cosmetic.

To recap, technology is never utterly new, and the traditions that saturate old media have often made their way into new media behaviours. Indeed, if we look closely at it, not only do new media consist of elements that are much older, but also, many of these elements were earlier performed in more mechanical ways. The crucial corollary is that even as technological platforms emerge, we find work practices and other kinds of technics folded into them – serving in turn as the basis for new technological development.

### **The Bias of Communication**

In turning to traditions developing in the bias of new media communications, it is essential that we do not entirely turn away from what has just been explored, namely, a sense of that order of traditions of new media concerning the way technology and person actually work together as ‘human-machines’. The orientations of such broadly conceived communication machines are primary motivators for the bias of communication as defined by writers in the Innis tradition. But the Innis-type analysis is profound and important in itself, and once it is properly situated, yields another way of looking at new media traditions that has all the hallmarks of a good model: one that is at once simple and explanatory. The originality of these writers consisted in their close attention to technological specificities of the medium and *then* to the effects of the media on the constitution of audiences.

Innis (1951) and Carey (1988) – and in Australia, Tom O’Regan (1987) – are renowned for the concept of a *bias in communication* (pp. 160-62). They used this term to indicate a tendency to space or to time. Innis explained the idea in the following way:

A medium of communication has an important influence on the dissemination of knowledge over space and over time and it becomes necessary to study its characteristics in order to appraise its influence in its cultural setting. According to its characteristics it may be better suited to the dissemination of knowledge over time than over space, particularly if the medium is heavy and durable and not suitable for transportation, or to the dissemination of knowledge over space than over time, particularly if the medium is light and easily transported. The relative emphasis on time or space will imply a bias of significance to the culture in which it is embedded (1951, p.33).

That is to say, for Innis (and for those after him), there are some media that bind audiences in localities while others bind people in time. The media that bind people in space are called *space-binding* media. The newspaper is the best example of the tendency because while it is gone the next day, on the day it is printed, it is not just read by a population-group; it actually defines them together as an audience. It literally binds them together in space. Then there are those media that bind audiences over *time*. These tend to be long-lasting and memorialising in nature – like the pyramids of Egypt. Innis traces examples of both kinds (see Innis, 1951, pp. 33-37, 1972a, pp. 7-11; on Egypt pp. 12-25).

For instance, the pyramids are a strong example of the nature and significance of time-binding media. Such writing in stone entailed time – generations could die out making them, but they conveyed meaning to subsequent generations, binding the people together in legacy fashion in time.

To be sure, a strong version of this hypothesis needs qualification. For Innis, and for McLuhan and Ong (1982) after him, media formations determined cultures, economies, and even political change. To take an example from their work, McLuhan (1987, pp. 100-101) following Innis (1951) insists that papyrus held Rome together. For a historian, such a claim (particularly as phrased by McLuhan) would appear preposterous – and the strong technological determinist position certainly does need qualification. But the clarity of the questions these theorists posed lies precisely in the bold strokes of a position. After Innis, the accepted histories of antiquity (which dwelt typically on classes, rulers, and peoples) needed questioning, and the importance of media traditions in the strict sense could no longer be neglected.

### **Bias of Communication and New Media**

Embedded in the space of the web are spatial and temporal dimensions. At first sight, it appears to defy the idea of an Innis-style bias of communication – because the web is at once spatial in its connection and temporally binding in that its materials could, conceivably, last forever. Yet these are highly elusive. The space is diffused through the manifold of a graphic user interface. As for time, it is reasonable to ask how time *happens* in web-space. With the advent of Web 2.0, whose chief innovations lie precisely in the many new interfaces and net-based software platforms, space and time are even more difficult to explain. From podcast to webpage, time and space, it seems, fold into one another.

But there is a further complication. There is a blurring of architecture and of message-structure in new media. In considering the historical case of a space-binding medium like the newspaper by contrast, one could easily distinguish the characteristics of the medium (the medium-structure is one of wide distribution and of short duration) from the physical

institutional site on a city-street which produced it (the publishing house, the factory). In the case of new media, things are not so simple.

Commencing with the time-binding dimensions of the internet, once a name is technologically imprinted, it tends to persist in that form. Rather like the standardisation effected by print, the time-binding aspect of the internet can be discerned in its stabilities. Take the way the internet address operates. This structure has proven durable – and there is reason to believe it will endure far beyond the purview of the inventors’ imaginations. The most obvious example of this persistence concerns the domain name. At its most basic, the internet message is always sent to what we think of as an ‘address’. The term ‘internet protocol’ (or IP) was once a number, but

Such long numeric addresses can be difficult for people to remember and use. Therefore the Domain Name System (DNS) helps people navigate the internet by matching IP address numbers to user-friendly names. For example, when you want to find the United Nations website, you can type `http://www.un.org` into your web browser – this is much easier to remember than “157.150.195.9,” the UN’s assigned IP address (Global Internet Policy Initiative).

The idea of an address implies correspondence with actual places. To be sure, there are country places (“au” or “uk”), but *network* places like the “edu” or “org” grouping are also address-clusters. These linger, not just because of the architectural dimensions of the internet, but also because they are integral to the medium, and are so in every communicative act.<sup>6</sup>

To see how this works, in any given message, we need to think about the multimedia communicative act itself. Shields (2000) has argued that the Web is nothing more than a mass of interlinked phone calls. He contends that analysts and users alike should learn to see that the web is just a set of phone-links. Written in the days of dial-up, he offered the

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<sup>6</sup> An interesting counter-factual emerged from observations made by one of the inventors of the web, Tim Berners-Lee. Asked if there was anything he would have done differently, he remarked  
I would have skipped the double slash – there’s no need for it. Also I would have put the domain name in reverse order – in order of size so, for example the BCS address would read: `http://uk.org.bcs/members`. The last two terms of this example could both be servers if necessary (Berners-Lee 20).

The counter-factual reminds us that it could easily have been otherwise – and that even though his new suggestion is a better idea, we are already committed to the one he invented the first time around.

example of the delay in loading a webpage: “Links disrupt the easy flow of a text or a webpage to force viewers into an awareness of the constructed quality of webpages; they send the viewer elsewhere, they break up the authorial control of texts” (2000, p. 146). Hence, he says, the “ethos of the web is not one of sovereign territories but of the traveling shot, the mobile index carrying the browsing reader through multiple links and pages that have never had time to fully unscroll” (2000, p. 152).

Shields’ view is essential to an understanding of both the spatial and temporal aspects of the web. Most obviously, like the domain-name structure, it supports a time-binding view in that all records of all calls are held in multiple locations – ISPs and telephone companies keep records, the user’s terminal keeps a record, and the sites visited all keep records. These records, potentially at least, could last forever. Once again, this exceeds the institutional or cultural aspect framing the internet, and inflects the medium itself. The internet supports the time-binding aspects of society by supplying an apparent record without end, as more and more information is amassed, and as the weave of phone-lines and phone-calls is laid down, recorded, and stored. Forensic investigation is facilitated, and justifiable paranoias about record-keeping and privacy develop. As with the address protocols, mobile phone numbers, and callings stations, these testify to a time-binding bias seeping into in the medium, and not just in the architecture of the sites themselves.

But let us not miss the obvious. For, on the other hand, the phone call is inherently evanescent – it disappears as it takes place. Similarly, once the website is taken down, *it is as if it were never there at all*. All those who conduct research have encountered this as they write out their bibliographies. Like oral conversations, those who wish to cite the internet must give dates not just for the appearance of a website, but also, for *when they themselves visited it* (or as most style guides put it, “retrieved” it). The need for such double dating (the time of appearance, the time of retrieval) arises because websites not only disappear, but are modified and improved. The bias in the apparent medium-structure is ultimately spatial (as the site cannot be counted upon to endure).

Shields' account does not take account of the *experience* of the web. In other words, there is also a phenomenological aspect of the web (or the phone call for that matter) that is essential to understanding not so much what it really is technologically, but what it is socially – or as Mumford would say, in terms of its technics. Once this step is taken then another quickly follows. The temporal bias is a victim of its own technological prowess – the very completeness of the record makes it difficult to manage. The web, in this sense, falls victim to the Nietzschean insight that in a mass of information, the chief task is not storage but *navigation* – and forgetting.

The problem lies often not in retaining old files, but rather, in the fact that first the software and then the hardware changes, so those old files become worthless. An example is given by Wolf (2000) who, after citing NASA's "thousands of lost terabits" observes that

if the decoding algorithm is lost, all files depending on it become meaningless....Digital preservation is insufficient protection against the ravages of history, which destroys the contexts of data files, relegating them to obscurity as it does the historical artefacts whose meaning is long lost, or runes written in some long-forgotten language" (p. 61).

Contrary to the view that it will be there forever, most of what is on the internet will become technologically obsolete, but so gradually that we don't notice its disappearance. Given that most search engines date-order their results, we will notice the loss even less than if old books were being randomly removed from a library. The space-binding bias of internet-based *communication* is obvious in a cultural sense– but it has emerged from forerunners and it sits on, and is blurred with, a time-binding *architecture* whose legacy is still being established.

Similarly, in the dimension of their deployment as human machines, social networking sites on the internet (or nascent in mobile telephony) are more spatially-binding than they are temporally-binding. These traditions, for all their apparent novelty have links to other older media formations. But, to repeat, sitting beneath the welter of spatial activity, a deeper time-binding software-architecture persists, consisting of internet protocols,

domain names, and forensically traceable records. Of this time-binding kind of new media tradition, most of us are only subconsciously aware.

### **Platform and Format**

How do human-communication machines like Myspace or Facebook work? Like all machines, they need a conceptual “place” or *platform* to operate (something on which they sit, a cleared area so to speak) – and as they are communication machines, they need a *format*, or what is called metaphorically a language, to do so. The words platform and format are widely used to describe these two needs – though they are used in ways that are confusing and contradictory at times.

The first leading idea has been detailed by Steven Maras in a brief essay on the relationship and nature of medium and platform.<sup>7</sup> This essay is remarkable because instead of using the jargon of media theory, he works with terms that are being bandied about in the industry itself. This in itself strikes me as a fruitful intervention. While there are many such terms, some are more important than others. Maras notes the emergence, almost without anyone noticing, of the term *platforms* to describe everything from shared platforms in automotive manufacturing to web-delivery platforms. He cites Fiona Martin who calls the ABC’s online presence a “platform.”<sup>8</sup> Written before the burst of Myspace type social structures, his intervention now looks prescient indeed.

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<sup>7</sup> Maras has also written of the field in two further essays that are relevant to the present discussion. In one striking essay, he shows how some habits (like columnar text) arose in the seventeenth century Ramist conception of textbooks, and have simply been imported unquestioningly into the newest media formations. He asks if “Ramism endures and is extended in electronic contexts? Powerpoint presentations, outlining tools... and the scourge of bullet points, are the most obvious evidence of greater institutionalization of Ramist knowledge architecture” (Maras “Reflections”). Once again, we see that orders of change, no matter how far-reaching, never change everything. In seeing the limits of change, we also see a need at times for further thought. In the essay on Ramism, Maras’s work appears to stand in the direct tradition of Innis and McLuhan. Yet things like the relationship between textbooks and powerpoint bullet-points suggest other orders of continuity. In this respect, Maras writes with sound knowledge of the “technological determinist” or “medium-based” tradition – and its shortcomings. In a further essay, “The Communications Environment,” he juxtaposes the medium-based tradition with the Lasswell type models, what he calls the “pill-model” (2003, pp. 95-96). In this essay, he makes it clear that neither model is quite adequate to what it describes – yet neither of them can be disregarded.

<sup>8</sup> The term is widely used - another example of such commonsense usage, this time from the US: “Facebook Platform Attracts 1,000 developers a Day” (McCarthy).

In drawing the term platform not from media theory, but from media practice, there are obviously issues that need exploration. The new multimedia structures still have no stable nomenclature, blurred as they are with actual social groups, soft magazine publishing, older chatroom structures, and intranets. These, however, are *already* becoming traditions. Initially, of course, we are content to allow things to be defined by their technological parameters – wikis for interactive development platforms or widgets and so on. But these are quickly socialised – and as in the 1990s, Weblogs became Blogs, and the people who did it were Bloggers. And sometimes the idea-to-technics aspect is dominant – as when we see viral advertising convincing target audiences where other methods have failed. Once the structure takes hold, however, and technics is again overlaid with technology, the term platform seems especially apt.

The best example of a platform-tradition on a grand scale is Web 2.0 itself. The term is widely used to refer to the socially networked patterning of the internet that emerged from the late 90s. While many might criticise aspects of what has emerged, few would deny the claim that a qualitative change occurred. But what was this change, exactly? It certainly concerned technics, as the following amply illustrates:

The phrase Web 2.0 dates from a famous Silicone Valley brainstorming session led by Tim O'Reilly, a cultish US west-coast businessman. Participants, noting the new types of organisation emerging from the wreckage of the dotcom crash, began to evangelise for a second phase of the internet boom. O'Reilly later tried to tie down what he meant. Web 2.0 was, among other things, about “trusting users as co-developers” while “leveraging the long tail through customer service.” Put less bafflingly, first-generation internet companies tended to sell things, while Web 2.0 companies tend to help people create and share ideas and information (Crabtree, 2007, 12).

While one can (as many do) complain about the merits of Wikipedia and other such sites, there are few, as Crabtree goes on to point out, who would wish to return to the older platform, which with retrospect, we might as well admit was Web 1.0.

Web 2.0 is itself a platform of colossal size. But the things that make it so are also platforms – the networking sites, the information-sharing sites and so on. These things are

platforms because they have a singularity despite their multimedia formats. That is, they are platforms sufficient for messages to be launched – and received. New media in this respect show a hybrid structure different from dedicated older media like print or broadcast. Perhaps the most recent example of this kind of mixture of media into a coherent platform is mobile television (to be discussed below). The media themselves (TV, telephone etc) fold together in an apparently unstable way – but what determines if it is a platform is if it comes together and actually *works*.

In consequence of the emerging new platform structures, we need to be attentive to another widely used term – *format*. The term has been dragooned into usage by a wide range of people – from disk structure (disks used to have to be formatted for instance), to what writers do to word processing “pages” when setting margins, to the file protocols described metaphorically as formats. From Latin times (*formo* = I shape, I fashion) to the present time, *to format* means to give something shape, to prepare it. We find this term used everywhere – and we do need it. The ways in which we need it are already clear, and they complement the usage of the word platform. We need it in relation to the message – platforms are preconditions or grounds for messages. They are required for any message to be able to be shared; the message *itself*, however has to have a format.

These ideas also tend to work quite well together, explaining both technological and human aspects of the communication machine – and developing thereby a tradition. Platforms are shared; just as when passengers all wait for a train, so are users online at the same time as advertisers and other users. Different people do different things on the platform – they conduct transactions of different kinds as their browsers exchange information – and all this takes place as their devices encrypt and otherwise format the message. The format seems to be mixed up with the programme as well as with communicative competencies – leading again to the issue of how traditions are passed on.

The nexus of platform and format offer new ways of grasping the issue of change and tradition. Sometimes there is a rowdy entrant, a new invention which does not fit an established way of doing things. An example is supplied in a landmark essay by Bower &

Christensen (1995). This essay, which is best seen as a continuation in the Innis-tradition of technological determinism, argued that “disruptive” technologies were to be distinguished from “sustaining” ones (p.45).<sup>9</sup> They seek to explain why once-successful companies that paid attention to their existing customer-needs, nevertheless failed – or were destroyed – by technological inventions (p.43). They take the example of hard-drive development, showing how IBM missed the “wave” of change. In terms of this discussion, these changes took place at the level of *platform* in that choice of hard-drive is a foundational basis for other things, but also, they implied downstream *format* possibilities (a problem now looked at in terms of compatibility). A platform can indeed, as they contend, emerge from within and below, and explode a given system, almost from the inside. Their now historical example of hard-drive sizing serves as a reminder of how success or failure depends on more than the storage capacity of the drive. It depends also on the relationship between things, between markets, between people, the elements of the human machine.

Similarly, symmetries between old and new media do not mean old media can proceed as before – indeed, the situation has changed profoundly. When ABC Newsradio appeared in the 1990s, it reflected both an old medium and a new – Newsradio relies on the intranet platform for its production, so a small staff can pick up radio news to reformat it in what was then a brand new station. Similarly, podcasting allow listeners to download their choice of existing old media material. Old and new technologies are nested into one another – and the nesting itself is part of the tradition, as ever newer platforms of information dissemination are developed, as ever newer formats for messages themselves become possible.

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<sup>9</sup> Their essay on disruptive technologies presumes – without comment – the correctness of the technological determinist hypothesis. By dividing technologies into “disruptive” and “sustaining” technologies (p.45), and tracing “waves” of technological change (pp. 43-46), they see technological invention as the motivator of change. Whether it be in business modelling such as that of Bower and Christensen, or whether it be in media theory more generally, a strong version of the determinist hypothesis needs qualification – but it has value precisely because of the strength of its formulation.

If their key oppositional terms are seen as tendencies (what they call “trajectories”), these could also be considered in terms of trajectory-bias or a different kind – namely of sustaining versus disrupting patterns of communicational-technological invention. For a more recent account, see Gilbert & Bower (2002); in this essay, the idea is broadened to include innovation in general; on innovation, cf. Girard (1990). I thank Harry Dillon for alerting me to the dimensions of this commerce-based literature.

### **On the Possibility of Media Traditions**

Can there be traditions in media that defy location? It may seem late in the inquiry to pose this question, but we need to establish that new media traditions are possible, not just in theory, but in terms of theatres like news and advertising. Are media traditions of this kind possible? After all, new media are surely everywhere and nowhere – and tradition appears to need some sort of *location*. To start with, markets are always *somewhere*, and news is always produced somewhere. From the very beginning of broadcast media, the news has always been international – and this never stopped traditions developing in these contexts.<sup>10</sup>

A useful place to begin is with the purchase of old media theory on new media. In old media theory, key questions of tradition have often been explored in terms of 1) patterns of media proprietorship, 2) workplace cultures, and 3) audience constitution and consumption. This picture corresponds to formulations of the 1940s by Lasswell and by Shannon and Weaver. Lasswell (1975), writing in 1948, famously phrased the communication model in terms of a series of memorable questions, namely, “Who? Says what? To Whom? With what effect?” (p. 117). The rise of new media does not mean that Lasswell’s questions have somehow been made redundant; still less does it mean that new media are somehow without history or place. When considering a social networking platform which has been purchased by a large operator like News Corporation, it *is* still useful to ask – who owns it? What does it communicate? Who receives the message? What effect does the message have on its receiver?

The relevance of Lasswell’s model is attested to by the many continued debunkings that take place in communication studies (if it really were obsolete or had no explanatory power, it would have been forgotten by now). The point is the old and the new coexist, and Lasswell’s model, properly framed, retains a limited validity – for both old and new media. Media owners, in Lasswell’s terms, do retain real power, and when they retire they hand over their way of handing over information to their successors – the Packer

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<sup>10</sup> As Carey (1988) points out the key date in internationalisation is when communications and transportation were separated – this did not happen recently, but when the telegraph was invented by Samuel Morse in 1837 (Carey 1988, p. 203).

family is an obvious case in point. The media empires they run are recognised as local sources of information – not just on the news stand but on their own internet sites and platforms (for which they are increasingly looking to appoint dedicated content-writing teams). In applying established ways of looking at media traditions to the limit case of new media, then, the surprising continuities are as important as the transformations– be it in the form of “trusted” website systems ownership patterns or in the establishments of local features of global phenomena (such as Myspace). Moreover, some old names have taken dramatically new positions in the field. In Australia, Telstra is increasingly seen as a possible content provider, rather than just a phone company. Here again, though, social networking is driving which of the latest innovations is taken up – and which of the old names can dominate the field. Telephony now supplies the platforms for content sharing and delivery – and it is hardly surprising that those involved in that field seek to capitalise on it. The change did not happen overnight – indeed the logic informing it is very old.

In the rise of new platforms, a *tradition of connectivity* (rather than convergence) appears to be developing. Typical of such a shift is the advent of mobile television – not as something at the centre of a room, but as something adjunctive, occasional, and part of something else. Instead of grand claims about its impact on all of us, a report for Nokia (by Orgad 2006) late last year emphasised:

- Flexibility, independence and security
- Enhanced personal viewing experience
- Time and place sensitivity
- Filling in time
- Do it yourself content
- Intimacy (Orgad, 2006, pp. 4-6).

Programmes will be “snackable” and “interactive” (p. 7), and there will be, the report adds, “interdependency across platforms” (p. 7). Once again, in keeping with Lasswell’s first question, big old names dominate much of the field in Australia – in news and in advertising.

Advertisers, key applied thinkers emerging biases of communications, have seen both challenge and promise in new media. Their actions supply pathways to tradition and

technics. On the one hand, as a result of social technics, matching subscribers and products is very difficult. On the other, the internet is spatially ubiquitous. Even in Australia, at the beginning of 2007, there were 6.43 million active internet subscribers, with 5.67 million of these being private households (ABS, 2007, 8153.0). This is a massive potential market. Not only were the overwhelming of Australia's internet subscribers private, but also, this group used the internet predominantly for what was described as "personal and private use" (ABS, 2006, 8146.0). These private users are the ones from whom revenue is made: "YouTube, which has almost three million local users a month, attracts revenue from local display and Google text, image and click-to-play video ads" (Sinclair, 2007a, p. 32).

In the bias of communication discussion, it was suggested that the internet does have locations. Such locations can be the basis for internet traditions at a local level. The 'au' suffix in the local internet address has weight not just in patterns of consumption but also because advertisers still frequently rely on geographical proximity to piggy-back their goods to a local market. But because of the specific qualities of the Boolean search engine, profiling technics are emerging in rapidly. These are built on what Anderson (1993, p.7) who was writing of nations called "imagined communities". They are imagined first in that their members do not all know each other and imagined second in that the way they are understood entails narration (p. 7). Locations matter in different ways to different advertisers – an imagined community can be a nation or a region, but it can also be conceptually or even product-based. This allows advertisers to trial new models of customer profiling. In Australia,

By the end of this year, most of Australia's biggest internet publishers, including Ninemsn, News Digital Media, Sensis, and Fairfax, are expected to be serving up ads to users based on their internet behaviour, with some estimating the market is worth \$120 million in potential revenue (Sinclair, 2007b, p. 34).

This process is itself part and parcel of the new kinds of technics emerging with Web 2.0.

In turn, profiling, an infant tradition, can be linked to a far older tradition – that of privacy. Such profiling would once have caused all sorts of problems. When Facebook

was a minor programme in late 2006 with just 25,000 users in Australia, privacy concerns may not have been uppermost in subscribers' minds; now, though, with over 200,000 subscribers in this country, concerns are being expressed (Welch, 2007, p. 30). Indeed, in the US, "privacy groups have expressed outrage at technology that tracks individual behaviour" but the technology continues to be developed as consumers themselves change in their approach to purchasing decisions (Sinclair, 2007b, p. 34). In Australia as in the US, subscribers to Friendster, Myspace and Facebook are invited to supply such information – and for all sorts of reasons that concern their aspirations, their *technics*, they do.

### **Qualifications, Anti-epiphanies, Traditions**

In the course of the paper, the work of a group of media theorists advocating a variety of technological determinism was traced, and their insights applied to the field of multimedia, the internet, and social networking software. The *combination* of approaches in the course of this paper leads to a stronger contention than any one of them could individually yield. Mumford has (correctly) been criticised for his one-sided view of the modern city as too suburban, car-oriented and specialised. We do not have to agree with him that city-life today is a "miscarriage of modern technics" in order to gain the benefit of his insights into the process of technics-in-general (Mumford, 1966, p.577). On the contrary, the value of his work lies elsewhere – it is his close attention to the *beginnings* of urban life that gives his work power for readers in the twenty-first century. These pages are the ones that are instructive in their insights into how civilisations come to be, what they do, how they grow, and how they communicate. If it is possible to criticise Mumford's dreams of the democratic and harmonious city, it is even easier to criticise Innis, McLuhan, Ong, and Carey – and to do so in ways that go to the heart of their arguments concerning communications. The "technological determinist" position is often derided, and do need of qualification. Yet their hypotheses fulfilled what Eric Gans (speaking of his own hypothesis concerning an originary event) saw as essential to this *kind* of contention: it "provides us with a minimal subject of conversation...if we want to speak together as human beings, the principle of parsimony entails that this event is the minimal object on which we can exercise our respective imaginations" (1997, p.6). With

strong explanatory power and almost indexical simplicity, the arguments of Innis and McLuhan certainly fulfil this criterion. They allowed a very fruitful dialogue about the role of technology and the impact of particular media on particular societies (and on consciousness) to take place. When qualified by the Mumford-style interest in the framing social organisation that gave rise to the media in the first place, their contentions gain what might best be called *situated force*.

This situating potential is strengthened further when the terms of the industry itself are drawn into the argument. These, far from revealing something unprecedented, show how the new frequently entails the embedding of old formations into new ones. Yet – most strangely as with the case of old media like print and radio – the apparently old and stable media are frequently transformed *almost from within* by the advent of new media genres. This then would be the final insight of tradition – that much that appears new has dimensions that are not just a few years old, but (like hypertext or the Boolean search) hundreds of years old, and much that appears old and stable in the guarantee of the masthead logo of the national broadcaster or of the daily newspaper – has dimensions that only emerged in the last few years.

This paper, in its own way, offers a synthesis of approaches. In so doing, it proffers an anti-epiphany of sorts, a corrective to the idea that new media are somehow unprecedented, and beyond any former contexts. Yet, in doing this, it seeks also to suggest that the scale of change in the field of communications is significant, and that in building on what went before, it has gone beyond the achievements of former communications regimes. Hence then this paradox: while the communications industry has been witness to some of the most astonishing transformations of technology, media genres, and occupational and leisure-based activity, there are other things that have moved rather more slowly. In taking the examples of hypertext and domain names in different points of this paper, it has been suggested that many dimensions of the most modern media reflect traditions in the deepest sense – things handed on from a long-forgotten past. Tradition, in this respect, is not just a passive handing on, but entails

transformation – at the risk of betrayal of all that was bequeathed, with the promise of fulfilling potentials that are as yet unimagined.

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