

Problematizing a homogenous spatial logic for the creative industries

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Introduction

The computer games industry can be regarded, in many ways, as a paradigmatic sector of the creative economy. It has been firmly on the policy agenda in the UK since New Labour's election in 1997 and, in particular, since 1998 with the inclusion of digital games as a sub-sector of creative industries as defined by the 'Creative Industries Task Force'. Its high public profile has been justified by claims of economic weight and potential externalities (DCMS, 2012a; TIGA, 2012). As well as a belief that the sector can provide direct benefits to the economy, it is suggested that it also provides additional advantages through a multiplier effect and can even ameliorate the impact of recent recession. In terms of policy interventions aimed at fostering growth within the computer games industry, many have taken a spatially targeted focus including the funding and development of hubs and clusters. The rationale for this attention rests on a belief that the sector has a particular spatial logic in common with the wider creative industries, which preferences proximity and is subject to advantages of agglomeration. Despite a paucity of empirical research specifically reviewing the spatial rationale of the computer games sector, significant work has been undertaken to identify the location patterns within the wider creative economy. The existing research suggests that the creative industries have a dominant spatial rationale which tends to favour co-location, and that large metropolitan centres act as natural hubs of activity, but there remain gaps in evidence base.

This chapter explores the emergence of the creative industries sector as a policy priority and then reviews the existing evidence of a common spatial rationale. The key attributes of the computer games industry are compared to those of the wider creative industries sector to determine if the former reflects the key characteristics seen to define the latter. Next, the existing empirical evidence regarding the spatial organization of the games sector is examined to determine convergence or deviation from the accepted creative industries logic. A scarcity of robust evidence is highlighted alongside an examination of some of the key challenges of

researching the computer games industry and the wider creative industries sector. Finally, it is argued that a tendency towards the social construction of the sector as a discreet industry can do more to obscure than reveal trends, especially in a time of increasing convergence and digitization affecting the economy as a whole.

The development of the ‘creative industries’ as a policy priority

The historiography of the current term ‘creative industries’ began with Theodor Adorno’s and Max Horkheimer’s definition of the cultural industries (1944), which focused on industrially-produced commercial entertainment as distinct from the subsidized arts sector. The term was deployed in an ironic fashion to demonstrate what they saw as the absorption of the arts within capitalist industry (Flew, 2002). Culture and industry were argued to be opposites and the term was used to express dissatisfaction with popular forms of culture such as magazines and films (UNCTAD, 2008). Similarly, and much later, the Greater London Council used the term ‘cultural industries’ during the 1980s to emphasise the mass consumption and wealth creation of the cultural goods of the non-subsidized part of the sector (O’Connor, 2000).

The term ‘creative industries’ first appeared in Australia in 1994 when *Creative Nation* was published, a report in which an Australian federal government developed, for the first time, a comprehensive cultural policy (UNCTAD, 2008); it reached the UK in 1997, shortly after the election of New Labour, when the Department of Culture, Media and Sport (DCMS) was set up. The DCMS created the Creative Industries Task Force which was to define, map and measure creative industries. Two mapping documents were published in 1998 and 2001 and significantly raised the profile of the sector (Oakley, 2004). These documents highlighted the economic weight and regenerative possibilities of the sector.

Britain’s Creative Industries Task Force defined the creative industries as ‘those activities which have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation through the generation and exploitation of intellectual property’ (DCMS, 2001: 3; 2011). This definition identifies the central role of intellectual property rights as the criterion for inclusion (Taylor, 2006). Though not universally accepted, this definition is commonly deployed in UK policy and academic discussion. It has been argued that the change in terminology from ‘cultural’ to ‘creative’ represented a repositioning towards the more universal

and democratic connotations of creativity (Matarasso and Landry, 1999; O'Connor, 2000). It represents a move away from the traditional connotations of culture, which can be 'seen to reflect a top-down dispensation of elitist cultural values developed in the context of time and class, and which neglected or dismissed many forms of cultural expression and identity' (Matarasso and Landry, 1999: 13).

The sector has risen substantially in profile in the UK since 1997 and there are features of it which are regarded as particular opportunities and advantages. The statistics tell an impressive story. The Creative Industries accounted for 10.6 per cent of the UK's exports in 2009 and in the same year the sector contributed £36.3 billion in GVA to the UK (2.89 per cent of the UK's GVA; DCMS, 2011). Overall there are calculated to be 1.5 million people employed in the Creative Industries themselves or in a creative role in other industrial sectors, constituting 5.14 per cent of UK employment (DCMS, 2011). For these workers, incomes are generally higher than average, particularly for Software, Computer Games and Electronic Publishing. In 2006 they were 36 per cent higher than the UK average, although since then there has been some slowdown. Creative occupations generated over £40 billion in salaries and wages in 2006, while support staff in creative industries earned an extra £16.8 billion. Overall, the creative industries workforce earned 9.6 per cent of all UK earnings (Higgs *et al.*, 2008).

The benefits associated with developing the sector have led it to be identified as a key area for employment growth, with a raft of policy interventions aimed at cultivating jobs in the sector. Beyond pointing to the growing economic weight of the creative industries, advocates stress their potential for regeneration. As Hutton (2009: 987) describes, the sector 'can be seen as phoenix rising from the ashes of traditional manufacturing, light industry and engineering sectors'. These proposed spillover effects are often associated with city renaissance and linked to prospects for increased liveability and quality-of-life advantages (Landry, 2000; Florida, 2002; Champion, 2008). In particular, there has been a significant policy thrust from formerly industrial cities to build a share in this sector, often touted as a panacea for urban decline, although critical evidence regarding the possibilities for this is hard to find. Many of these policies are spatially targeted and focus on hubs and clusters of activity which have either emerged organically or been state-led. This place-based focus for policy assumes a spatial

rationale which favours proximity and co-location. The next section explores the commonly identified spatial characteristics of the creative industries sector from which this picture stems.

Spatial logic of the creative industries

Particular spatial and place-based factors are argued to be central to the development and organization of creative industries. The need for proximity is commonly identified as a priority in this sector to allow flexibility, develop networks and offset risk (Banks *et al.*, 2000; Scott, 2001). Creative businesses are also said to ‘thrive in milieus, networks, clusters, embedded knowledge and informal infrastructures of the city’ (Banks *et al.*, 2000: 454). Other place-based factors relating to the built environment, existence of cheap space, public-sector support framework, connectivity, local identity, institutional environment and availability of amenities are also drawn upon as possible influences in the locational choices of creative industry firms (see for example; Helbrecht, 1998; Leadbeater and Oakley 2001; Drake, 2003; Hutton, 2004; Markusen, 2006; Champion, 2010).

Research suggests that co-location is an ideal environment for creative industries to operate within. Commonly drawn upon as one of the most crucial factors in creative industry success is the presence of human capital. Mommaas (2004) draws on three factors which demonstrate the importance of clustering in the creative industries. He asserts that clusters are expected to create a local climate favourable for creative workers to be active in. There is also thought to be wider symbolic and infrastructural spinoff which is likely to attract more workers. Finally, clusters are expected to function as a context for trust, socialization, knowledge, inspiration, exchange and innovation in a product and service environment characterized by high risk. Geographically clustered networks of resources, including human capital, are very important to the creative industries and are often considered the key to successful project work. Deep local pools of creative and skilled labour are advantageous both to firms and employees (Reimer *et al.*, 2008). The literature suggests that the geographic proximity of individuals possessing human capital, skills, expertise or creative capabilities enables interactions which result in the spillovers that are crucial for innovation (Stolarick and Florida, 2006). This appears to be true, for example, in the film industry where access to networks is crucial both in the US (Hollywood) and the UK (London) (Ekinsmyth, 2002). Further to this, there may be an atelier

effect where the number of skilled individuals exceeds the labour demand, paving the way for new entrepreneurial activities (Santagata, 2002). In Cook and Pandit's (2007) study comparing the broadcasting industry in three city-regions, London was found to be advantaged by several factors relating to the possibility for knowledge spillovers. The labour market in London offers a pool of talent unrivalled in the UK. The highest financial rewards and the most prestigious projects are located there. Moreover, as a deep labour pool is necessary for the security of employees, skilled workers are likely to be encouraged to settle in a large urban centre offering a range of employment opportunities.

The industrial structure of the creative industries sector tends to make clustering even more advantageous than in the wider knowledge economy. The sector contains large numbers of very small firms. This allows them to be flexible but poses certain problems that can be somewhat offset by co-location. The problems associated with small firm size include less access to technological information, restricted resources and high training costs. Clustering is beneficial in this regard, as it 'can derive competitive advantage by obtaining efficiency gains that a small firm could not manage on its own' (Wu, 2005: 3). It is further suggested that the spatial clustering of related industries and skilled workers allows the development of an innovative environment likely to lead to a competitive and specialized local economy. Co-location offers benefits in terms of coherence with a shared learning process, path dependence, complementary resources and technological opportunities (Bathelt *et al.*, 2004). Co-operation and competition take place simultaneously as there is a common pool of labour, knowledge, information and ideas (Wu, 2005).

Banks *et al.* (2000) argue that the market for creative products is volatile and creative firms are not solely profit-orientated, but are also keen to remain innovative. As formal support structures such as banks and business support organizations are generally ill-equipped to help with the needs of creative industries, networks are seen as necessary to temper risk and inspire trust. Informal and untraded relations are often more important in creative industries than are formalized interactions (Bayliss, 2007). For instance, in her study of creative industry firms operating in the lace market in Nottingham, Crewe (1996) identified the use of informal networks and gentlemen's agreements to derive more secure tenancy arrangements. With the advent of the knowledge economy there has been a shift from permanent to freelance and

contract employment. Short-term and temporary collaboration is a corollary of a more reflexive and flexible economy, and the creative industries exemplify this trend. Firms are active in a volatile environment and so an adaptive nature and networking capabilities are needed to help overcome these weaknesses. This leads 'to the rejection of large hierarchical organizations in favour of networks of small firms able to respond and adapt quickly to changes' (Antcliff *et al.*, 2005: 6). For example, within the advertising industry campaigns are increasingly responding to current events and face increasing competition for media time and space. Workers need to come together on projects with little notice and on an ad hoc basis (Grabher, 2004). There are several characteristics of this shift. Project work takes place over a limited timescale and consists of interrelated tasks (Sydow and Saber, 2002). Meeting deadlines is the main criterion of evaluating performance (Grabher, 2002a). Importantly, project members tend to be assembled by a project manager and are often made up of past collaborators from the same network of contacts. In this way it is inter-personal rather than simply inter-firm relations which form the basis of the networks coming together to work on projects (Ekinsmyth, 2002).

The structure of project-based work can be described as 'flexible networks, or latent organizations consisting of groups of workers from different occupational groups, who come together repeatedly to work on successive projects' (Antcliff *et al.*, 2005: 15). These networks are characterised by mutuality, trust, shared expectations and norms governing behaviour (Antcliff *et al.*, 2005). The findings of Antcliff *et al.*'s (2005) study of workers in the audio-visual industry in the UK suggested that individuals in this sector sought to reconstruct stable employment relations through their involvement in and use of networks. The trust and reciprocity engendered by stable networks, built up over time, were used to offset the risk associated with the erosion of stable employment. These findings are echoed by a study of TV content production in two media regions in Germany by Sydow and Staber (2002) who found that, although firms come together to work on particular projects, typically their business relations extend for a much longer period than this. Commonly, firms and individuals who have worked together in the past will reassemble for further project work aided by their past experiences and expectations, even when they can only meet for short periods of time. Grabher (2002a) contends that it is 'know-who' rather than 'know-how' which dominates these networks and therefore it is essentially a reputation business. Projects can provide access to training and

acquiring skills, but a reputation can be built once the core of long-term relationships is accessed (Grabher, 2002b).

Projects are likely to favour proximity amongst participants for the regular face-to-face contact which is thought to encourage the transfer of tacit knowledge. The creative industries are argued to be knowledge-intensive, with a far greater reliance on the transfer of tacit information or know-how. Unlike codified knowledge which can be transmitted globally, over long distances and at low cost, tacit knowledge tends to be 'sticky', non-articulated and embedded and is considered best transferred by those co-located in clusters (Bathelt *et al.*, 2004). Face-to-face exchange gives rise to what Bathelt refers to as an information and communication ecology, which can be described in a number of ways such as 'industrial atmosphere', 'noise', or 'buzz' (Bathelt, 2005). Co-location helps firms translate and understand local buzz transmitted through tacit knowledge. He argues that tacit knowledge is automatically accessed by those firms located within a cluster (Bathelt, 2005).

Some networks are highly place-specific due to the difficulty and high cost of transmitting tacit knowledge and also due to locally based cultures and traditions (Sydow and Staber, 2002). Those actors who are located in the pool are exposed to noise, including rumours, impressions, recommendations and trade folklore, which allows them to become enculturated (Grabher, 2002a). The more short-term the project, the more important co-location of project partners becomes (Grabher, 2002a). Proximity encourages the development of untraded interdependencies, which are of benefit to creative workers who work part-time or via contracts. Watson (2008) suggests in his study of London's music industry that organizational connections can offer, at best, only a very partial substitute for geographical proximity, particularly those already embedded in communities of practice. Proximity is also useful for meeting material resource requirements, such as access to studio space. This clearly has a spatial rationale that again points to the primacy of co-location for the creative industries.

Creative industries are regarded 'high-touch' as well as high-tech, meaning that the ability to meet lifestyle preferences and network in informal surroundings is seen as crucial to the success of firms (Montgomery, 2007). The creation of an institutional structure is often stimulated by local buzz, leading to the development of communities of practice. Co-location allows the development of shared structures: language, technical attitudes, interpretative schemes

and ‘communities of practice’ (Bathelt et al, 2004). Grabher (2002a) describes this process as ‘hanging out’. The development of communities of practice, based around agglomerations of skilled workers, can provide an informal training ground, which allows participants access to the knowledge needed to become an insider. Individuals within this community will share norms of values, tastes, lifestyles and ways of doing things (Ekinsmyth, 2002: 233). These cannot be transmitted mechanically and so personal and collective stories are important (Santagata, 2002: 12). As O’Connor comments, the ‘creative industries are seen to be highly sensitive to embedded cultural knowledge whose mobilization depends on being “inside” a place’ (2004: 132). The symbolic nature of the products also depends on the knowledge of different sub-cultures, which can be accessed via socialising through networks within the range of alternative cultural and social scenes provided in urban locations (Reimer et al, 2008).

These factors would suggest that the co-location of firms in this sector leads to the development of a sophisticated environment for creative production which is reliant on the ability to build networks to successfully transmit knowledge. The evidence from existing studies would suggest that creative production is likely to be focused on global centres and raises the question as to whether other locations can support this economic sector.

The UK Computer Games Industry: how does the Games industry fit into the wider creative industries sector?

In many ways the computer games sector seems to reflect the characteristics of the creative economy and is often held up as a paradigmatic success story representing the wider creative economy. In 2008, the UK constituted the third largest computer games development territory by revenue and employed almost 10,000 people contributing £1 billion to GDP (Bakhshi and Mateos-Garcia, 2010). The UK is home to the studios that have developed games such as *Grand Theft Auto IV* (the fastest selling entertainment product of all time), *Runescape*, the *Fable* series, *Broken Sword* and *LittleBigPlane* (TIGA, 2012). According to the DCMS, almost 60 per cent of the UK population play video games. The sector has also been the focus of increased policy attention, most recently with the announcement in the 2012 budget that the sector will receive specialist relief from taxation from April 2013 (alongside animation and TV production). It has been estimated that over five years a games tax relief could create and protect 1,650 studio jobs

and increase the Games development sector's contribution to UK GDP by £280 million (DCMS, 2012a). In the same budget, investment plans for spatially targeted ultra-fast broadband connections were outlined for Birmingham, Bristol, Leeds & Bradford, Newcastle and Manchester along with the four UK capital cities (DCMS, 2012b). There has been strategic funding targeted at higher education institutions including the Universities of Abertay and Salford. Scotland has seen significant and explicit state support through the establishment of the Scottish Games Alliance.

Significant emphasis in the literature is placed upon the common characteristics of the creative industries sector which in turn are likely to produce a shared spatial logic. It is therefore important to explore the commonalities between the different activities included under the banner of the creative economy and determine how far these are shared by the Computer Games sector. Whilst not being exclusive to the sector or shared by all the component parts, these characteristics tend to be seen in the activities involved. This section suggests there are several ways in which the UK Computer Games industry reflects the key attributes associated with the broader creative industries sector. These relate to the nature of the product, organisational structure and employment trends.

Nature of product

Firstly, a commonly identified quality of the creative economy rests on the nature of the creative product which tends to be of a high value-added nature derived from the knowledge-intensive aspects involved in its creation, production, marketing and distribution. Creative products tend to possess symbolic or sign value, which can be ideas, experiences and images, rather than solely utilitarian functions (Scott, 2004). The markets tend to be niche and the products are highly customized. This is very much reflected within the computer games sector in the UK where technological innovation intimately supports content delivery and business model development (Bakhshi and Mateos-Garcia, 2010). In fact, within the games industry the lifecycle for a single product averages several years, in many ways suggesting that the sector offers a paradigmatic example of a knowledge-intensive production process (Tschang and Vang, 2008).

Nature of organizational structure

Creative industry firms are asserted to be small and agile, operating within a networked chain of interrelated activities (Rantisi *et al.*, 2006). Small firms and individuals are regarded as suitable for providing the model of flexible specialization and so, structurally, the majority of creative industry firms are small and are complemented by only a few large establishments (Scott, 2004). Reflective of these trends, in the UK, the computer games sector comprises of 220 businesses with only 5 per cent possessing a workforce of over 200 and only a quarter with a workforce of more than 50 (Skillset, 2010).

Nature of employment

In terms of workers in the creative industries, there are seen to be specialized demands which must be met by highly skilled, talented and committed individuals. The workforce is disproportionately young and well educated, with about 43 per cent passing through some form of higher education (Leadbeater and Oakley, 1999). The computer games workforce has an even younger age profile than the wider creative industries with 59 per cent aged under 35 in 2010, although there is evidence that the workforce is aging as this proportion was 76 per cent in 2005 (Skillset, 2010). The computer games workforce is also highly qualified with 80 per cent of employees possessing a degree qualification.

The sharing of these attributes suggests that the computer games sector is likely to reflect many of the spatial habits of the wider creative economy as already discussed such as an appetite for proximity, a tendency to co-locate and a preferencing of global cities. The next section considers the available evidence regarding the spatial habits of the Games industry.

The spatial logic of the UK computer games sector

Within the UK, there is also a strong trend towards the concentration of creative activities in London. According to the Work Foundation's (2007) research, by far the greatest concentration of employment in the creative industries is located in London and the south east of England. These two regions together account for 46 per cent of the creative industry workforce compared with the 27 per cent of the total UK workforce. In some of the sectors there is a particularly strong regional skew: for example 40 per cent of UK advertising is based in London alone. The distribution of turnover in these industries is likely to be even more imbalanced than employment, because of the larger proportion of the more specialised and higher value-added

activities being in London. Export activity is also dominated by London and the south east. The London bias would be even more significant without public funding (Work Foundation, 2007). The evidence suggests that the computer games sector diverges from this general pattern. There is a more even distribution of the sector's workforce across the UK than within other components of the creative economy with just 19 per cent based in London compared with 46 per cent within the wider creative industries sector (Skillset, 2010; see Figure 1). One explanatory factor regarding the less privileged position of London could be related to staff wages. Wages in the sector are higher in general than in the rest of the creative economy and thus paying staff London wages could be seen to be a significant burden over and above this (Cornford and Naylor, 2001; Skillset, 2010).

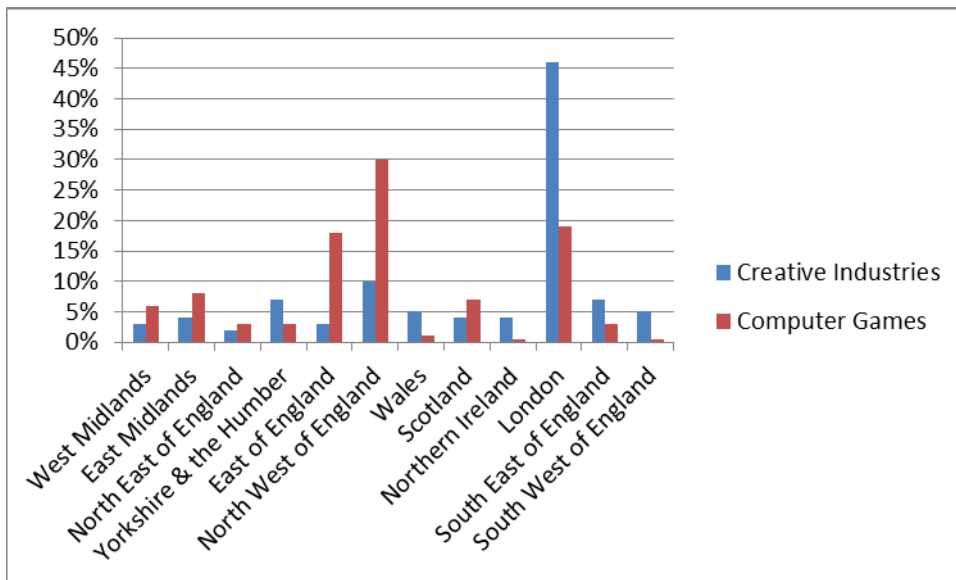


Figure 1 - Proportion of Computer Games Workforce and wider Creative Industries Workforce by Nation/ English Region (taken from Skillset, 2010 and Skillset, 2009)

In terms of firm distribution, existing studies have found greater levels of dispersion across the UK than the creative industries sector as a whole. A 2009 study (de Propis *et al.*) looked at firm distribution across travel to work areas (TTWA) and found that there were hubs of Software, Computer Games and Electronic Publishing activity in the cities of Bristol, Edinburgh, Manchester, Brighton, Oxford, Wycombe and Slough, Cambridge, Guildford and Milton Keynes.

There are several industry-specific explanations for the divergence of the spatial patterns of the computer games sector from the wider creative economy. One important factor is that the product lifecycle is frequently lengthy due to its complexity often taking between one and a half to four years to bring a game to market, depending on the size of the team (Tschang and Vang, 2008). This can be seen to reduce the requirement to share information between firms as well as increasing the level of secrecy around product development. As the production time is longer, there is a further tendency towards relying on in-house capacity and so the proportion of freelancers and temporary staff is lower than in other creative industries (Tschang and Vang, 2008).

Despite some divergence from the patterns of the wider creative economy, there is some evidence of a tendency towards co-location within the computer games industry. Within the de Propis *et al.* (2009) study, greater levels of concentration of activity were found in another part of the study where location quotients were calculated. This is a measure which aims to show the relative degree of concentration of activity within a geographical area. This measure is a well established index for comparing an area's share of a particular activity with a national or other benchmark. Location quotients are widely used partly because they are easy to understand. 1.0 means the same degree of presence in a local area as the average for the wider area in which it is situated, 2.0 means twice the proportion for the wider area, 3.0 means three times and 0.5 means only half as much as the wider area. Of all the creative industry sectors reviewed in the study, Software, Computer Games And Electronic Publishing were the most concentrated across a small number of regions, namely London (1.31), the South East (1.4) and to a lesser extent the East of England (1.13) (see Figure 2).

Region/ Nation	Software, Computer Games and Electronic Publishing	Total Creative Industries
London	1.31	1.37
South East of England	1.4	1.09

South West of England	0.93	0.95
East Midlands	0.79	0.82
West Midlands	0.84	0.84
East of England	1.13	0.97
Yorkshire & the Humber	0.7	0.79
North West of England	0.81	0.94
North East of England	0.56	0.91
Wales	0.59	0.75
Scotland	0.7	0.94

Figure 2 - Location quotients for Software, Computer Games and Electronic Publishing and the total Creative Industries firm location by region/ nation 2007 (de Propis *et al.*, 2009).

A feature which may influence spatial location is that there is a high propensity for spin-offs from larger firms. This may account for some patterns of co-location as spinoffs will tend to be located in relative proximity to the parent firm. Finally, due to the nascent character of the sector it is likely that it is affected by some, more arbitrary location decisions, for example the home of a founder. Agglomeration economies may emerge over longer periods of time which favour certain hubs of activity (Appold, 1998). Previous work has emphasized differences in spatial behaviour not just of the computer games sector as a whole, but also the different functions contained within it. For example, Cornford *et al.* (2000) noted that games development companies lacked an inclination to cluster. Patterns of clustering they identified within the study were more attributed to spinoffs or rationalizations and acquisitions rather than compulsions for proximity related to ideas sharing, ‘buzz’, ‘thick’ labour markets and other factors of agglomeration commonly attributed to the creative economy.

The Dundee example reflects this in many ways. The emergence of the sector in the late 1980s was around the time that Timex, the watchmaker, had turned over its Dundee factory to

producing Sinclair ZX Spectrum computers, which unlike other computers of the time, could be programmed spawning an interest in computer-games design. The first notable success in Dundee was realised by David Jones, a former Timex employee, who set up the company DMA Design in 1988 which was responsible for the huge hit Lemmings in 1991 and Grand Theft Auto in 1997. Many of the developers involved in DMA went on to set up further computer games companies including Visual Sciences and Realtime Worlds which in turn have spawned Ruffian Games, Tag Games, Proper Games and others. The regular pattern of spin outs has had strong institutional support with the University of Abertay capitalizing on the green shoots of the industry by launching the world's first Masters programme in Software Engineering for Computer Games Technology in 1996 and a B.Sc in 1998. Further funding and support have been derived from the Scottish Games Alliance, Interactive Tayside and European Regional Development Fund which has facilitated a greater embedding of the sector in the city.

A heterogeneous sector?

There is a dearth of illuminating empirical evidence for a spatial logic for the computer games sector which can lead to the emergence of a rather contradictory picture as we have seen. The indications available tend to suggest that the games industry behaves distinctly from some of the accepted patterns of the wider creative economy. There are, however, huge deficiencies within the current state of knowledge about the spatial behaviour of the games industry and the creative industries more broadly, which pose challenges for research. The de Propis *et al.* (2009) study utilized a rather broad definition, namely Software, Computer Games and Electronic Publishing. The challenge of a lack of clarity regarding definitions and a tendency to aggregate activities into larger groupings which lack utility in analysis will be discussed in this section. In conceptual terms, there is contention regarding their definition and treatment as a homogeneous group, particularly in terms of what activities should be included within it (Flew, 2002; Galloway and Dunlop, 2007; UNCTAD, 2008). A corollary of this is that measurement of the sector is quite difficult. There are gaps in data provision and significant problems arise from the outmoded nature of existing statistical classifications.

The diversity of definitions of the creative industries and the activities included within it has led to 'terminological clutter' (Galloway and Dunlop, 2007: 19). Definitional questions can be divided along breadth and depth lines. In terms of breadth, the divisions can be drawn differently, depending on whether activities such as the gaming industry, tourism and sport are included or not (Pratt, 2005). With regard to questions of depth, decisions over what is included can be drawn along several lines, including content origination, exchange, reproduction, manufacturing inputs, education and critique and archiving (Pratt, 2005). How different activities are categorized is particularly relevant for funding. For example, there are differences in specialized tax breaks for the different sectors. As it is considered more cultural, the film industry is more likely to be funded than the computer games industry. The shift to using the term creative industries has tended to broaden the definition of which sectors and activities are included. As mentioned in the last section, computer games have often been subsumed into a wider category which includes software development, electronic publishing and even computer consultancy activities. Some see this as an attempt to overstate the economic weight of the sector and overemphasize its homogeneity for purposes of political expediency and instrumental gain (Oakley, 2004; Selwood, 2006). Tepper (2002) asserts that definitions tend to aggregate a wide breadth of activities and concentrate measurement on outputs. Even a slight alteration in a category of activity or output can result in a huge change in the statistical figures. This can do more to obscure than reveal generalizable trends. Garnham (2005) asserts that, in the DCMS mapping document, the whole of computer software was included and further argues that it was possible only on that basis to make claims about size and growth stand up.

Divergence from the high-level trends of the creative industries have been illustrated using the example of spatial organization in this chapter. There are, however, a number of other ways in which the overstating of commonalities across these activities could be highlighted. For example, the creative economy is often associated with fostering diversity. In particular, the creative industries can be felt to promote the gender balance as a significant number of women work in the production of arts and crafts, fashion-related areas and the organization of cultural activities (UNCTAD, 2008). Within the games sector representation of women is very low (around 6 per cent of the workforce) along with individuals from a Black, Asian and Minority Ethnic background (3 per cent; Skillset, 2010). Critics have highlighted socially constructed

aspects of the computer games sector and, in particular, have identified an overly ‘boosterish’ tone to reports (Cornford *et al.*, 2000). Creating a semblance of the bigger picture may ‘satisfy the requirements of accountability; might be persuasive in terms of justifying subsidy; or might serve the purposes of advocacy by proving that the cultural activities make a substantial contribution to GDP’ (Selwood, no date: 1).

A further challenge in researching the creative industries, linked to definition, is that of measurement. Measuring the sector is an extremely difficult thing to do. There are different histories of data collecting, gaps in reporting, no relevant national industrial classification and a lack of shared mechanisms for collecting data. The Annual Business Inquiry (ABI) is commonly used to identify the spatial organization of the creative industries sector and tends to form the basis for the majority of quantitative analyses of firms in the creative industries. This database, however, suffers from a number of drawbacks. Much of the data in the ABI is based on estimates from a sample survey, leading to relatively large standard errors at disaggregated levels. Whilst not unique to the ABI, the Standard Industrial Classifications (SIC) are somewhat outdated, being rooted in past industrial structures and revised only when new sectors of the economy have become well established. Problematically many of the classifications mix together, to differing extents, creative and non-creative activities within single codes.

Positively, in January 2008 the SIC codes were updated from SIC 2003 to SIC 2007. Some old codes were removed from the list as they were no longer relevant, new ones were added as new industries emerged, and others were moved around, split up, or aggregated with others. This included the removal of the certain SIC codes from Software/Electronic Publishing sector including computer consultancy activities and business and domestic software development. The structure of the classifications means that, for some SICs, identification of Creative Industries within whole industrial codes is required. In the past Computer Games were part of an aggregate category ‘Software, Computer Games and Electronic Publishing’, but due to demand there have been attempts to develop a more focused coding. The result of that is the creation of the category ‘Digital and Entertainment Media’. Whilst this signifies an improvement and greater level of detail, it is still not possible to distinguish computer games from other aspects of digital media. Further to this, due to the modifications, the estimates in the most

recent release are not comparable with estimates from previous reports posing difficulties for creating any time series data.

Conclusion

The issues with definition and measurement, as outlined in the previous section, have further implications for policy developed to grow and nurture the sector. As Pratt (2005: 35) recognizes, a “one size fits all” creative industries strategy may be ineffective’. The limitations of accurately defining and measuring the sector raise important questions regarding the suitability of schemes aimed at boosting growth in these industries. These issues relate primarily to the diversity of activities and types of firms included under the umbrella term of the creative industries, which make uniform policy unlikely to be successful. As Tepper (2002: 163) suggests, ‘the sector is heterogeneous, and effective policy must be informed by thorough analysis of the component parts of the system and their interrelationships. So, the lesson is that aggregating might be good for politics, but disaggregating is essential for policy and understanding.

There are also many factors which are likely to influence spatial patterns over the coming years with digitization and convergence prospects disrupting as well as shaping business models in these industries. There is a clear mandate for detailed research, but there remain issues with the availability and utility of data which can be used for studying the sector. It is important to strive for greater disaggregation of data and steer away from the social construction of the sector as homogeneous. By recognizing, measuring and accepting diversity appropriate and targeted interventions can be used to help secure a stronger and more sustainable creative economy.

References

Adorno, T. W. and Horkheimer, M. (1944) *Dialectic of Enlightenment*, London: Verso

Antcliff, V., Saudry, R. and Stuart, M. (2005) Freelance worker networks in audio-visual industries, *Lancashire Business School Working Papers*, Preston: University of Central Lancashire.

Appold, S.J. (1998) Labor-market imperfections and the agglomeration of firms: evidence from the emergent period of the US semiconductor industry, *Environment & Planning A*, 30(3): 439-62.

Bakhshi, H. and Mateos-Garcia, J. (2010) *The Innovation Game: Adjusting the R&D Tax Credit: Boosting Innovation in the UK Video Games Industry*, London: NESTA.

Banks, M., Lovatt, A., O'Connor, J. and Raffo, C. (2000) Risk and trust in the cultural industries, *Geoforum*, 31: 453-64.

Bathelt, H., Malmberg, A. and Maskell, P. (2004) Clusters and knowledge: local buzz, global pipelines and the process of knowledge creation, *Progress in Human Geography*, 28 (1): 31-55.

Bathelt, H. (2005) Cluster relations in the media industry: exploring the 'distanced neighbour' paradox in Leipzig, *Regional Studies*, 39: 105-27.

Bayliss, D. (2007) The rise of the creative city: culture and creativity in Copenhagen, *European Planning Studies*, 15 (7): 889-903.

Champion, K. (2008) The business of creative cities, *Journal of Urban Regeneration and Renewal*, 2 (2): 111-23.

Champion, K. (2010) Hobson's choice? Constraints on accessing spaces of creative production in a transforming industrial conurbation, *Creative Industries Journal*, 3 (1): 11-28.

Cook, G. A. S. and Pandit, N. R. (2007). Service industry clustering: a comparison of broadcasting in three city-regions, *Service Industries Journal*, 27 (4): 453-69.

Cornford, J., Naylor, R. and Drive, S. (2000) New media and regional development: the case of the UK computer and video games industry, in Giunta, A., Lagendijk, A. and Pike, A. (eds), *Restructuring Industry and Territory: The Experience of Europe's Regions*, Norwich: Routledge, pp. 83-108

Cornford, J. and Naylor, R. 2001. *Cutting edges in strange places: new media debates and the computer and video games industry in the UK*. CURDS Discussion Paper 01/1, Centre for Urban and Regional development Studies, University of Newcastle Upon Tyne, UK.

Crewe, L. (1996) Material culture: embedded firms, organizational networks and the local economic development of a fashion quarter, *Regional Studies*, 30 (3): 257-72.

DCMS (2001) *Creative Industries Mapping Document*, London: DCMS.

DCMS (2011) *Creative Industries Economic Estimates Full Statistical Release*, London: DCMS.

DCMS (2012a) *Budget boost for creative industries*,
http://www.culture.gov.uk/news/news_stories/8932.aspx [Accessed 25 August 2012].

DCMS (2012b) *Ten super-connected cities announced*,
http://www.culture.gov.uk/news/news_stories/8931.aspx [accessed 25 August 2012].

De Propris, L., Chapain, C., Cooke, P., MacNeill, S., and Mateos-Garcia, J. (2009) *The Geography of Creativity*, London: NESTA.

Drake, G. (2003) 'This place gives me space': place and creativity in the creative industries, *Geoforum*, 34: 511-24.

- Ekinsmyth, C. (2002) Project organisation, embeddedness and risk in magazine publishing, *Regional Studies*, 36 (3): 229-43.
- Flew, T. (2002) Beyond ad hocery: defining creative industries, Paper presented at the Second International Conference on Cultural Policy Research, Te Pap, 23-26 January.
- Florida, R. (2002) *The Rise of the Creative Class*, New York: Basic Books.
- Galloway, S. and Dunlop, S. (2007) A critique of definitions of the cultural and creative industries in public policy, *International Journal of Cultural Policy*, 13 (1): 17-31, pp. 17-31.
- Garnham, N. (2005) From cultural to creative industries: analysis of the implications of the 'creative industries' approach to arts and media policy making in the United Kingdom, *International Journal of Cultural Policy*, 11: 15-29.
- Grabher, G. (2002a) The project ecology of advertising: tasks, talents and teams, *Regional Studies*, 36: 245-63.
- Grabher, G. (2002b) Cool projects, boring institutions: temporary collaboration in social context, *Regional Studies*, 36: 205-214.
- Grabher, G. (2004) Learning in projects, remembering in networks? Communitarity, sociality, and connectivity in project ecologies, *European Union and Regional Studies*, 2: 103-23.
- Helbrecht, I. (1998): The Creative Metropolis: Services, Symbols, and Spaces. In: *International Journal of Architectural Theory*, 3, (1), pp. 1-10.
- Higgs, P., Cunningham, S. and Bakhshi, H. (2008) *Beyond the Creative Industries: Mapping the Creative Economy in the United Kingdom*, London: NESTA.
- Hutton, T. (2004) The new economy of the inner city, *Cities*, 21 (2): 89-108.

Hutton, T. (2009) Trajectories of the new economy: regeneration and dislocation in the inner city, *Urban Studies*, 46: 978-1001.

Landry, C. (2000) *The Creative City: A Toolkit for Urban Innovators*, London: Comedia.

Leadbeater, C. and Oakley, K. (1999) *The Independents: Britain's New Cultural Entrepreneur*, London: DEMOS.

Leadbeater, C. and Oakley, K. (2001) *Surfing the Long Wave: Knowledge Entrepreneurship in Britain*, London: DEMOS.

Markusen, A. (2006) Urban development and the politics of a creative class: evidence from a study of artists, *Environment and Planning A*, 38: 1921-40.

Matarasso, F. and Landry, C. (1999) *Balancing Act: 21 Strategic Dilemmas in Cultural Policy*, Strasbourg: Council of Europe Publishing.

Mommaas, H. (2004) Cultural clusters and the post-industrial city: towards the remapping of urban cultural policy, *Urban Studies*, 41 (3): 507-32.

Montgomery, J. (2007) *The New Wealth of Cities: City Dynamics and the Fifth Wave*, Aldershot: Ashgate.

Oakley, K. (2004) Not so cool Britannia: The role of the creative industries in economic development, *International Journal of Cultural Studies*, 7 (1): 67-77.

O'Connor, Justin (2000) The definition of the 'Cultural Industries'. *The European Journal of Arts Education*, 2(3): 15-27.

O'Connor, J. (2004) 'A special kind of city knowledge': innovative clusters, tacit knowledge and the 'creative city', *Media International Australia Incorporating Culture and Policy*, 112: 131-149.

Pratt, A. (2005) Cultural industries and public policy: an oxymoron? *International Journal of Cultural Policy*, 11 (1): 31-44.

Rantisi, N., Leslie, D. and Christopherson, S. (2006) Placing the creative economy: scale, politics and the material, *Environment and Planning A*, 38: 1789-97.

Reimer, S., Pinch, S. and Sunley, P. (2008) Design spaces: agglomeration and creativity in British design agencies, *Geografiska Annaler, Series B, Human Geography*, 90 (2): 151-72.

Santagata, W. (2002) Cultural districts, property rights and sustainable economic growth, *International Journal of Urban and Regional Research*, 26 (1), pp.9-23.

Scott, A, J. (2001) *Global City-Regions: Trends, Theory, Policy*, Oxford: Oxford University Press.

Scott, A, J. (2004) The cultural products industries and urban economic development: prospects for growth and market contestation in global context, *Urban Affairs Review*, 39: 461-90.

Selwood, S. (2006) A part to play? The academic contribution to the development of cultural policy in England, *International Journal of Cultural Policy*, 12 (1): 35-53.

Selwood, S. (no date) ESRC Seminar at LSE,
http://www.lse.ac.uk/collections/geographyAndEnvironment/pdf/Sara_Selwood.pdf#search=%22esrc%20seminar%20lse%20sara%20selwood%22 [Accessed 1 July 2006].

Skillset (2009) *2009 Employment Census*, London: Skillset.

Skillset (2010) *Computer Games Sector – Labour Market Intelligence Digest*, London: Skillset.

Stolarick, Kand Florida, R. (2006) Creativity, connections and innovation: a study of linkages in the Montreal region, *Environment and Planning A*, 38 (10): 1799-817.

Sydow, J. and Staber, U. (2002) The institutional embeddedness of project networks: the case of content production in German television, *Regional Studies*, 36 (3):215-27.

Taylor, C. F. (2006) Beyond advocacy: developing an evidence base for regional creative industry strategies, *Cultural Trends*, 15 (1): 3-18.

Tepper, S. (2002) Creative assets and the changing economy, *The Journal of Arts Management, Law and Society*, 32 (1): 159-68.

TIGA (2012) *UK Video Games Industry*, <http://www.tiga.org/about-us-and-uk-games/uk-video-games-industry> [Accessed 25 August 2012].

Tschang, T., F., and Vang, J. (2008), *Explaining the spatial organization of creative industries: the case of the U.S. videogames industr*, Paper presented at The 25th DRUID Celebration Conference 2008 on Entrepreneurship and Innovation, Copenhagen, Denmark.

UNCTAD (2008) *Creative Economy Report 2008*, Geneva: UN.

Watson, A. (2008) Global music city: knowledge and geographical proximity in London's recorded music industry, *Area*, 40 (1): 12-23.

Work Foundation (2007) *Staying Ahead: The Economic Performance of the UK Creative Industries*, London: DCMS.

Wu, W. (2005) Dynamic cities and creative clusters, *World Bank Policy Research Working Paper* 3509, New York: World Bank.