



Toward a 6th Media Age

AN ESSAY BY

ANDREW DUBBER

Toward a 6th Media Age

An essay about the world in which we live

Andrew Dubber

This book is for sale at <http://leanpub.com/6thmediaage>

This version was published on 2014-05-24



This is a [Leanpub](#) book. Leanpub empowers authors and publishers with the Lean Publishing process. [Lean Publishing](#) is the act of publishing an in-progress ebook using lightweight tools and many iterations to get reader feedback, pivot until you have the right book and build traction once you do.

©2014 Andrew Dubber

Introduction

Over my years as an academic, I have developed several pillars of my research. These are ideas I return to time and time again as a leaping off point for understanding other things. I thought it was time I started to put some of them in a form that I can point to as a shorthand so that I don't have to rehash old territory over and over again. Thankfully, we live in the Digital Age, and I can just publish my ideas and be done with it.

This is an article I have written in a number of different ways over the years. The idea of 'five media ages' has appeared in a couple of blog posts, and it also forms part of the setup in my book *Radio in the Digital Age*. But I've never quite been satisfied with the way in which the idea is stated, and it's never managed to be something standalone that I can refer to in other work, point people to or bring out to discuss.

I've also wanted to have it in a form that is easily readable and shareable, not too bogged down in academic language, but thoughtful and scholarly at the same time. I think it's an important idea, as ideas go, and it helps make sense of a lot of things. I use it to make sense of the media and music industries, but you may find it a helpful tool to apply to other areas of endeavour.

There are key phenomena that mark out the era in which we live. These are times in which government bodies of foreign nations can intercept and examine every piece of communication we exchange. In which we can go grocery shopping in the middle of the night without leaving the house in the name of convenience. In which we can quantify every aspect of our day to day activities through the use of a wearable device. In which we can speak face to face with relatives on the other side of the world as a matter of course. In which we can navigate to places we have never been with the aid of a speaking device that always knows the way. In which 10 million private homes around the world have their floors cleaned by a robot. In which national revolution is plotted and organised within a context provided free of charge by a global commercial corporation, supported by advertising. In which the vast majority of what we read, watch, hear, write, say and do takes place in a computer-mediated environment.

Very few people would dispute the notion that we live in a Digital Age. It's almost a redundant statement - something taken for granted when speaking about anything at all that takes place here in the 21st century. Of course it's the Digital Age - I mean, *look how digital*. But the phrase needs a little unpacking. We don't simply "use a lot of digital things", we *live in* a digital age. That is - we inhabit digitalness.

This is a period in history. There have been others. If this is the digital one, what were the others, and is there

a pattern emerging between them? What can we learn about ourselves, about culture or even about the future by periodising history? How long will the Digital Age last, and what comes after it?

Toward a 6th Media Age

Every individual part of our society and culture is a complex and discursive practice situated within a political, geographical and cultural framework. If we eat food, exchange gifts, listen to music, express ourselves, fall in love, try to succeed or experience grief, we do that within a cultural, technological, and societally normative framework. This is how it's done here. This is how we do things now. And while we all differ, the parameters within which we differ are often very narrow.

The interesting thing is not how different everybody is, but how similar - and also how that similarity is situated within a time, place and socio-political context. I am not very much like my neighbours. But I am more like them than I am like someone living in the 1800s. Or someone living in North Korea. As Raymond Williams said, "culture is ordinary". But it can only be ordinary within the framework of what surrounds it. It is ordinary in that we all participate in it (our culture essentially being everything we say, make and do), but also in the sense that we have a shared understanding of the parameters of that framework and a shared set of tools through which we enact that culture. So everything that we say, make and do is cultural - and 'our culture' is the aggregate of that 'everything' -

but what defines our culture is the context. The medium within which we are working.

People often think of media as the thing that connects us, just as a mediator stands between two parties and communicates from one to the other. We tend to consider media as a line drawn between sender and recipient. I write the email, you receive the email, the medium is the internet. My computer, being a Macbook, makes a whoosh sound when I hit the send key, and off it goes. The internet is the bit between you and me.

But that's not really how it works. Marshall McLuhan says that "media are environments". We don't use media, we inhabit them. The internet is a medium for you and me in the same way that soup is a medium for vegetables and dumplings. Email is not a line between us but a circle around us.

The extent to which the media we use impact upon neural plasticity (how our brains physically change in response to our environment) is something of a contentious matter. Arguably, video games don't 'make us' violent any more than pop concerts make us musical. But the important thing is not technologically deterministic change in response to an external stimulus (the word 'impact' is horribly overused here and I always imagine someone being repeatedly hit in the face with an iPad), but rather the fact that we are, to a large extent, products of our broader environment. It matters little that the dumpling repeatedly comes into contact with a piece of carrot. However, the both the

dumpling and the carrot always take on the flavour of the soup.

The communication that we send and receive 'in the digital age' is just as complex and multifaceted as it was in the 'pre-digital' era - but it differs mostly in that it is contextualised within a technological environment characterised by digital media forms and communications media. It has different affordances for communication, meaning, expression and access.

By 'affordances' of an environment, I mean the ways that certain opportunities are available for an actor within that space. One affordance of a room with a table in it is table-top dancing. The table does not make you dance, and nor does the room. There may even be a sign up somewhere saying 'please do not dance on the table'. But without that table, no table-top dancing. As an environment, digital media have certain characteristics and affordances and it seems to me that most of the problems that people have in terms of adapting to that environment have to do with misunderstanding or refusing to make use of those affordances. Or worse, insisting to be allowed to engage in tabletop dancing in room where there are no longer any tables.

Living in the Digital Age does not preclude anyone from using analogue technologies (nor of engaging in pre-digital era practices). However, those analogue forms and processes are now situated alongside and within a broader digital context in complex and intertwined arrangements

— and as such, ratios shift, behaviours alter, as do the meanings, uses, gratifications, functions, phenomenological experience and ontological status of all everything we say make and do. Our culture is different, and so we are different.

So how can the Digital Age be understood as a discrete period of media history, both from a technological perspective and from a cultural perspective? Ideas from the field of Media Ecology help illuminate the notion of digitalisation and the effect of that changed environment on the media that we use. As that environment changes (from an analogue context to a digital one), those affordances alter, and different opportunities become available as others become less accessible.

In order to understand this age, we need to take something of a holistic approach to the study of media; one that is interested in connections between seemingly disparate phenomena, that accepts a multiplicity of seemingly contradictory factors, and which prioritises an understanding of the broader contemporary *noosphere* — Pierre Teilhard de Chardin's (1955) useful term for the technological, cultural, political, social and intellectual ecosystem that connects, contains, shapes, informs, but is, importantly, also created by the sum of human activity.

Contemporary media is digital in much the same way that the primary media of the 20th century was 'electric'. That is, it not only used that particular 'flavour' of technology, but also followed the conventions and practices inscribed

by the media environment within which it took place. It's here that we can find the clues to what the previous "ages" of media might be - and how we can approach an understanding of a media age.

To speak of an *Age* is to define and historicise a period that is characterised by a dominant aspect of that era — specifically, a dominant technological or media aspect of that era. The ancient Greek poet Hesiod is credited with an attempt to divide history into 'metallic' ages. In the process, he theorised a golden and silver age of pre-history, based on the idea that the iron age was preceded by a bronze age. The metallic raw material of each age was the 'medium' within which craft, arts and cultural expression were represented and preserved and from which the tools of day-to-day life were crafted.

Since, he reasoned, iron was cheaper than bronze and the age of bronze had preceded that of iron, those very few more valuable metals must surely have, in turn, preceded that too. It's a nice and very neat idea: an age of Gold and Silver that led inevitably to the Bronze and Iron Ages of which Hesiod had direct knowledge. Of course, we know now that no such Ages actually existed, but the notion of a 'golden age' has stuck with us as a metaphor for a time when things were better – before things were debased and degraded. You tend to hear about that golden age a lot these days. And often, the people talking about it are really speaking about the electric age.

Lucretius later developed this model and presented it not as

degradation, but as a form of cultural evolutionary progress that marked those periods of history when humankind put more abundant and replicable media forms to use in the service of their arts, culture and sciences. The idea of increasing abundance and replicability of media is an important one in the narrative of media evolution, and it is one we'll return to.

These days, museums, archaeologists and paleo-anthropologists tend to use C.J. Thomsen's classification of archaeological finds into different categories based on the typology and chronology of objects found. It's a 'Three Age System' (Stone Age, Bronze Age and Iron Age) to denote the phases of human intellectual and cultural development based on the primacy of the technologies, raw materials and tools used for the creation of that society's cultural artefacts. These ages are further subdivided: the Stone Age into paleolithic, mesolithic and neolithic; the Bronze age into copper and bronze.

These ages not only describe the activities and objects of the people who lived in those periods, but also the kinds of economy, social structure, political infrastructure and religion of the time. That is to say, that the primary medium of the age provided the context within which the unique nature, institutions and conceptual context of humans that emerged in that time. In other words, human civilisation - human culture - is the text of that mediation.

As Paul D. Miller (aka DJ Spooky) evocatively puts it:

Stop. Think about it. Every sensation you have comes from one source: civilization. When you finish this paragraph, put down the book for a little while and look around you—check out your surroundings. What can you see, hear, smell, taste, that does not originate in or is not mediated by civilized people? (Miller 2008)

This idea of civilisation as context of mediation has been expressed by a number of scholars over time, but perhaps most notably Lewis Mumford, whose 1934 book 'Technics and Civilisation' posits technologies as both defining and being defined by the prevailing characteristics of the culture of the time, and especially of the sophistication and intellectual and practical developments of the age. Borrowing from Thomsen's prehistoric categorisation, Mumford divides civilisation since mediaeval times into the eotechnic, paleotechnic and neotechnic ages.

Similarly, McLuhan demarcates several different periods of cultural history according to the dominant forms of media and communication. However, in so doing, he leaves archaeology behind, and abandons the physical raw materials (stone, iron, bronze) from which bygone cultures have been constructed, instead favouring the predominant *communicative* form as the central defining characteristic of an age of civilisation. This seems to me a useful thing to do - and certainly helpful for us to understand where our own Digital Age fits into the equation.

McLuhan offers 'speech' and 'writing' as two significant early ages of humankind. As a species, he asserts, we had an Oral Age, followed by a Scribal Age. Each discursive medium defines the civilisation and the historical period in which we live. So... while things we make from iron or stone might well be expressions of ourselves and our culture, nothing defines who we are, and expresses us more than the primary method through which we communicate with our contemporaries (rather than with future archaeologists).

Further, that translation of culture is not simply a shift in what we do and make as a species, but (quite literally) *who we are* as a species. Communication forms are, to McLuhan, media technologies. The adoption of a new media technological framework alters ratios between our senses: the means by which we take in information about the world and form understandings of it. By changing the nature of our technologies, we change the nature of ourselves.

Thus, McLuhan not only posits media as environmental in nature, but also goes further to assert that for us it is essentially the only environment that genuinely matters, as it profoundly impacts upon what we can say, how we can understand, and the ways in which we can perceive.

Human beings are hardwired for narrative. Always have been. As soon as we figured out how to make words, we've been telling each other stories - and some of our most compelling and enduring myths come to us from the Oral Age. The medium was speech- the campfire storytale. The

oratory of Homer. The story was present before us, and we could interrogate it as it played out.

The Oral Age pretty much starts at the dawn of human civilisation, and unless you want to make the case for a gestural age before it (grunting and pointing to communicate), it marks the first media age. The first period through which human beings had a means by which they tended to communicate, take in information and form an understanding of the world in which they lived.

And then we invent writing. We can now take those stories, and we can preserve them. No longer do they have to be passed down from generation to generation by painstaking repetition and rote learning. Now they can be captured in a permanent form and recalled at will - brought back to life from the page.

Writing was more complicated than mere speech though. For a start, it required the skill of literacy, and that wasn't evenly distributed for the most part. Besides, there were very few texts.

In order for a copy of a text to be made, what would often happen is that some scribes and monks from my monastery would come and visit your monastery in a different part of the world. It would take them months to travel there, they would copy a book by hand - character by character, line by line - and then they'd make the journey back to my monastery where it would sit in my library, where only my monks were allowed to read it. And only the important ones at that.

Sadly, when texts are so precious and rare, sometimes great calamities can befall them. Like the fire that wiped out the Alexandrian Library, taking hundreds of thousands of irreplaceable scrolls containing a large chunk of all recorded human knowledge with it.

But writing allowed for stories to be captured, studied and repeated faithfully in one telling to the next. The guy with the literacy could stand up the front and read in sermons to a congregation of illiterate and accepting attendees. After all, you can't question a text. It says what it says.

So, along comes Gutenberg, and he makes a machine that uses the concept of movable type (hundreds of years after the Chinese first think of it, as it happens) and before long, he's mass-producing books. This turns out to be the biggest revolution in human history since the development of writing. We enter the third age of media - the Print Age. Not only can speech be captured in text on a page, it's now almost a trivial exercise to make and distribute multiple copies of that knowledge.

Now everyone can have their own Bible - or print and distribute leaflets suggesting that perhaps they don't need one... or that the saving that needs doing is one of political reform, or an intellectual and cultural enlightenment project. Print puts the message in everyone's hands. Literacy spreads like wildfire. Before long, people are nailing their edicts to church doors, or sitting in private taking in information at their own pace - the words going into their brains like beads on a string.

And as a result, our brains change radically. We develop an unprecedented sense of the individual. We discover sequential logic and cross-referencing. And with mechanical reproduction, we invent the industrial age.

Then suddenly - Bam! Marconi, Edison, Franklin, Faraday, Volta, Tesla, Morse and Bell change the world again with their magnets and sparks and gadgets that create action at a distance by way of invisible forces that travel through cables and can be transmitted through the air. Not only can culture be mass-produced, it can now be captured as audio or images - and mass broadcast. It's one thing to read a book that someone else is also reading and be able to have a conversation about it. It's something quite different again to simultaneously witness man setting foot on the moon along with millions of other people all across the globe.

The radical shift in media environment that the Electric Age brings about is what exercises McLuhan the most. The effect of that media shift on our minds is something that he is now perhaps best known for: "The Global Village" - which is not, as you might think, some sort of caring, sharing 'hands across the water' thing (villages can be quite problematic and claustrophobic collections of people).

The Electric Age completely transforms our media environment again. The main way in which our brains take in information about the world in which we live and how we can make sense of it is fundamentally altered.

The Electric Age is characterised by TV shows, radio air-play, records, tapes, CDs, retail stores with display shelves,

top 40 charts, superstars, the dream of being signed to a major label and the album and single as the main ways in which music is produced and consumed.

And now, as the age of recordings and broadcasting fade, just as the era of print, writing and speech had before (note - we can and do still do all of those things, just in a profoundly adjusted ratio), we find ourselves in a new age now - a fifth media age: the Digital Age. It's an epochal change, just as the other ages were. And it represents fundamental differences in our media environment, just as they did. More importantly - it reshapes once again *who we are* as human beings.

But it's important to remind ourselves that even though we may take on the flavour of the soup like soft digital dumplings, we are not entirely helpless in adapting to our new media environments. Jock Given reminds us that digital communication technologies "do not get invented in laboratories or backyards removed from social, economic, and political processes as pure technological determinism would have us to believe" - and he has a point. Our technologies may shape us, but we shape them first. Even so, these tools are not neutral. In fact, the dominant technologies of our times (Print, Electric, Digital) define our Age in at least as significant a way as Stone, Bronze and Iron have defined ages that come before ours.

And given that fact, we have unarguably shifted from an age characterised by electric and electromagnetic technologies (recordings and broadcasting, for the most part) to an

age characterised by digital technologies. In so doing, we have shifted from an age of somewhat abundant ‘mass’ media — though with finitudes and scarcities (such as spectrum availability) to one in which we have discovered ways to put ever more abundant and replicable media forms to use in the service of arts, culture and sciences — and, simply, to express ourselves to other human beings.

The difference between the view held by strong technological determinists, who assert that media *make us* do certain things and be certain ways, and the (surely more palatable) view of media ecology through the frame of ‘affordances’ which allow for human agency within an altered technological framework is a hugely significant one.

In my book about radio, I explore the problem that some thinkers assert that radio *simply is* a certain way (personal, secondary, portable, time-bound, blind, etc.) and when it moves into the digital environment, it merely translates those essential characteristics into a new context, which seems to simply be another way (asynchronous, global, abundant, democratised, online, visualised, etc.).

I say ‘problem’ because this line of thought leads us into certain otherwise avoidable traps: first, that radio is *necessarily* a particular way in the digital age (and is therefore *uniformly* a particular way in the digital age); and secondly that digitalisation is an external force that happens to an industry — either to be resisted by that industry, to be welcomed as a challenge to the status quo, or to completely eradicate that industry altogether.

There's a great deal of rhetoric about digital technologies causing 'the death of' all sorts of things —radio included— and similarly a lot of rhetoric about the triumph of radio in an age of increasing (mostly digital) media competition. But, as Douglas Adams pointed out in his 1998 article 'What Have We Got To Lose?', the question concerning the impact of digital technologies and new media forms on industries such as radio, magazine publishing, and the music business are not problematic simply because we disagree about the effect of that external force.

[...] it's a hard question to answer because it's based on a faulty model. It's like trying to explain to the Amazon River, the Mississippi, the Congo and the Nile how the coming of the Atlantic Ocean will affect them. The first thing to understand is that river rules will no longer apply.

And while the analogy of rivers meeting the ocean is an admittedly limited one, it paints a vivid picture of the profound recontextualisation of media production, distribution and consumption that the digital age represents. However, the way that Adams puts it, it also appears to suggest an engulfing of those industries — overwhelming and effectively erasing their path by the unstoppable force of environmental transformation. This is not, I believe, the case in the context of media shift. My interpretation of that 'rivers meeting the ocean' is somewhat further nuanced.

My Amazon and Mississippi still have agency. My Congo still has identity as — if not a river, then still the Congo. My Nile still flows even though its borders are no longer made of rock, but of more water.

In contrast, Manuel Castells re-frames the debate in a different manner by positioning the technological context not as something that happens to us, but something that *we are* in an ontological sense, or are at the very least a part of:

Our world has been in a process of structural transformation for over two decades. This process is multidimensional, but it is associated with the emergence of a new technological paradigm, based in information and communication technologies, that took shape in the 1970s and diffused unevenly around the world. We know that technology does not determine society: it is society.

Echoing Teilhard de Chardin's concept of the noosphere, Castells asserts that we do not simply inhabit, but also, importantly, constitute the media environment within which we find ourselves. And while Castell's point about the unevenness of society, and the implications of that inequality, is well taken, the underlying prerequisite for his position is that human beings, connected together, are collectively the media environment, and that the digital tools that facilitate that communication are, in effect, the

points of connection. That idea takes a bit of getting used to, but it's worth the mental effort.

Communication technologies are not simply tools that are external to ourselves (or forces to be resisted, championed or overwhelmed by), but are indeed, as McLuhan would have it, extensions of ourselves. Digital media is not something that 'happens to' and transforms our communication – it is how we communicate, or more precisely, it is us, communicating.

As such, it's important to understand what is and is not possible within that environment. If digital media are extensions of ourselves, and not some external force with which we must contend, we are therefore in a position to make decisions about the ways in which we use and express ourselves through these media.

That said, the fact that we have agency does not suggest that we have complete autonomy. As with any environment, there are rules that provide for what is possible, what behaviours are encouraged (indeed, may appear to occur naturally) and what actions are not compatible with the space (or carry with them certain dangers and undesirable outcomes). That is to say, once again, that the media we create have 'affordances'.

Strong technological determinism would have us attribute causation and, strangely, *intention* – as in 'information wants to be free' – to what is (from an essentialist view of media) an external, inanimate and mechanistic other with fixed and non-negotiable properties. On the other hand,

a view of media ecology that understands the noosphere in terms of affordances, and our participation as media creators, participants and consumers (as well as, let's not forget, technologists and inventors of tools within that media space) in terms of our effectivities with respect to those affordances, restores that agency to the people who operate in, communicate through, and themselves make up that technosocial environment.

This seems a more convincing, and — importantly — more useful position that helps us yield rich and nuanced insights into technological shift, rather than simplistic and reductive bumper sticker slogans like “the death of” something or other.

It's difficult (to say the least), not to mention somewhat arbitrary, to put a date on the shift from the Electric Age to the Digital Age. The first record to be released on Compact Disc (the first digital consumer music format) was Billy Joel's 52nd Street in October 1982. But the Radio Computing Systems 'Selector' digital music programming software was being introduced to radio stations as early as 1979 - and computers for billing and even scheduling were not unusual (if not exactly common) prior to this date.

Perhaps the most important characteristic of digitalisation is that it converts the core information of the communicative process into a single, indivisible unit: the binary digit, or 'bit'. In his 1995 book *Being Digital*, Nicholas Negroponte compared the atom - as a core, indivisible unit of physical matter - to the bit, a core, indivisible unit of

digital information. In a digital media environment, all information — whether it is the recipe for Coca-Cola, a photograph of a suspected terrorist, the collected works of Geoffrey Chaucer, a season of *Breaking Bad* on DVD, a database of the Automobile Association members' contact information, a hit song by Rihanna, a British Rail timetable, or a collection of topographical maps of the Galapagos Islands — exists as the same easily stored, easily manipulated, instantly duplicated, and readily distributable format.

Paul Levinson notes that:

Prior to digital computers, the encoded form differed from medium to medium; for example, grooves in a record were incommensurate with patterns of electricity in phone wires, etc. The digital improvement in this regard, then, was to make the encoding process the same for all media.

Another key difference between analogue media and digital media is that analogue media consist of continuous waves, while digital media are discrete. We learn from Wikipedia that:

Digital refers to the property of dealing with the discrete values rather than a continuous spectrum of values... The word comes from the same source as the word digit: the Latin

word for finger [...] as these are used for discrete counting.

We have been through five main ages of media, each with its own unique characteristics. As we move from one age to another, the media environment alters, and the organism of our brain has to adapt to its new environment. This isn't a particularly complex idea, but it is an important one - especially as it affects culture, society, law, politics, art, commerce and our own fragile psychologies. The ways in which we take in information and how we make sense of the world around us is increasingly digital, rather than broadcast or print. It's quite literally reshaping who we are as human beings.

From mobile phones to laptops, sat navs to digital cameras, YouTube to Skype, iPods to USB keys - what we surround ourselves with - the media environment we're immersed in - has fundamentally changed. But we have a choice. Despite the fact that technology makes us what we are - in fact, if we understand the process, we can choose the adaptations that we make, rather than simply have them happen to us. This is not an entirely deterministic process - but it is a revolutionary and game changing one. Digital media represents as significant a cultural break as writing, print, or the discovery of electricity did before.

The Oral Age lasted around ten thousand years, give or take. The Scribal Age, a couple of thousand. The Print Age, about five hundred. The Electric, not much more than a hundred. The Digital Age? Who knows - it might already be

neering its end. History, it seems, is speeding up. And while the Ray Kurzweils of the world talk about the impending technological singularity in which we download our brains into robots and send them off into outer space (or something) - I'd like to think that what we're working towards is synthesis - and that a post-digital era allows us to revisit the oral, scribal, print and electric modes of communication and create integrated and hybrid technologies that not only help us to communicate differently, but in a way that is richer, more rounded and more whole.

Literary critic Northrop Frye suggested that narrative history has been a downward progression from the Mythic, through the Romantic and the Mimetic to the Satirical. You start with Homer and end up with Kafka. But once you push through the bottom of satire, you end up back at the top - in the world of the mythical, but this time seen from the perspective of a culture that's already done the whole journey. You can retell and reimagine great stories of gods, monsters and heroes - not as naïve tales of moral instructions, but as ways of helping us understand who we are and how we fit in the world. I've argued before that this is kind of like what's happened to superhero films: we're telling the same stories again - the reboot phenomenon - but for an audience that understands satire, expects some darkness and can handle intertextuality. In William Blake's terms, it's the difference between Innocence and Experience - the same things seen through different eyes.

I can't predict the future, and won't pretend to - but

my hope is that we're going to push our way through this Digital Age and have a similar kind of transcendent experience. Not Transcendence in the Johnny Depp sense (the film of that name borrows directly from Kurzweil's book 'The Singularity is Near') - but in the sense that we emerge from it with a new understanding of media and communication in general - and can design and innovate in ways that bridge analogue and digital, marry together physical and virtual - and blend the oral, scribal, print, electric and digital.

I'd argue that this is already starting to happen at the very cutting edge of media design innovation - and it's for this reason that this topic is central to my work. That's exactly what I'm interested in.

I know that we are not uniformly living in this Digital Age, and that there are economic and social barriers to it. Hell, not everyone's living in the electric or print ages yet. I'm also aware that even among those members of society fully immersed in digital technologies, the benefits of that age are not evenly distributed. However, digital technology - both online and off - are increasingly the dominant modes of communication - and dominant modes of communication shape the ways in which we think.

For instance, in a literate society, we read books. We learn to apprehend the world in a linear, logical and sequential fashion. Through the printed alphabetic language, we take in information one word at a time, like beads on a string - rather than in the surrounding all-at-once fashion that

oral cultures are immersed in. The way in which we get information, culture and media completely transforms the way in which we experience the world.

Media are, as McLuhan put it, extensions of the senses. Because we only experience the world through the information that comes in through our senses, the input to those senses - visual, sonic, etc. - completely inscribe our world. Changing the nature of those inputs changes the nature of our experience, and thereby our selves. And it's for that reason that the technological shift represented in this periodisation of media history is significant.

Changes to our media environment don't just change the economic, political, societal, expressive, and cultural aspects of our lives. They change us.

Further reading:

Adams, D. (1998). "What Have We Got To Lose?". Retrieved 9 Oct 2012, 2012, from <http://www.douglasadams.com/dna/980707-05-a.html>.

Castells, M. (1996). *The Rise of the Network Society*. Oxford, Blackwell.

Dubber, A. (2013). *Radio in the Digital Age*. Cambridge, Polity.

Ellul, J. (1964). *The Technological Society*. John Wilkinson, Trans., with an introduction by Robert K. Merton. New York, Knopf.

Gibson, J. J. (1977). *The theory of affordances. Perceiving acting and knowing Toward an ecological psychology*. R. Shaw and J. Bransford, Lawrence Erlbaum. *Perceiving*: 67-82.

Innis, H. (1951). *The Bias of Communication*. Toronto, University of Toronto Press.

Levinson, P. (1997). *The Soft Edge: A Natural History and Future of the Information Revolution*. London and New York, Routledge.

Levinson, P. (1999). *Digital McLuhan : a guide to the information millenium*. London ; New York, Routledge.

Logan, R. K. (2004). *The alphabet effect : a media ecology understanding of the making of Western civilization*. Cresskill, N.J., Hampton Press.

McLuhan, M. (1964). *Understanding media; the extensions of man*. New York,, McGraw-Hill.

Miller, P. D. (2008). *Sound unbound : sampling digital music and culture*. Cambridge, Mass., MIT Press.

Mumford, L. (1934). *Technics and Civilisation*. New York, Harcourt, Brace & Company, Inc.

Negroponte, N. (1995). *Being Digital*. New York, Alfred A. Knopf.

Ong, W. (1982). *Orality and Literacy: The Technologizing of the Word*. London, New York, Methuen.

Sanders, J. T. (1997). "An Ontology of Affordances." *Online* 9: 97-112.

Teilhard de Chardin, P. (1955). *The Phenomenon of Man*. New York, Harper Perennial / Modern Thought.

Turner, M. (1998). *The Literary Mind*. Oxford, Oxford University Press.

Williams, R. (1981). *The Sociology of Culture*. Chicago, University of Chicago Press.

- **Andrew Dubber, 24 May 2014**

<http://andrewdubber.com>¹

¹<http://andrewdubber.com>