Title: How will developments within digital technologies affect the creative industries?

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Abstract
Digital technologies are having significant effects on creative organisations as the relationship between end-user and producer is in a state of change. This paper maps out significant key issues and effects on the creative industries, followed by primary research to further investigate the major themes and effects from a spectrum of industry sources and viewpoints. Literature revealed that dramatic changes in strategic management may be required as a result of emerging digital technologies. Primary research was undertaken in the form of qualitative interviews; the results of which generally contrasted with the literature, revealing conflicting opinion from industry perspectives around the current significance and overall impacts of digital technologies. Findings suggest actors in the creative industries are aware of basic impacts, are confident of their *trained abilities* as gatekeepers to provide higher quality creative value, but are equally fearful of present and future paradigm shifts already taking place.

Introduction

The global explosion of digital technologies has brought with it significant implications on innovation, creativity, and business models for the creative industries. Creative businesses will need to explore ways in which to take advantage of innovation from new areas within an open-network with constantly changing and evolving digital technology and business environments. This may have implications on existing hierarchy-based business models as technologically informed groups of people explore new ways to create value. There is a new generation of distributed, interconnected and mass-communicating actors/end-users who impact upon traditional value creation processes and can provide new resources within the creative industries.

The aim of this paper is to investigate current developments and impacts of new digital technologies on creative businesses and analyse primary research insights into these impacts from a variety of industry perspectives.

Definitions

Creative industries

"The creative industries include art, advertising, architecture, design, fashion, entertainment media and film, music, the performing arts, publishing, software and computer services, television and radio." (Reform, 2008)

Digital technology

"*The current surge in connectivity and technology is fuelling information exchange among people, and at the same time allowing companies to be more aware of, and responsive to, millions of global customers in a more local and intimate manner*" (Andrews & Bevelo, 2004).

Mass-creativity and innovation

"...Ideas are emerging from a mass of creative interaction between a wide range of people who combine different but potentially complementary insights" (Leadbeater, We Think Research Reports, 2009).

Web 2.0 (the social Web)

The Web's creator, Tim Berners-Lee famously commented in 2006 on Web 2.0 saying that, "*nobody even knows what it means*;" There is still confusion on its clear definition today (Anderson, 2006).

"Web 2.0 is a stage of development of the Web. It is about creating an effective communication tool out of the Web for the dual and inter-related purposes of improving human knowledge and fostering collaboration (Leadbeater, We Think Research Reports, 2007).

Literature

Digital tools are being democratised and becoming widely available to everyone for free. The 20th century represented a period of mass-consumption and there is now the possibility that the 21st century will represent mass-innovation via digital tools. There is a shift from a Cathedral with a priest to a marketplace, with everyone participating and traditional creative organisational hierarchies being dissolved. There is a transition from *push* to *pull* marketing with companies increasingly adopting a customer-centric rather than product-centric focus. From initial mapping of a number of key issues, a relations diagram (Figure 1, below) identifies some of the root causes or drivers to the issues, against the possible outcomes or results.

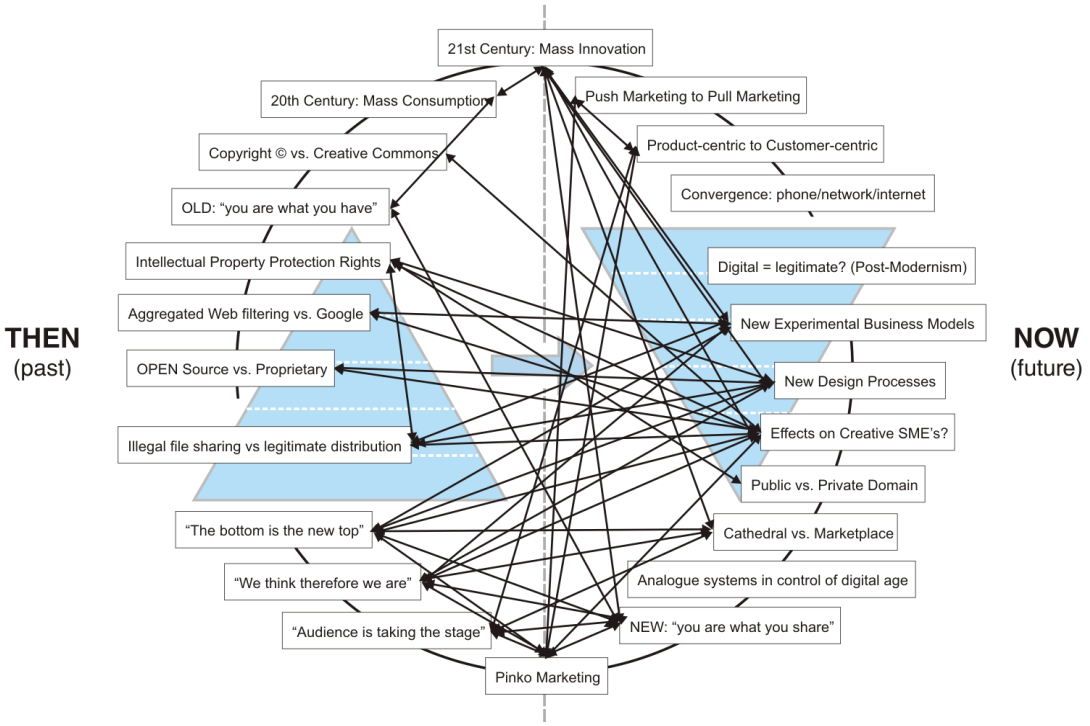

Figure 1. *Relational diagram*

Calls for research

Sapsed et al, 2008, identified several priority areas that are 'crucial to business practice and for which there is as yet insufficient research attention'. These include, 'understanding how innovation changes business models and markets,' whilst looking at the effects of new technologies and business models on sectors of the creative industries. The Advanced Institute of Management (AIM) argue that digital technology poses new opportunities for innovation for organisations, but also that they challenge existing business models as users develop innovation for themselves. AIM made several recommendations stating that creative organisations should open-up to new sources of ideas and means of absorbing and diffusing creativity and innovation.

The key issues involving digital technologies and creative business include:

- **Web 2.0 (the social Web)**

- New marketing dynamics, creative '*openness'*, I.P rights, copyright and Creative Commons licensing.

- **Mass creative-collaboration and innovation**

  - New design processes and resources within changing creative business models.

  - Internal and external organisational innovation.

The genesis of thinking about digital technology and business implications can be traced back to 1999 and the *Cluetrain Manifesto*. The author set out a number of calls to action for businesses operating in a newly-connected marketplace via the internet (Manifesto, 1999).[1] The manifesto focuses on the new global-conversation taking place, whereby people and markets are becoming smarter and creating new ways to share relevant knowledge between themselves; effectively bypassing companies faster than they realise (Levine, Locke, Searls, & Weinberger, 2000). It originally pointed out a particular phenomenon –conversations among a networked world– that would have significant effects on future business planning and strategy, heightened by the over-hype of the 'dot.com boom and bust'. More recently, Marzano commented on the changing relationships between society, consumers, products, services and businesses that were predicted by the Cluetrain Manifesto (Best, 2006). He highlighted several situations where digitisation is now affecting all products and services resulting in opposing traditional paradigm-shifts, whether the product itself is digital or not:

- Change from *local* to *global* orientation

- Change from *predictable* to *unpredictable* consumer behaviour

- Change from *highly tangible* products to *tiny products, barely more than packaged information*

Digital technology is '*rapidly becoming an essential facility for citizens and consumers of a modern society'* (Department for Culture, 2009). In 2008, the '*Creative Britain – New Talents for the New Economy*' report highlighted three major areas of concern for digital technology:

- The ability to *understand* its nature

- To rise to *future* challenges

- To *embrace new, innovative business models*

This means organisations in the creative industry need to develop the strategic abilities to exploit the changes brought about by digital technology. A number of different issues revolving around the common digital technology theme are highlighted, including managing of intellectual property, effects on value chains as well production and distribution. The Engineering and Physical Sciences Research Council (EPSRC) is currently in the process of funding up to £30 million for three *Digital Economy Hubs*, over the next five years that are multidisciplinary research centres to highlight the skills needed to realise the UK's digital economy (EPSRC, 2009). Research is however primarily focussed around digital-social inclusion projects, rather than specific effects on any particular sector such as the creative industries. Birkinshaw, Bessant, Delbridge, (2007) state that businesses should open up to new sources of ideas and means of diffusing and absorbing innovation and that research needs

[1] Presented in the form of a manifesto as a declaration of the future due to the sudden and swift changes that had been foreseen.

to be carried out in order to find organisational models that can make them happen. Research into the effects of such models could be used in conjunction with new business models being explored, such as generating new revenue streams from existing intellectual property catalogues (designs, photography, music, film, literature for example) or providing basic tools and products for free with augmented paid for, add-on creative services.

Some of the more significant developments and implications will now be explored from the literature.

Implications of new marketing dynamics

***Push* to *Pull* Marketing**

Digital technologies have brought with them significant changes in the dynamics of marketing. Push marketing via untargeted, interrupt messages has dominated as the way to communicate marketing information about products and services to consumers. In the digital age, pull marketing is replacing it as the social web continues to take gain momentum. Rollins (2009) states that old marketing has been superseded by the pull of online consumers who create, share and influence each other via peer communication and collaboration by the '*individuals' networked empowerment*'. Consumers increasingly look to each other rather than '*credentialed experts and celebrities... to discover the culturally relevant... and to create new sign-value*'. The online consumption of digital music already demonstrates this shift as users customise their platforms (iTunes, Spotify, Pandora, Last FM) to suite their individual tastes and needs for themselves as well as using other fan playlists to find tracks that meet their own personal requirements. Aggregated download lists on illegal file sharing networks and services like the BBC iPlayer offer on-demand viewing of video and audio content pulled along on consumer's terms, recommending content, where and when they want it and on almost any digital device. These digital platforms mark a significant shift from traditional push strategies as the user finds and consumes as they see fit, individually. Not all users and consumers may want to participate but they will at least have the option to listen to both push and pull messages. As popularity of services that enable lateral dialogue amongst the users and consumers increases, this shift will become more profound and spread into further sectors becoming ubiquitous in the future.

There is a mode of thought that states that creativity comes from special people, in special places, in R&D laboratories, in special rooms within companies, who then come up with special ideas; and in order to increase creativity you just need more special people (Leadbeater, 2009). The Web challenges this concept as ideas can flow back-up the pipeline as a pull from consumers, ahead of the producers. Users and consumers are experiencing shifts in traditional value creation roles. Organisations will need to be aware of, adapt, experiment and embrace new models, as *users can easily become producers* and *consumers can easily become designers*. Digital technologies are continuing to reverse traditional thinking that products and services flow down a value chain in a purely top-down manner. In the digital, connected world it can (and increasingly will) flow back up (as well as laterally) between users in a much more complicated, previously un-experienced manner.

It could be argued that the dynamics of the relationship between users and producers is in a state of change or simply that it is adjusting to new access and availability of creative and collaborative tools. Not all users are embracing and experimenting, but only younger, motivated and technologically-minded generations of users ('*Generation Y*' (BBC, 2010)), exploring new ways to create value. In the future however, more diverse age groups will start to experiment as knowledge and understanding proliferates. Rather than challenging, eroding and replacing the work of the professional, it could be that a gap is only narrowing between the two, whilst raising the standards of creative output on both sides simultaneously. What

does seem evident is that the playing field is being challenged in new and significant ways and creative organisations must be aware of the extent of theoretical and real implications on current and future practices.

Rollins (2009) has commented on this shift from older push mass-marketing strategies, to the pull of the online (social) community, '*creating, sharing and influencing each other*.' She notes that the decentralisation and exchange of ideas and intellectual property has defied creative organisational hierarchy and instead creates *value constellations* rather than value chains that have the power to span across not only creative, but economic, environmental, political and technological spheres.

New design processes and resources

Digital technologies bring new ways in which ideas can be shared and communicated amongst users and producers that can have effects on new design process and resources available to creative industries. Two regularly occurring changes are now explored from the literature, *pinko* marketing and *crowdsourcing.*

Pinko marketing is a response to the increase towards a pull-marketing environment and has significant implications on traditional design processes. It reverses the traditional model that product messages are sent top-down from marketing departments as well as changing the way in which products are assessed for development and production (Hunt, 2007).

Potential creative works (new designs, products, photography) can be uploaded to services such as Flickr to be syndicated, aggregated, obtain feedback and general perception by an expanding community of over 8 million users (Sauvignon, 2009). This provides an unprecedented arena to test out new creativity from the consumer perspective. It also has potential effects on product design and development as traditional job roles (performed by marketing executives or product managers) that could become largely digitised and automated by the use of new mass-collaborative digital test bed platforms. However, if correctly implemented, these could provide additional tools for creative organisations to obtain further macro-environmental information, whilst taking advantage of the open framework mindset. Larger organisations such as BT, BBC, BMW and Virgin Atlantic have for example over recent years started experimenting with forms of open end-user or co-creation input; but as of writing the term *pinko marketing* is relatively unknown concept.[2] Japanese retailer Muji already circulates new product innovations via its online member base of around 500,000 users and asks them to pre-evaluate designs through voting and commenting. Approved designs are then handed over to development departments before production (Wei, 2009). Smaller creative organisations may not have the registered user base of Muji, but they do have access to a much larger and free user base such as Flickr.

Crowdsourcing (previously known as *community-based design*) is a term that refers to a design task usually performed by employees within an organisation and outsources it in the form of an open call to a large undefined group of people using digital technologies (Howe, 2009).

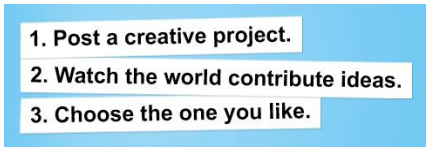

Figure 3. *The Crowdsourcing model*

[2] As of June 2010, a '*pinko marketing*' Google search returns a relatively small number of results, 58,000; whereas a 'viral marketing' search returns over 6 million results. No Wikipedia entry for *pinko marketing* currently exists.

It is usually adopted to leverage mass-collaboration and to obtain intellectual property from unpaid or low-paid amateur community designers to create content or solve problems in their spare time (Boutin, 2006). This has direct impacts in nearly all creative disciplines (graphic designers, web designers, illustrators, animators, products designers, film makers) as it can undermine the technical training required to complete the task as a creative professional within an organisation. The general nature of digital technologies and the open source movement is to democratise the tools and knowledge needed to complete creative tasks and value creation, once held by closed, private organisations. However, if all users have access to the same tools, there may be the risk of mass mediocrity, even poor standards of work (which has been the main criticism of the Wikipedia project (Black, 2008)) that broaden the divide between traditional, institutionally-trained creative's and mass-community creative output.

Lainer (2006) coined the phrase 'Digital Maoism,' referring to the belief that the collective is all-wise and people simply follow, rather than think create and think for themselves, resulting in a loss of individual creativity. Kelly (1994) however points out that the 'hive mind can't do everything, [and is] not stupid,' arguing that collaborative-creation actually empowers us to assert ourselves individually as creative content can be distributed easily.

Liu, Summers and Hill (2009) point out, '*with digital creation and collaboration tools becoming increasingly connected and easy to use, the barrier to market is much lower'*. The short term implications imply that the emergence of a two tiered design class would widen between task-orientated designers and conceptual designers, particularly between outsourced production work to countries such as India and design centres such as New York and London (DMI, 2009). On the one hand, flatly-democratised standardised technical skills could create further distance between technical, conceptual and elitist design classes. In this case it seems to contradict the idea that the situation is merely inverted, but is inverted *and* dividing at the same time. It could also be argued that the gap could be closing if lower-level creative work is cheaply outsourced, as there would be greater competition to increase overall standards of work.

Creative organisational '*OPENness*'

The *OPEN Framework* is described as a strategic tool for organisations to assess the current state of openness –how to leverage the nature of digital technologies as well as to direct future uses to build brand equity via strategic digital experience. Rollins (2009) states that in order to be an open organisation, an open framework, based upon several key user behavioural attributes: *on demand*, *personal experience*, *engaging experience* and *networked experience* could be adopted (Figure 3, *The OPEN Framework*). "OPENness is a meme and a macro-trend that cuts across all spheres, and so takes up open branding and the Web's uniquely open ethos into its larger force field." [3]

Figure 2. *The OPEN Framework*

[3] '*OPENness*' denoting a decentralised exchange of ideas, IP, and goodwill that defies hierarchy and boundaries and creates value constellations rather than value chains.

Vargo and Lusch (2004) advise that organisations should shift their strategies towards creating an open relationship with their consumers who should view them as 'co-creators of value rather than targets'. This also extends beyond the creative world and is now also being adopted by leading educational institutions such as MIT as anticipated by Leadbeater.[4]

Impacts of Copyright and Creative Commons

UK Copyright framework will celebrate its 300th anniversary this year and does so in a world vastly different from that in which it was originally created. The copyright framework was originally set up to protect a different world of intellectual property, implemented in order to prevent unlicensed, unregulated printing of books. Today in the context of digital technology, founder of the Creative Commons (CC) copyright license, James Boyle, noted at a NESTA conference that the Web is inherently '*a machine to facilitate copying*,' in direct contrast to existing copyright law. In the digital world, we inadvertently pull copyright laws' triggers as we all have the potential to violate them with the simple and instantaneous click of a mouse. Boyle states that it is under this entirely different and modern playing field that these original laws are struggling to be upheld, enforceable and even relevant. Boyle recommends that businesses should go *with*, rather than fight its fundamental nature to facilitate perfect copying and duplication of content.

It was with this in mind that the Creative Commons licensing was established to offer an extension to outdated copyright laws, to allow for legal distribution of creative works without the need for lawyers to get involved. It gives copyright-holders, legal licences and tools to '*mark creative work with the freedom the creator wants to carry, so others can share, remix, or use commercially'*. This has particular implications for the creative industries such as the music industry, where digital content is circulated regularly and illegally. As Boyle states, contrary to our natural inclinations, '*the enemy is obscurity, not copying*'. With Creative Commons licensing, content can be legally distributed, heard, viewed, being more generally known about. The Web puts sharing central to economic business models and goes against the traditional industrial models of private ownership, hence fears and resistance of experimentation and adoption. This new context subsequently raises questions about our natural and immediate inclinations to protect and guard intellectual property. Under this framework it immediately opens up the commons to new business models and strategies to generate value. Creative Commons licensing provides an up-to-date framework enabling the legal exploration of new modes of value creating and is especially designed to be in harmony with the nature of digital technologies today.

There are reactions against the idea of freely sharing and distributing content as seen by the massive increase in patents applications and intellectual property protection that have doubled since 1985.[5] This could be seen as a reaction against the nature of digital technologies (organisations built on old models of private ownership) as a machine to facilitate copying, by those who seek to guard their intellectual property (as economic protectionism) for increasingly challenged and out-dated business models. Tensions are emphasised by the inter-connected-base of billions of consumers who can produce, copy, participate and share content, making it even harder for those to monetise creative rights from copyright content. In this context however, it does so unsustainably against the fundamental nature of the digital tools it uses.

[4] In 2007, Massachusetts Institute of Technology placed all of its 1900 undergraduate and graduate course learning materials online (including video streams of classes) for free using the Creative Commons licensing framework. The only limitation for viewers is that it does not grant degrees or certificates. By doing this, MIT attempts to share the intellectual academic commons and disseminate knowledge, as an extension to creative content being openly shared by further sectors (Technology, 2009).

[5] Statistic source: World Intellectual Property Organisation (WIPO), statistical publication on patents, available at: http://www.wipo.int/ipstats/en/statistics/patents/csv/wipo_pat_appl_total_from_1985.csv

Effects of mass creative-collaboration and innovation

Rheingold, 2007, has defined paradigm shifts from small group activities to mass co-operative actions, linking it back to man's earliest need to survive through collaborative efforts. This has been echoed by many creative-collaborative projects that have emerged via digital technologies, such as the success of Linux, without any formal organisational structure. He claims that collaborative technology lowers creative thresholds and amplifies our ability to do things together; not as altruism, but as self-interest that benefits everyone. Earls, 2009, says as humans, we are social beings who like being and doing things together and have copied each other from child birth, arguing that the nature of the Web plays exactly into our social instincts as human beings, and we simply use the Web to facilitate mass-interaction and collaboration.

These behaviours can be demonstrated by some recent mass-scale, collaborative efforts using digital technologies:

- When Hurricane Katrina hit the United States in 2005, teams of volunteers got together and created software to help search for relatives as part of the disaster response and was completed in a single weekend (Rheingold, Mass Collaboration: Smart Mobs, 2007).

- In 2007, Google, NASA, Amazon and Universities worldwide got together over night to co-ordinate a search effort for a missing professor in 132,000 miles of ocean using and sharing satellite mapping data to aid the search effort (Hafner, 2007).

We have in-built desires to organise, socialise, create and collaborate together and the arrival of digital technology has provided a set of tools in which to realise and explore these behaviours. Consequences of this are sudden changes in the act of creating value that have (up until now) been under the control of various industries. It could be that actual levels or desire to collaborate and create is in a form over-hype of the interconnecting and enabling properties of digital tools, not dissimilar to that of the dot.com boom and bust, driven by an underlying sense technological positivism. Only as time passes and mass-collaborative digital technologies become further widespread, developed and refined will it be possible to assess the most far reaching impacts.

Implications specific to the Creative Industry

What makes the use of these technologies different within the context of the creative industries is that new and freely-available tools and means (as well as interconnected and communicating audience) are at their core, widely available tools to generate value by the act of creating. Traditional barriers to entry and access to these tools are being lowered, challenged and changed. The result is that established traditional business models are being tested to their limits as end users increasingly have the ability to organise themselves, collaborate and innovate to generate creative value, independent of the industries. There are other knowledge barriers such as educational levels to understand the technologies in the first place, how to manipulate signs in novel ways and conducting cultural analysis to name a few; but what we are seeing at the moment is primarily democratisation and access to sets of tools. Knowledge proliferation and education (shared amongst peers) will surely follow enabling manipulation of these tools to higher professional standards, before significant impacts will be felt across the board.[6]

[6] An example of the current extent to which high professional standards can already be reached by the community can be seen with by the Ubuntu linux project: http://www.ubuntu.com.

There are implications for other sectors too, such as healthcare, education, science and politics; but the initial wave of mass creativity, collaboration and innovation is in relative early stages and primarily affecting the creative industries (such as software, entertainment, and media)[7]. It enables people to generate creative output, consumer value and intellectual property to equal professional standards as the industries but with little or no initial costs at all. Charles Leadbeater (NESTA, 2009) focusses on how digital technology is changing our world, creating a culture in which more people than ever can participate, share and collaborate, ideas and information. He discusses the role of digital technologies, particularly Web 2.0, as allowing creative collaborations that, "*are not designed for mass production, so much as production by the masses*" and that creativity has the potential to become a mass-activity, rather than an elite one, held solely within creative organisations. The power of these collaborations has already been witnessed with the case of Wikipedia, which has now matured and been subject to studies confirming that it is 'about as accurate' as the printed Encyclopaedia Britannica.[8]

Impacts in film, the music recording industry, broadcasting, both public and commercial as well as design services are facing new challenges as these industries have relied upon high capital start-up costs for creating and distributing content in order to maintain competitive advantages, that are now being eroded. The ability to collaborate and innovate on a mass-scale is challenging those that want to share and those that want retain control of content in a top-down manner.

One of the most significant impacts Leadbeater highlights is that companies inherently create top-down financially driven organisations, and then try to make them appear to be humane, democratic and bottom-up; or in other words, to try make more like the open and mass-collaborative commons. This could explain why these open communities are thriving so well in the digital world as they resolve these traditional organisational tensions.

When democratised, semi-professional digital technologies combine with mass-collaborative digital tools and platforms (such as Web 2.0), the explosion in mass-innovation can have significant effects on creative sectors. From here it seems that one of the ways for creative organisations to survive increasing creativity by the masses –potentially by billions of people around the World– is to embrace them and incorporate them, rather than try to compete against them or ignore them altogether. This goes a long way to explain how the nature of mass-collaboration and innovation is challenging and changing the established organisational creativity and critiquing what it means to be a professional within industry. Leadbeater does not specifically frame these impacts within context of creative organisations and how these impacts are actually affecting business processes and strategy or not. Primary research interviews within creative organisations regarding these issues raised could provide a context in which to frame and analyse these issues more specifically in practice.

Yochai Benkler has pointed out that camera phones, laptops and the Internet have put the tools and systems into the hands of people that have traditionally involved business models to deploy effectively (Day, 2009). The individual now has a productive piece of capital at their fingertips (as well as a mass audience) without the need of an expensive printing press or radio aerial. This critical change was demonstrated in the recent Iranian Election protests of July 2009. Individuals on the street captured video, sounds and images that were uploaded to the free-networked internet 'cloud'. Traditional media organisations witnessed an inverted relationship to content, by performing curatorship role rather than capturing content themselves. The director of The Photographers' Gallery notes '*the recent emergence of*

[7] Which are also amongst the fastest growing sectors of the developing economies (Department for Culture, 2009)

[8] Study undertaken by British journal Nature in 2005 (BBC News, 2005).

citizen journalists, whose images are more and more often sourced by newspapers' appeared with the July 2005 terrorist bombings in London where 20,000 pieces of news, 400 photos and 4 camera phone videos were submitted to the BBC via mobile phones (Unit, 2009). The story was then run with headline footage from a camera phone. Here the audience took the stage, moved from user to producer and marked an inversion of the traditional newsroom model. It is an example where a sudden and dramatic reversal has taken place with mass-amateur audiences challenging the comparative minority-qualified, professional practice. In both cases the audience took the stage by swift, sudden and opposing changes brought about by the mass-enabling nature of digital technologies. There are already signs of some experimentation with new business strategies and thinking in response to the impacts of digital technologies highlighted in this review. The main implications being that creative organisations need to embrace, incorporate and be prepared to experiment with open, collaborative thinking.

Several high-profile companies are already experimenting and adopting new business models and strategies that have raised awareness and challenged our natural tendencies to be risk-averse to open frameworks and thinking (Boyle, Rip, Mix and Burn, 2009). The UK Government is currently involved in test beds to find ways to monetise digital content for the creative industries as we continue to develop a knowledge economy. Some of the main areas of testing include: micro-payments from embedded advertising; encouraging the sharing of IP in order to reduce IP piracy incentives and the Digital Communications Knowledge Transfer Network (KTN) to assist the government Technology Strategy Board (Board, 2009). Large organisation-experimentaion and government-led initiatives have the power to legitimise new thinking and strategy to dispel fears, that can positively filter down and have effect on all levels of creative organisation.

How might future business models work?

- Tools become distributed to consumers to help themselves
- Knowledge on how to use the tools is transferred between peers
- Leadership and governance comes from within the community
- Users put in resources and value and are not simply consuming

Literature summary

Conducting the literature review has identified some of the most significant issues, changes and challenges facing creative organisations as well as revealing a number of underlying, linking themes. Fundamental impacts of digital technologies include: facilitating mass-collaboration; creativity and innovation, the transition from push to pull marketing; consumers performing professional creative tasks and; new design resources and processes being explored and created. These themes will now form the focus of the primary research in order to further investigate, analyse and synthesise them against the literature from the perspectives of those within the creative industry.

Some potential industry responses to such impacts could include: abilities to adapt current strategies and business models; increasing the open-organisational mind-set, resistance and reluctance to new changes, unawareness of potential future effects and future government level engagement in research.

The underlying themes isolated indicate a sense of real and potential, rapid traditional paradigm inversion, brought about by the fundamental user-empowering characteristics of digital technologies that can flip traditional thinking and practice around on its head. This phenomenon underpins most situations analysed where cases of significant change are brought about by sudden shifts from one situation to the opposite; and occurring in relatively short periods of time.

Proposed model

The literature review has highlighted a number of different situations and scenarios that appear to be related an overall underlying linking-effect. A model to help explain the situation is proposed in Figure 4 (below) to aid and focus discussion for primary research.

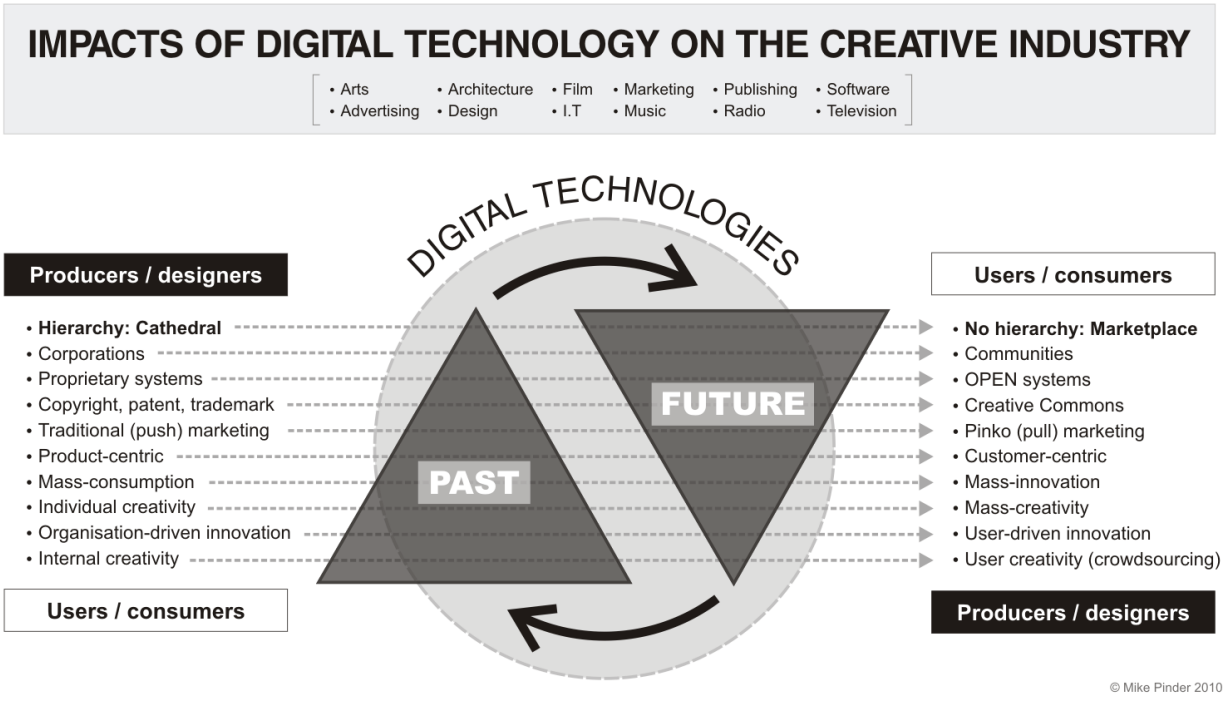

Figure 4. *Proposed model showing the underlying impacts of digital technologies on the creative industries*.

The variety of impacts and effects discussed within the literature were as wide ranging as feasibly possible, looking at a number of creative sectors in order to analyse them for potential impacts. The review could have looked into further sectors and may have found that the same underlying impacts were not evident; or indeed, other underlying impacts (not already highlighted) could have been discovered that contradict findings so far. In other sectors it may be that these phenomena do not have any potential impacts on current strategies whatsoever. There also might not be the same underlying impacts on entirely traditional handmade creative sectors: arts and crafts and fashion industries for example. In the common underlying impacts did emerge (in the cases observed) where digital tools are already used to some degree or another in act of creation, in all the areas reviewed.

It may be that such a theoretical framework may attempt to oversimplify the discussed impacts into a 'one size fits all' model. However, in the situations discussed, it attempts to demonstrate that despite the variety of influences and impacts, they seem to suggest a common underlying and unique characteristic; that digital technologies that have the power to cause dramatic inversions in previous thinking, strategy and practice –currently, most notably within the creative industries– as the creative output can be so easily and quickly duplicated and distributed via digital tools. Similar impacts could also be observed in other industry contexts –healthcare, education, science and politics– as noted in the review, but fall outside the scope of this paper and research questions.

It is not intended to suggest that all sectors are being subjected to the same potential dramatic shifts in their entirety, but simply demonstrating the extent to which potential current and future impacts can have on the creative industry in relatively short periods of time.

The review presents viewpoints of key impacts of digital technologies from the perspective of researchers, academics and authors commenting from outside creative organisations. This therefore implies a need for primary research to investigate and determine whether or not the proposed model actually explains what is happening form an internal creative organisation perspective (in contrast to the literature), to either confirm or challenge the finding so far.

Methodology

This empirical research is based in grounded theory as data collection will commence without any previously established theoretical framework (due to the complex and overlapping nature of the issues revealed by the Mind Map, *Figure 1*). The research seeks the opinions of expert participants; through their experience and observations, therefore an interpretivist stance will be most suitable, as it will help to uncover deep, hidden attitudes and beliefs around the themes.

Assumptions

Fundamental shifts in traditional thinking to an inverse situation – '*the audience is taking the stage*'.

Transition from *push* to *pull* marketing: "As the so-called social web began to flower, old mass marketing push tactics were superseded by the pull of an online population prolifically creating, sharing, and influencing each other." (Rollins, 2009)**.**

Mass creativity and innovation will continue to increase and encroach on traditional 'trained' designer roles: "mass creativity challenges and will continue to challenge traditional creative industries. Designers will no longer be the soul sources of knowledge or authority as the recipients now want to be participants" (Leadbeater, 2009).

Increasing open-organisational mind-set: "We are seeing a third wave of transformation in the way we organize our society, share our personal creativity, and generate innovations. It requires a new way of thinking – "open platform thinking" - that goes against the grain of traditional business practices and conventional business wisdom." (Rheingold, Saveri, Vian, Chai et al, 2006)

While qualitative data is important to answering the research questions, due to the complicated nature and vast number of actors involved in the impacts of digital technology, expert qualitative interview research would reveal far more about the issues (with its multiplicity of perspectives), and to allow generalisations to be made, rather than concrete statistics alone. For these reasons qualitative semi-structured interviews will be undertaken.

Data collection and analysis
Interviews will target professionals from different disciplines within the creative industries, such as design management consultants, graphic designers, digital designers, art directors, new product development managers, digital strategists, patent and IP lawyers and innovation strategy advisors. General themes for interviewing will be used to ensure that the same areas are explored throughout (to allow for triangulation). This also provides more focus than a conversational approach and still allows for a degree of freedom and adaptability to obtain information from other topics raised.

Open questions will be generally used, leaving flexibility for the interviewer to probe new arising issues and get objective interviewee feedback with heightened awareness of influencing concepts in the minds of the respondents. The visual explanation model (Figure 4) will be used as an initial prompt for discussion (to more specifically define the discussion themes) and to obtain feedback from the respondent's individual industry viewpoints.

Primary data analysis approaches
Analytical induction will be used as it provides an '*intensive examination of strategically selected phenomenon'* (Johnson, 2004); and is much more in-line with the nature of data required. The approach generally starts with a less-defined explanation of results (themes from the visual explanation model) and when there is no other clear existing theory to use, as in this case (Moustakas, 1994). This approach allows the researcher to start with loosely defined themes, carry out research, narrow down and then select further primary research as a result; ceasing to collect data when a valid explanation is found and where, if they are not valid or relevant, can continue until research reasonably explains the phenomena. The literature review started in an immensely wide context, which was somewhat narrowed-down into key themes. The analytical inductive approach continues that process still, by analysing the data in the same manner, focussing further with each interview.

Triangulation of analysis
In order to provide strong, credible and believable data, triangulation will be used as it seeks qualitative data from more than one person's perspective (from multiple backgrounds) around the same key themes in conjunction with the analytical induction approach (as described above). Multiple perspectives from within different industry contexts on the same subject should then provide a degree rigour to the research.

Primary data analysis
Using analytical induction, a first wave of interviews was carried out using themes from the literature review. After reflection of the data (looking beyond respondents views as the only explanation), a second phase of interviews was carried out, focussing-in on unanswered themes, in order to draw reasonable explanations that could most effectively answer the research objectives. The results of both phases were loosely grouped in accordance with the literature review themes. The primary research initially presented somewhat challenging viewpoints to the findings of the literature review, down-playing the levels of significance and impact indicated.

The following keywords summarise some of the first-phase findings in relation to the literature review: apprehension, cautiousness, dismissing, challenging, opposing, optimistic.

With this in mind, the analytical induction approach was used for a second phase of interviews to probe reasons for these viewpoints, by narrowing-in with questions to investigate causes for these disparities in perspectives. Both interview phases are now presented.

Transition from *push* to *pull* marketing

Several responses were made, indicating that the situation was not entirely shifting as indicated by the literature, but merely being extended:

"It doesn't really change the role, it just extends the input from consumers as it still has to go through the same processes to realise them. It still has to go through the same organisational process so doesn't change much in the way they are executed in the end." - 06DM

Other viewpoints indicated that the transition was an inevitable outcome of digital technology and that it provides a more refined extension to existing tools:

"There are a lot of subjective things that need a larger sample. The web provides a bigger more relevant sample." – 01AD

On threats to traditional product management positions:

"I wouldn't say a threat but a real upheaval: a need for highly experienced ones where there is a need for qualitative approach that cannot be modelled." – 14TS

Further probing questions revealed that a move from *push* to *pull* marketing *was* actually changing the nature of the relationship between the *user* and *producer* in several other ways:

"Instead of trying to be above [consumers], we are trying to be a part of them, be on par with the consumer...

...one thing that has changed within the market is that instead of people wearing the brand to give them kudos [cultural capital], people see wearing the product as giving the brand kudos." - 05PD

This suggests that the nature of the interconnected, empowered audience could have other related impacts, causing subtle changes in the relationship between producers and consumers,

Initial phase 1 interview research, suggested that a transition was not impacting as significantly and aggressively as found in the literature, but on further specific phase 2 probing, signs of this shift were commented upon, somewhat re-confirming the literature.

Consumers performing professional creative tasks

Signs emerged that designers and new product development managers in particular, were aware of the increasingly inter-connected and informed audience and signs of organisational narcissism were evident as a result of the potential audience increasingly undertaking creative roles:

"Traditional design teams have an ego, we're the designers, and we're the ones who know what it means to be creative. There's a lot of pride there. The danger is that everyone thinks they can design." – 01AD

"We don't ask others for input, because that's your job. I'm the creative one!" – 04GD

There were signs of fear about giving-up creative tasks to the audience as eventually users would end up controlling the activities of creative organisations.

"The last position that we want to be in is to be totally driven by users because we do consider ourselves experts in doing these things, but at the same time take into consideration what's going on out there." – 01AD

The literature review demonstrated that consumers are now positioned to perform traditional designer tasks due to the nature of technological empowerment that could challenge the role of *professional designers*. An opposing viewpoint to this stated that a formal educational training still provides a key barrier to entry:

"...professional designers are trained to step-beside their own wishes and desires and try to understand the target group. And I think that the single-user is trying to push his own desires into the product and often he cannot see what influences his desires may have." - 06DM

This is interesting as it provides an argument against the literature findings. It may be the case for the time being, but in the future as consumers and users become even more knowledgeable and trained by their peers, it may be that consumers gain the same skills and knowledge to train themselves to think beside themselves as designers do.

In response to bottom-up product development; the literature findings focussed around a general assumption that the majority of consumers and users would be involved in the creation process. Perhaps in reality only a small proportion may actually be involved:

"Not every consumer is trying to influence product strategy. Some are simply not interested and would prefer to go to a competitor instead. It's only the lead user who is interested in co-developing the product. Users are more likely to work for a company like LEGO than they are for a company making, for example, liquids to clean your house." – 06DM

This phenomenon may also only affect industry leaders (with sufficient resources) who place more value upon user-generated design and creativity and who have a sufficiently large enough audience who is actually motivated to participate in the first place:

"I don't think the designer is losing his power in creating the products but he is getting better inspired by consumers." - 06DM

"...there will always be a place for long, complex and sometimes tedious creative processes that require more than gimmicks" – 14TS

Further signs that changes in attitude are taking place between user aggregated content and official media outlets were commented upon:

"A new iPhone app that filters user aggregated news content, but not from big news sites. A shift from value from the professionals to the end consumers."– 01AD

One of the most highly commented upon themes was for professionals to exemplify their experience and professional training above and beyond the creativity of the mass audience by naturally defending their positions within industry. These were mostly in contrast to the literature, but raised important and valid points within more specific situations in the industries where the implications were not so generally influential.

Research indicates that news media is experiencing some of the most drastic inverted traditional impacts, due to mass user-generated content. These impacts include undermining the perception of journalistic professionalism; user generated free content and generating sufficient revenue from free online content that relies solely on advertising to fund the posting of correspondents around the World. In response The Times newspaper recently launched its 'pay wall' online digital service in order to address declining circulation numbers and to turn a

profit from its journalistic efforts (Bell, 2010). Implications are an estimated 90% decline in users, closing and excluding content from the public mainstream, including search engine indexing altogether. This strategy may solve short term revenue issues and increasing perceived value of professional journalism, but it also goes against the nature of the digital tools it uses to be open and accessible to all. It also challenges the findings and recommendations on future strategic thinking highlighted by this paper. A case in point being The New York Times, which, in 2007 reverted back to providing free content on its site as it simply disabled itself from being able to take part in a global conversation (Perez-Pena, 2007).

New design resources and processes created

A graphic designer explained a sense of organisational unwilling to engage with new digital technologies; commenting with a sense of reluctant inevitability:

"We feel we are being dragged into it and it feels like something we should be doing rather that wanting to be doing." **-** *04GD*

Design managers commented that new design resources only provide additional tools, rather than replacing existing ones:

"...it is streamlining an already existing processes rather than replacing them completely. Making existing part of consumer research more effective, but not replacing, just extending the traditional approach...

...I think it is only another information stream to design, they still have to match the concepts with the brand as well." **-** *06DM*

These views seemed to further down-play the more drastic implications indicated in the literature. A senior art director subsequently commented that there is in fact a marked change in mind-set particularly within the digital creative industries, as positive impacts can now be quantified (more so than in traditional graphic design organisations):

"Before they were resistant but now they are seeing tangible results, now they want to do something about this. There is a change in attitude now." – 01AD

It appeared that amidst feelings of fear and uncertainty in experimenting with and adopting new digital-based design resources, some more high-profile creative organisations now have analytical proving data to convince business leaders of tangible positive implications. This suggests changes in organisational mind-set are now only just starting to gain a degree of change-momentum.

Increasing open-organisational mind-set

While most interviewees agreed in principal that an open-organisational mind-set was a beneficial concept, most also agreed that it has very serious potential problems for creative organisations for a number of different reasons:

"*[It] can be very dangerous if they let users choose which products to develop. If consumers of MUJI are influencing the product development process, it has the danger of mis-aligning itself with its brand values, if the process is not managed...*

...now it is user centred design and companies have to change how they deal with the way in which these processes are changing." – 06DM.

There were strong opinions about the extent to which an organisation should be open, with severe implications if it is too open:

"You can't let your audience dominate your strategy or design. Take-in what they say, but if you lose control of your audience then you will have a problem. You need a balance of both." – 01AD .

Concealing design (or intellectual property) to maintain competitive advantage was a particular issue with regard to product design and development organisations:

"If we show something, we have so much competition. They would see what we do and we need to keep what's coming-up low-key." – 13TS

In this case any desire to be *open* would be simply over-ruled by current strategic business thinking and need to keep intellectual property hidden from competitors.

Creative organisations demonstrated an inherent fear about the impact of negative comments by the end-users and consumers, highlighting that it is a two way mass medium, not just one way. Again possibly accounting for initial reluctance to adopt and experiment with openness:

"*Most companies are very cautious because of negative comments that can come out of it." –* 01AD

"It's challenging because if we do something they don't like, they can push the responses back to the mass-audience." - 13TS.

The gestural sign-value of having an open-organisational strategy was commented as being:

"...a blurring at the moment. [It] tends to be more of a propaganda tool within organisations than real commitment. It's cool for the sake of being mentioned as cool" – 14TS

Primary research feedback on this impact centred on largely the negative implications openness could have on existing processes. Whilst most agreed that it is the way the industry is headed, it is done so with a sense of severe caution. In some cases openness simply went against corporate strategy entirely and in others it contradicted it. In extreme cases, it was seen as having the potential to completely misalign a brand with itself. The general feeling was that it is a good way to lose control of their markets, brands and consumers equally.

Business awareness of the changing environment

There were a number of fears revealed about general business-awareness levels. One of the main issues indicated that creative organisations were remarkably hesitant about taking the initial steps to adopt and invest in new digital technologies:

"*They didn't want to just jump in and see what happens. A lot of people are stuck in their ways and there are a lot of people that are not educated enough.*" – 05PD.

"*Mostly business people making the decisions, they don't want to shift until they can see the results. Slowly they are starting to see that they need a separate sector*" – 01AD

Some openly commented on their willing to let others 'take the lead' position (and initial financial risks):

"We don't come up with the new stuff, because we let them do it first, then we take their idea and put our take on it. We don't use our money to come up with the big ideas first... ...we let the others use their money to make it and then we follow!" (((Laughs – suggesting acknowledgement of the risks of financial failure resting with competitors alone))) – 13TS.

The scale, power and enormity of the Web could also be a driving factor of fear in engagement:

"*That generation is like that; more traditional and doing it the old ways. They see it as too big and scary, because they can narrow everything down so much in the marketing." 13TS.*

Other fears indicate losing control of the mass-audience, as this could lead to being dictated to and ultimately restricting the creativity of trained professionals.

"I would say yes and no. I do agree with no hierarchy, but we don't want to be just driven by users." – 01AD .

A technology specialist defined a possible root cause of such fears as:

"...becoming useless as an intermediary or too fragile against competitors since they are just manufacturing interfaces" – 14TS.

We may now be at a point where new impacts can be quantified and accounted for, encouraging high-end agencies to start adopting them. A high-profile digital design consultancy agreed with the general literature findings, pointing out that:

"[It's] a two way street. Even traditional organisations are starting to embrace that idea, because they see the results from that." – 01AD

Primary research on this theme demonstrated that creative organisations are highly-aware of the potential practical uses and applications of digital technologies, but are at the same time highly-cautious about investing in research, experimentation and adoption strategies. Other fears were again strongly evident in giving-up control to the end-users.

Conclusion

Following on from the literature review and primary research, further reflective thought is now presented upon the data. The literature review narrowed-down to some of the most influential and impacting key issues affecting the creative industries today. This demonstrated that there is a need for open-organisational thinking and an awareness of the dramatic opposing shifts in traditional business thinking, willingness to experiment with business models at all industry levels, embracing of mass-innovation, creativity and resources as well as calls for further research in the area.

The review took in a broad range of actors' viewpoints at varying levels of organisation within the creative industries and provided a relatively different picture to the literature. Creative organisations generally felt that digital technologies were extending, not shifting traditional ways of creating value; although there was clear acknowledgement of a general shift to user-generated content and thinking. Traditional and formal design training (gatekeepers), skills and education provided the main defence against the mass audience taking the stage, claiming that the audience simply lacks the knowledge to be a serious threat and that it merely provides and extension to *trained* designers' tools and was subsequently not taken too seriously as capable of replacing current job roles, functions and creativity.

This seemingly confident outlook rather out-shadowed underlying fears that were clearly evident. There were deeply-held views, demonstrating resistance to embracing, adopting, experimenting and taking advantage of digital technology as it was seen to be a perfect way in which to lose control of the audience, who would then start dictating, via *untrained* voices back up through established and traditional creative design processes. Openness was held with instinctive fear as it simply goes against traditional business thinking, but was something that creative organisations could see as the inevitable future, being reluctantly drawn-into at

some point soon. The initial steps and competitive-lead advantage are happily surrendered to the to the largest organisations to experiment and test-out the best ways in which to exploit digital technologies (as well as absorb the initial financial investments and risks) for the future benefit of remaining organisations further down the line.

This interpretation looked at a number of existing implications of digital technologies and extended them to a largely unexplored and specific context within the creative industries. Opposing viewpoints have been highlighted between the literature and the primary research and looked at possible causes for disparities. The literature review took in a wider-span than primary research which is based upon individual industry perspectives of occurring phenomena. Possible causes of these opposing viewpoints could indicate that the creative industries are not yet experiencing the noted effects of digital technologies and/or are not fully aware of the extent of the major implications. It may also be the case that the literature is over-emphasising the significance of the perceived current and future impacts; but due to the variety and number of well-informed sources indicating the contrary, it seems logical to draw a conclusion that the creative industries are perhaps in a state conscious dismissal of impacts, by discrediting the significance or by simply burying heads in the sand. Creative organisations will need to experiment and actively engage with these future issues as digital technologies become ubiquitous, second generation Web matures and Generation Y comes of age in the workplace.

Possible reasons accounting for the dissonance between the literature and primary research:

- The industries are relatively knowledge-unaware and future foresight is lacking due to the newness of the issues.
- The industries are aware, but do not see the impacts as important yet and are waiting for industry leaders to jump-in and test models and strategy out first.
- Impacts have not yet been felt or experienced at more general, lower industry levels, suggesting an ideal situation in which to start experimenting before changes are wider-influencing.

Further research implications

Widening the scope of primary research could reveal additional data confirming or challenging the opinions defined by this research. The majority of respondents were of largely the same viewpoints within the scope of this paper, but could differ if carried out in further, broader sectors within the creative industries. These findings however do raise new questions:

If creative organisations are in a state of unawareness or appreciation of potential future challenges, then how can the industries essentially become more aware, whilst combining new technologies with new business models and proliferate this knowledge at the same time to dispel fears?

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