CONVERGINGPATHWAYS
to new knowledge

LabforCulture
Kennisland | Knowledgeland

CONVERGINGPATHWAYS
to new knowledge

Riksbankens Jubileumsfond

STIFTELSEN **framtidens kultur**

Ministerie van Onderwijs, Cultuur en Wetenschap

Contents

Foreword

Technology has brought fundamental change into our society — change that we can describe in tectonic terms as a 'digital shift'. However, this digital shift is about much more than new online tools, greater efficiency, speed or relentless tides of information. Technology has changed how we think. The digital shift is about new ways of working, new ways of reflecting, new approaches to problem solving and, as a result, new ways of building and sharing knowledge. Technology has also upended our familiar linear chain of cultural creation, production distribution and participation. As we become increasingly less 'linear', many more doors and pathways open up to us.

Converging Pathways to New Knowledge is a LabforCulture initiative that set out to consider how our knowledge building has been affected by the digital shift and how we should respond in the cultural sector. The notion of 'converging' is about thinking in an inter-disciplinary, intergenerational, international and 'inter-expertise' context — and building a multi-dimensional picture. Our particular spheres of knowledge should no longer be spinning independently, but intersecting in a multitude of ways — continually changing and enriching, so that the translucent 'space between' becomes a surprising place of connection and exchange.

LabforCulture is an online platform with a two-fold interest: 1) to provide timely information for and about culture across Europe; and 2) to encourage the cultural sector to be more experimental with online collaborative tools. LabforCulture aims to connect people with information. Increasingly in our digital world, this is no longer about simply providing or delivering information. Rather it is about finding ways for people to bring added value to information — to provide spaces where information is alive and becomes knowledge.

Kennisland (Knowledgeland) is a fitting and inspiring collaborator in this initiative. Kennisland brings together a network of partners to think about the consequences of the knowledge economy and how to respond to it as a society. Beyond thinking, Kennisland also translates this into concrete action and supports learning-by-doing in this transformation process.

We hope that the reflections and perspectives collected in this publication will inspire you to bring your thinking, and your pathway, to our ongoing investigation.

Katherine Watson
Director, LabforCulture

A guide to this publication

Converging Pathways to New Knowledge consisted of a series of three online debates, followed by a one day Round Table in Göteborg, Sweden, on 28 July 2009. The debates involved invited experts and the LabforCulture community — who came together to discuss and comment on knowledge production, knowledge sharing and regulation. The Round Table coincided with the Swedish EU presidency conference, 'Promoting a Creative Generation'. The conference was organised within the context of the European Year of Creativity and Innovation.[1] (The Round Table brought together around 40 representatives of foundations, governments, cultural and cross-sectoral organisations and creative industries).

This publication reflects the proceedings of both the online and the Round Table debates and the surrounding global debates. However, the publication is not intended as a summary report of the discussions. Rather, the publication aims to continue the conversation that was started online and in Göteborg. The main underlying question is what are the relevant issues that may have to be dealt with in and through cultural policy-making (in the broadest sense). To that end the text is structured around five themes. It includes and reflects on excerpts from the debates. And it is enriched with practical examples and links to further reading (and experiences) that have not necessarily cropped up during the actual debates. Full transcripts and additional media can be found in the online project space at http://www.labforculture.org/newknowledge, which offers a rich environment for further knowledge building and knowledge sharing.

Given the broad composition of the cultural sector, the debates and the publication tend to concentrate a bit more on cultural institutions (museums, archives, heritage institutions, theatres and the like) than on the creators (artists). The publication — written by Martijn Arnoldus, Senior Advisor for Creative Economy and Open Content at Kennisland (NL) and with guest contributions from Ken Arnold, Head of Public Programmes, The Wellcome Trust (UK); Olivier Schulbaum, Cultural producer, co-founder of Platoniq (ES); and Floor van Spaendonck, Director, Virtueel Platform (NL) — concludes with some remarks on what the road ahead might look like.

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1 Web link: http://create2009.europa.eu/

1 A sense of chaos reigning

From the agricultural revolution to the invention of the printing press and beyond, mankind has experienced periods when conventional practices of knowledge building and knowledge sharing were replaced by new ones. The latest shift is so profound that it is often labelled the new digital paradigm. But this shift is not something to worry about.

In the words of the freelance journalist and cultural industry consultant John Newbigin, with every past cultural shift *"there must have been a sense of absolute chaos reigning. And it seems, in a way, that we are in that situation again. People can have access to knowledge in a way that has just not been true before. We may feel that we are in a state of anarchy and uncertainty about where all this is going. But, we ought to draw some comfort from the fact that actually in the course of human history we have been in this situation many times before"*.[2]

So, what is this new paradigm? It all began with the invention of digital technologies, which have deeply influenced the way we access, build, distribute and share knowledge. Amongst the most radical developments are the following shown in the highlighted boxes:

24/7 - it's always on
Knowledge and information are accessible at any time of the day. The internet never shuts down, while for instance libraries and archives do.

Infinite mobility
Digital technology has made it possible to reach the most distant corners of the planet in a matter of only microseconds.

Multi-platform
The mobility of technology allows new patterns of work and lifestyle. Digital technologies are omni-present, and thanks to the mobile telephone and mobile internet, we can interact with the digital world at any place and at any time.

Unlimited reproduction
In the digital world the production of perfect copies only requires a mouse click. In fact, the operation of the internet and of digital devices actually requires persistent copying. The internet is just a giant copying machine. And it is very good at it.

No marginal costs
With the exception of energy costs, marginal costs of reproduction and distribution in the digital world are next to nothing. [3]

No filter
As a network without a hub, the internet lacks a central filter to control information flows. In the absence of a filter, anyone can publish and in theory reach a vast audience.

Democratisation of access
In theory the rise of the internet has caused new means of access to knowledge and information. Although digital technologies have their own barriers to entry (one must understand how to operate them), the internet has effectively tackled many 'analogous' impediments to access.

Speed of change
Digital technologies allow a far greater speed of adoption, adaptation and (re-)use of knowledge and information. What is 'new' right now could well have disappeared from the digital front pages within hours.

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2 John Newbigin, *Converging Pathways to New Knowledge Round Table*, Göteborg; morning session, 28 July 2009.
3 Energy costs should not be ignored for at least two reasons. First, although energy consumption at the individual level may be very low, total energy consumption by the internet is extremely high. Second, energy costs are a major factor in the lack of access to the digital domain in developing countries.

These are the most essential features of how digital technologies have affected the world we live in today. However, the new paradigm is not just about impersonal technological characteristics. In fact, the fundamental shift has been in how we position ourselves in relation to information and - by adding meaning to information - to knowledge. This, in short, signals the paradigm shift in its fullest sense. From contemporary debates it becomes clear that the digital paradigm is actually not as well understood as the purely technological face of the digital shift. The reflection on the digital paradigm and its (practical) impact on our society will without doubt occupy leaders, thinkers and policy-makers for years to come.

Three observations

If the paradigm shift is about how people position themselves in relation to information and knowledge, then how does it work out in practice? Three observations can be made.

First, people nowadays get swamped with information. The information storage capacity of the '24/7 - always on' internet is virtually unlimited. With no limits to shelf space and no marginal costs, the amount of information that can be accessed has exploded in less than a decade. As a result we are all exposed to much more, and more diverse, information than ever before in human history. During the Round Table in Göteborg, Ken Arnold (Wellcome Trust, London, UK) even called it "a risk for mental health". Consequently people have to redefine how they value and select information that is relevant to them at a given moment.

Second, and closely related to the first observation, people nowadays are confronted with a tremendous plurality of sources. Perhaps because of the lack of a central filter, digital technologies and the internet permit diverse, plural and fluid sources of knowledge and information. In the past, information and its sources tended to be closely linked. People knew where information came from. Compared to today's situation, the number of creators, publishers and distributors of information was fairly limited in the past. In the value chain of production, distribution and consumption, there was always a notable role for 'gatekeepers' who were able to control information flows to some extent. Digital technologies and the internet have challenged the old practices. People, then, have to redefine how they value and select sources of information that are relevant to them at any given moment.

Third, digital technologies hand people the instruments to become much more involved themselves in creating, publishing, sharing, adapting and distributing information. The number of personal weblogs by far outnumbers the traditional media. Commenting tools and forums are heavily used to express opinions. Millions of profiles on social networking sites not only offer personal information but also information about people. Formerly linear information flows and value chains are losing their linear characteristics. What is more, people are also becoming more actively involved in the allocation of meaning to information. This is what we might call the empowering aspect of digital technologies. People can and do participate in all stages of knowledge building and knowledge sharing much more easily.

With these three observations in mind, it is good to note that not everything has changed with the new digital paradigm. The acquisition and building of knowledge continues to involve cognitive processes (learning, communicating, interpreting information) that are culturally conditioned. That is where the questions arise regarding the challenges and opportunities facing the cultural sector and for cultural policy-making.

2 The new paradigm and the cultural sector

"I feel, maybe lots of people feel this too, a mixture of excitement, but also the flipside of that, puzzlement and occasionally worry in the sense of knowing that something very big and very new and very uncharted is happening and feeling that there are all sorts of possibilities. But, I suppose in my slightly less optimistic moods, feeling as though I am bound to get left out."[4]

Ken Arnold
Head of Public Programmes
The Wellcome Trust, UK

The new paradigm of digital culture induces both high expectations and discomfort throughout the cultural sector. On the one hand many cultural practitioners feel they do not quite understand what is going on in the digital sphere. For instance, few museums and other heritage institutions are convinced they have fully adapted to the rise of digital technologies. Indeed, despite a lot of experiments with digitised collections and online services, no widespread practice has as yet evolved that fully comes to grips with the new paradigm. [5]

On the other hand, an important guiding role may be waiting for the cultural sector under the new paradigm. The strength of the arts and the cultural sector has always been built on the practice of allocating new meaning to existing information, of communicating meaning and of reflecting on meaning. The cultural sector has made it its core business to discover and provide alternative ways for people to relate to old and new information.

Given its core strength the cultural sector can actually play an invaluable role in helping people to reposition themselves in relation to information. In other words, the cultural sector is the obvious candidate for helping people to (a) redefine how they value and select information, (b) redefine how they value and select sources, and for stimulating them to (c) participate in all stages of knowledge building and knowledge sharing.

In consequence there are two sides of the same coin for the cultural sector. The frosted side exposes the challenges and difficulties that the cultural sector runs into whilst adapting to the new paradigm. The cultural sector (artists and cultural institutions alike) will have to become aware of the new paradigm. And it will have to learn how to employ the new digital technologies. The shining side of the coin reflects the opportunities that arise for the cultural sector from the new paradigm of digital culture.

But where to start? In July 2009 LabforCulture brought together thinkers, practitioners and innovators from a diverse range of backgrounds (see acknowledgements) in three online debates and a one-day Round Table in the Röhsskka Design Museum in Göteborg, Sweden. The conversations during those different occasions helped to uncover a number of topics that are important when it comes to challenges and opportunities.

4 Ken Arnold, Converging Pathways to New Knowledge Round Table, Göteborg; morning session, 28 July 2009
5 DEN/Kennisland (forthcoming, 2010), Business model innovation for the cultural heritage sector, will be online at http://www.knowledgeland.org
6 http://www.labforculture.org/content/view/full/50530

Five key themes have been identified that demand attention of both cultural practitioners and policy-makers: **access, curation, expertise, purpose** and **trust**. They will be dealt with in the remainder of this publication. We are not claiming to present an exhaustive list of every imaginable theme. Nor do we claim that our classification is the only viable one. Yet, we do believe that these five themes are definitely important for the cultural sector and policy-making. In fact, they all relate to core values of practice in the cultural sector. For every topic we operate the same scheme, starting with a quick note on how that theme relates to the new paradigm, followed by the challenges for the cultural sector and then moving on to the luring opportunities and some practical examples.

Göran: "One very open question is, taking a step back, is the cultural field ready for a new definition of the 'visitor' when opening up towards social media and consumer/producer produced content?"

Maaike: "Visitor still sounds very passive to me. There is a trend to see our visitors as partners and not just passive users."

Globalarts: "So you mean, Göran, the audience is an active community with personality?

Göran: "Yes, since I come from a school background I know what it takes to include people in an active process of let's say learning."

Conversation taken from the Converging Pathways debate series; 1st Online debate: "Knowledge building in the 21st century"[6], with guest speaker Maaike Toonen, Dutch National Archive.
This snippet features two of the online participants, 'Göran' and 'Globalarts'.

3 Access

" The medium is the message.
The way of finding out ideas and inform-
ation is as interesting as the information itself.
My puzzlement there is what happens when all of this
isn't new anymore. Are we always going be re-inventing
ways of accessing information?

Along with 'global village', 'the medium is the message' is
the most famous catchphrase associated with the Canadian
philosopher Marshall McLuhan. According to him, the
media by which information or concepts are conveyed are
intimately connected with the information and concepts
themselves. Thus, the dominant medium of a particular age
shapes the way people of that age think. So in the case of the
internet and digital culture, the processes (the mechanisms)
that allow images, words, films and sounds to be distilled
from any number of sources and then disseminated across
the web can be as significant and relevant as the specific con-
tent of the digitised material itself. We seem just as motivated
and engaged by the idea that this material is instantly avail-
able all the time and all over the world as we are by the pic-
tures, sentences and sounds themselves, many of which have
long been available through other sources - such as books,
recordings and museums. The big difference now is that we
are all overloaded with too much information, and individual
meanings seem to have less of a hold on us than the fact that
information has become ubiquitously and universally avail-
able.

So my quandary, then, is whether we are destined always
to be inventing new ways of transferring the pictures, words,
sounds and other content. Might we actually have to do so in
order for it to carry on seeming to be of interest to us? Will
we before too long need a Web3, Web4 and so forth, and
then some other technology altogether - maybe a means of
inserting ideas directly into our brains, or some other as yet
unimaginable technology in order to keep us engaged with
what is fundamentally the same information and concepts as
before? Or, alternatively, will we get completely used to the
internet and the power of digital technology and, as it were,
get bored by the power of the medium (or maybe simply
sated by what it can offer)? And then, we may gradually
become more concerned again with the depth of
meaning and the nuances of the material itself. "

Ken Arnold
Head of Public Programmes, The Wellcome Trust, UK

Many people within the cultural sector have always considered it part of their raison d'être to facilitate access to information and knowledge. However, under the digital paradigm, conventional modes of distribution and opening up collections are under pressure. People have become used to the idea of the internet as the portal to information. But it is not just in the selection of information and sources that people have turned to digital technologies. They are also becoming actively involved in enabling access and distribution. Internet users can choose from many different sources and platforms to publish content. And they are not just uploading their own content. The same goes for distribution. Consider peer-to-peer (p2p) technology.[7] It has enabled decentralised network distribution of information on a hitherto unseen scale. It is estimated that, with the exception of Northern Africa, well over half of all internet traffic in any world region is generated by p2p networks.[8]

Artists and cultural institutions are challenged by these new developments in several ways. First, the fact that anyone can (and in a lot of cases, will) make information accessible is still new to the cultural sector at large. It raises questions about control. Control of access and control of distribution. For a long time, mechanisms to control access and distribution have been principal building blocks for business models in the cultural sector. Here, business models not only refer to revenue models, but also to the way in which cultural practitioners organise what they do and how they interact with the broader public.

The emergence of a general public that actively uses tools for making information accessible also creates opportunities for knowledge building in the cultural sector. To follow are two examples that illustrate the point. Originally a pilot from the US that was adopted on a larger scale in The Netherlands, Wiki loves Art[9] is a photography contest. Photographers (both amateurs and professionals) were invited to take pictures of museum artefacts and upload them to Flickr.com and Wikipedia, using Creative Commons licenses to guarantee open access. Participants are free to make the pictures accessible and to distribute them in any way. Forty-five museums participated in the Dutch Wiki loves Art project. Almost 5,500 photos were uploaded, tagged and commented on by an international audience.

A second example comes from Brooklyn Museum,[10] New York (which, by the way, launched Wiki loves Art in the US). In the case of Brooklyn, open access does not only refer to the artefacts per se (as digitised images), but also to metadata: background information. In 2009, Brooklyn released an open 'API' — Open Application Interface — which is a set of rules and procedures for building software applications. It is basically a technical key that anyone with the necessary programming skills can use to query the museum's collection data. With an open API, third parties can develop services and applications around the collection and can interact with it. In both examples the cultural institution has experimented with new ways of letting people openly access information and stimulated the public to actually create something new.

The second challenge is that cultural institutions (notably museums and archives) run into legal problems when trying to increase access to their collections. Copyright can be a huge obstacle to unlocking information and knowledge. The cultural sector has tremendous collections of cultural information that is stored in 'physical form'. Digitisation enables the necessary preparations to make that information fit for broader access and distribution. Yet, due to copyright restrictions, a lot of cultural information might remain unreachable for the general public. So, even in cases where cultural institutions do feel inspired to open up information the legal barriers may be too high.

Nevertheless, there are opportunities for the cultural sector to take advantage of too. One of the basic strengths of the cultural sector has always been that it provides access to groups of people that otherwise might have been excluded — the arts communicate ideas to all segments of society, and museums serve a broad public. (The reverse is also true, of course. One just has to look at the gap between high culture and popular culture to know that the cultural sector is not just concerned with providing universal access.)

Improving access might start on quite a small level, by making the most of new technological possibilities. For instance, the Tate[11] in London developed i-Map, an online art resource that allows visually impaired people to enjoy the museum's collection. One could say that i-Map 'breaks down' an artistic work, introducing details step by step (text, audio, animation, raised images). In so doing, the visually impaired visitor gradually comes to understand the work as a whole.

"In the open access movement the author pays for publication and the work is made available for free. Let's define free: in my opinion this means free to the end user. That does not mean there is no revenue model. Nothing is totally free in the end."[12]

Harry Verwayen
Senior Advisor 'Open Content', Kennisland
The Netherlands

7 p2p technology, most commonly associated with downloading content, is actually all about sharing. p2p networks are decentralised networks of participants ('peers') that create their own resources (like storage space or network bandwidth) available to the other peers. In p2p networks, peers are suppliers and consumers at the same time
8 Poque (2009) Internet Study 2008/2009.
9 Web link: Wiki loves Art - http://www.wikilovesart.nl, http://www.flickr.com/groups/wikilovesart/, http://en.wikipedia.org/wiki/Wikipedia_loves_art
10 Web link: Brooklyn Museum, New York – http://www.brooklynmuseum.org/community/blogosphere/bloggers/2009/03/04/brooklyn-museum-collection-api/
11 Web link: Tate, London – http://www.tate.org.uk/imap/
12 Taken from 3rd Online debate: "Regulation:legislation" with Lodewijk Reijs, moderator; Heiner Holtappels, Netherlands Media Art Institute; and Harry Verwayen, Kennisland. http://www.labforculture.org/content/view/full/50531

4　Curation

The core tasks of a substantial section of the cultural sector (museums, libraries, archives etc.) include the selection, acquisition, collection and preservation of (cultural) information and knowledge. Curation is intimately bound up with the cultural sector. It is also closely connected to expertise (more in the following section); curators are the content experts in cultural institutions.

Digital culture opens up new challenges for curation. To start with, both cultural institutions and the general public run the risk of being swamped by the information that is out there in the digital domain. It would be good to note the spectrum of (new) methods and channels used by the general public to collect and select information and sources. It ranges from leaving everything to the machine as in Google's random search function ('I'm feeling lucky', which accounts for one out of every hundred searches) to association methods like the one first implemented by Amazon ('customers who viewed this book also bought…'). Or Google's new 'social search', which enables users to find content shared by friends from social networks and digital communities.

Perhaps more importantly, under the new paradigm everyone more or less becomes a curator. It is no longer an activity undertaken predominantly by cultural institutions. From music sampling to visual referencing, we are all involved in the act of bringing things together from different sources. As with the issue of access, the general public has not just discovered new ways to collect information and knowledge, but actually shows an interest in taking part in the act of curation.
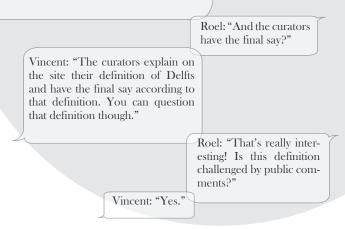
The cultural sector may benefit from the broader curation interest among the general public. An example of an interactive process of curation comes from Röhsska Design Museum[13] in Göteborg. The museum involved the 1,500 members of its Facebook community in the decision about whether or not to accept a vintage 1950's leopard fur coat as a gift. Museum Director Ted Hesselbom relates how a fellow institution had advised against accepting the gift because of international fur trade regulation. The community, however, reacted in a very positive way, raising questions about the museum's acquisition policies along the way. A lively debate developed and eventually the museum decided to accept the artefact.

That the community felt it was taken seriously in the whole process seems subordinate to the fact that, through this very process, the museum openly shared its considerations for acquiring or not acquiring a particular artefact. From the Round Table, the conclusion was drawn that the curator should not so much act as a selector, but as someone who shapes the discourse on why particular choices have been made.

The Brooklyn Museum[14] in New York provides another example of how the public can be involved in curation. In 2008 the museum launched 'Click! A crowd-curated exhibition'. Inspired by James Surowiecki's The wisdom of crowds (2004), a photographic exhibition was developed with the help of visitors, the community and the general public. By answering a list of questions and rating the potential pictures for the exhibition, a selection was made. Along with the actual exhibition, the museum disclosed information on how different groups of voters had rated the pictures. In this project it was not so much a debate on acquisition logic that triggered the public, but the process as a product in itself. The process is also key to an initiative of the Gemeente Museum[15] in Den Haag, The Netherlands. The museum involved the public in the definition it uses to define the country's famous Delft pottery.

Vincent: "The Delfts pottery website starts on a very practical level. We daily get questions of people who want to know if the object they have is 'real' Delfts (and thus hopefully very valuable!). It takes a lot of time to answer these questions and it's difficult to explain why our experts think it is or is not Delfts. The Delfts site will present a lot of background information on the subject. User-generated content is treated equally to the museum content. You can filter the public objects or the private ones though. Or, more interesting, distinguish the real Delfts objects from the ones that are not Delfts."

Roel: "And the curators have the final say?"

Vincent: "The curators explain on the site their definition of Delfts and have the final say according to that definition. You can question that definition though."

Roel: "That's really interesting! Is this definition challenged by public comments?"

Vincent: "Yes."

A related approach to curation in digital culture is to focus on customisation or tailor fit models of curation. In this approach the cultural institution continues curating in the traditional way but acts as a guide to its visitors or clients. An example is provided, amongst others, by the Museum of Science and Industry[16] in Chicago. By answering a few questions, the visitor is provided with a customised visit plan for the museum, showing which parts you definitely want to see. In return, the museum collects a lot of information about its visitors' interests. In this approach the public is not involved in a direct way in acquisition, collection or preservation.

13 Web link: Röhsska Museum, Göteborg - http://www.facebook.com/group.php?gid=6891205162
14 Web link: Brooklyn Museum, New York - http://www.brooklynmuseum.org/exhibitions/click/
15 Web link: Gemeente Museum, The Hague - http://www.gemeentemuseum.nl/index.php?id=1&langId=en
16 Museum of Science and Industry, Chicago: http://www.msichicago.org/visit-the-museum/plan-your-visit/
17 http://www.labforculture.org/content/view/full/50531

5 Expertise

Under the new paradigm the boundaries between expert/professional and amateur/public have become blurred. 'Hobbyists' might be the greatest of experts in particular fields. A lot has been written about the rise of the 'professional amateur' in recent years and no doubt more is yet to come.[19] Although the focus may differ, most observers of the new paradigm have noted that intrinsically motivated people are willing to go very deep into their areas of interest. When Wikipedia started back in 2001, it was received with a lot of scepticism because of its openness to anyone who wants to contribute. Eight years later it is the most extensive encyclopedia ever created, covering the oddest of subjects because of its power to attract the best of 'professional' and 'amateur' experts in any field.

The point with expertise, then, is basically the dwindling distinction between professional and amateur. But that is not all. In the digital world of social networks and communities, new rules and practices for expert qualification that bear importance to the cultural sector are on the rise. As John Newbigin[20] said, "the world is filled with patients telling their doctor what kind of disease they have". Expertise increasingly involves conversation and negotiation rather than the showing of a degree.

Again, there are two sides to the challenges facing the cultural sector. First, artists and cultural institutions will have to find ways to build their reputation as experts in the digital domain as well. To achieve this, they will probably have to play by the rules of a new code of conduct for expert qualifications.

Second, being a professional expert amidst amateur experts brings on the challenge of working out new relations with all those other experts. One way to deal with that is the rather selfish approach of searching ways to tap into external expertise. Another solution might lead to more cooperative models in which the cultural sector may even help to grow expertise among the general public.

A broad range of opportunities arise when the cultural sector starts to think of its clients and visitors as participants and co-creators. For now it looks as though the cultural sector has experimented predominantly with attracting expertise and building communities of experts around a particular project or one's own institution. Relatively few cultural institutions are actively engaged as 'ordinary' participants in existing communities of expertise. For instance, few cultural institutions are actively and visibly contributing to Wikipedia. Apparently most prefer to have the 'amateur' experts come over to their own digital environment.

There are three discernable levels when taking a closer look at the levels of expertise in the cultural sector. The first level may be called 'specialised knowledge'; it consists of highly specialised knowledge obtained by people (either as professionals or hobbyists) spending a lot of time and energy on a particular topic. Often, they come together in communities of practice, "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al, 2002, p.4). The second level encompasses 'general knowledge', where the general public might have some additional knowledge about a particular topic. The third level may be called 'personal knowledge', which includes people's personal reflections (opinions, taste, experiences). This level can be quite important when it comes to meaning attached to information (see the next section on Purpose).

In practice the three levels may often be hard to separate. For instance, in The Netherlands the Royal Tropical Institute[21] has announced a collaborative pilot project with the Wikimedia Foundation. From November 2009 until May 2010 the institute hosts an exhibition on 'Marron culture in Suriname'. The museum will release 2,100 photos for use on Wikimedia community websites (including Wikipedia). The institute hopes that people (especially from people not involved with the Dutch Wikipedia) will contribute to providing background information on the culture of the Marron ethnic group. The institute will use relevant information from the community in the exhibition.

This example is targeted at both specialised and general knowledge. Given Wikipedia's character as an encyclopaedia, it is less likely that personal knowledge will crop up. It is altogether different when using the photo website Flickr, as Maaike Toonen found out. She was responsible for taking the Dutch National Archive to Flickr The Commons, which provides a 'no known copyrights space' where cultural institutions can upload pictures for free use, hoping to get exposure, useful comments and tags (keywords) in return. The first goal was certainly achieved, with more people taking a look at the digital collection than during a year at the archive in Den Haag. Through the tags, the National Archive[22] received valuable information on how people classify and associate pictures. From the comments, however, the National Archive predominantly yielded personal knowledge and opinions ('I like it!') that were not very useful to the museum's purpose of collecting specialised knowledge.

Although not quite obvious from these examples, expertise can very well be an important value proposition for new business models in the cultural sector. Kevin Kelly, co-founder of Wired magazine, has argued (2008) that business models have to be constructed around unique assets that cannot be copied in the digital age with its easy copying. Expertise is one of those assets, particularly when it involves 'embodied' or 'tacit' knowledge (skills, knowledge that is hard to code). In essence, the distinction between the professional (who has acquired a lot of tacit knowledge) and the amateur will remain relevant.

18 Taken from 2nd Online debate: "The collective: the amateur and the expert" with Lodewijk Reijs, moderator; Roel Klaassen, Premsela; and Vincent de Keijzer, Municipal Museum, Den Haag. http://www.labforculture.org/content/view/full/50531
19 Leadbeater, 2004, 2008; Shirky, 2008; Von Hippel, 2005; Keen, 2007. Web link: Royal Tropical
20 John Newbigin, Converging Pathways to New Knowledge Round Table, Göteborg; morning session, 28 July 2009.
21 Royal Tropical Institute: http://www.tropenmuseum.nl/
22 National Archive: http://www.flickr.com/commons

6 Purpose

" Platoniq is a group of cultural producers and software developers who have been operating in Barcelona since 2001. Inspired by the net and their ways of inhabiting it, we explore possible social uses of technology in a search for more effective strategies that lead to new forms of communication and training and to new forms of work and citizen participation. Our best example would be the Bank of Common Knowledge (BCK) project, which adapts the techniques of peer-to-peer media sharing to peer-to-peer education, allowing discrete chunks of information to be broken down and passed on via a network of volunteers.

BCK is a laboratory, a meeting point in the public space that seeks to improve social participation in order to recover knowledge and open culture. BCK seeks to empower those citizens who are conscious of their role as producers, and not only as users or consumers. BCK generates networks or communities of people with common interests who want to share their resources and knowledge. Trust and motivation (whether it is ideological, professional or if it stems from a desire to learn) are basic features for the development of these communities. In BCK, citizens can offer and demand knowledge, as well as recommend other people who could teach useful or interesting issues.

There are no barriers: all kinds of knowledge are valid, from academic to practical, as well as that knowledge obtained through vital experiences. BCK detects the abilities and knowledge from those who have something to teach, and attracts those who want to learn. Offers and demands shape the base of what we call P2Pedagogy, a series of methodological exercises for peer-to-peer mutual education.

In all cases, we see our activities as contextualised pilot schemes, and they are meant to offer an alternative to the idea of knowledge as the domain of academic or scientific communities — a notion that has been imposed as being the only true path. It's not. "

Olivier Schulbaum,
Editor in chief, Platoniq, Spain

In the new ways that people relate to information, in many cases, the information in itself seems to become less important. For years, 'content is king' was a widely adopted motto, especially after Bill Gates used it in 1996. Today, 'context is king' is more popular, stressing the fact that the same information is now frequently (re-)used in different settings with different meanings to different people. Internet journalist and blogger Cory Doctorow (2006) coined another interesting variation of the motto: 'Conversation is king. Content is just something to talk about.' His words draw attention to a widespread purpose of sharing content on the web, as a starting point for showing your presence, attracting attention and starting a conversation.

The Digital Youth Project by the MacArthur Foundation in the US (2008) shows that online behaviour among the younger generation boils down to just three motivations. Most young people use online media predominantly to extend their friendships. It's all a social thing to them. A smaller proportion of young people use online media to find out more about some (niche) area of interest. Finally, they occasionally 'geek out': visit specialised communities to deepen their knowledge, improve crafts, grow as an expert and build a reputation. In effect, online behaviour also signals new ways of learning, and adds new purpose to knowledge building and sharing.

The cultural sector does not stand alone with the challenge of new purpose. It can, in fact, be detected in other sectors as well such as education, creative industries and universities. Everywhere there is a struggle to understand and act upon shifting motivations for use of information and knowledge. In fact, there may be a role for the cultural sector in translating those challenges to other sectors in meaningful ways. An interdisciplinary approach is called for. After all, the cultural sector has always been involved in the 'business' of creating and clarifying its own purpose to society at large.

During the morning session of the Round Table in Göteborg, Gottfried Wagner, as Director of the European Cultural Foundation, asked "Will digital technology help to create a language that will help generations to understand one another?" That question is an example of how the cultural sector can shape the purpose of knowledge building under the digital paradigm, in an intergenerational way. And it is not simply an idea. For a long time, the cultural sector has been actively assigning meaning to information and communicating purpose to a broader public.

A good example comes from the Ontario Science Centre[23] in Toronto, Canada. In 2006, the centre opened its own channel on YouTube in an experimental search for meaningful ways to have an online presence. The rise of a phenomenon called 'meetups' triggered the idea for the so-called '888torontomeetup'. A meetup is a rather spontaneous meeting whereby community members get together in physical space. To the Ontario Science Centre, the concept seemed a perfect way to bring online activity and the physical exhibition space together. Some 450 people from all over the world attended the meeting on 8 August 2008 (hence 888). Many of these people would perhaps never have visited the exhibition space otherwise. Around half of the visitors were under 19 years old. The 888torontomeetup channel on YouTube became a great success, with an estimated 1,000 videos being produced around the event, 880,000 views and nearly 14,000 comments. Interestingly, over two-third of the user-generated content could be classified as 'social' content, featuring the participants. Only 1 out of 100 videos was classified as a 'science' video. To their surprise, the organisers found that the participants were mainly interested in each other — not in the centre. As such, the Ontario Science Centre acted as the context, providing space, content and a narrative.

The same logic appears to be a driving force behind this second example. Creative Spaces[24] is an online social networking tool developed by nine British museums and galleries (amongst others the British Museum and the National Portrait Gallery). Users can browse the collections of the participating museums and create a notebook. The notebook contains one's personal collection and allows uploading user-generated content. Notebooks can be shared with other users in groups. Again, the cultural institutions provide the context for people to meet and interact. The purpose, then, is closely related to giving people a reason to participate and get together.

Thorsten: "We are in a situation of hyperchange. Chaotic. You cannot always restart - there is a chance you'll 'die'. A new culture of sharing has to evolve in the digital domain. We [BpB] have published over 6,000 photos under Creative Commons licenses. Our next step is to build narratives around the material, provide context, and open it up to the 'amateurs'. (...) I'm sure we should not look at intellectual property rights too much as a commodity."

Jarmo: "We have to keep in mind the difference between data collected, publicly funded, and cultural content, which is the result of creative work."

Round Table, Göteborg, morning break out session, Thorsten Schilling, Bundeszentrale für politische Bildung and Jarmo Eskelinen, Forum Virium Helsinki.

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23 Web link: Ontario Science Centre (888torontomeetup) - http://www.youtube.com/user/888torontomeetup
24 Web link: Creative Spaces - http://bm.nmolp.org/creativespaces/

7 Trust

Classical wisdom says 'trust no one unless you have eaten much salt with him' (Cicero). In the anonymous world of the internet, the issue of what and who to trust affects everybody. Trust is crucial under the new paradigm and has a lot to do with the connection or disconnection of source and information. In the digital universe, a large pool of orphan information exists for which the source cannot be determined. But even for information that has a clear source, the overwhelming amount of information and number of (international) sources makes it impossible for users to know which sources can be trusted.

It is within this context that new practices of trust and reputation building come about. Ratings, recommendations, reviews and the like do to some extent complement or even replace the trust mechanisms of the 'analogue' world. Personal connections seem to be key, while people also tend to trust anonymous internet users with whom they share some explicit interests. For example, a recent survey by Nielsen (April 2009) shows that up to 90 per cent of all 25,000 respondents trust recommendations (whether online or offline) from people they know. For consumer opinions posted online, the score equals 70 per cent, meaning that the majority of internet users put high trust in peer-reviews when — for instance — booking a hotel or deciding whether or not to go to a particular theatre show.

Like most of the previous four themes, people are not just confronted with the issue of trust in the way they select and value information and sources, but they also play an active attributive role in how trust is built under the new paradigm.

Consequently, the challenge for the cultural sector is to get acquainted (and comfortable!) with new mechanisms of trust and with the role played by the general public. Also, the cultural sector will have to find ways to secure its own position as trustworthy. In that respect it is important to realise that trust works in two directions. It is not just about how the general public can trust the cultural institutions. Equally important is how the cultural sector can trust the general public — especially if that public is to have a more participatory role in processes of knowledge building and sharing. Some initiatives betray a belief that broad participation can never yield trustworthy results. For instance, Wikipedia now has a 'competitor' in Citizendium,[25] a 'wiki' that uses stricter rules for attribution.

Like expertise, trust could very well be a central value proposition for future business models for the cultural sector. Opportunities for the cultural sector lie in the area of helping the general public to select and value sources that can be trusted. It is important to note that, in the digital domain, trust is built on two extremely important pillars. First, conversation and interaction. In the digital world people want to know who they are dealing with. By the way, we do not want to give the impression that all internet users are suspicious of digital sources. On the contrary, the success of all kinds of malicious spammers shows that a lot of people are quick to trust others. In general, however, to gain trust means to communicate and interact with the other. It is something a growing number of cultural institutions (and artists) do; they not only 'listen' to others on the internet, but also engage actively via Twitter, Facebook and similar services.

Second, association is important for building trust. That is why in some online networks there is never much happening. As many participants in the Round Table agreed, in such networks "you go nowhere except to the next connection". That does not mean there is no value in joining the network. Being somehow visibly related (in the positive sense!) to a trustworthy party can help to be valued by others. Just have a look at Artbabble.org.[26] Started by the Indianapolis Museum of Art, it highlights high-quality video art and proudly presents associated artists. In theory, the cultural sector might even help others to build their own trustworthy reputation in digital space in future. Cultural institutions have a long tradition of being trusted places with high levels of expertise and knowledge. Therefore, there is a potential for adding value to the reputation of others that a cultural institution chooses to associate with. One online mechanism that might help has been popular in the media sector for quite some time: 'the editor's pick', by which the editor highlights a particular (trustworthy) contribution of a third party.

25 Web link: Citizendium - http://en.citizendium.org/wiki/Welcome_to_Citizendium
26 Web link: Art Babble - http://www.artbabble.org/
27 http://www.labforculture.org/content/view/full/50531

Tomasera: "How do you feel towards the fact that Flickr the Commons is funded by a private/commercial company, and that there is no guarantee that the massive efforts engaged to build this collaborative knowledge bank may not be annihilated if the interests/means of Yahoo change in the future?"

Maaike: "Many of them only have a limited description or just keywords."

Tomasera "We keep control of our own meta-data using our own systems. Flickr is an additional service. That's why we filter back the results from Flickr into our own image bank."

Lodewijk: "And that filter back is always fact-checked, I believe you mentioned."

Maaike: "After a while you get to know the people online as well, often the same people respond and help you. We do fact check the information, whether from our volunteers or from our online visitors."

Lodewijk: "So it is actually a relatively small group of people that are involved deeply?"

Maaike: "It depends on the theme. There is a small group of people that you often see, but there are also many, many people who only contribute once or twice. We do see that a lot of people mark our photographs as a favourite. So they do interact with the photos without necessarily adding metadata."

Conversation taken from the Converging Pathways debate series; 1st Online debate: "Knowledge building in the 21st century"[27], with guest speaker Maaike Toonen, Dutch National Archive.
This snippet features moderator, Lodewijk Reijs and one of the online participants 'Tomasera'.

8 The road ahead

"

Currently the cultural field is, in relation to digital and electronic developments, trying to digest the new and unknown effects of art & culture in an era of hyper-communication. In this era there is so much going on that there is an urgency to address topics such as the digital gap, the need for research and reconsideration of known values. Policy-makers should understand, adapt and act in order not to lose grip or worse, to miss the wave of innovation and new opportunities.

It is my opinion that the cultural field is obliged to take some steps in order to seize the opportunity John Thackera suggests: 'We have to enhance the ability of all citizens to engage in meaningful dialogue about their environment and context and foster new relationships between people who make things and the people who use them.' (In the Bubble – Designing in a Complex World, 2005).

Besides encouraging citizens, we have to bridge the gap, we have to understand what is happening with the digital revolution, what the meaning is and how can we get a grip on the effects of the massive usage of digital and online communication. Issues such as media literacy and Intellectual Property Rights should be on the agenda of policy-makers before the development of new pathways can be considered.

To understand and solve issues addressed in the Göteborg meeting, I would like to add:
 • a need for support to put 'practice into policy';
 • to urge the creative crowd of early adopters not only to bring the research to prototyping, but also to bring the research into a phase of a proof of concept, and even better to bring it to the market;
 • give better access to the policy-makers in order to make them understand the how to of media and intellectual property rights (IPR).

The international dialogue expressed in a media policy agenda like the Singapore Agenda[28] is a good example of a converging pathway to new knowledge. "

Floor van Spaendonck
Director, Virtueel Platform, The Netherlands

A double task lies ahead for the cultural sector. On the one hand, the sector has to master the use of digital technologies in the processes of knowledge building and sharing. On the other hand, the sector has to turn its strengths into practices that contribute to those processes. The five themes we presented may be good starting-points for reflection and dialogue relating to those two tasks.

LabforCulture feels strongly that neither reflection nor dialogue should be limited to the cultural sector. Additonally, the new digital paradigm affects everyone, whether in the 'have countries' or the 'have-not countries' practices of knowledge building and sharing in the digital world tend to cross national, sectoral and disciplinary boundaries. Information from one place can be accessed from the other side of the planet. People with completely different backgrounds, skills and crafts come together in online communities. It is in this sense that pathways to new knowledge are converging into transnational, cross-sectoral, interdisciplinary practices. Instead of going down solitary routes, cross-sectoral conversations should be taking place — and dialogue with policy-makers is crucial at the supranational scale.

Having said that, we feel that at least three major issues will be the subject of those conversations and dialogues. We will touch upon all three issues in the concluding remarks for this publication to offer directions for continuing the conversation about the implications of the new paradigm.

New roles for the cultural sector

First, experiments are necessary in thinking about new roles for the cultural sector. During the Round Table in Göteborg, one of the recurring statements was that 'proof of concept' is still lacking. In one of the online debates, Roel Klaassen (Premsela, Dutch platform for design and fashion) summarised this as 'demo or die'. Discovering the opportunities of the digital world and how people react to digital technologies demands small steps at a time. The Round Table participants could not help feeling that a lot of experiments do not yet move beyond displaying physical arts or physical collections online. In part this might be the result of a reluctance to take risks and to allow others to do more with arts than just admiring it.

However, it is not all just reserve on the side of the artist or cultural institution, regulatory impediments (like copyright restrictions) may also slow down experiments and innovation. Huge debates about copyright have already evolved. These will likely continue in the foreseeable future. That's fine. We need those debates. However, from the perspective of experimentally finding out what works and what doesn't work in the digital age, we

may also need pragmatic conversations about how — in the short run — to create small, open spaces for experiments within existing regulatory frameworks. The digital world is here now and it is moving on. Major interventions in regulatory frameworks may be needed. Some major international initiatives are already well on track, such as the Charter for Innovation, Creativity and Access to Knowledge (Barcelona Culture Forum, www.fcforum.net). However, we have to move beyond manifestos and calls for action. The cultural sector can't sit back and wait. Instead, it has to be pragmatic and act.

Reorganisation of resources

Second, the cultural sector should start thinking about how to organise resources for a more experimental and entrepreneurial way of engaging in digital culture. Relatively few artists and cultural institutions allocate a substantial structural budget to advancing their presence and participation in the digital world in an experimental way. In many cases resources for digital projects are allocated to the marketing budget. During the Round Table, Christopher Torch (Intercult/Culture Action Europe, Sweden) observed that for most artists "at best, the digital world is a marketing tool". We do not mean to say that the focus in terms of organising resources should be centred on digital culture. Yet, digital culture should be a more integral part in the allocation processes. To some extent, the same can be said about government funding and subsidies. This then, is also a consideration for the policy-makers. As Swedish journalist Oivvio Polite remarked at the Round Table: "If policy was funding — a lot of the times it boils down to funding — I'd like to see, at least in the Swedish example, more funding go to smaller initiatives. (...) There is nothing really specifically directed to pushing the online sphere as a cultural sphere. And I think that needs to happen."

Converging pathways

Third, relating to the cross-sectoral, interdisciplinary, intergenerational, 'inter-expertise', transnational character of how information and knowledge are built and shared under the new paradigm, we should start rethinking the role of the cultural sector beyond its own boundaries. An interesting observation from countries where the creative industries have been on the political agenda is the urge to create meaningful crossovers between the arts and other sectors. For instance, in The Netherlands subsidies ('Creative Challenge Call') were awarded to experimental projects to connect the creative industries (the arts included) with other disciplines. Although not necessarily digital in nature, most projects were inspired by the participatory character of the internet.

"What I do is run a venue called Wellcome Collection, and like everything the Wellcome Trust does it starts with medicine and science, but it quickly gets very caught up in a web of connections. I think what the Wellcome Collection tries to do is to champion the sense that medicine and health is too big and too important to be left to medics and scientists alone. So every project that we are involved with draws lines of connections: so we are a venue of art, design, history, archaeology, and magic. Almost anything you care to mention belongs in the Wellcome Collection, but always joined through some sort of line, curved or straight to the worlds of science, health and medicine." [29]

Ken Arnold
Head of Public Programmes
The Wellcome Trust, UK

Experiments with educational schemes (for instance Tate Online) show how the cultural sector creates purpose for and from bringing sectors and disciplines together. Why not focus on a more problem-solving approach for such initiatives? From a European perspective, the question then arises how the cultural sector may attribute to solving cross-sectoral, interdisciplinary and transnational European challenges like the innovation gap, the issue of migration, climate and environmental issues, demographic change and learning. We are just starting to reflect on these kinds of questions, and we do not pretend to have the full answer in store. Again, experimental approaches will be needed, starting on a small scale and in time travelling up to more profound ways of knowledge building and sharing. Yet, at least it is time to get started. There is real urgency, since people are actively interacting with new technology, online culture is a reality and cultural heritage is becoming available online, one way or the other. It is all part of the road ahead.

28 Singapore Agenda, http://www.virtueelplatform.nl/en/#2514
29 Ken Arnold, Converging Pathways to New Knowledge Round Table, Göteborg; morning session, 28 July 2009

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A starting-point for further reading (and experiences) will be the online environment for Converging Pathways to New Knowledge. It can be accessed at http://www.labforculture.org/newknowledge. The interactive online space offers background information, additional media, transcripts of the three online debates and media files of the Round Table in Göteborg. The list of references below only includes sources referred to in the text of this publication.

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For furthur information about the organisations who partipated and contributed towards this publication, please visit their websites:

+ Kennisland | Knowledgeland, www.kennisland.nl
+ LabforCulture, www.labforculture.org
+ Platoniq, www.platoniq.net
+ The Wellcome Trust, www.wellcome.ac.uk
+ Virtueel Platform, www.virtueelplatform.nl

Appendix

Participants of the Converging Pathways to New Knowledge Round Table Conference, hosted by the Röhsska Museet, Göteborg, Sweden on the 28th July, 2009.

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Joy Tang, Founder, oneVillage Foundation, Taiwan

Chris Torch, Artistic Director, Intercult, Sweden

Pier Mario Vello, Secretary General, Fondazione Cariplo, Italy

Gottfried Wagner, Director, European Cultural Foundation, The Netherlands

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Ana Žuvela Bušnja, Deputy Director, Culturelink, Croatia

In so many ways we are all experiencing what can be termed as a "digital shift". This shift is about much more than new online tools, greater efficiency, speed or relentless tides of information. Technology has changed how we think. The digital shift is about new ways of working, new ways of reflecting, new approaches to problem solving and, as a result, new ways of building and sharing knowledge...

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