

The Ecology of Culture

A Report commissioned by the
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Cultural Value Project



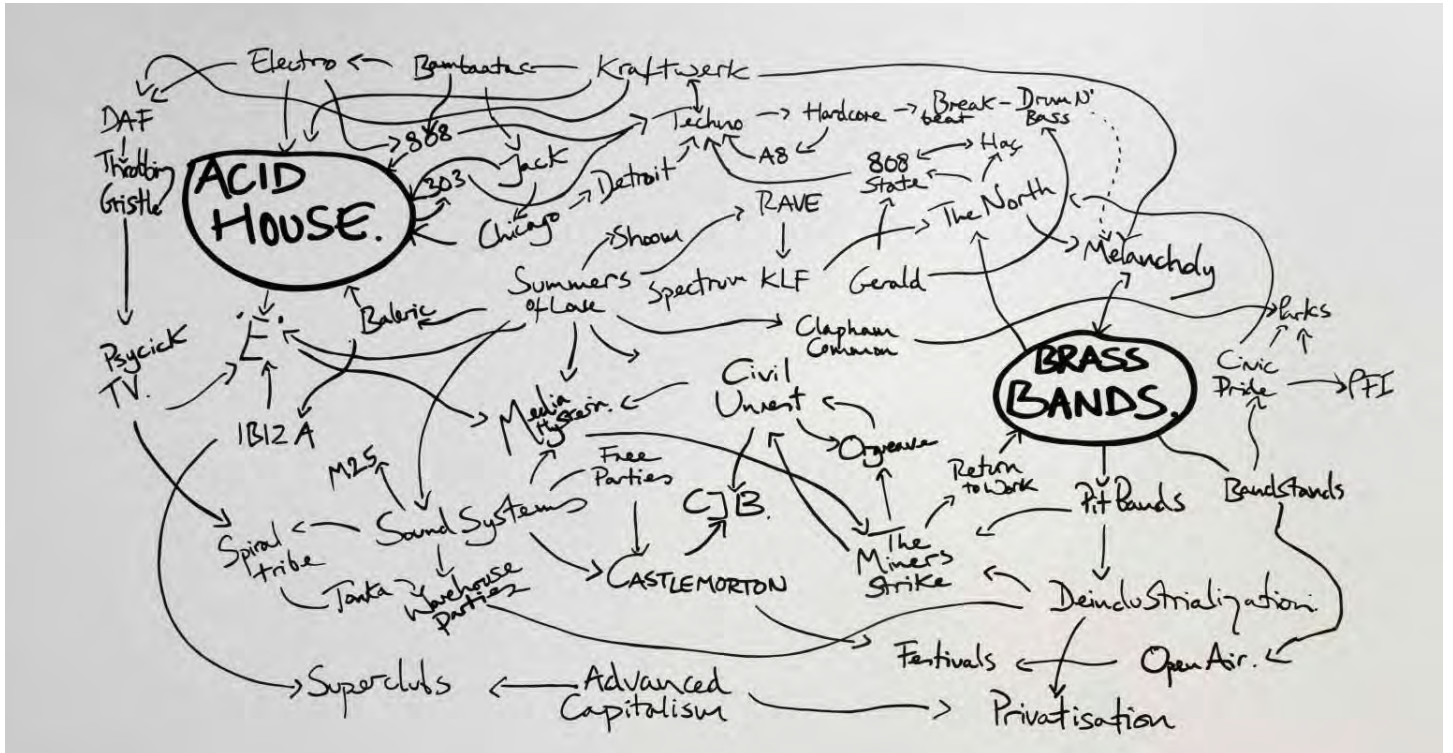
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Jeremy Deller
The History of the World, 1997
 (with thanks to the artist)

'I think the real strength of the creative industries in the UK is the fact that they've come together, that fashion works with film, that films work with video games, that video games work with advertising, with craft, and they are all working together in this very strong ecosystem across the UK.'¹

Nicola Mendelsohn, Facebook, VP, Europe, Middle East and Africa

'It is the configuration of relationships that gives a system its essential characteristics. Thus it is less helpful to define the creative economy by what it does, than to try to understand how it is organized... Creativity comes from being at a point of exchange.'²

Robert Hewison, Cultural Historian

1) Summary

This report examines the ecology of culture: 'the complex interdependencies that shape the demand for and production of arts and cultural offerings'³.

It is based on evidence from interviews and a literature review that show the UK's cultural ecology is intensively interlinked, with many feedback loops and systemic strengths, but also points of vulnerability.

The starting point for the conversations held with interviewees was the suggestion that the ecology of culture could be conceived as three highly interactive spheres: publicly funded culture, commercial culture and homemade culture.

Culture is often discussed as an economy, but it is better to see it as an ecology, because this viewpoint offers a richer and more complete understanding of the subject. Seeing culture as an ecology is congruent with cultural value approaches that take into account a wide range of non-monetary values.

An ecological approach concentrates on relationships and patterns within the overall system, showing how careers develop, ideas transfer, money flows, and product and content move, to and fro, around and between the funded, homemade and commercial subsectors. Culture is an organism not a mechanism; it is much messier and more dynamic than linear models allow.

The use of ecological metaphors, such as regeneration, symbiosis, fragility, positive and negative feedback loops, and mutual dependence creates a rich way of discussing culture. Different perspectives then emerge, helping to develop new taxonomies, new visualisations, and fresh ways of thinking about how culture operates.

2) About this report

This report has been commissioned by the Arts and Humanities Research Council as part of their Cultural Value Project, which is led by Professor Geoffrey Crossick. It adopts Markussen's definition of the cultural ecology as meaning 'the complex interdependencies that shape the demand for and production of arts and cultural offerings'⁴, and argues that examining culture as an ecology rather than as an economy offers a better approach, because it provides a comprehensible overview that does not privilege one type of value – financial value – over others that attach to culture. The report's case is based on interviews with 38 cultural practitioners and experts from across the cultural field, chosen to represent a wide range of perspectives and experience. They include people working in the commercial and publicly funded sectors and the voluntary arts, in the arts funding system and arts education. A variety of cultural forms are covered, including, *inter alia*, the visual arts, dance, fashion, choral music, popular music, and film. The interviewees are listed in the Appendix, together with a brief description of their organisations. In addition, a literature review was undertaken to examine interactivity, flows and influences across the cultural world⁵.

3) Introduction

Many reports that have looked at the cultural sector (e.g. Holden 2007, Smith 2010), have called for comprehensive surveys to be done, often with a view to establishing connections between publicly funded culture and the creative industries, and sometimes underpinned by a desire to justify public funding of the arts on the grounds that such investment eventually leads to commercial profit.

For example the 2013 report *The contribution of the arts and culture to the national economy*, written for Arts Council England by the Centre for Economics and Business Research (CEBR) concludes: 'This report has identified some of the ways in which arts and cultural organisations provide support to creative commercial industries, and found some anecdotal evidence for these. Future research could attempt to map these interactions and their outcomes systematically. A survey of creative businesses to identify the extent of such interactions and their perceived benefits could help establish the value of these activities across the sector.'¹⁶

The first thing to note about this type of endeavour is that it is overwhelmingly concerned with the supply-side of culture – what the producers are doing and how they are funded – and often neglects the important role of audiences, participants, and the public as consumers, and therefore as shapers, of the cultural ecology.

The second issue is that attempting to produce a comprehensive map of the whole cultural sector is over-ambitious and unlikely to be helpful; maps are always incomplete, always out of date; and 'the map is not the territory'¹⁷. The realism contained in Aristotle's *Nicomachean Ethics* needs to be applied: 'One can expect only as much precision as the subject matter allows.'

Although totalising accounts of culture may be impossible, an ecological approach to the subject can nevertheless provide an understanding of the dynamic ways in which cultural activities affect each other and are linked together. Just as in the natural world we do not know everything, yet can study how systems work, so too in culture we can grasp the totality without needing to understand all the minutiae. In this report I have therefore sought to examine the many ways in which each part of the overall cultural world co-operates and/or competes with, influences, and affects the others, rather than attempt to explain the detail of how, for example, the theatre sector or the video gaming industry operates. What emerges is a picture of complexity that makes the phrase 'each part of the overall cultural world' too reductive and atomised. There are no parts, only ways of seeing things as parts. The connections, symbiosis, feedback loops, and flows of people, product, ideas and money are so dynamic and intense as to defy complete description. But a deeper understanding of culture can be achieved by applying the multiple perspectives that an ecological approach demands:

a) The first perspective is that culture consists of moments when people and things come together in concatenations, 'flowerings', events and *assemblages*. Take, for example, a project at Sage Gateshead that involves a world-famous percussionist, an avant-garde band based in Berlin, students, professional musicians, audience members, and a video games company, housed in a landmark building – a collaboration that involves all sorts of financing models, motivations, disciplines, equipment, locations, and personal histories that interact and combine to produce a creative moment that will itself have reverberations and repercussions.

The idea of culture as temporary phenomena with deep roots and complex enabling factors is a strong theme of this report, reflecting both Bachmann et al's observation that '...an overall ecosystem is viewed as a pattern of coordination amongst all the lives within it.' (Bachmann et al 2012.5) and Crossick's argument that

'...the need is for a system to create spaces in which something can happen' (Crossick 2006.17).

b) The second approach is that of looking at the ecology of culture as a regenerative life cycle. Many acts of creativity compete for attention; most fail, but some flourish and then, through a process of curation, collection and conservation become established, and provide the makings of the next act of creativity.

c) Time is an important dimension in ecological thinking. There are slow changes in culture, such as public schools gradually moving from being bastions of philistinism as they were 50 years ago, to become the contemporary breeding ground for many chart-topping bands and Hollywood actors (this has happened because rich parents – some of them rock stars themselves – understand where money is made in today's economy). There are also flash-in-the-pan events such as pop-up choirs that, unrecorded, are gone in an instant. All cultural happenings have deep roots, and some have lasting repercussions. The cultural dynamism of today rests on a global inheritance going back thousands of years; and decisions taken now about things as various as the benefits system, music in schools, and licensing will affect both the near and distant future.

d) Ecologies require classification, and a major theme of this report is that the taxonomy of culture is changing. Thinking about culture in terms of money is the dominant approach in contemporary policy and politics (though not in society more generally). Another familiar way of 'cutting the cake' of culture is by referring to artforms as different means of expression: poetry, film, theatre, music and so on. McLuhan tells us that the medium is the message, so we can equally describe culture as 'TV, cinema, concert hall'. But none of these existing taxonomies is adequate. We need to put all of these and more together, in order to see culture in terms of linked phenomena – as the artist Jeremy Deller does in the piece shown at the beginning of this report, which shows the connections between brass bands and the phenomenon of acid house. The cultural ecology does not only consist only of human actors. It should be seen as including inanimate objects like concert halls and movie cameras that can be considered as 'actors' in their own right⁸. Culture happens when people, with their ideas, skills and abilities, find the right opportunities. In turn, opportunities are enabled by things: money, equipment, streets, buildings, objects. The opportunities are also aided or stifled by politics and policies. A cultural happening combines people, places, ideas, instruments, paint, and so on, and culture can only be explained by putting together things that were once thought of as different, such as – to use Deller's example – Clapham Common, melancholy and privatisation.

The taxonomy of culture (and hence the way that is thought of as a whole ecology) is being affected by technology, which is changing both the role of media (crudely put, theatre audiences over 40 read newspaper critics; the under-40s consult blogs) and creative possibilities (drawing on i-pads; creating an audience through Youtube; collaborating by Skype). Culture in the future is more likely to be described in terms of fluid movements and startling shifts: someone who creates followers through one activity might follow it up not with a similar activity, but a different activity with the same followership. 'Likes' and 'Followers' will come together and fall apart, creating temporary cultural moments in new ways, and a new language is already emerging to describe them: pop-ups, mash-ups, Instagram.

4) What does the 'the ecology of culture' mean?

The term 'cultural ecology' has been used in the discipline of anthropology since the 1950s; it means the study of human adaptations to social and physical environments. But the use of the word ecology in relation to the *cultural sector* is a more recent phenomenon. Two reports from 2004, published almost simultaneously on both sides of the Atlantic, but written without any contact between the authors, employ 'ecology' as a metaphor (Holden (2004), Rand (2005)). These may not be the first linking of ecology with the cultural sector, but after this date the idea that the cultural sector can be thought about in ecological terms became more widespread.

John Knell's *The Art of Living* from 2007, uses the terms 'funding ecology', and the 'arts and cultural ecology' liberally, and in 2008, the DCMS report *Our Creative Talent* refers to the 'arts ecology'. In February 2011 the UK culture minister Ed Vaizey gave a speech entitled *The Creative Ecology*, which he defined as 'an alliance between the subsidised and commercial arts; the professional and the voluntary arts; and the arts and the creative industries'. He went on: 'The great strength of the arts is its ecology – subsidised arts feeding the commercial arts, the voluntary arts and the amateur arts ensuring the creative spirit is present in every corner of the nation.'

More recently (February 2014), Arts Council England used the term 'cultural ecology' in a paper entitled *This England: How Arts Council England uses its investment to shape a national cultural ecology*. In the introduction, ACE's chief executive, Alan Davey, defined the cultural ecology as 'the living, evolving network of artists, cultural organisations and venues co-operating in many fruitful partnerships – artistic, structural and financial'. He added: 'The metaphor of an ecology, of a living, balanced environment, expresses how nothing happens within this system without its impact being felt widely.'

When asked the question 'What does the ecology of culture mean?' interviewees for this report responded with essentially one of two views, depending on whether they defined culture in a broad sense (as everything that people do to create meaning), or saw it as something narrower (synonymous with arts practices).

Many interviewees gave succinct views on what 'the ecology of culture' means to them, such as 'how the arts and creative industries interact and how they influence economic and social wellbeing. How the different parts fit together' (Thomson from the Barbican); 'Bricks and mortar and people' (visual artist Salter); 'Anything that comes from an idea: art, literature, music, film, narrative, design-led manufacturing' (film producers Hoad-Robson and Walker); 'high art or urban culture or medieval culture' (Designer Conran).

Tate's Samuel Jones responded to the question by linking culture, society and politics together: 'You cannot participate in society without a cultural voice. Culture is a form of record that is created by choice. A healthy cultural ecology is an environment where people feel confident and able to contribute to that record, where they can feel part of it, and find an audience. This means that *people* create culture, that subcultures can thrive, and that you cannot run a society with a fixed idea of what culture is. At any given moment, certain elements of the cultural ecology will be prized above others. In the seventeenth century it was tulips, now it's Jeff Koons. But if the state valorises just one thing, you have a problem'.

NESTA's Hasan Bakhshi was attracted by the idea of self-definition. He said that the cultural ecology includes people who self-identify as cultural actors, or whose primary motivation is cultural expression and the production of meaning through symbols: 'This works better than the idea of cultural ecology as cultural forms, which privileges the known and existing over the emergent.' Simpson from Voluntary Arts concurred that self-definition is important, and pointed out that people choose their descriptions carefully: artist, participant, professional musician, amateur, volunteer, designer, supporter and so on.

In view of the lack of agreement about what 'the ecology of culture' means, it comes as no surprise that Arts Council England's Russell believes that the 'whole field of cultural ecology is poorly understood. There is assertion, there are expectations, but little actual evidence.' He added that few lessons have been learnt so far that can affect policy and investment decisions: 'even the question "what would be helpful?" is at an early stage'. ACE is actively researching investment flows in the performing arts, and how artists' ideas move into the commercial world, and looking at European case studies: 'It's a question not just of what we find out, but how we find out'.

One thing that is clear is that there are microcosms of activity within culture, and that drawing parallels between one area and another is dangerous, because, despite their many interconnections, cultural sub-sectors operate in very different ways. Each artform has its own micro-ecologies. Smith, from media and entertainment company Ingenious, gave a full and clear explanation about how studio film and indie film have different financing and operating practices and models; there is little read-across between the two. Brownlee said that: 'The more I experience theatre the more complicated it gets. In the UK it is very complex and blurred and inter-dependent.' Hughes from the BBC Symphony Orchestra

sees orchestral music as a world of 'professionals, freelancers, agents, money made from broadcasts, performances, soundtracks, CD's, digital rights, education work, film scores.' Some things however do not change; Thomson noted that: 'Each artform sees itself as the most neglected.'

Given these caveats and disparate views, is the concept of 'the ecology of culture' useful? Ann Markusen, the lead author of a 2011 paper, *California's Arts and Cultural Ecology*, puts the case in favour, and provides a helpful definition of cultural ecology:

'An arts and cultural ecology encompasses the many networks of arts and cultural creators, producers, presenters, sponsors, participants, and supporting casts embedded in diverse communities. Forty years ago, scientists and policymakers realized that treating plants, animals, minerals, climate, and the universe as endlessly classifiable, separate phenomena did not help people understand or respond to environmental problems. So they created the integrated field of environmental ecology. In similar fashion, arts producers, advocates, and policymakers are now beginning to strengthen the arts and cultural sphere by cultivating a view of its wholeness and interconnectedness... We define the arts and cultural ecology as the complex interdependencies that shape the demand for and production of arts and cultural offerings.'⁹.

5) The Three Spheres of Culture

The starting point for the conversations held with interviewees was the suggestion that the ecology of culture could be conceived as three highly interactive spheres: publicly funded culture, commercial culture and homemade culture (the order in which the three spheres are mentioned changes throughout this report, reflecting their equal importance). The three spheres model is a concept proposed and more fully developed in Holden 2008.

First there is the publicly funded sector, where the production or maximisation of public goods is assisted by support directly from the state or from philanthropists (where the state foregoes tax income). Next there is the commercial sector that operates through the marketplace. Here, while individual 'products' such as films or songs may fail the test of market viability, overall the sector manages without direct state support. Finally, there is the 'homemade sector', where people make culture for themselves and fund it themselves. This extends from traditional 'amateur' and voluntary activities such as am-dram and community choirs through to the uploading of self-produced music and images onto websites.

The interviews and literature made it clear that this framework is a useful starting point for an exploration of the ecology of culture. As Alex Beard from the Royal Opera House observed: 'It reflects economic fundamentals. Money is after all how humans keep score, and it's a philosophical construct as much as anything else.'

But the framework also has disadvantages. It privileges the economic, whereas 'money is not the only form of measuring value, and measuring is not the only form of articulating value'¹⁰. Furthermore, as explained in more detail below, it is impossible to draw stark lines between the three spheres: many publicly funded organisations pay a substantial part of their own way and are highly entrepreneurial; public investment and tax incentives underpin much of the commercial sector; and homemade culture is a heterogeneous field that displays many motivations and forms of reward. Having said that, where the money comes from has its significance. Anthony Sargent from Sage Gateshead pointed out that: 'the dynamic is different in different business models – there is a kind of direct simplicity in the commercial world, whereas funded and homemade culture are 'values led' rather than 'finance driven''. He added that: 'there is a risk with public funding that it can provide a life support system for something that should change. Paradoxically, dependable supplies of public money can take away the public interest.'

The former Executive Director of the National Theatre Nick Starr has made a different point about the strong connection between finance and culture: 'a money decision is an art decision and an art decision is a money decision...the two things are completely inseparable'¹¹.

Interviewees noted the following characteristics of the three spheres:

a) Publicly Funded Culture

The recent House of Commons Select Committee on Culture, Media and Sport's report *Work of Arts Council England*, lists 'four primary sources of public sector funding for the arts' (with the relevant sums given for England in 2011/12): Local Government (£439m); DCMS grant in aid (£493m); Arts Council England grant in aid (£393m); Arts Council England Lottery (£211m). The CEBR report *The contribution of the arts and culture to the national economy* was written for the Arts Council in 2013 and it looks at six art forms – theatre, dance, literature, visual arts, music, combined arts – and museums. Among its headline findings are that businesses in the UK arts and culture industry generated an aggregate turnover of £12.4bn in 2011 and contributed an estimated £5.9bn of gross value added (GVA) to the UK economy, also in 2011. The arts and culture industries employed, on average, 110,600 full-time equivalent employees in the UK and 99,500 in England during the period 2008-2011. This represents about 0.45 per cent of total employment in the UK and 0.48 per cent of all employment in England.

There is an important role for the publicly funded sector, and particularly the larger, long-established and better-funded institutions, as guardians of assets and tradition, a point made by Roly Keating of the British Library and Jonathan Williams of the British Museum. Keating described one of the BL's roles as 'physical and digital custodianship', and described the logistical task of cataloguing and preserving all types of records including ephemera. In this way the funded sector not only supports research and innovation well beyond the cultural sector (for example the BL provides free access to information and data for businesses, and the expertise to interpret them), but also provides a degree of stability within the cultural sector, as well as a set of standards that are subject to challenge, contestation, and development.

Many spoke of the role of public funding as providing a base on which the rest of culture is built. Brownlee, from the Society of London Theatres said that 'the very early end of the process renews the industry and diversifies the base'. The BBC Symphony Orchestra's Hughes said that: 'Public money is seed money, it sustains the ecology. Patronage has always sustained new work from Bach to Wagner to Stravinsky. Now the BBC Symphony's remit is to be distinctive and different,

performing new music', as shown by the high proportion of new commissions and new artists in their programme.¹²

Public funding also supports livelihoods. Tambling from CCSkills explained how publicly funded education work enables early careers, and Salter described how the availability of part-time teaching in higher education – which is now under threat – has sustained many artists' livelihoods, including her own.

One of the most frequently expressed ideas was that public funding enables research and development (R&D) for the whole sector. This is an important issue, pinpointed by Bakhshi: 'there are lots of reasons for public funding, not just market failure – the key question is who funds risk-taking in a creative ecosystem.' But what does R&D mean exactly? It is certainly the case that the emergence of new content or product in the publicly funded sector is inextricably bound up with artists' and technicians' career development. Culture is created by people, and as Crossick notes: 'the way that knowledge is constituted within and for the creative industries makes it [i.e. the creative industries] unusually people-centred.' (Crossick 2006.11)

This entanglement of people and 'product' was clear from the response of Henderson of the Royal Central School of Speech and Drama (RCSSD). When questioned about the role of the funded sector he responded that it is for: 'R&D, artists' career development and investment in the future of our industry'. He added that drama schools provide the R&D for the R&D of the funded sector; 'they are the first wave of creativity that feeds the industry'.

Erica Whyman from the Royal Shakespeare Company described two sorts of R&D going on in the funded sector, both necessary to the wider ecology. The first relates to the creation of commercially successful shows such as *Matilda* that would not have been developed in the same way by the commercial sector. A second type of R&D is where ideas break new ground. These may be troubling and experimental, involving complex and subtle questions, and attract small audiences. But they stimulate debate, change audiences and artists, and can cause chain reactions that reverberate and affect wider society. Whyman cited the work of Mark Ravenhill, who 'has moved from the periphery to the centre', and Maria Aberg, who worked with singer and Mercury Prize winner Laura Marling on the RSC's recent *As You Like It*.

Considerable attention is paid to an examination of funded culture as R&D in *Not Rocket Science: A Roadmap for Arts and Cultural R&D* (2010) by Hasan Bakhshi, Radhika Desai and Alan Freeman, who set out a ten-point blueprint for arts and cultural R&D predicated on public funding.¹³ Another paper, *Publicly Funded Arts as an R&D Lab for the Creative Industries?* (Albert et al 2013), focuses on careers in the theatre. It sets out to discover whether the commercial sector enjoys additional economic benefits from the investment made in individuals within the funded arts, and concludes: 'The report provides some quantitative evidence to support a widely held belief that public subsidy in UK theatre provides an important space for innovative and challenging work to be created...Public investment in theatre...generates additional value in the wider creative economy, but in ways that can be complex to track.'¹⁴

Although the term R&D is used widely in relation to funded culture it is problematic. First, it begs a very large question, which itself needs to be the subject of detailed research, about the ability of the parts of the cultural sector to learn from each other. In addition, by adopting a term commonly used in business and science, it suggests that culture works in a similar way, with a linear progression from laboratory to application. But as Crossick notes: 'Cutting-edge new knowledge is generated within the process of production rather than elsewhere and then transmitted to it. There is often no separation, conceptually or practically' (Crossick 2006.10). What really matters is the combining of disparate elements that learn from each other by engaging in creative acts together. The model is the rehearsal room, not the science park.

b) Homemade Culture

The sphere of homemade culture is defined by the fact that people do not get paid for their work, (notwithstanding the fact that the organisations that they are working within, such as volunteer museums or community choirs, may receive grants or sponsorship). Homemade culture is a heterogeneous area, encompassing the 'amateur arts', 'voluntary arts' and the use of internet platforms to share content that is produced without financial reward and is free to the user. Homemade culture involves huge numbers of people, with around 15% of the population involved in organised amateur arts¹⁵. Simpson of Voluntary Arts spoke of at least 63,000 groups across the UK and 9 million individual participants. *Our Creative Talent: the voluntary and amateur arts in England*, is a good source of facts and figures, such as that in 2006/07: 'amateur groups put on 710,000 performances or exhibitions, which attracted 159 million attendances. On average, a voluntary and amateur group attracts 220 people to each performance or exhibition. 564,000 people had management roles in voluntary arts groups.' The report concludes: 'Formally organised voluntary and amateur arts groups are a crucially important part of the arts ecology and account for almost one fifth of all arts participation in England...The sector plays an important role in sustaining cultural traditions and developing new artistic practice...Over the last five years, 34% of amateur groups have had members who went on to become professional... The relationship between the amateur and

professional sectors is of vital importance and the two sectors are mutually supportive' (Dodd et al 2008:10-11).

Simpson explained that the edges of homemade culture are fuzzy: 'should it include cooking? Gardening? DIY?' Homemade cultural activity has been boosted over the last decade by mainstream broadcasting encouraging choirs and dancing, and by the internet making it easier for people to find and join groups, to produce their own work, and to share it.

Homemade culture speaks to the heart of individual and communal identity. As the music promoter and folk musician Laurel Swift puts it: 'There's a naturalness to Morris dancing, an idea that you should be able to walk off the street and do it. In some places, you're born into the Morris community. It's not a question of dancing because you want to. It's part of the identity.'¹⁶

Sargent made a distinction between two types of 'amateur'; the first where 'the performers are not getting paid but in no other sense are they amateur.' Groups such as the London Symphony Chorus aspire to and achieve the highest standards, equivalent to those found in the professional sector, whether funded or commercial. Simpson cited many examples of this type of amateur, including the Northampton Symphony Orchestra and Birmingham Symphonic Winds: 'BSW has performed over 325 different pieces of music, including 18 premiere performances, in more than 25 different venues in the UK, USA and Europe.'¹⁷ Simpson added that: 'In the case of brass bands¹⁸, the best are amateur.'

The second type of amateur activity identified by Sargent is where the reward is in the doing of it, and the social life, rather than in the excellence of the performance, even though high standards are often striven for and attained. From the point of view of venues, the first type (quasi-professional) can be part of the venue's own core programme, but the second type tend to hire venues rather than be booked by them.

The distinction between these two types of 'amateur' is valid and useful, and Matarasso points to the work of the Canadian sociologist Robert Stebbins who 'coined the phrase "serious leisure" to distinguish the work of committed amateurs from those for whom their engagement with art is a more casual entertainment'¹⁹. But the line between the two is by no means strictly drawn, as Matarasso's own detailed description of the West Bromwich Operatic Society in *Where We Dream* shows. There is no tension between the conviviality of rehearsing and performing and the achievement of high standards of performance: a 1954 Programme calls that year's event 'An amateur production with professional standards'²⁰. Matarasso also points out, as does Simpson, that amateur societies often rely on the time and energy of a few highly committed unpaid individuals, some of whom are running complex organisations with big budgets, and who may be applying for grants for specific activities from local authorities, trusts, ACE or the Heritage Lottery Fund.

The interviews revealed that what used to be thought of as 'amateur' – with all its negative connotations – really no longer holds. New ideas can be generated and acted on anywhere in the cultural ecology. Whyman pointed out that the small homemade influences the funded mid-scale, which influences the large scale which influences the commercial – and vice versa.

Virani of Queen Mary, University of London, made the important point that in the old paradigm people worked in a bank or a factory and did amateur things in their own time. The new paradigm is that 'employers encourage the amateur both institutionally and morally.' This was confirmed by Walker of Brickwall, a company where staff pursue their own creative projects in work time, and use the company's resources and people, 'because it raises everyone's game'.

A further recent development in the world of homemade culture was pointed out by Brownlee, who believes that more local authorities will encourage volunteers to run theatres and venues, just as has happened with public libraries. Examples of cultural facilities already being run by community groups include Workshops and Taunton.

c) Commercial culture

The commercial cultural sector is defined by the fact that it exists without direct public investment, and individuals and organisations must make an overall profit in order to survive. Taken as whole, this part of the cultural sector is of great economic significance. Using 2014 DCMS estimated figures for the creative industries as a rough proxy for commercial culture (thus including some parts of the funded sector, but excluding some aspects of software) in 2012 it accounted for 5.2% of GVA and employed 1.68 million people²¹. But the importance of commercial culture stretches well beyond its financial impact. Most people choose to listen to, watch, read and enjoy commercial culture on a daily basis. These practices are an integral part of life, and major factors in how identity is formed and understood.

Nor should the economic importance of commercial culture be taken to mean that the pursuit of profit is the whole story: many artists working in the commercial sphere seek high artistic standards and/or social goods. As Sargent said, 'There is no alignment of the quality of ideas and the financial base that supports them. Some people value the security

of public funding, some prefer working without the administrative burden of public funding but therefore also without that safety net. Sage Gateshead, like most of the funded sector, *is* in the commercial world. It aspires to make a surplus to plough back into the work. Similarly many people in the commercial world want to make things with elegance and style not just to generate profits.'

When projects bring the funded and commercial together 'it is very exciting and rich. The commercial and the funded combine in the Director of the National Theatre Nicholas Hytner's phrase, quoted by Sargent, that 'the National Theatre does not exist to sell tickets; it exists to make work that it's worth selling tickets for.'

As in the funded and homemade spheres, the commercial sphere is complex at a micro-level. Virani thinks that the label of 'the cultural and creative industries' is a 'crude umbrella. Many sub-sectors don't talk to each other; public and private combine in multiple ways. The only common factor across the creative economy is that work is precarious, especially at the early stage.'

d) Mash-ups of funded, commercial and home-made

In reality all of the three spheres described above operate as mixed-economy models. As Smith writes: 'the true picture on the ground is more often one of a complex intermingling of market and non-market arrangements.'²² This convergence in turn prompts Sargent to ask for specificity in the use of language: 'Does commercial mean better, quicker, business-like systems, or more profitable commercial shows?' For Kampfner of the Creative Industries Federation: 'The public sector should be more entrepreneurial and the commercial world should be more civic. But the battle is mostly won – there is very little of the old caricatures left... it is in everyone's interests to produce a healthier civic space.'

In summary therefore, although the commercial, funded and homemade spheres have different characteristics, the sources of income for individual organisations or activities are not as distinct as the headings suggest. The table below shows sources of direct income that different interviewees mentioned, but their relative importance to individual organisations varies considerably.

Funded	Homemade	Commercial
Paying public	Participants	Paying public
Grants from Public agencies	Supporters	Tax incentives
Local authorities	Paying public	Investors and angels
Philanthropy and sponsorship	Local authorities	Business-to-business transactions
Earned income from IP, rental of space, provision of services and product sales.	Public agencies	Banks
	Philanthropy and sponsorship.	Local authorities

The convergence and interrelatedness of the three spheres is increasingly being recognised. The recent formation of the Creative Industries Federation, that is 'bringing together commercial companies and publicly funded cultural organisations, think tanks and education bodies, large and small, across the whole country'²³, is one manifestation of this trend.

6) Ecological and economic approaches to culture

The 'three spheres' model provides one way of looking at the whole of culture, but it does not adequately capture the complexity of the cultural ecology. It is rooted in differences that are based on income sources, and, as CCSkills' Tambling rightly observed: 'seen from the point of view of practitioners, funded/commercial/homemade is just a funding construct'. Both freelance conductor Gibson and Voluntary Arts' Simpson pointed out that in the performance of a work, it would be possible for the creator, performer and administrator to come from any of the three spheres. For example a play written professionally by Alan Ayckbourn could be performed by a mixed cast of amateur and professional actors in a volunteer-run company production taking place in a hired theatre space. An amateur visual artist could show work in a local authority arts centre that is operated by a company under a commercial contract. Artists themselves may choose different methods to achieve particular results. Brownlee noted that: 'The not-for-profit and commercial sectors of theatre are very permeable; a producer might decide on either route', and he mentioned Eleanor Lloyd and Patrick Noble as examples.

Economic approaches to culture privilege the creation of financial value. They look for ways in which funded and amateur activity support the creative industries, the commercial sector, and the economy as a whole. The concept of 'spillover' typifies this approach, and has been used in a number of significant books and reports to describe the way that culture works. 'Spillover' proposes that activity in an artistic core of funded culture stimulates activity in the creative industries and from there flows outwards into the wider economy. The idea features in the writing of David Throsby²⁴ and gained currency in the UK when it was adopted in the Work Foundation's 2007 report, *Staying Ahead: The Economic Performance of the UK's Creative Industries*. The concept is central to the Centre for Economics and Business Research's 2013 report *The contribution of the arts and culture to the national economy: An analysis of the macroeconomic contribution of the arts and culture and of some of their indirect contributions through spillover effects felt in the wider economy*.

In addition, Smith has written that: 'By mapping the flow of funds in the whole cultural economy and analysing the multiplier effects of the "spill-overs" of funding from the arts to tourism, film, games and other adjacent sectors, we should then be able to provide a measure of substantiation to the otherwise largely rhetorical claim that arts subsidies enable "pathways to talent" and invigorate the broader economy. Then, also, we would be in a better position to begin to talk more credibly about "investment"²⁵.

There are a number of reasons to question the validity, and utility, of the 'spillover' thesis. First, the notion of spillover defines a cultural 'expressive' core that is then commercialised through the creative industries. As this report makes clear, no such division should be drawn – creativity and expression flourish throughout the cultural ecology and can be exploited for economic gain anywhere within it.

Secondly, spillover implies a uni-directional movement of ideas, people or content from one part of culture to another, whereas the interactions are much more various as Albert et al confirm: 'The relationship between the publicly subsidised and commercial theatre is more complex than a simplistic treatment of spillovers would imply.'²⁶

Third, as cultural historian Hewison points out, the spillover model puts the (phallic) artistic creator at the centre, whereas 'the artist is really at the periphery. Spillover is a romantic and hierarchical conception of value – because it starts with the expressive (romantic) and moves to the economic. More than that, culture does not come into being through individual creation; it is a communal endeavour.'

Particular individuals instigate work, but culture is only ever realised through the skills of many, and only becomes 'culture' once it is communicated and received. Seeing culture as a communal endeavour, involving all the elements of creation, communication and reception, embeds the artist in fact not at the centre, nor at the (equally romantic) periphery, but in a social network.

Economic approaches use money as the measure of culture, and in doing so they become teleological, assuming that the point of culture is financial gain. But culture is a much broader endeavour than this, involving the making of meaning, the expression of identity, and the construction of social lives as well as (sometimes) the pursuit of profit.

It is therefore a category mistake to treat culture only as economy, because the cultural ecology operates in ways, and produces effects, that transcend monetary transactions. The mistake has real consequences. One is that concentrating on only monetary valuations of the system (which the Treasury's Green Book methodology demands, in that it requires all types of value to be expressed in monetary terms²⁷) inhibits interactivity, and is likely to reduce the creation of both financial and cultural value. Another is that non-monetary flows in the ecology are neglected whereas in fact, as Crossick explains: 'without an extraordinary level of free-sharing, value cannot be formed'²⁸. The cultural ecology cannot be understood without taking into account free labour and emotional rewards.

Treating culture as an ecology, not only as an economy, changes the viewpoint:

- a) In the first place, an ecology is explicitly non-hierarchical: one part does not exist to serve another. In a natural ecosystem, microbes and large mammals are equally important because neither could exist without the other. This research shows that, in a similar manner, all parts of the cultural system are interdependent and, in this sense equal, and equally valuable: all parts are needed to make the whole.
- b) The phrase 'the ecology of culture' implies that culture is a communal phenomenon, with disparate elements coming together to produce a whole; where 'audiences' create culture just as much as do 'artists'. Culture is a social process.
- c) The concept of ecology helps us to see our position in relation to culture. As with the natural ecosystem, the cultural ecosystem is not separate from us, or related to us, but rather we are embedded in it – it makes us, at the same time as we make it. Culture is a process of constant formation, where our views and decisions are moulded by what we see, read, make, watch and listen to.
- d) Thinking about culture as an ecology helps displace mechanical and linear metaphors that have proved damaging in many areas of human endeavour: it is now a truism that pulling on 'the levers of government' and 'setting targets' produce unintended consequences, and thinking of the natural environment as a machine to be managed has resulted in many examples of species depletion. Assumptions that processes are simple and predictable often lead to wrong conclusions.

The use of ecological metaphors and terminology in place of gears, switches and levers, was pioneered by environmentalist writers and thinkers from the late 1960s onwards. The physicist Fritjof Capra explained in 1996: 'The basic tension is one between the parts and the whole. The emphasis on the parts has been called mechanistic, reductionist or atomistic; the emphasis on the whole holistic, organismic or ecological' (Capra 1996.17).

d) Treating culture as an ecology brings the qualitative into consideration as much as the quantitative. The description of approaches to the natural ecology described by the naturalist Denis Owen in *The Science of Ecology* could equally be applied to the cultural ecology:

'Ecology began as a descriptive natural history but nowadays scientists study and describe ecological phenomena in quantitative terms, often to such an extent that scientific magazines devoted to ecology... look more like pages from textbooks in mathematics. The same applies to economics. But economics and ecology are subjects in which intuition also plays an important role, and although both subjects have received rigorous mathematical treatment it could be doubted if this has told us a great deal that we did not know already.' (Owen 1980.2)

e) Ecology deploys many useful concepts that are transferable into the field of culture, such as co-operation and collaboration held in balance; existential threats coming from outside the system; positive and negative feedback loops; predation; self-regulating systems; mutual dependence; dynamism; food-chains; homeostasis; fragility and robustness; global environmental capacity; interactions, linkages; patterns. And as Denis Owen says: 'An extremely important relationship is who eats whom, and another, perhaps equally important, is who breeds with whom'²⁹ (Owen 1980.1). This was put in a different way by John Newbigin, Chair of Creative England, who asked: 'why aren't there more mergers and acquisitions in the funded arts?'

Cultural endeavour involves the making of meaning and the construction of social lives as well as (sometimes) the pursuit of profit. If culture is treated as an ecology, then the analytical approach becomes one of identifying cultural value, by taking into account the multifaceted and pluralistic value of culture beyond, as well as including, the economic. Culture recovers its organic meaning, its social significance and its moral weight, bringing into play the health of the cultural system, its creative capacity, its ability to generate new meaning, and the social and public goods that it produces, as well as – and certainly not ignoring – its economic return.

7) Flows within the cultural ecology

*'There's a huge amount of interplay between the commercial and the cultural aspects, and just the sheer scale of what's going on, there's so much happening at all levels.'*³⁰

Rosy Greenlees, Executive Director, Crafts Council

'There is huge, massive interconnectivity, much more than even eight years ago.'

Maria Balshaw, Director, Whitworth Art Gallery and Manchester City Galleries.

One way of understanding the ecology of culture is to take a 'helicopter view' of culture, looking at how the parts of the system link together, rather than describing the parts in themselves. The interviews for this research were designed to uncover flows between the commercial, funded and homemade parts of culture, and connections emerged principally in four areas: careers; ideas; money and product.

a) Careers

'Many of our most talented and commercially successful artists and producers were trained and nurtured in the public sector, but make much of their living, and occasionally their fortunes, in the private sector.'

Smith 2010.7

'Careers develop from increased judgement about which shows will have a good public reception: compare Hytner and Mackintosh.'

Sargent

Within the literature relating to careers, Kate Oakley has produced a useful review for Creativity, Culture and Education in 2009, called *Art Works*, that offers 'an overview of the literature surrounding the nature of work in the cultural industries, as it has permeated policy-making, public debate, and practice across many sub-sectors within the arts, and the culture sector more generally; and in more academic writing by scholars and cultural commentators.'

Creative Career Stories is a report produced by the Creative Graduates Creative Futures project, a longitudinal study of the early career patterns of arts graduates. It looks at the arts and design world from the perspective of employees and demonstrates the fluidity of the careers of creative graduates: self-employment, portfolio careers.

Career development in theatre is a relatively well-researched area. Albert et al's 2013 report for CCSkills, *Publicly Funded Arts as an R&D Lab for the Creative Industries?: A Survey of Theatre Careers in the UK* reaches conclusions on (*inter alia*) three points that show not only labour mobility, but the way that the movement of people is connected to skills development and career progression:

- 'There is high labour mobility between subsidised and commercial theatre. The flow of work is often not one way.
- Respondents were more likely to say that publicly funded theatre gave greater opportunities for 'presenting challenging work'... and 'providing sufficient time to experiment' than commercial theatre.
- 'According to our sample the subsidised theatre was the primary area in which respondents had experienced their breakthrough moment in the sector... there are strong talent development-related grounds for public subsidy in theatre.'

Matarasso also demonstrates strong flows between the amateur and other sectors: 'Contrary to what some people would wish... the arts are not divided up into two separate and antagonistic worlds: the amateurs and the professionals. It is better understood as a complex ecosystem in which people may play different roles at different times or in different aspects of their careers.'³¹

The relationship between careers in theatre and film have been stressed by a number of high-profile actors and directors, such as Judi Dench: 'Being trained in the theatre is a necessity. The health of our film industry depends on the health of our theatre'³², and film director Stephen Frears: 'If you look at *The Queen* it has a theatre cast. All of them have been at the National in the last three or four years. The fact is they would not be Oscar nominees today if it hadn't been for their experience in the theatre'³³

Not only do careers develop by moving back and forth between homemade, funded and commercial, but they are also constructed from operating in all three spheres in parallel. Khwaja's route to running the London Centre of Contemporary Music (LCCM) included simultaneously being a professional musician, writing novels, writing software, and working for

arts organisations on a freelance basis: 'There were multiple, multiple things going on...musicians need a huge armoury of skills to apply in different settings.' The networks that he built up during these varied activities have been useful in bringing in teaching talent, financing, and property skills to LCCM.

The career paths of many interviewees showed that they had worked in all three spheres of culture, or that they had combined working in the funded or commercial sector with activity in the homemade sphere. For example Thomson at the Barbican has experienced a rich professional history: two years in publishing literature, then EMI classics; an arts sponsorship consultancy; BBC Radio 3; a local authority councillor and council leader; then the government agency IDEA together with freelance cultural work; the Metropolitan Police; and the Barbican. Throughout all this she played chamber music with her family, and has also served as a Board member of the Association of British Orchestras.

Even when careers have been constructed mainly within one sphere, most people have had a different cultural enthusiasm that they have pursued, and/or they have served on the boards of funded organisations. The Royal Opera House's Alex Beard for example has been an opera enthusiast since his early teens, and served on the Board of Glyndebourne (which only receives public funding for its touring and education work) during the 19 years that he worked at Tate. Smith at Ingenious serves on the Boards of (among others) the Young Vic and St John's Smith Square.

Interviewees also mentioned many cases where professional commercial careers had their origins in small grants from, or workshop projects organised by, the funded sector: Craig David and Thomas Heatherwick were mentioned, but the most astonishing example is J K Rowling who received a grant of £8,000 from the Scottish Arts Council in 1997, when the manuscript for the first Harry Potter book – written while she was receiving state benefits – had just been accepted by Bloomsbury. The publisher advised her to 'get a day job, because there's very little chance of making money in children's books'. The grant allowed her to look after her young daughter and press on with the next Potter book. The books rapidly became an extraordinary publishing phenomenon, transforming Bloomsbury's finances, and spawned a hugely successful film series. The big-screen adaptations were widely credited with driving a renaissance in the British film industry, employing large numbers of technicians and special effects experts. By 2003, just six years after that Arts Council grant, Rowling had become richer than the Queen, according to the Sunday Times Rich List. She is now said to be worth £570m.

Amateur or youth company settings provide a route into both the funded and commercial spheres: interviewees cited Clive Owen, Aneurin Barnard, Lionel Bart, Peter Sidhom and Jack Brymer as examples. Hughes, Gibson and Simpson also said that there is travel in the opposite direction, with professional musicians and actors returning to amateur status.

The transition from one sphere to another is not always as easy as these examples might suggest. Robin Simpson noted that his experience of 'running an amateur orchestra didn't seem to count' when he first wanted a job in professional arts admin.

Nor is transferability uniform: Matarasso notes one amateur cast member saying 'In a dream world I would love to be an actor, but I'm not unrealistic...'³⁴

Career movement is not limited to performers. Henderson said that technical graduates from drama schools have highly transferable skills: 'there is demand for lighting and AV in conferences, trade fairs, cruise ships etc.'

The move from amateur to professional is not confined to the performing arts. Ben Cowell from the National Trust mentioned that NT volunteers have moved into paid conservation work, and many visual artists begin their careers doing work purely for their own enjoyment.

b) Ideas

'Knowledge is increasingly a global, networked activity'

Roly Keating, British Library.

The younger generation of creators who were interviewed were omnivorous in their approach to culture, and good at seeing connections and moving ideas between one part of culture and another. They draw on publicly funded collections and resources to create value in the commercial world, but in a highly eclectic way. As fashion stylist Aimee Croysdill put it: 'Always have your eyes and ears open. Everything you're looking at can lead to something'. She gave as examples her constant attention to 'Instagram, the street, online magazines like Novembre and musicfashionland...the collections at the V&A, fashion shows at the Barbican.'

Will Taylor, who is the songwriter and vocalist for the band Flyte, also uses the cultural resources of London. He sometimes writes in the V&A library 'and when I get stuck I go for a wander around. My songwriting stepped up tenfold in London; the streets, the National Gallery. The fuel comes from places like the British Museum and the British Library'. He

also used to visit the BFI 'three or four times a week, I'm a big fan of Mike Leigh and Ken Loach – and it's all either free or cheap'.

Shah, from TV company Juniper Communications notes that in his office one young employee is a developer but also writes for comedians; another writes for bands. Balshaw from the Whitworth Art Gallery mentioned getting ideas from 'the collections, the people in the organisation, the geographical context, the building and academics.'

The conclusion from the interviews is not so much that ideas in themselves travel, but that people working in the cultural and creative sector are constantly on the look out for ideas, and that while inspiration can come from anywhere, it comes mainly from relatively proximate cultural sources. The frequency of talking about cultural forms that then get changed into other cultural forms suggests that creativity is self-reinforcing: fashion designers are more likely to get inspiration from something closely related to their concerns, like a magazine, or a fashion archive, than by something more remote, like a building. But it is the attitude of the people that matters most: they are open and receptive, always scanning their environment for anything that might be useful, tucking things away for future use. This implies that a rich cultural ecology becomes a self-reinforcing phenomenon: the greater the range of source material, the more creativity will result.

Ideas can travel in any direction. The designer Es Devlin, who works with Take That and Kanye West, as well as the Royal Ballet and the Almeida was interviewed by the Financial Times' Peter Aspden: 'I ask her about her still relatively unusual springing back and forth from popular to high cultural forms. "Everything that's alive in my work I attribute to those cross-fertilisations" she says emphatically.'³⁵ The cross-fertilisation applies to the craft and technical aspects of culture. Sebastian Conran said: 'design is about turning science and technology into experience and culture, and craft – making things - is at the root of technology.' At the Royal Opera House, Alex Beard said that leatherworkers from the costume department went on work experience to Mulberry.

c) Money

Essentially money in the cultural and creative sectors seeks either one, or a combination of, two things – public goods and economic gain. The term 'public goods' includes several things: artistic excellence, or social goods such as health or well-functioning communities. Public money flows into funded organisations through grants made by local authorities, cultural funding agencies, central government and the lottery. Money flows back to the Treasury through VAT on cultural goods and services, PAYE, and corporation tax on commercial activity.

The private sector supports public goods through sponsorship, and pursues profit - and often artistic excellence - through commercial activity and investment in development. The public sector creates public goods through grant-giving and investment, and seeks to stimulate economic activity through development funding.

Within this overall system, there are many flows of funds between the homemade, funded and commercial worlds. Looked at from the point of view of practitioners rather than funders, a number of trends were apparent:

- everybody is working with a mixed economy model. This manifests itself in a number of ways.
 - Some publicly funded institutions, such as Tate and Sage Gateshead operate with (relative to their overall income) very little direct public subsidy. Martinez from Sadler's Wells said that they get only 10 per cent of their income from core public funding. ACE's Russell said that one of their success criteria is to see National Portfolio Organisations raising more funding from non-public sources.
 - Some homemade culture only survives because of access to cheap public space or free internet platforms.
 - Martin Smith of Ingenious pointed to the TV programme *The Fall* as an example of mixed funding: it was financed by Ingenious; Northern Ireland Screen; European Regional Development Fund; Northern Ireland Development Corporation; and distributed by Netflix.
- Austerity is hitting the amateur world. Gibson said that 'the cost of hiring halls has gone up hugely because of local authority changes. Croydon choir can't afford Fairfield Hall any more.'
- Too little money goes into the early stages of development. As Martin Smith said: 'tiny amounts of money go into incubation'.
- All practitioners are deeply aware of how important money is to the realisation of ambitions of whatever type, and understand the micro-markets in which they operate. Flyte for example explained that in their field there are five ways to make money: record sales (at the bottom of the list); merchandise; touring and gigs; publishing – including being played on the radio, particularly Radio1; and syncing, meaning the use of music for events, films, advertising and on the catwalk.

- Very rapid changes can come about because of changes in financial conditions. Creative England's Caroline Norbury mentioned the massive boom in special effects companies because of new tax breaks bringing activity from Los Angeles to the UK. Similarly, as Smith said: 'the exchange rate is hugely important. If the dollar were to hit two to the pound UK production would once more fall off a cliff.'
- Public funding is taking a more broad-based approach than it used to. ACE's Russell pointed out that, as well as funding digital activity with the BBC and NESTA, ACE is also funding hybrid commercial activities, such as orchestras, and artistic companies set up on a commercial basis like the dance organisation Akram Khan Company. He also said that Grants for the Arts supports amateur activity.
- Many interviewees talked about taking big personal financial risks when they were setting up their businesses. They also looked for every opportunity to find the money to achieve their goals, whether that meant taking on bank loans and mortgages, or applying to trusts and public funding bodies, seeking backers (sometimes family members), or whatever. Croysdill said that her student loan enabled her to get going while still at University: she emerged not only with a degree, but, having been able to do unpaid work while studying, she had developed a client list in fashion, music and film. Henderson sees his students as being very entrepreneurial: they now think in terms of crowdfunding and partnerships, not only ACE and local authority grants. He also noted that 'the entrepreneurial spirit of the 80s came out of the art schools.'
- Early careers are increasingly being funded by parents, leading to changes in the class make-up of the cultural and creative industries. Not only are 'public schools very heavily involved in the arts across the board' (Henderson), but training actors 'is an expensive business'. Salter notes that: 'For students coming out of art school now it is economically impossible in London unless you have money'. A far higher proportion of successful bands are now emerging from public schools, and Salter said that 'Class is a huge issue in the creative industries'. The journalist Nick Cohen writes grimly that: 'the privileged few are tightening their grip on the arts.'³⁶

d) Product

Both the 2013 CEBR report *The contribution of the arts and culture to the national economy*, and Holden's *Publicly Funded Culture and the Creative Industries* list examples of 'supply-chain links' between arts and culture and commercial creative industries, including

- theatre groups working directly with the BBC and commercial broadcasters, providing content for radio and television programmes
- museums and libraries offering their archives of text, images and footage for re-use by television, film and book production
- newly-written theatrical or operatic work being published commercially in some format
- the arts and culture providing important markets for software designers, advertising agencies, and graphic designers, often commissioning websites and other media campaigns from such specialist businesses
- the arts and culture using architects to design their workspaces or new venues
- theatre and opera groups regularly commissioning composers
- galleries and visual arts venues commissioning specific pieces from artists
- museums and galleries regularly commissioning a variety of artists to provide responses to their collections in the form of music, drama, dance, art or film, as part of exhibitions

The CEBR report concludes that: 'Over a quarter of the arts and culture industry's supply chain is accounted for by the creative industries, representing almost £2.2bn in 2010... The arts and culture industry in the UK is indirectly a significant source of support for jobs in the commercial creative industries.'³⁷

Interviewees were able to quote many examples where content or product has directly transferred from one sphere to another. As Kampfner observed: 'In some places the read-across is very clear, for example theatre and film. In other it's less clear – like theatre and video games, but it's there'.

Specific cases of transfer include Tambling mentioning *Jerry Springer, the Opera* starting at Battersea Arts Centre, then appearing at the Edinburgh Festival, then at the National Theatre before a West End run, and finally being shown on TV. *War Horse*, *Matilda*, *Les Misérables*, and *The History Boys* provide other well-known examples.

Apart from works themselves moving from one part of the ecology to another, works created in one part can be used in another, where cultural products are redeployed in new cultural circumstances. Salter described how one of her paintings had appeared in an advertisement for Rafa cycling wear. Another example from the visual arts is that of Damien Hirst being used in Young's Beer posters³⁸. Hughes gave a list of classical orchestral works being re-used in advertising including Hovis (Dvorjak's New World Symphony); Hamlet (Bach's Air on a G String); and Old Spice (Orff's Carmina Burana); melodies from classical music being rebooted as pop: Eric Carmen's '*All by myself*' uses a theme from Rachmaninoff's Piano Concerto No. 2, and there is a disco version of Beethoven's 5th³⁹ by Walter Murphy and the Big Apple Band. The website songfacts.com lists dozens of pop songs used in advertisements.⁴⁰

Film makes untold use of classical music, and pop music in film is ubiquitous. Classical music has also been used in comedy: Hughes cited the case of the BBC Symphony Orchestra performing with Monty Python on '*Not the Messiah*' by Eric Idle and John Du Prez in a live performance at the Albert Hall which was recorded and released on CD and DVD by Sony.

Interviewees also provided many examples of artists working across artforms, or of work that combined aspects of funded, commercial and homemade. Smith described the connectivity of Damon Albarn, a pop musician with Blur, educated at Goldsmiths, whose career has involved working with fine artists (Michael Craig-Martin designed a Blur album cover), musicians from Michael Nyman and Snoop Dogg to Brian Eno and the Congolese band Tout Puissant Makalo. Albarn has created two operas, *Monkey: Journey to the West* and *Dr Dee* for the Manchester International Festival, that have been staged in several opera houses. He has also acted in films, been in a play on radio 4, and is currently writing a musical for the West End.

Work is also specifically created by professionals for the homemade sphere; for example Howard Goodall has written several community operas⁴¹, and Gibson maintained that a great deal of choral work written over the last 200 years was written for non-professional choirs. Aesthetic innovation can clearly arise in any part of the ecology, whether private or public: Smith gave the example of James Cameron's film *Avatar* creating 'a new high-quality innovative look that has been influential on other films and video games' (though *Avatar* itself draws on multiple aesthetic and narrative sources⁴²).

A rare account of the failure of a transfer from the funded to commercial world is discussed by Jo Crowley from the theatre company 1927 and Peter Wilson from PW Productions, the two main people involved in the proposed West End transfer of 1927's *The Animals and Children Took to the Streets*. Wilson makes this point relating to the ecology: 'I failed fully to understand the web of relationships that support these artists who have created, with financial help from a number of sources with varying attitudes, a piece as original as *The Animals*'. Crowley describes 1927 as 'neither a subsidised institution nor a commercial entity. *The Animals* was created in both the subsidised and independent sectors and was resourced through a complicated jigsaw puzzle of subsidy, the company's independent resource, and in-kind support'.⁴³

8) Applying ecological concepts to the field of culture.

Examining linkages and flows of ideas, product, and people provides one way of examining the cultural ecology, but a different way of thinking is to apply ecological concepts and biological metaphors to culture. Doing this helps create fresh ways of looking at culture. The use of environmentalist concepts such as sustainability, the precautionary principle, and intergenerational equity was explored in Holden (2004), and Knell has used the biological motifs of life and death in two influential papers: *The Art of Dying* and *The Art of Living*. The research for this report revealed that the interviewees, and some of the existing literature, make use of biological metaphors either explicitly or implicitly.

In this section, these biological metaphors are considered individually, but they are inter-related. For example, emergence is the precursor to growth; growth takes place within the context of complex interdependencies that develop through networks; and the evolution of the overall system is a function of the development of its parts. The system itself can, like a natural ecosystem, appear robust in some ways and fragile in others (theatre continues, even though individual companies come and go); and it can simultaneously become more complex, and yet convergent (technology enables new ways of creating visual images, while artists bring performance into the gallery).

It is helpful to think of these biological concepts as a set of life-cycle questions: what conditions bring a form of culture into being? How is that form of culture then sustained? What threatens its existence? How can it be nurtured to grow to its full potential? How can it help other life-forms to emerge? When should it be let go? These questions, or ones like them, could help administrators and policymakers to understand both the state of wellbeing of their specific cultural ecology (for example in a town or region, or across an artform) and what actions they could take to maximise the vitality of the ecosystem. Bill Sharpe, from the International Futures Forum puts it like this:

If we look at the way industrial policy has changed over the past 25 years we can see a shift from picking winners towards maintaining the enabling conditions for successful innovation: healthy markets, liquidity of money providing available funds for investment, business incubators to nurture start-ups, fluid relationships with research centres and universities etc...By analogy cultural policy now needs to start making the same transition...Innovation funding in the arts and cultural domain is still about picking winners; it needs to shift towards providing enabling conditions i.e. a healthy creative ecosystem. (Sharpe 2010.82)

a) Emergence

Natural ecologies are fecund, messy, highly competitive places, and so is the contemporary cultural world. Jon Dovey noted that: 'the cultural ecosystem is not democratic'. Some cultural producers and products thrive because they happen to alight upon the right conditions to flourish; others simply wilt. As Tambling said:

'You need to hit the moment as well as be good.'

Public policy and government actions at national and local level attempt to create those 'right conditions', but the 'management' of life and death by the cultural funding system has proved very difficult. John Knell has written two excellent papers on the subject: *The Art of Dying* and *The Art of Living*. Robert Hewison has chronicled how ACE, on its own admission, caused 'huge anger and distress' when in 2007 it culled some of its portfolio (Hewison 2014.114). Similar emotions were aroused by DCMS's refusal to intervene in the closure of public libraries.

The 'birth' part of culture lies in the creative process and several interviewees pointed out that this is still the most fragile part of the ecosystem. Norbury said that: 'Industry relies on creativity but creativity is usually a bit left-field to begin with. Public funding is judged on job-creation and outcomes but those things happen much too late in the process.' Or, as Iggy Pop put it in the 2014 John Peel lecture: 'capital investment never really leads. It follows the action.'⁴⁴ Experimentation and prototyping need free money and time but that early-risk capital – whether in the form of a 17 year old living on benefits while she writes songs, or a film-maker having time to develop a storyline – often isn't available. Smith commented that 'in indie films the challenged bit of the value chain is in development – writing stories and script development. The private sector doesn't like to invest in it.' Public funding sometimes steps into the breach; in the case of indie film it comes from the BBC, Film 4, or the lottery via the BFI. Alternatively, as Shah pointed out, the bank of mum and dad 'supports the possibility of creativity'.

The uptake of new technology has changed the meaning of the word 'emergence' in the cultural context. Shah said that: 'The barriers to entry have dropped enormously; the digital world is hugely creative, but 95% can't be monetised and the field is quite anarchic.' Balshaw said that young people 'are much more avid and active users and shapers of culture. They reshape, re-circulate pop and high culture, using images and text.'

Dovey and Reddington from Bristol's Watershed noted that: 'Linear processes and KPI-driven funding models don't fit with the messy reality of the cultural ecosystem. Policies have to cope with *emergence*'. Funders should value the role of the connector in assisting emergent activity: 'Our role is not to sit on the energy, it's to move it on. We push it on.'

b) Growth

Emergence is closely related to the idea of growth, where again funding and policy assumptions fall short (a proposition more fully explored in Crossick (2006) and Bakhshi et al (2013)). Policy assumes that growth means single companies growing ever larger, say from 1 person to 60 people, but growth in the cultural sector often does not conform to that model. Activity might instead grow from one person to four small companies of fifteen people each, or ten groups of six associated individual freelancers. Tambling pointed out that in a digital age personal career growth requires constant re-skilling rather than a front-loaded education system.

Growth and expansion are not only about creativity, they are also affected by receptivity, and technology has changed this too. Hughes: 'Digital has changed how the BBCSO is received. You can listen, listen again, listen anywhere on a range of platforms; but all of this increases the attraction of the live event.' Balshaw described how the Whitworth gallery sourced an audience for a late opening on a Thursday, which is the same night as evening retail in Manchester. Rather than using print and posters, they used other cultural groups – the example given was videojam⁴⁵ – to bring their own followers into the museum using social media.

Growth is inhibited by some gaps in the cultural system. Smith said that the UK has world-class special effects companies, but they cannot recruit enough people in the UK who combine both technical and creative skills. Henderson said that in musical theatre you need to sing and dance and act, but in the UK we train these disciplines separately, so we have to import performers. Khwaja gave the example of his London Centre of Contemporary Music being a new type of institution in music, that educates for a career rather than simply improving technical skills. Knell points to the 'unpalatable truth' that 'current funding behaviours and practices are systematically under-supporting innovation and demand.'⁴⁶

Virani emphasised the importance of hubs in emergence: in the case of fashion 'everyone wants to be near the London College of Fashion.' In spite of digital connectivity, it is still the case that physical proximity, face-to-face meetings and the vibe of a locality all matter.

c) Complex interdependencies

The interviews and literature reveal the complex way in which culture works. One example given in detail is a study of how music venues operate (Behr et al 2014). In conversation, two of the authors described how venues rely on multiple income streams from music, club nights and comedy, giving as an example a club in Glasgow that had Blondie playing from 7 till 10, followed by a club night from 10 onwards.

The British Museum provides another case study, as described by Deputy Director Jonathan Williams. Its activities include providing advice to groups of amateur enthusiasts such as coin clubs; identifying objects for the public; publishing – both with its own imprint, and with commercial publishers (A History of the World in 100 Objects was published by Penguin); partnering with the BBC for programmes on radio and TV; doing 'remote' exhibition tours for cinema audiences; having its own Youtube channel; using social media to publicise its events; being active in academic research, including supporting a PhD on retail in museums; having partnerships with the performing arts, for example with the RSC for 2012's Shakespeare exhibition; and extensive links with museums of all types in the UK and beyond.

d) Evolution

The rate of change within the cultural ecology can be speeded up or slowed down by funding and tax decisions, education and other policies. One example of 'speeding up' is free museum entry; visit numbers soared after all national museums abolished their entry charges in 2001. "Slowing down" can be exemplified by funding cuts to theatre in the 1980s and 1990s that caused a decline in productions, audiences and led to a fall in quality⁴⁷. The cultural world has examples of very rapid change – Tower Records, one of the largest retailers of CDs and DVDs went out of business five years after the introduction of i-tunes – and slower, more subtle change, such as the digital republication of out-of-copyright fiction⁴⁸. Tambling asked: 'Did Creative Partnerships Margate lead eventually to Turner Contemporary?'

Jon Dovey said that: 'Producers are the conductors of the rhythm of the ecology', and his organisation, React, takes its time signature from software development: rapid iteration - build; test; refine. React itself learns from its experiences, then advises the next creative endeavour, thereby speeding up the ecology both by shortening learning times within the system and highlighting connective opportunities.

Conran pointed out that twentieth century technology was linear, but each advance happened in a shorter time than the one before; for example telex/fax/scanner/mobile phone. But in the twenty-first century speed is exponential – the only thing that holds things up is the physicality within the process: 'the length of time it takes a boat to get from China to California'.

Another aspect of evolution is that the particular ways in which cultural subsectors work is constantly changing, often in response to 'market forces'. Flyte's Taylor said that pre-recession, record labels worked on a 5% success, 95% failure rate; now they have become more cautious, more savvy, so that now: 'It's important to know what not to do – which venues have poor acoustics, what the financial deals are.' The work of Brennan at the University of Edinburgh shows the risk profile of the music business changing, with the division of labour of concert promotion shifting.

Many interviewees commented on the hollowing out of the middle ground – success at the top end, and the small scale, but problems in between in theatre (Brownlee) and visual media (Norbury), music venues (Brennan), and classical music (Gibson).

e) Webs and Networks

The ideas of the web and the network are prominent in descriptions of ecologies and environmental systems. The scientist and environmentalist Fritjof Capra, for example, titles one of his books *The Web of Life*. Almost every interviewee had something to say about the power of networks within the cultural ecology. Smith summed it up neatly: 'The network is gold dust'; and so did Shah: 'the most important thing is networks'. Each person's or organisation's networks are unique to them; Smith again: 'At Ingenious we have a network. We know everyone in film, in TV, and in commercial music, and we are the only people who have experience in investing in all three areas.' Professional networks exist formally by type of organisation (such as the Plus Tate network of contemporary art galleries) by profession, by locality, and also informally across groups of friends.

The lines between professional and social networks are blurred, with Khwaja talking about 'a friend of my brother in law'; Shah mentioning 'my children's friends', and the producers at Brickwall socialising with musicians, artists, actors, and writers: 'creatives go with creatives'.

Jonathan Williams pointed out that: 'Institutions don't think of themselves as 'us' or as 'the institution' so much – they think of themselves as part of a network, as a partner.'

As well as networks of people, we need also to think about how inanimate objects are part of the network. The narrative of this report has described the role played by buildings (such as clubs, libraries and museums) that enable culture, but other inanimate objects are important as well: musical instruments, paints, clay. Tracing the network of connection between the physical elements of culture is both an art-historical adventure (where did the pigments in the Book of Kells come from?) and a pressing environmentalist concern (how much oil is consumed when a rock band does a global tour?). The role of machines in the network is increasing. The European Commission's Peter Fatelnig said that 'Today there are four times as many machines as people on the internet, and tomorrow it will be a lot more. This is where the future is. It is the nervous system of the planet.'⁴⁹ Norbury expanded on the same point: 'the next convergence is the internet of things – not just devices talking to each other, not just about functionality, but about how things are linked creatively, personally and entertainingly.' In other words, culturally.

f) Convergence

*'Unrelated species living in similar physical environments often are shaped by natural selection to have comparable characteristics; they are said to evolve convergently. Convergence is a common feature of evolution... Once an interaction evolves between two species, other species within the community may develop traits akin to those integral to the interaction, whereby the new species enters into the interaction.'*⁵⁰

The academic research done by Virani confirms the importance and vitality of informal networks across fashion and music, an area where two things that were once thought of different have converged. A recent BBC4 TV Programme, *Oh You Pretty Things*, treats music and fashion as two sides of the same coin, and the u-music blog explains in detail the symbiosis of fashion and music:

The arrival of London Fashion Week is as good excuse as any to examine the relationship between two of the most cutting edge industries. Universal Music works with several of the big designer houses and many of our artists connect with fashion. Earlier this year Jake Bugg performed at the first Burberry-hosted live music event at the label's London flagship store; Bugg is also a fan of the clobber. Lana del Rey meanwhile has fronted a campaign for H&M and - in the ultimate music and fashion hook-up - the singer has had a Mulberry handbag named after her... Ever since the teenage

Elvis Presley pursued 50s fashion in tandem with his Memphis tailor Bernard Lansky, pop stars have called on clothes and style to help project and boost their image. One look at Lady Gaga's meat dress confirms the fusion of style and sound has got even more intense over the last decade with the line between music and fashion becoming blurred.⁵¹

Many other examples of convergence both within the cultural world and beyond it came up in the interviews. Shah described how movies and gaming are converging.

Salter talked about her collaboration as a visual artist with a composer who uses Western and Japanese instruments. Thomson said that 'business events and arts events at the Barbican used to be completely separate; but now they are more integrated – the arts are now a plus not a minus.' Norbury mentioned Maverick TV, who both produce the TV programme *Embarrassing Bodies* and work with the health sector in Birmingham⁵².

g) Systemic Fragility

Many interviewees pointed out places in the ecology that they felt were fragile, or that needed attention. These included:

- Ingenious' Smith: 'The UK has great creative talent and technical talent and facilities and professional infrastructure such as lawyers, but the money is overwhelmingly American.' So are most of the large companies that exploit copyright. As in so many areas of economic life, the UK creates, and the shareholders of non-UK companies reap the financial benefits.
- Creative England's Newbiggin: 'A large majority of programmers in tech city are foreign and are here because London is "cool". If it loses its coolness they go.'
- Brickwall's Hoad-Robson: 'There is a trend of speculative litigation around rights; hedge funds are moving in.' The restriction of the use of rights is not only a financial threat, but a threat to creativity as well.
- Brickwall's Walker: 'Government is very unfriendly to the arts. What support do the creative industries get compared to a several billion pound bailout for the banks? It could all unravel very quickly if you lose character, art, music, theatre.'
- Artist Salter: Artists (unless they are very well known) are in a weak position vis-à-vis gallery owners with no contracts; bad terms of trade; late payment. Salter has proposed to the House of Commons Select Committee for Culture that there should be a code of conduct between gallery and artist, and if galleries don't sign up they should be ineligible for purchases from public funds.

9) *The cultural environment*

The study of ecology involves looking at species within a wider environment. For example a rainforest exists within a greater global biosphere. The rainforest ecology is affected by changes in its internal relationships, such as the ebb and flow of species due to fluctuations in food chains, and is also affected by external shocks, such as climate change. The internal and external are related.

In similar fashion, culture exists within a wider political, social and economic environment with both proximate and remote connections. No account of the ecology of culture can be complete without recognising the broader context in which culture sits. There are clear links for example between festivals, transport policy, and CO2 emissions; and between cinemas, tax incentives, copyright law, and acting careers. Some of the more proximate relationships between culture and its environment appear obvious, but need further examination because they in turn affect the internal connections within the sector. Many interviewees mentioned proximate 'environmental' factors in their descriptions of how the ecology of culture works.

The broader context of culture sets up many definitional problems: what are the boundaries of 'culture'? When does the technology through which culture is created and disseminated become so integral that it ceases to be a separate category? How can we imagine cultural events such as festivals existing without the food and drink that helps to define, in cultural terms, what they are - Glyndebourne and Glastonbury have different caterers as well as different music.

There is also the problem that the environmental factors themselves are interlinked in complex ways, so that, for example, changes in technology affect audience expectations and the ways in which media companies operate, which in turn affect the fortunes of production companies and the type of work they are commissioned to make. The cultural phenomenon of the TV series *Sherlock* displays both hi-tech production values and plotlines and global media distribution, all based on nineteenth century literature and classically trained actors. The media and technology 'environment' are inextricably part of the cultural 'product'.

However fuzzy the borders between culture and its context may be, the connections are nonetheless clear, and particularly strong in the following cases. Education policy and practice, which has a direct and important effect on the ecology of culture with both short and long term consequences, was frequently discussed by interviewees. This is an area that has been the subject of intense research, debate and polemic, much of which can be found on the website of the Cultural Learning Alliance: <http://www.culturallearningalliance.org.uk>

The education system creates the 'audiences of the future' as well as the practitioners of the future. It is fundamental to the development of artists and technicians and the entire workforce of the cultural and creative industries, to such a degree that many people think of education as being within the cultural sector. As John Kampfner put it: 'The most important thing is a healthy cultural education sector. What happens now has serious repercussions in 5 to 10 years.' The education system also plays a role as something to kick against – creativity as a reaction to the curriculum, as can be seen in the rock band Flyte's comment that they made music from an early age 'anywhere outside school'.

Many funded arts organisations are themselves set up as educational charities, and they see education as a central and essential part of their mission.

The links between Higher Education and the cultural ecology are so multifarious and strong that HE can make a claim to be part of the cultural sector. Conservatoires, drama schools, and arts management degrees all produce graduates for the cultural and creative sectors, but beyond that all universities produce graduates, particularly in computing and media, who eventually work in the cultural and creative sectors. University museums, orchestras and theatres provide essential infrastructure for local audiences and amateurs as well as students. Student unions act as the first rung of the touring ladder for many emergent bands. Culture is an important part of campus and university life, with student societies being a rich breeding-ground for talent. As Shah said, this is often the place where cultural network formation starts. Higher education and academic publishing also play a role in cultural soft power. On top of that, Salter told me that: 'Arts education is inextricably linked to artists' careers'. Artists benefit economically from HE (and other) teaching, but their education work also enriches their artistic development, with Hughes stressing how education and participatory work feeds the development of musicians' practice. Henderson noted that HE is stepping in to help with some of the problems caused by local authority cuts: RCSSD has taken over running Hampstead Theatre's youth theatre.

It is a truism to say that technology has transformed culture, particularly homemade culture, but as the artist Jeremy Deller comments: 'The cliché about traditional forms of culture is "Oh everything is dying out"...but actually they are not, because the internet has helped a lot of folk practices to share what they do.'⁵³ Technology has placed the tools of

cultural production, communication and monetisation in the hands of everyone. As Hoad-Robson said: 'digital changed everything; the technical unionised stuff has gone; small companies can produce big as well as dream big in a digital world, they can edit HD on an I-mac.' Technology is transforming network relationships and how organisations of all types operate. It is destroying and creating business models, and even changing the way we think (see 'Taxonomies' section below). Khwaja noted the convergence between culture and technology in this way: 'The creative imagination is the same mind-set for musicians and software engineers.' But Virani believes that 'the dust is now settling down from the start of the internet. Grand Theft Auto is now traditional – it's an institution in its own right.'

Another important part of the environment of culture is the built infrastructure. Theatres, galleries, concert halls form the backbone, but streets, parks and other public places are also important. 'The public realm' is a physical as well as a metaphorical space. There is a problem with size: the retail units in shopping centres are too large for many independent retailers of craft and art, and small-scale retail space is essential to that part of the sector. Spaces also need to be at affordable rents: the craftsman-carpenter Oliver Rock said: 'It's very difficult to find a workshop in London. In the space that I need to make a table, you could have four people working on laptops'. Salter ascribes the rise of digital art among young artists, at least in part, to the unavailability of studio space: 'Anything involving kit is being lost: printmaking, sculpture, ceramics, metalwork. Courses are being squeezed but also once you've left college and are in early career where do you find space and equipment?' Walker thought that London also has another problem: 'They've got to sort housing out. A "key worker" in Hackney is an illustrator.'

Heritage is part of the ecology of culture, but heritage buildings play an important part in the cultural ecology in broader terms than being culture in their own right. The reinvention of heritage buildings such as has taken place at Tate Modern, the Baltic in Gateshead and Compton Verney in Warwickshire is itself a cultural phenomenon. Many artists and creative industries companies choose to locate in former industrial buildings, partly for aesthetic reasons, but also driven by cost and the fact that these types of building are adaptable and so can provide units of the right scale. Ben Cowell of the National Trust described the use of NT buildings and landscapes as settings in film and TV (Lacock Abbey and Montacute in *Wolf Hall*, Petworth Hall in *Mr Turner*, and Lamb House in *Mapp and Lucia* are three recent examples), and during this research I came across two fashion shoots in London streets using a background of heritage buildings, one a warehouse and the other a church.

Indeed the Church was mentioned several times as a significant force in culture. Churches commission new work, train choristers and musicians, and provide performance and community spaces not only for religious practices but for cultural events like amateur dramatics and choir rehearsals. Music mostly sung in Church can gain broader currency and significance; for example John Tavener's song *The Lamb* was used in Paolo Sorrentino's film *The Great Beauty*. Cultural expression and religion are deeply intertwined, from Gospel choirs and soul singers to organists and cathedrals, to the extent that in some communities, religion and culture are synonymous. Several interviewees also talked about food as an integral part of many cultural events, from large-scale festivals to village hall am-dram. Just as 'the cultural impulse is collective'⁵⁴, so too by definition is the sharing of food and eating together. As well as being integral to the social role of many events, food and drink provide earned income for both publicly funded and commercial venues of all sizes: 'Alcohol sales are a significant revenue base for venues', according to Brennan.

Culture would not exist as it does without the broadcasting channels and commissioning power of Sky Arts, Channel 4, and particularly the BBC, which is a hugely important source of work, a patron, a commissioner, a developmental resource and an archive for people in the cultural sector, as well as being a direct provider of culture. The BBC partners with major cultural players, from filming at National Trust properties to broadcasting from the Royal Albert Hall. ACE has collaborations with the BBC (the digital collaboration *The Space* is especially noteworthy) and SkyArts. Despite big changes in the operating environment, Shah notes that regulation means that TV hasn't been as disrupted by digital as, for example, music has. Gibson sees TV as a powerful force in the amateur world: 'The effect of Gareth Malone and the like has been very positive on amateur music'. *Strictly Come Dancing* has had an equally positive effect on commercial dance schools.

There are of course many other areas that are symbiotic with culture: comedy, which often uses cultural venues; pubs and clubs, that provide cultural spaces; sport, where football terraces have pop-up choirs of their own; even policing, which is an essential aspect of outdoor events from the Winchester Hat Fair to Manchester International Festival. Although not strictly part of the ecology of culture, all of the elements mentioned in this section play a role in maintaining the existence and promoting the health of the cultural ecology. The ecology of culture cannot be understood if these wider contextual issues are not taken into account.

10) New Overviews of Culture

This report has used the idea of the ecology of culture to describe culture both in terms of how it is funded and financed, and as a system that functions and regenerates through the flow of ideas, people, product and money. Ecological concepts have been deployed as metaphors to explain culture, and to place culture within its wider, but proximate, environment. In this section, some new ways of describing the cultural landscape are proposed.

a) Local Cultural Ecologies.

'Culture is like terroir. Bristol is an activist/green/difficult and contrarian place, with creative/tech crossovers such as the BBC Natural History Unit/Hewlett Packard/Toshiba/Ardmann. Bristol has vernacular creativity in music, theatre and graffiti. It has local critical mass and freedom to experiment.'

Jon Dovey

The intimate relationship between culture and place has been explored by many writers, including Charles Landry, who has recently written about the Royal Academy and its immediate locality, and Richard Florida who has explored the connection between cities, culture, and the wider application of creativity. Both these writers have been highly influential in fostering the notion of the 'creative city', with widespread policy and spending consequences on a global scale.

A rich account of how culture works in a specific geographical area was provided by Subnum Harif from Bolton museum and libraries. In that town the main public library is linked to the council-run museum on the floor above, the Octagon theatre across the road, and to the nearby University of Bolton. The town also has heritage sites (Hall i'th Wood and Smithills Hall) and Bolton Little Theatre, whose amateur actors do voice-overs on the museum website and exhibition videos. Most of the cultural organisations in town have voluntary staff as well as, or instead of, professionals. The museum hosted a flashmob during Farnworth Arts Festival. It is a 'learning destination for the Children's University passport scheme' and also helps people get an ArtsAward. The museum works with Bolton hospice, taking museum objects there, and work created in the hospice is shown in the museum. Amateur sewing groups exhibit and have workshops in the museum, and museum staff give lunchtime talks in the lecture theatre. The library and museum hire out spaces; they have an annual Open Art exhibition that anyone in Bolton can enter. They employ local design companies on their website, film and print; work collaboratively with Manchester museums; get commercial sponsorship; and earn income from touring their collections in China.

Polly Hamilton provided an equally compelling description of culture in Blackpool. The Winter Gardens and the Tower (heritage buildings of the first importance) are owned by the council. The Tower is managed by a private sector company (Merlin) and the Winter Gardens are run by a commercial company set up by the council. The venues host ballroom dancing (sometimes televised), music concerts, theatre, comedy, darts nights, bridal fairs, antique fairs, punk conventions, and circus. In addition, there is the Grand Theatre, an ACE-funded National Portfolio Organisation, which presents a balanced programme of performing arts and entertainment, specialising in contemporary dance, and Grundy Art Gallery, another ACE funded National Portfolio Organisation, that shows contemporary art, and sells creative work from designer-makers. The Central Library in Blackpool has recently been redesigned and apart from its cultural role (in addition to loans of books music and film, and housing a local archive, it runs an arts and health programme, a dance development programme, craft workshops, adult learning classes, creative writing classes, a literature festival and author visits in collaboration with the Council's Arts Service) it has a social role, providing community meeting rooms and helping people with various government services. The Arts Service is currently working with the Ministry of Stories in Hoxton to create a storytelling centre, with support from LeftCoast - the ACE-funded Creative People and Places Programme. The Arts service also supports the Fylde Coast Youth Dance Company who appeared at the 2014 Commonwealth Games. On top of that there are many private sector dance schools, clubs and venues. A new c.£22m museum is planned, and the local hinterland has 'a fair few' amateur groups, including the Poulton choir which rehearses in a Church hall and performs at weddings and community events. Most famously of all, Blackpool has its illuminations, with a £400 million economic impact.

These examples from Bolton and Blackpool demonstrate linkages between publicly funded activities, commercial activity and 'homemade culture' – particularly between funded and homemade - at a local level. They suggest that investigations of local ecologies can yield rich results and deserve greater attention. Combining descriptions of activity, infrastructure, history, and demographics on the manageable scale of a particular locality, with data about cultural participation and its objective and subjective effects (such as that contained in Bunting and Knell (2014)), is likely to prove a useful approach to further investigation of the ecology of culture.

b) Culture as 'flowerings'

Culture is an endeavour that brings together various elements for a purpose at a particular moment, or for a particular period. These events could be described as 'flowerings', and as such, they are not new. Describing those moments when the elements successfully combine (successfully in the sense that something comes into being, not in the sense of the quality of the result) sheds light on both the complexity of cultural events, the elements that have to be linked in order to produce the result, and the deep roots from which they emerge.

Any cultural performance, object, institution or product can be described using this approach. For example:

- Seventeenth century court 'masques' involved music, costume, dance, set-design and *coups de theatre* (now called SFX). Professional architects, designers, musicians and playwrights were employed but the actors were mostly amateur noblemen and women: 'Court entertainments were far more opulent than those of the public playhouses, but professional actors and writers crossed over between both. Ben Jonson wrote masques for the court as well as drama for the public playhouses'.⁵⁵
- Cilla Black's appearance at the 1964 Royal Variety Performance combined music and theatre. She wore a dress from Biba that was inspired by a costume worn by Richard Burton in the film *Becket*. High-tech engineering was also part of the mix: there was an Aston Martin DB5 on stage.
- Peter Gornstein, Cinematic and Artistic Director of the computer game *Son of Rome*, describes the combination of elements needed to produce the product. Craft skills are required to build the architectural models for the sets; technical skills are needed for lighting and camera work. In the set design for *Son of Rome* design history skills came into play with the merging of art deco and ancient Rome; this involved understanding classical and renaissance architecture. The game depends on narrative skills to provide a route through the story; and sounds and music are deployed as key elements of the whole.⁵⁶

The most obvious contemporary example of rich concatenation is the Festival – whether in Manchester, Edinburgh or Glastonbury. In every case there is an intense combination of amateur/professional; public/private; creative/technical. The Olympic Opening Ceremony still stands out as the *ne plus ultra* of complex collaborative cultural concatenations.

Beard from the Royal Opera House suggested that one approach to describing culture is to produce network diagrams for particular moments or periods of time, for example the visual arts in the UK 1990-2014 would start with linking Tate; Saatchi; the YBAs; Art schools; White Cube etc; art fairs; journals and magazines; Docklands.

Two publications look at culture from the point of view of combining, or re-combining the raw materials of culture in new ways. Jon Dovey and Constance Fleuriot's *Pervasive Media Cookbook* does so in an explicit, entertaining and revealing way, describing the projects of 'experience designers' in terms of *ingredients*, such as 'a quick and reliable programmer' and 'a database of tweets'; *cooking time*: 4 weeks; and *method*. Also included are 'cook's tips' and 'diners' comments'.

Culture Label's *Remix* provides several case studies of how people have taken existing elements and made new use of them, for example screening film in unusual places, or selling craftwork online instead of in shops.

c) New taxonomies of culture

Biological systems are explained using the Linnaean classification of classes, families, genera and species. Many examples of cultural taxonomies can be found on the internet, such as the dozens of sub-genres of metal music to be found on mapofmetal.com, and an entire picture of music on Every Noise at Once⁵⁷. Musicmachinery.com helps people to construct their own maps. Taxonomies encourage thinking about the world in particular ways. Economic taxonomies of culture result in specific policy approaches to funding and research – for example investment in culture to encourage regeneration, with accompanying economic impact studies. Ecological taxonomies encourage a wider grasp of the value of culture beyond the economic.

But new ways of constructing a mental map of culture are emerging. The new taxonomy is coming about because of changes in technology. Technology is no longer a servant of culture, confined to sharpening up marketing and finance departments. Nor is it simply a means of creating new cultural forms such as video art and light shows. Technology is today enabling a new type of navigation through the cultural world, and thereby changing creative possibilities. The hyper-connectivity of the internet means that subjects that were once far apart are now proximate, and this is changing the way that people think about the possibilities that are open to them.

There is an emerging way of constructing a cultural career that exists in parallel with the old model. It is still possible to pursue a career in theatre, film, the visual arts, or literature. The convergence and interaction of these traditional routes

has already been described – the way that theatre actors move to film, and the way that fashion and music are converging for example – but there is a radically different pattern emerging, where people move from one creative act to another in non-traditional ways. Whereas a young person used to (and still can) write a song, then another and another, and record and tour their music and have 'a career in music', they might instead write a song, upload it, and decide that they will use the existence of the technology, or of their internet following, to enter some different area of culture. In this way, a fashion-designed hat might be followed by a food venture, based on a constituency of fans who liked the hat and might be willing to try the food. The beginnings of technology-led transfers are stirring: the use of an app being applicable in different contexts for example. We can expect more unusual combinations and what seem like incomprehensible shifts to the older generation. Institutions will have to identify where the groups of followers are and what their leaders (who will move around the network) are thinking and doing.

11) Visual Models of the Cultural Ecology.

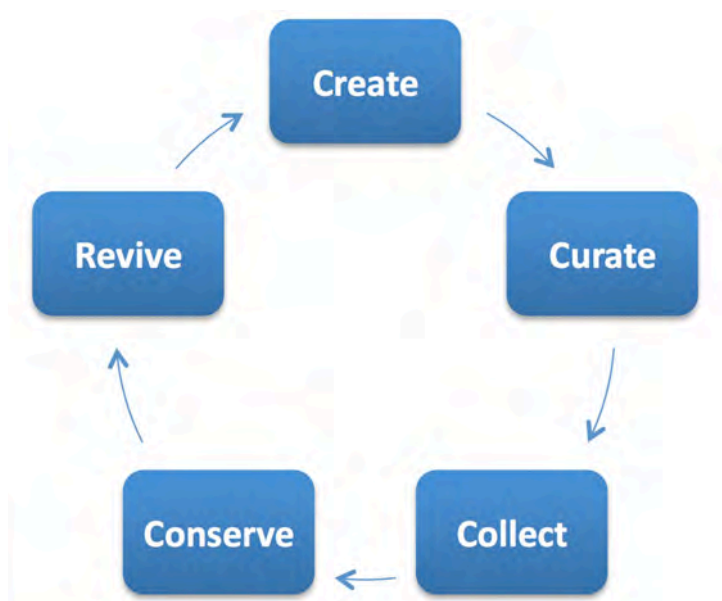
Natural ecologies are visualised in many different ways. Some visualisations look at processes, such as the carbon cycle or the relationship between plants and animals. Others concentrate on functions, for example predator and prey, or host and parasite. Although there is no single methodology, what these visualisations have in common is that they concentrate on dynamic relationships, an approach that can also be used in the visualisation of the cultural ecology.

Network diagrams can be helpful in visualising specific cultural events or phenomena, or in showing the linkages between people or organisations in a locality or across an artform. However, they are of less use when it comes to looking at the cultural ecology as a whole, because the network connections would become so dense, so extensive, and so various in quality as to lose meaning.

Here, three examples are offered as first attempts to develop simple ways in which to visualise the cultural ecology: one looks at culture as a regenerative cycle, the next as culture as a local network, and the third concentrates on the roles played by different 'actors' within the cultural system.

a) Cultural ecology as a cycle of regeneration

A regenerative, cyclical model of culture has been proposed by the creative consultant Andrew Missingham. He calls it 'the creativity filter', where creativity becomes funded culture, which in turn becomes heritage, which then acts as a stimulus for further creativity.⁵⁸ This helpful model can be built on because the cycle of regeneration within culture is both more complex, and more generally applicable. A modified version of Missingham's cycle of creativity works both for specific cultural productions and for wider 'movements'. It can be applied to all types of culture, and mixes of culture, not only to funded culture:



Within the cultural ecosystem there is a constant cycle of regeneration. The first step is creativity, which often occurs at the margins of society and can be transgressive of current accepted norms. Most creative work stops there. Step two, if it happens, is that the creativity is curated – choices are made about what to take up and what to ignore, about what works and what doesn't. In the collection phase the creativity is taken up more widely, and people buy or experience – in other words collect. In the next phase the creativity is conserved, and once conserved may be re-used to create something else. Keating from the British Library saw one role of libraries being to 'stimulate new IP' from their collections and holdings. IP exists on a continuum, and when public institutions making content free for re-use this 'is not generosity but part of our purpose.'

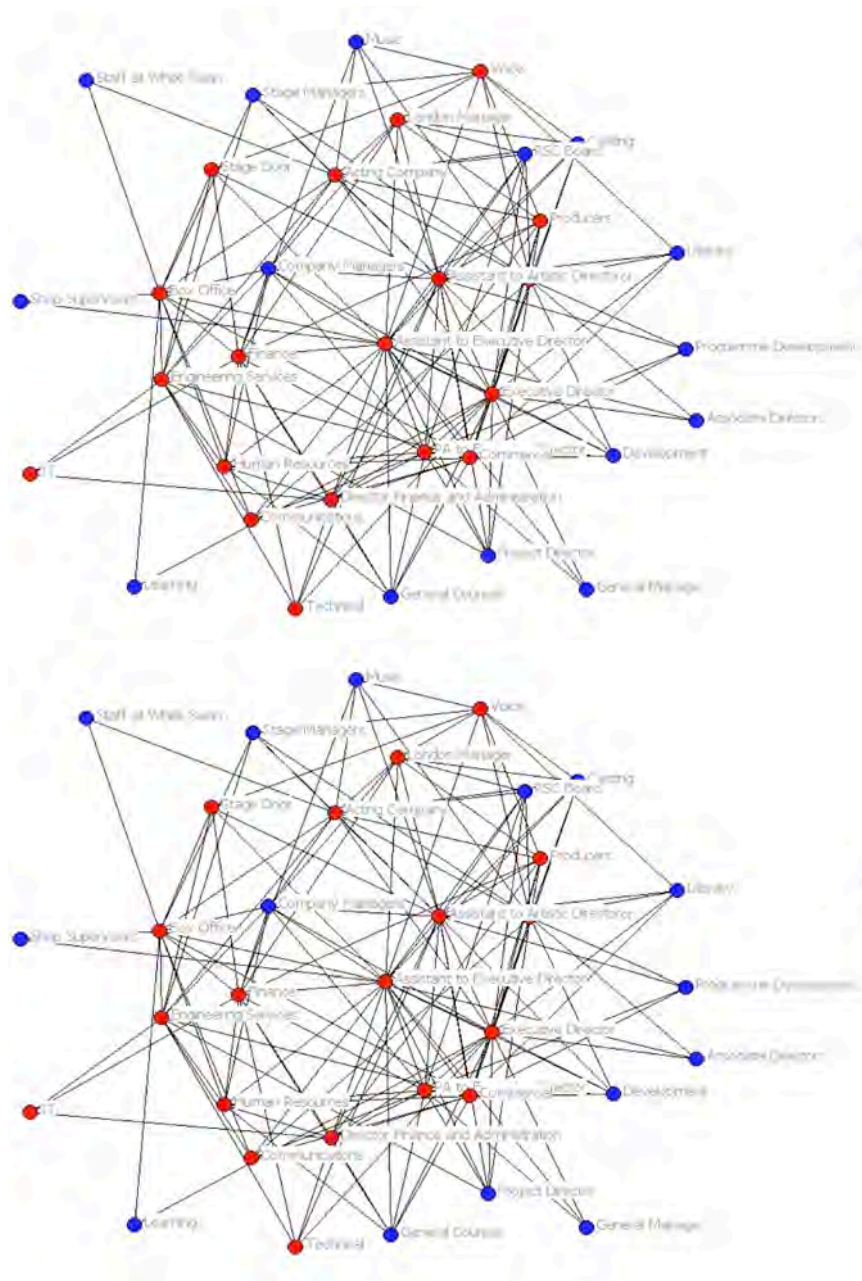
Applying this 'cycle of regeneration' model to the phenomenon of punk, an original creative and transgressive movement (which also drew on existing cultural forms) came into being from the work of a small number of art school students, fashion designers and musicians. In the curation phase, Fanzines (an example of homemade culture) were produced and record companies (commercial culture) decided which bands to sign and promote. A wider public then began to collect

clothes, concerts, records, artwork, and magazines. In the conservation phase, Vivienne Westwood’s creations went into the V&A fashion collection (funded culture), and in Blackpool an annual punk gathering takes place (a combination of homemade, funded and commercial). In the revival phase, Versace used punk ideas and motifs to create ‘that dress’ worn by Liz Hurley at the 1994 premiere of the film *Four Weddings and a Funeral*. The dress was subsequently shown in the V&A’s Versace show in 2002, influenced the designer Christopher Kane⁵⁹, and was worn again by Lady Gaga in 2012.

b) Network diagrams

The idea of network mapping has arisen in several places in this report as a way of explaining cultural phenomena and events (for example in Deller’s artwork and in Beard’s suggestion of mapping the emergence of the YBAs). A network map of the whole cultural ecology was rejected at the start of this report as being both impossible to achieve, and too unwieldy to interpret. However, just as in the natural world smaller scale ecologies - either geographically limited or reduced in scope to the interaction of particular species – can be mapped in detail, the same can happen in culture.

Even relatively crude network mapping, such as that undertaken at the level of one cultural organisation, the Royal Shakespeare Company, by Hewison et al in 2010 can show the increase or decrease of connectivity within a system, as these two maps of social networks on 2007 and 2009 show (Hewison et al 2010.88):



Network mapping could be used on the supply side of culture, to show relationships and different types of interaction between organisations, individual artists and so on. On a local scale, or in terms of a sector or sub-sector, such a diagram would show the level of interconnectivity – which organisations are most connected, and which are isolated. Specific maps could show interactions at a level of detail, such as who shares information, or undertakes co-productions. Network mapping has already been used in examining specific artform networks. A good example is the work done on the evaluation of the Turning Point network of visual arts organisations by Annabel Jackson in 2011 (Jackson 2011).

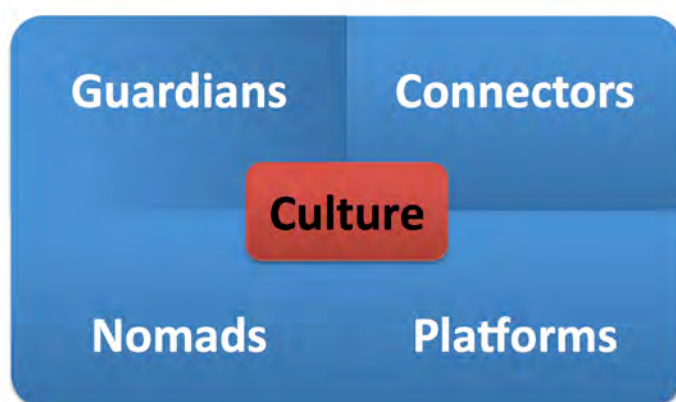
Networks could also operate on the demand side, tracing individual's cultural lives in terms of where they go, and what forms of culture they become involved with and consume.

Network mapping sets up issues of its own, such as where to draw the boundaries; the crossover between local and artform or sectoral networks; over-simplification; and capturing the quality of the network. Many of these problematic issues can be dealt with once the point of mapping the ecology, and the specific questions that need to be addressed in such an exercise, are clear.

c) Cultural ecology as interacting roles

In the interviews for this report, it became apparent that many interviewees were describing the roles that they or their organisations play within the ecology of culture.

There are four types of role apparent in the cultural ecology. Organisations and people can be Guardians, Connectors, Platforms and Nomads. Although they may be active in more than one of these roles, they tend to have a dominant activity. Culture needs all four roles to be undertaken in order to come into being and to function. Visualising the cultural ecology in this way has the advantage of cutting across the traditional public/private or funded/commercial distinctions; the roles exist across different funding models.



Guardians

Look after tangible and intangible cultural assets. Paradigmatic examples include museums, libraries, archives, heritage bodies, and also scholars and conservators. Thus the British Library's Roly Keating spoke about the British Library, as a copyright library, being 'a backstop to the national research collection on any topic for all adult citizens and the academic community,' adding that 'persistent investment in research has served the UK and the international community very well.'

Performing arts companies are also Guardians. As Alex Beard said: 'The ROH are custodians of the repertoire, we add to it, make sure it has a future; provide a public service and perform at the highest level.' The RSC's latest annual report says that 'Our job is to give the best possible experience of Shakespeare to the widest possible audience.'⁶⁰ Many of these publicly funded guardians are extraordinarily creative and inventive in the way that they display and interpret objects and texts. They have a bias towards free use and do their utmost to make the resources that they look after available to scholars, artists and members of the public. Many invest heavily in learning and education.

However, as Bill Ivey points out in his book *arts inc*, cultural assets are often owned by corporations, so Disney, Sony, Penguin and music publisher Schott's are also guardians. Corporations take a different view of cultural freedom, and generally want people who use their content to pay for it. Although that is normal commercial practice, it means that some guardians can shut down culture by pricing it beyond reach or by refusing access. Sometimes they have a policy of enlightened self-interest in allowing free re-use; sometimes they are heavy-handed and punitively litigious. But their role as guardians remains: if Disney destroyed *Fantasia* it would be an act of cultural vandalism akin to a library burning a

manuscript. Individuals too can be guardians: conservators, country house owners, collectors, archivists, and members of preservation societies all fall into this category.

As described in section 7, the cultural ecology is more robust and self-regenerative when it has the widest range of cultural stimulus. It follows that the role of guardians and the health of the cultural commons is crucial to the vitality of the cultural ecology.

Connectors

Put people and resources together, and move energy around the ecology. Producers and impresarios have traditionally undertaken this role, gathering together money, artists, technicians, venues, musicians, and whatever else it takes to make a cultural event happen. These connectors have to have an intimate knowledge of the micro-operations of their field and they need strong and eclectic networks. Examples of connectors interviewed for this report are Ingenious, Brickwall and Watershed, but a typology of connectors would include amateur arts administrators, critics and bloggers who connect the audience to the content, and volunteer heritage organizers as well as commercial producers and curators.

Tom Fleming's 2008 report for the UK Film Council, *Crossing Boundaries: The role of cross-art-form and media venues in the age of 'clicks' not 'bricks'*, looks at how six publicly-funded, cinema-led arts centres have played a role in the cultural and creative lives of their cities and regions, and he makes this point about their role as connectors: 'The venues' contribution to new models of creative infrastructure is perhaps their least understood and publicised role. This study shows that the venues offer and curate those porous, connected and flexible spaces which are vital to a rich creative ecology and dynamic creative economy. They operate as critical brokers, commissioners and connectors, generously linking activity, both physically and digitally, in a way that gives them a role akin to that of a curator: making experiences, using facilities, mixing collaborators and content in a way that virtually no other part of the cultural infrastructure can. The venues go some of the way to ensuring that in each of the cities there is an organisation which consistently seeks to build new and strong relationships, to cross boundaries, introduce new ideas, and ensure that those with the ideas have the platform upon which they can be expressed.'⁶¹

He continues: 'The venues operate as vital, dynamic, cross-boundary spaces where different disciplines and sectors, such as science and art, can collide and collaborate. This is critical to their role in the creative economy. Research into the drivers of success and productivity for places and the economy shows that vital are spaces which encourage interaction between individuals from sectors that don't normally mix. This study shows that the venues' active facilitation and brokering of new forms of knowledge transfer and exchange is making a real impact.'

Claire Reddington of Watershed argues that connectors are not given due weight: 'the thing that needs funding is the nodes in the system'. Recent unpublished research by this author suggests a growing role for the connector, with more producers/ impresarios/ organisers/independent curators putting together shows for building-based organisations, running festivals, or creating pop-ups and one-offs and street art.

As Kate Tyndall puts it in her book *the producers: alchemists of the impossible*, which gives a richly articulated and detailed description of the role of producers across the funded and commercial sectors (many of her chosen examples have worked in both): 'the producer leads in navigating between a bold vision of an idea, and how feasibly - and brilliantly - to deliver it, how to give the idea life and locate it in the world.'⁶² Her work concentrates on individuals and describes how 'the job these people do involves an all-encompassing interwoven set of responsibilities necessary to make great ideas and projects happen...they must ...build and hold together the frameworks of relationships and of meaning that will attract the necessary support and finance, and engage those for whom it is intended.'

The connector role is increasingly being undertaken by large-scale and some smaller-scale guardians. As Balshaw explained 'the museum has an official function of display, but also now acts as a hub, connector and gathering space'.

Platforms

The main types of platforms are venues, galleries, community halls, streets, clubs and pubs, and websites that host cultural content. They exist across all funding models and can be owned and run by charities, local authorities, voluntary groups, large and small commercial organisations, and individual business owners.

Venues act as platforms for the work of others either by programming work or being available for hire. Programming ranges from the huge number of events and performances happening every day at the Southbank, to a pub owner providing an open mike for performance poets. Hires can be as large as a promoter booking the Albert Hall, or as small as a sing-a-long in a village hall. Platforms can provide spaces in multiple ways for many purposes. Thomson explained that the Barbican rents its stages to the RSC, curates and commissions both visual arts and performance, charges for the use

of the buildings in fashion shoots, film and TV, partners with the Guildhall School of Music to provide platforms for young musicians.

Like Guardians, Platforms can also act as Connectors: 'The Barbican and workspace innovators The Trampery have joined forces to create Fish Island Labs, a unique new centre to kickstart the careers of a new generation of emerging talent spanning technology and the arts.'⁶³

Venues provide physical platforms in their buildings, but public spaces are also important platforms, with examples such as the Winchester Hat Fair taking place on the streets of that town, or the many buskers found in Edinburgh during the festival.

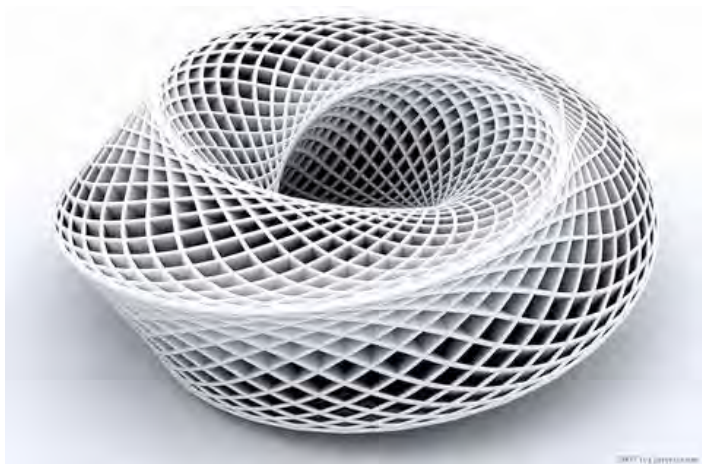
The cultural ecology has been transformed by the relatively recent emergence of digital platforms. Websites such as Youtube, Instagram, 53millionartists.com, and Tumblr are intensely democratic cultural spaces because anyone can upload their work for free. This has led to an upsurge of creative activity, critical comment, and the sharing of personal curations of culture

Nomads

The cultural ecology has interconnected guardians, connectors and platforms, but all of them exist because of the fourth role, that of nomads. Most of the population range freely across the cultural world, visiting venues, listening to the radio, borrowing books from the library, seeing films and TV shows. They are the demand-side of culture, an often neglected but essential part of the ecology – the viewers, listeners, readers and purchasers whose enjoyment of culture drive its production. Helen Charman from the Design Museum believes that 'nomad' is a good word to describe how people interact with culture these days, describing how people 'graze across the landscape'.

Nomads are consumers of culture, but the category also includes producers such as individual visual artists who show their work in different galleries or upload work onto the internet; technicians, actors and musicians who move from one show to another; touring theatre companies and rock bands. All of these people engage with other parts of the ecology to perform, sell, buy, share, and enjoy culture. They will draw on the collections of the guardians for creative stimulus, put their work on real or virtual platforms, and be in touch with agents and producers to help them get employment, gigs, or other kinds of work.

12) What next? Future approaches to cultural ecology



Topological model of a network: http://vizproto.wikispaces.asu.edu/CMA_Brainstorm

The ecology of culture is an intricate web of connections, both internally – with movement of ideas, people, products and money around the whole system – and externally into a wide range of other fields. The effectiveness and efficiency of the ecology depends on the number and strength of the internal and external connections. Both economic and cultural value are created through a high degree of interaction and the quality of those relationships. The cultural ecology also depends on the benignity of the environment within which it functions. Just as with a natural ecosystem, the cultural ecology will be more fecund and productive when it has a great number of species interacting with each other: in the opposite case the result will be a cultural desert.

How then can understanding the cultural ecology be taken forward?

From the information and viewpoints collected during the course of this research a number of suggestions can be made:

Look at local and specific ecologies.

This report has concentrated on the word 'ecology' in the singular, but within the broad sweep of culture there exist smaller ecologies that can be more readily understood because of their scale and/or their specificity. This can be seen in the examples of Bolton and Blackpool, or by looking at the world of theatre, or, as in the case of the work of Behr et al, concentrating on venues. Although each local ecology will be different (because it will have different cultural assets and activities) there is merit in analyzing how they operate, and how they integrate with the localised infrastructure, investment and economy. Understanding and analyzing local cultural ecologies would be of great help to local authorities and help them to see where their investment is best deployed. The analysis of the ecologies would be best achieved through the following actions:

Map small-scale networks.

Looking at the number and density of connections between the various parts of the system, and understanding whether they are increasing or decreasing in number and quality, provides a useful measure of judging the health of an ecology and a means of assessing whether it is likely to be resilient. Mapping local networks is a relatively simple process – and a relatively crude one. It needs to be undertaken at regular intervals to show how relationships are changing, and it is important to examine the quality of relationships as well as their simple existence. In particular, more work should be done on how different parts of the cultural ecology learn from each other. Bakhshi pointed out that analysing and understanding cultural ecologies should become more achievable as big data becomes available: 'Big data analysis at city and local level will be useful knowledge – big data is clearly an important element in understanding any large system, and social media throw up new opportunities to gather big data.'

Analyse roles, not business models.

Network analysis can be further enhanced by categorizing the organisations and people who are connected in the ecology according to their roles as guardians, connectors, platforms and nomads, as suggested in section 11. The development of the ecology may be being held back by a lack of connectors, for example, or the absence of a type of platform. Connectors can also act as an early warning system because they are connected to different parts of the ecology and

can spot potential problems and weaknesses. Seeing the full range of cultural roles across different types of funding models helps understand how the cultural ecology appears from the point of view of its users rather than its funders or administrators.

Measure Vital Signs.

Section 8 suggested using ecological concepts in the field of culture. This idea can be extended to the question of how to assess the health of the cultural ecology. A number of measures are used within natural ecosystems to determine the resilience of those systems. Signs of deterioration include: species depletion; invasive species; pathological growth. Signs of ecosystem health include the existence of top predators; balanced populations of species; increasing complexity and fecundity.

Translated into cultural terms this would suggest measurement of systemic health should concentrate on:

a) the variety and number of different types of cultural actors; whether they are increasing or decreasing; whether new forms are emerging. In other words, we should be measuring the number and variety of theatres, concert halls, clubs, cinemas etc, and looking at what they are doing. Signs of ill-health include, for example, that there are many cinemas around the country but few films shown, and that public libraries are closing; one sign of health is that festivals continue to grow in scale.

b) supply-chain analysis; large scale complex events, such as the Olympic opening ceremony and the Manchester International festival are akin to 'top predators': they need a complex and rich network of support systems in order to exist. This can be thought of in terms of supply chains – will these type of events be able to continue to draw on a supply of artists, technicians, and will there be an audience for what they do?

c) increasing complexity; a healthy ecology should be generative. New artists, audiences and artforms should be appearing. The ecology should be getting more complex not only in terms of the numbers of people involved but in the diversity of their involvement. Variety is source of ecological strength: it is better for the health of the ecology, for example, that the theatre sector in a big city has a variety of sizes of venue and a wide range of different types of performance being staged, rather than offering a collection of long-running musicals, even if they attract big audiences. The health of the ecology cannot be judged in terms only of audience numbers or financial turnover.

Local cultural ecologies could choose their own measures of 'vital signs' to determine the robustness of their own cultural infrastructures, and the cultural opportunities that they are creating for cultural professionals, amateurs and volunteers, and audiences. Data collection would include quantitative measures of Audience numbers as a percentage of population;

Opportunities to engage and participate;

Numbers of professional and amateur artists, performers and technicians;

Economic activity relating to culture;

Social impact studies;

The number and type of public and private sector guardians, platforms and connectors;

The range of artforms and variety of cultural opportunities in a given locality;

Cultural infrastructure both public and private;

Cultural educational opportunities in schools, FE, HE and adult learning.;

And qualitative measures of:

Audience experience;

Critical response to the work on offer;

The nature of the relationships amongst and between the various cultural actors: institutions and organizations; their users, participants and audiences; funders; local government; national funders; foundations and trusts.

Some of these qualitative and quantitative measurements are already being gathered under the DCMS' Taking Part survey, and in work being done by specific local authorities. New measures of qualitative assessment are being developed, as for example in the case of the Manchester Metrics Project (Bunting and Knell 2014).

There is much work-in-progress, and this report is only a first step in developing approaches to the assessment and evaluation of the ecology of culture. The project could be taken forward by using the tools and approaches offered herein to investigate the detail of local and artform ecologies.

13. Bibliography

Albert, A., et al, 2013. *Publicly Funded Arts as an R&D Lab for the Creative Industries? A Survey of Theatre Careers in the UK*. Purfleet: Creative & Cultural Skills.

Arts & Business, 2010. *A Private Sector Policy for the Arts*. London: Arts & Business.

Arts Council England, 2014. *This England: How Arts Council England uses its investment to shape a national cultural ecology*. Manchester: Arts Council England.

Aspden, P., 2014. Designs for (cultural) life. *Financial Times*. 31 May/1 Jun, Life & Arts, p.11.

Bachmann, G., et al., 2012. *Cultural Value Networks*. Bristol: Digital Cultures Research Centre, University of the West of England, at: <http://www.dcrc.org.uk/research/cultural-value-networks-summary-report/>

BAFTA, 2012. *The BAFTA Career Pathways Survey: Career Pathways in Film, Television and Games*. London: BAFTA.

Bakhshi, H., Desai, R., Freeman, A., 2010. *Not Rocket Science: A Roadmap for Arts and Cultural R&D*. London: Mission Models Money.

Bakhshi, H., Hargreaves, I., Mateos-Garcia, J., 2013. *A Manifesto for the Creative Economy*. London: Nesta.

Bakhshi, H., Lee, N., Mateos-Garcia, J., 2013. *Capital of culture? An econometric analysis of the relationship between arts and cultural clusters, wages and the creative economy in English cities*. In: Rushton, M., ed., 2013. *Creative Communities: Art Works in Economic Development*. Washington: Brookings Institution Press.

Bakhshi, H., Throsby, D., 2010. *Culture of Innovation: An economic analysis of innovation in arts and cultural organisations*. London: Nesta.

Ball, L. et al., 2010. *Creative Career Stories*. Brighton: Institute for Employment Studies.

Bang Larsen, L. (ed.) 2014. *Networks*, London: Whitechapel Gallery.

Bauman, Z., 2011. *Culture in a Liquid Modern World*. Cambridge: Polity.

BBC, 2010. *The Economic Impact of the BBC: 2009/10*. London: BBC

BBC, 2013. *The Economic Impact of the BBC: 2011/12*. London: BBC.

Behr, A., Brennan, M., Cloonan, M., 2014. *The Cultural Value of Live Music from the Pub to the Stadium: Getting Beyond the Numbers*. London: Arts & Humanities Research Council.

Beyers, W., et al., 2004. *The Economic Impact of Seattle's Music Industry*. Seattle: City of Seattle, Office of Economic Development.

Beyers, W., Fowler, C., Andreoli, D., 2008. *The Economic Impact of Music in Seattle and King County*. Seattle: Mayor's Office of Film and Music.

Blau, J., 1989. *The Shape of Culture*. Cambridge: Cambridge University Press.

BOP Consulting, 2012. *Measuring the economic benefits of arts and culture: Practical guidance on research methodologies for arts and cultural organizations*. London: Arts Council England.

Bunting, C, and Knell, J. 2014 *Measuring Quality in the Cultural Sector. The Manchester Metrics pilot: Findings and Lessons Learned*, London, Arts Council England.

Capra, F., 1997. *The Web of Life: A New System of Mind and Matter*. London: Flamingo.

Carnwath, J., Brown, A., 2014. *Understanding the value and impacts of cultural experiences: a literature review*. Manchester: Arts Council England.

Caves, R., 2000. *Creative Industries: Contracts between Art and Commerce*. Harvard University Press.

Centre for Economics and Business Research, 2013. *The contribution of the arts and culture to the national economy: An analysis of the macroeconomic contribution of the arts and culture and of some of their indirect contributions through spillover effects felt in the wider economy*. London: Arts Council England.

Cogo-Fawcett, R., 2003. *Relationships between commercial and subsidised theatre*. London: Arts Council England.

- Cronshaw, S., and Tullin, P., 2009. *Intelligent Naivety*. London: Culture Label.
- Crossick, G., 2006. *Knowledge transfer without widgets: the challenge of the creative economy*. London: Goldsmiths, University of London.
- Culture Label, 2014. *Cultural Innovation and Entrepreneurship in London*. London: City of London Corporation.
- Deloitte, 2010. *The Economic Impact of the BBC: 2008/09*. London: Deloitte.
- Department for Culture, Media and Sport, 1998. *Creative Industries Mapping Documents*. London: Department for Culture, Media and Sport.
- Department for Culture, Media and Sport, 2006. *Developing Entrepreneurship for the Creative Industries*. London: Department for Culture, Media and Sport.
- DeNatale, D., Wassall, G., 2007. *The Creative Economy: A New Definition*. Boston: New England Foundation for the Arts.
- Dobson, A., ed., 1991. *The Green Reader*. London: Andre Deutsch.
- Dodd, F., Graves, A., Taws, K., 2008. *Our Creative Talent: the voluntary and amateur arts in England*. London: Department for Culture, Media and Sport.
- Dovey, J., Fleuriot, C., 2014. *The Pervasive Media Cookbook*. Bristol: DCRC Press.
- The Embassy of the Kingdom of the Netherlands, Ahmadali, A., 2011. *Creative Cuts: Best-practice research on culture and creative industries in the United Kingdom, September 2010 – March 2011*. London: the Embassy of the Kingdom of the Netherlands.
- Fleming, T., 2008. *Crossing Boundaries: The role of cross-art-form and media venues in the age of 'clicks' not 'bricks'*. London: UK Film Council.
- Fleming, T., Erskine, A., 2011. *Supporting growth in the arts economy*. London: Arts Council England.
- Flew, T., 2012. *The Creative Industries, Culture and Policy*. London: Sage.
- Gardiner, L., 2011. *Making the Leap: From Labour of Love to Earning a Living*. Newcastle upon Tyne: Voluntary Arts England.
- Hartley, J., ed., 2005. *Creative Industries*. Oxford: Blackwell.
- Henley, D., 2012. *Cultural Education in England: An independent review*. London: Department for Culture, Media and Sport.
- Hesmondhalgh, D., 2013. *The Cultural Industries, 3rd edition*. London: Sage.
- Hewison, R, Holden, J, Jones, S., 2010 *AllTogether*, London: Demos
- Hewison, R., 2014. *Cultural Capital: the rise and fall of creative Britain*. London: Verso.
- Higgs, P., Cunningham, S. Bakhshi, H., 2008. *Beyond the Creative Industries: Mapping the Creative Economy in the UK*. London: Nesta.
- Holden, J., 2004. *Capturing Cultural Value: How culture has become a tool of government policy*. London: Demos.
- Holden, J., 2006. *Cultural Value and the Crisis of Legitimacy: Why culture needs a democratic mandate*. London: Demos.
- Holden, J., 2007. *Publicly-funded culture and the creative industries*. London: Arts Council England.
- Holden, J., 2007, *Useful and Suggestive: Creative Industries and the V&A*. London: Victoria & Albert Museum.
- Holden, J., 2008. *Democratic Culture*. London: Demos.
- Hutchison, R., Feist, A., 1991. *Amateur Arts in the UK*. London: Policy Studies Institute.
- Hutter, M., and Throsby, D., eds., 2008. *Beyond Price: Value in Culture, Economics and the Arts*. Cambridge: Cambridge University Press.
- Ivey, B., 2008. *Arts, Inc.: How Greed and Neglect have destroyed our cultural rights*. Berkeley: University of California Press.
- Jackson, A., 2011. *Turning Point Network: Final evaluation report*, London, Arts Council England.
- Jones, S., 2010. *Culture Shock*. London: Demos.

- Joss, T., 2008. *New Flow: A Better Future for Artists, Citizens and the State*. London: Mission Models Money.
- Julier, G., and Moor, L. *Design and Creativity: Policy, management and practice*, London: Bloomsbury.
- KEA, 2006. *The Economy of Culture in Europe*. Brussels: European Commission, Directorate-General for Education and Culture.
- Knell, J., 2005. *The Art of Dying*. London: Mission Models Money.
- Knell, J., 2007. *The Art of Living*. London: Mission Models Money.
- Knell, J., 2007A. *Western Australia's Cultural Ecology: A Very Relaxed Sort of Crisis*. London: Intelligence Agency.
- Knell, J., Taylor, M., 2011. *Arts Funding, Austerity and the Big Society: Remaking the case for the arts*. London: Royal Society of Arts.
- Kreidler, J., Eng, M., 2005. *Cultural Dynamics Map: Exploring the Arts Ecosystem in the United States*.
- Landry, C., 2013. *Culture & Commerce: The Royal Academy & Mayfair*. Stroud: Comedia.
- Latour, B (2005) 'Network, a Concept not a Thing out There' in Bang Larsen, L. (ed.) 2014. *Networks*, London: Whitechapel Gallery pp 68-73.
- Leadbeater, C., 2004. *Britain's Creativity Challenge*. Leeds: Creative & Cultural Skills.
- Leadbeater, C., Oakley, K., 1999. *The Independents: Britain's new cultural entrepreneurs*. London: Demos.
- Local Government Association, 2013. *Driving growth through local government evidence in the arts*. London: Local Government Association.
- Markusen, A., 2006. *Crossover: How Artists build careers across Commercial, Nonprofit and Community Work*. Minneapolis: University of Minnesota.
- Markusen, A., and Gadwa, A., 2010. *Creative Placemaking*. Washington DC: Mayors' Institute on City Design and the National Endowment for the Arts.
- Markusen, A., et al., 2011. *California's Arts and Cultural Ecology*. San Francisco: James Irvine Foundation.
- Matarasso, F., 1997. *Use or Ornament? The social impact of participation in the arts*. Stroud: Comedia.
- Matarasso, F., 2012. *Where We Dream: West Bromwich Operatic Society and the Fine Art of Musical Theatre*. West Bromwich: Multistory.
- Matarasso, F., and Landry, C., 1999. *Balancing Act: twenty-one strategic dilemmas in cultural policy*. Strasbourg: Council of Europe.
- McMaster, B., 2008. *Supporting Excellence in the Arts: From Measurement to Judgement*. London: Department for Culture, Media and Sport.
- Mermiri, T., 2010. *Private Investment in Culture Survey 2008/09 – the arts in the new normal'*. London: Arts & Business.
- Millard, R., 2001. *The Tastemakers: UK Art Now*. London: Thames & Hudson.
- Mowlah, A., et al., 2014. *The value of arts and culture to people and society – an evidence review*. Manchester: Arts Council England.
- Myerscough, J., 1988. *The Economic Importance of the Arts in Britain*. London: Policy Studies Institute.
- Myrone, M., McMillan, J., 2014. *British Folk Art*. London: Tate.
- Oakley, K., 2009. 'Art Works' – *cultural labour markets: a literature review*. London: Creativity, Culture and Education.
- Oakley, K., Sperry, B., Pratt, A., 2008. *The Art of Innovation: How fine arts graduates contribute to innovation*. London: Nesta.
- O'Brien, D., 2011. *Measuring the value of culture*. London: Department of Media, Culture and Sport.
- O'Brien, D., 2014 *Cultural Policy: Management, Value and Modernity*, London, Routledge.
- Owen, D., 1980. *What is Ecology?* Oxford: Oxford University Press.

- Potts, J., Cunningham, S., 2008. Four Models of the Creative Industries. *International Journal of Cultural Policy*. 14 (3), pp.233-247.
- Pung, C., Clarke, A., Patten, L., 2004. *Measuring the economic impact of the British Library*, London: British Library, available at <http://www.bl.uk/aboutus/stratpolprog/increasingvalue/publicvalue/confpres/pungelwesmarks.pdf>
- Robinson, M. *Just how big is the arts ecology?* at <http://thinkingpractice.blogspot.co.uk/2010/07/just-how-big-is-arts-ecology.html>, accessed 15/10/2014
- Sharpe, B., 2010. *Economies of Life: Patterns of health and wealth*. Axminster: Triarchy Press.
- Shellard, D., 2004. *Economic impact study of UK theatre*. London: Arts Council England.
- Smith, M., 2010. *Arts funding in a cooler climate: Subsidy, commerce and the mixed economy of culture in the UK*. London: Arts & Business.
- Throsby, D., 2001. *Economics and Culture*. Cambridge: Cambridge University Press.
- Throsby, D., 2010. *The Economics of Cultural Policy*. Cambridge: Cambridge University Press.
- Tullin, P., 2012. *REMIX*. London: Culture Label.
- Tullin, P. 2012A *Why cultural entrepreneurship is a win-win scenario for the sector* at <http://www.theguardian.com/culture-professionals-network/culture-professionals-blog/2012/sep/24/cultural-entrepreneurship-technology-remix-ebook>, accessed 15/10/2014
- Tyndall, K. n.d. *the producers: alchemists of the impossible*, London: Arts Council England and Jerwood Foundation.
- UK Creative overview website at <http://www.thecreativeindustries.co.uk/uk-creative-overview>, accessed 15/10/2014
- United Nations Commission on Trade and Development, 2010. *Creative Economy: A Feasible Development Option*. Geneva: United Nations Commission on Trade and Development.
- Vaizey, E., 2011. *The Creative Ecology*. 10 February, State of the Arts conference, London.
- White, A., 2014. *Innovation Population*. London: Nesta.
- Work Foundation, 2007. *Staying Ahead: the economic performance of the UK's creative industries*. London: Work Foundation.

Appendix: People interviewed

In the following table interviewees are shown in alphabetical (surname) order and have been categorised according to my own assessment of their role in relation to publicly funded, commercial and homemade culture.

SECTOR	NAME	ORGANISATION	DESCRIPTION	CULTURAL SPECIALISM
Public/commercial	Hasan Bakhshi	NESTA	'An innovation charity with a mission to help people and organisations bring great ideas to life'	Creative industries, digital.
Public	Maria Balshaw	Whitworth Art Gallery and Manchester City Galleries	Major regional galleries; Whitworth a University gallery, Manchester City Galleries local authority owned	Visual arts
Public	Alex Beard	Royal Opera House	Major cultural organisation	Opera
Academic	Matt Brennan and Adam Behr	The University of Edinburgh	University academic	Music and music venues.
Public/commercial	David Brownlee	Society of London Theatres	Membership organisation representing funded and commercial theatres	Theatre – funded and commercial
Commercial	Sebastian Conran	Sebastain Conran Associates	Private sector design company	Product Design and development
Public	Ben Cowell	National Trust	Membership organisation and statutory body	Heritage
Commercial	Aimee Croysdill	Individual	Freelance fashion stylist; clients include actors and musicians	Fashion
Public/commercial	Jon Dovey and Clare Reddington	Watershed	Community interest company, subsidiary of Watershed Arts Trust, a media centre in Bristol	Cultural broker in art, design and creative technology
Homemade/ Commercial	David Gibson	Freelance conductor	Individual	Classical music; amateur choirs
Public	Polly Hamilton	Blackpool Council	Local authority	All artforms, museums, library, venues, illuminations.
Public	Subnum Harif	Bolton Museum and Libraries	Local Authority	Museum and Library; Local Authority arts
Education	Gavin Henderson	Royal Central School of Speech and Drama	College of Higher Education,	Performing and Creative arts
Academic/public	Robert Hewison	Individual	Cultural historian	All artforms – particularly theatre, heritage and visual arts
Commercial	Matthew Hoad-Robson and Alex Walker	Brickwall	Independent film production company making short films for public and private clients	Film
Public	Paul Hughes	BBC Symphony Orchestra	Orchestra, part of the BBC	Classical music

SECTOR	NAME	ORGANISATION	DESCRIPTION	CULTURAL SPECIALISM
Public	Samuel Jones	Tate	Major visual arts galleries	Visual arts
Public/ commercial/ homemade	John Kampfner	Creative Industries Federation	Independent membership organisation	Arts, cultural and creative industries
Public	Roly Keating	British Library	National Library	Library and Archive
Education/ commercial	Darius Khwaja	London Centre of Contemporary Music	Independent college offering degree courses	Contemporary music
Public	Eva Martinez	Sadler's Wells	Major Venue	Dance
Public/commercial	Caroline Norbury	Creative England	Not-for-profit company working with public and private partner to invest in and develop creative sector.	Film, TV, video gaming, moving image
Public	Richard Russell	ACE	Arts funding and development agency	All artforms; museums, libraries, archives
Public/commercial	Rebecca Salter	Individual	Visual artist and Royal Academician	Visual arts
Public	Anthony Sargent	Sage Gateshead	Major Venue, significant education and learning programmes	Music
Commercial	Samir Shah	Juniper Communications	Private sector Production company	TV
Homemade	Robin Simpson	Voluntary Arts	Charity promoting 'active participation in cultural activities across the UK'	All artforms
Commercial	Martin Smith	Ingenious Group	Major financial services group involved in media and entertainment	Film and TV; Festivals
Public/commercial	Pauline Tambling	CCSkills	Skills Training Agency	Creative and Cultural Industries
Commercial	Will Taylor and Nick Hill	Indie Band Flyte	Musicians and songwriters from Indie Band Flyte, recently signed to a major label	Popular music
Public	Leonora Thomson	Barbican	Largest multi-artform venue in Europe, owned, funded and run by the City of London Corporation.	Arts centre: Music; visual arts; library; theatre; cinema.
Academic	Tarek Virani	QMC	University academic	Creative industries
Public	Erica Whyman	Royal Shakespeare Company	Major theatre company	Theatre
Public	Jonathan Williams	British Museum	National Museum	Museum

Endnotes

- 1 <https://www.youtube.com/watch?v=Gmz-IVSI92E>
- 2 'The Creative Industries do not Exist (but may have to be invented)', speech at My Creativity Conference, Amsterdam, November 2014.
- 3 Markussen 2011.10
- 4 Markussen 2011.10
- 5 A relatively small number of publications were key works in that endeavour: Bachmann et al (2012), Bakhshi et al (2010); CEBR (2013); Crossick (2006); Dovey (2014); Fleming (2008); Hewison (2014); Holden (2007); Joss (2008); Matarasso (2012); Oakley (2009); Sharpe (2010); Smith (2010); Throsby (2010); and Tullin (2012).
- 6 CEBR 2013.96
- 7 Latour, B., 2005.72
- 8 see the work of Bruno Latour and Michel Callon on actor-network theory.
- 9 Markussen 2011.10
- 10 Bachmann et al 2012.8
- 11 <http://www.bbc.co.uk/programmes/b04k9h4w>, accessed 29/09/2014
- 12 <http://www.bbc.co.uk/symphonyorchestra/events/by/date/2015/3>
- 13 http://www.missionmodelsmoney.org.uk/sites/default/files/23974477-Not-Rocket-Science-Hasan-Bakhshi-et-al-2010_0.pdf
- 14 Albert et al 2013.3
- 15 see Dodd et al 2008
- 16 <http://www.theguardian.com/music/2007/jan/16/folk.craigtaylor>
- 17 http://bsw.org.uk/about_us.asp
- 18 For more on brass bands, see the website 4barsrest: <http://www.4barsrest.com/default.asp>
- 19 Matarasso 2012.79
- 20 Matarasso 2012.53.
- 21 https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/271008/Creative_Industries_Economic_Estimates_-_January_2014.pdf
- 22 Smith 2010.7
- 23 <http://creativeindustriesfederation.com/mission.html>
- 24 Throsby 2010. 26-28 and 92ff
- 25 Smith 2010.7
- 26 Albert et al 2012.25
- 27 Hewison 2014 137-138
- 28 Crossick 2006.9
- 29 Owen 1980.1
- 30 <https://www.youtube.com/watch?v=Gmz-IVSI92E>
- 31 Matarasso 2012.76
- 32 <http://news.bbc.co.uk/1/hi/entertainment/6368307.stm>
- 33 Financial Times, 16 February 2007.

- 34 Matarasso 2012.78
- 35 Aspden 2014.
- 36 Cohen, the Observer 13 September 13.
- 37 CEBR 2013.65
- 38 Millard 2001.34
- 39 <http://www.youtube.com/watch?v=VAQKFNRl-o0>
- 40 http://www.songfacts.com/category-songs_used_in_commercials.php
- 41 <http://www.howardgoodall.co.uk/works/musicals/silas-marner>
- 42 http://avatar.wikia.com/wiki/Influences_on_the_Avatar_series
- 43 Their different perspectives can be found here, and should be read in full as they reveal the high degree of complexity involved: <http://www.theguardian.com/culture-professionals-network/culture-professionals-blog/2014/jun/12/connecting-commercial-subsidised-theatre-1927>
- 44 John Peel Lecture, broadcast on Radio 6 music, 13/10/2014
- 45 <http://videojam.co.uk/project/17072014-video-jam-at-manchester-art-gallery/>
- 46 Knell 2007.33
- 47 Hewison 2014.199-204
- 48 for example at <https://www.gutenberg.org>
- 49 <https://www.youtube.com/watch?v=tmTQDwlmsv4>
- 50 <http://www.britannica.com/EBchecked/topic/129392/community-ecology/70635/Convergence>
- 51 <http://umusic.co.uk/umusic-blog/musicandfashion>
- 52 <http://www.mavericktv.co.uk/about-us/>
- 53 *Financial Times* Life & Arts section July 5/6 2014 p14
- 54 Throsby 2001.13
- 55 <http://www.vam.ac.uk/content/articles/0-9/17th-century-theatre/>
- 56 <http://www.nationalgallery.org.uk/channel/building-the-picture/>
- 57 <http://www.furia.com/misc/genremaps/engenremap.html>
- 58 <http://amissingham.com/2012/05/22/the-creativity-filter/>
- 59 <http://fashion.telegraph.co.uk/news-features/TMG6239709/Milan-Fashion-Week-Versus.html>
- 60 <http://www.rsc.org.uk/about-us/our-work/annualreport.aspx>
- 61 Fleming 2008.9
- 62 Tyndall n.d. 1
- 63 <http://www.barbican.org.uk/fishisland/>



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