

Higher Education and the Creative City

Roberta Comunian, Learning and Teaching Enhancement Unit, University of Southampton,
United Kingdom

R.Comunian@soton.ac.uk

Alessandra Faggian, School of Geography, University of Southampton, United Kingdom
A.Faggian@soton.ac.uk

Abstract

The creative city has become a very popular, fashionable and yet controversial concept in the last decade. Nevertheless, very little attention has been given to the role that Higher Education (HE) plays in shaping and fostering the creative city. The work of Florida (2002) has put emphasis on the role of HE in regional economy as providers of talent (or as preferred by economists, human capital). Within this broader discourse about the HEIs contribution to local and national economies, the present paper focuses on the contribution of HEIs to a specific sector of the economy: the creative economy and the 'creative city'. We use the concept of 'bohemian graduates' to investigate the contribution of HE to the creative workforce of the city. Using student micro-data collected by the Higher Education Statistical Agency (HESA) in the United Kingdom the paper highlights the role of HE in attracting bohemian graduates to study in specific cities and maps their ability to retain this talent and to offer them work opportunities in the creative sector.

1. Introduction

The influence of higher education institutions (HEIs) on their local areas have been explored from a variety of perspectives. Whilst there is a general acknowledgment that the contribution of HEIs to the economic, social and cultural development of their own cities and regions is of paramount importance, describing and quantifying this contribution is a challenging task. Various attempts have been made by researchers in different disciplines including economists (Preston and Hammond, 2006), social scientists (Chatterton, 1999) and regional development specialists (Charles, 2006, Cramphorn and Woodlhouse, 1999) and it is now clear that the picture is very complex because of the overlapping synergies, benefits and opportunities created by the HEIs in their local areas. Chatterton and Goddard (2000, p.493) emphasise this by defining HEIs as *"repository of knowledge about future technological, economic and social trends and can be harnessed to help the region understand itself, its position in the world and identify possible future directions"*.

In this paper we investigate the relevance of the interconnection between HEIs and their locale with specific reference to the creative economy literature and the concept of 'creative city'. Initial research in the UK shows that HEIs are key actors in developing sustainable creative economies. Wood and Taylor (2004), for example, looking at the case of Huddersfield, highlight the vital role played by the University in supporting the 'Creative

Town Initiative'. More recently, the establishment of a new university centre in Folkestone - following the work of the Creative Foundation in promoting the local creative economy and attracting new creative industries - has further highlighted the potential of these local synergies (Arts Council of England, 2009, Noble and Barry, 2008). Examples of collaborations between creative industries, universities and local policy makers are becoming more common and, as a result, the 'triple helix' approach is now a reality also within the cultural and creative economy (Comunian et al., 2007).

Alongside this economic development perspective, further literature – mainly from the US – underlines the role of HEIs in promoting the arts, particularly in relation to engaging students, exploring the practice and boundaries of creativity (Stanford Arts Initiative, 2007) and involving other local communities in creative activities on campus (Cantor, 2005). Tepper (2004) points out that while creativity has become a one-size-fits-all key to success for businesses, cities and regional economies; most American Universities have not yet fully embraced the concept and do not consider it fundamental for their success. Some noticeable exceptions are Stanford, Princeton and Columbia which established 'Creative Campus' initiatives and promoted the participation and engagement in arts and culture of students and members of staff (Tepper, 2004, Tepper, 2006). Tepper also highlights, the involvement of American universities into the creative economy is growing, so much so that about 20 per cent of performing arts organisations claiming some kind of involvement with American HEIs.

While there is common acknowledgement that this 'cultural provision' is part of the civic role played by HEIs in their local area (Cantor, 2005; Chatterton and Goddard, 2000), this can also be critically interpreted as the exploitation of 'loss leader' by HEIs, where creative activities are used to attract students but do not support themselves neither economically nor academically as "arts does not seem to lend themselves easily to the 'tenurable' standards of other university subjects" (Garber, 2008)

Examples of collaborations between HEIs and the creative sector are not restricted to the UK and the USA. Matherson (2006), for instance, studying the case of New Zealand, points out how design education is now changing and a more holistic view of the subject, which requires a substantial involvement of partners in the creative sector, has been introduced. Similarly, Cunningham et al. (2004) studying the case of the "Creative Industries Precinct Project" within the Queensland Institute of Technology in Brisbane, Australia, shows how HEIs can provide support for R&D activities in the creative economy. The initiative presents itself as "*Australia's first site dedicated to creative experimentation and commercial development in the creative industries*"¹ led by a university.

However, while all these contributions recognise the importance of HEIs spillovers and collaborations with private and public actors to foster the local creative economies, they seem to overlook the most important role of HEIs, i.e. as a conduit for bringing potential creative practitioners into a region, educate them and produce high quality 'creative human

¹Details on the project and programmes offered are available on the QUT Creative Industries Precinct website: <http://www.ciprecinct.qut.edu.au/about>

capital', i.e. young graduates educated in creative and artistic subjects. As such, their primary role is in attracting and retaining students in creative disciplines.

In the present work we investigate the relationship between HEIs and the creative city analysing the 'production' and retention of 'bohemian graduates' (i.e. individuals with high human capital, who obtained a degree in a 'bohemian' subject such as creative arts, performing arts, design and others). We explore in detail the location and migration choices of bohemian graduates and their connection with the creative economy and the creative city.

The chapter is organised in three sections. Firstly, we present the literature and debate on the creative city and its relationship to higher education. Secondly, we introduce the concept of 'bohemian graduate' and detail the methodology and data used. Finally, in the result section we present the geography of higher education provision in creative disciplines in the UK, the location choices of bohemian graduates and the relationship between these and the creativity of cities. The chapter concludes with some preliminary conclusions and avenues for further research.

2. Theoretical background

2.1 The creative city: from infrastructure to people

The concept of the 'creative city' has proved very appealing for academics and policy makers in the last fifteen years. However, there is still confusion on the definition and interpretation of this concept.

The first coherent formulation of the concept of 'creative city' is to be attributed to the work by Bianchini and Landry (1995), later extended by Landry (2000). In their contributions, the concept of 'creativity' was presented in its broadest sense, as 'thinking outside the box' and solve everyday problems in 'innovative ways'. It was argued that creativity could assist in regenerating cities. In this sense, their work had links with the UK urban development policy of the late 1980s and early 1990s, which underlined how cultural industries and cultural regeneration could play a fundamental role in improving the image of a city and eventually foster economic growth (O'Connor and Wynne, 1996). To support this idea of culture as 'engine' of regeneration and growth many researchers (Cameron and Coaffee, 2005, Evans and Shaw, 2004) pointed at successful collaborations between artists (and art organizations) and their locale to revitalize communities .

This vision of using cultural industries and creativity to revitalize cities became even more popular in the UK following the European Capital of Culture (ECC) initiative, particularly after the title was awarded to Glasgow in 1990². It was clear that the European initiative believed in the potentials of culture and creativity to improve a city, its image and its economy. This idea of 'creative city' as a city where cultural activities and infrastructures lead to urban regeneration and growth remained dominant till the end of the 1990s (Griffiths, 2006).

² Glasgow is the first city to be given the title that had not been a culturally recognized leading European city; previous hosts had been cities like Florence and Paris. The choice of Glasgow was motivated specifically by the potential to improve of its image and regenerate the city.

However, as the word 'creative' gained popularity, it started being used in different contexts with slightly different meanings. Following the publication of the DCMS document on 'creative industries' in 1998 and the work by Florida on 'creative class' (2002), the focus shifted from cultural infrastructures and consumption of cultural goods to creative production and people. Thereafter, the key to success for cities is seen in attracting and retaining skilled labor as driver for the new "knowledge and creative economy".

Following the definition of 'creative industries' by the DCMS (1998), a new interpretation of the creative city emerged as the city where work and production of creative industries is concentrated and supported (Montgomery, 2005). There are elements of consumption, when the creative industries and their cultural scenes are able to shape the image of a city and attract visitors, but these are only peripheral to the production perspective (O'Connor and Wynne, 1996, Pratt, 2004a).

The second, more recent and more powerful association is the one between the 'creative city' and the 'creative class' (Florida, 2002b). This has emerged from the success of Florida's book (2002) *The Rise of the Creative Class* and has added an extra connotation to the creative city term which, in many cases, has superseded the previous understanding. Florida (2002b, 2002a) suggests that the economic success of a city is determined by the presence of the 'creative class'. This 'creative class' encompasses a wide range of professionals, of which creative industries workers are only a small proportion³. As such, the term 'creative city' is now often interpreted as a city with a high presence of - or potential to attract – the creative class. There is still a small link with infrastructures, as Florida suggests that, in order to appeal to the creative class, cities should foster a cultural climate, promote diversity, and offer cultural entertainment⁴.

The present paper acknowledges the complementary role of these different interpretations of 'creative cities' and argues for a better understanding of the interconnections between the infrastructure and image, "cultural consumption oriented" creative city and the human capital and creative communities, "creative production oriented" creative city (Chapain and Comunian, 2009).

2.2 The role of higher education in the creative city and the creative economy

From the discussion above it is clear that HEIs are important in building both the physical and human resources infrastructures for the creative city and that they do it in a variety of ways. Although it is impossible to provide a comprehensive list of the ways in which HEIs

³ In Florida's own words at the core of the creative class there are 'people in science and engineering, architecture and design, education, arts, music and entertainment, whose economic function is to create new ideas, new technology, and/or new creative content', but also 'the creative professionals in business and finance, law, healthcare and related fields. These people engage in complex problem solving that involves a great deal of independent judgment and requires high levels of education or human capital' (Florida 2002b, p.8).

⁴ This is articulated further in the three Ts indexes: technology, talent and tolerance are the proxy by which the ability of a city to attract creative class can be measured and implemented.

contribute to make a city more 'creative', we propose a classification which partially mirrors the definitions of creative city presented above.

If we take the view that a city is creative if it offers a wide array of cultural goods and opportunities (i.e. the **cultural consumption oriented** view), then one of the roles of HEIs is to actively engage in the provision of cultural goods either directly or via collaborations and partnerships with the local cultural infrastructures and communities. Chatterton (1999) underlines that HEIs have traditionally been well positioned in providing the city with cultural facilities, such as art galleries and theatres, but more recently they have taken this role further including a wider range of cultural facilities, such as media production facilities, recording studios or rehearsal spaces. The cultural opportunities offered by both the city and the HEIs are often interrelated and self-reinforcing. Also, the HEIs infrastructures not only provide additional income for the city (hence favoring regeneration Robinson and Adams, 2008), but also strengthen the image of the city as 'cultural' hub and provider of knowledge and innovation (Preston and Hammond, 2006), sometimes attracting tourists (e.g. Oxford) and making the consumption of specific city cultural goods more appealing.

If we take the view that a city is creative when its productive structure includes a strong creative sector (i.e. the **creative production oriented** view), then we have to consider the role of the HEIs both as **providers of knowledge and innovation** (mainly in the form of knowledge spillovers) and **providers of human capital** (in the form of skilled creative workers). The production and transfer of knowledge to firm in the local areas (and the related concept of knowledge spillovers) is probably the most recognised and cited contribution of HEIs to regional innovation systems (Fritsch and Schwirten, 1999, Etzkowitz and Leydesdorff, 2000). In the field of culture and arts & humanities, this innovation and knowledge transfer perspective has been overlooked and only recently some contributions both on the academic (Crossick, 2006, Taylor, 2005, Cunningham, 2004) and policy side (NESTA, 2007) addressed it. As Cunningham et al. suggests (2004, p. 4) *"creative industries appear to be marginal within university-based research"*. However, in the UK there are important example of new emerging partnerships in this area – for example CIBAS, the Creative Industries Business Advisory Service, supported by the University of Portsmouth or ICE, Institute for Creative Enterprise at Coventry University. There is also a lot of wishful planning on the potential of these collaborations, such as the Creative Convergence project drafted by HESE (Higher Education South East) to support the interaction between universities in the South East and the regional creative economy⁵. As the high-profile Lambert Review of Business – University Collaboration (2003) suggests *"there are many excellent examples of collaborations involving the creative industries and universities or colleges of art and design. Policy-makers must ensure that policies aimed at promoting knowledge transfer are broad enough to allow initiatives such as these to grow and flourish, and that the focus is not entirely on science and engineering"* (HM Treasury, 2003:45). Some specific cultural and creative clusters have highly benefited in the past from the interaction with HEIs. For example Crewe and Beaverstock (1998) highlight the positive benefits of the involvement of Nottingham Trent University with the Lace Market cultural quarter and Rantisi (2002) considers the role of the Parsons School of Design in the development and

⁵ The project remains for the moment at its final draft but has not been put into practice yet.
www.hese.ac.uk/documents/Creative-Convergence-final-report.pdf

growth of the New York Garment district. Mould et al. (2009) also consider the example of Sheffield Hallam University involvement in the Sheffield Cultural Quarter.

A relatively under-explored area so far is the role of HEIs in producing highly skilled creative workers. As Faggian and McCann (2006, Faggian and McCann, 2009) argue the primary role of the university system is being a conduit for bringing potential high quality undergraduate human capital into a region. The benefits of having a highly skilled labor pool far outweigh the benefits generated by knowledge spillovers. Hence, attracting and retaining higher human capital and creative individuals can be seen as a more effective and long-term strategy for local economic development (Mathur, 1999). The argument put forward by Florida (2002) suggests that this higher human capital level has connections also with the kind of urban environment and cultural setting that highly educated individual look for when making a location choice.

Overall, it is clear that the relationship between HEIs and the creative city – and their contribution to the creativity of various locations is a complex and multi-layered issue. In the present paper, we use the concept of ‘bohemian graduate’ as a key to better understand the connections between these dimensions. In particular, bohemian graduates are relevant to many of these theories and perspectives as they are the means via which universities knowledge and impact can be transferred to the local economies.

3. Research framework and data

3.1 Between Human capital and Creativity: the role of Bohemian graduates and their location choices

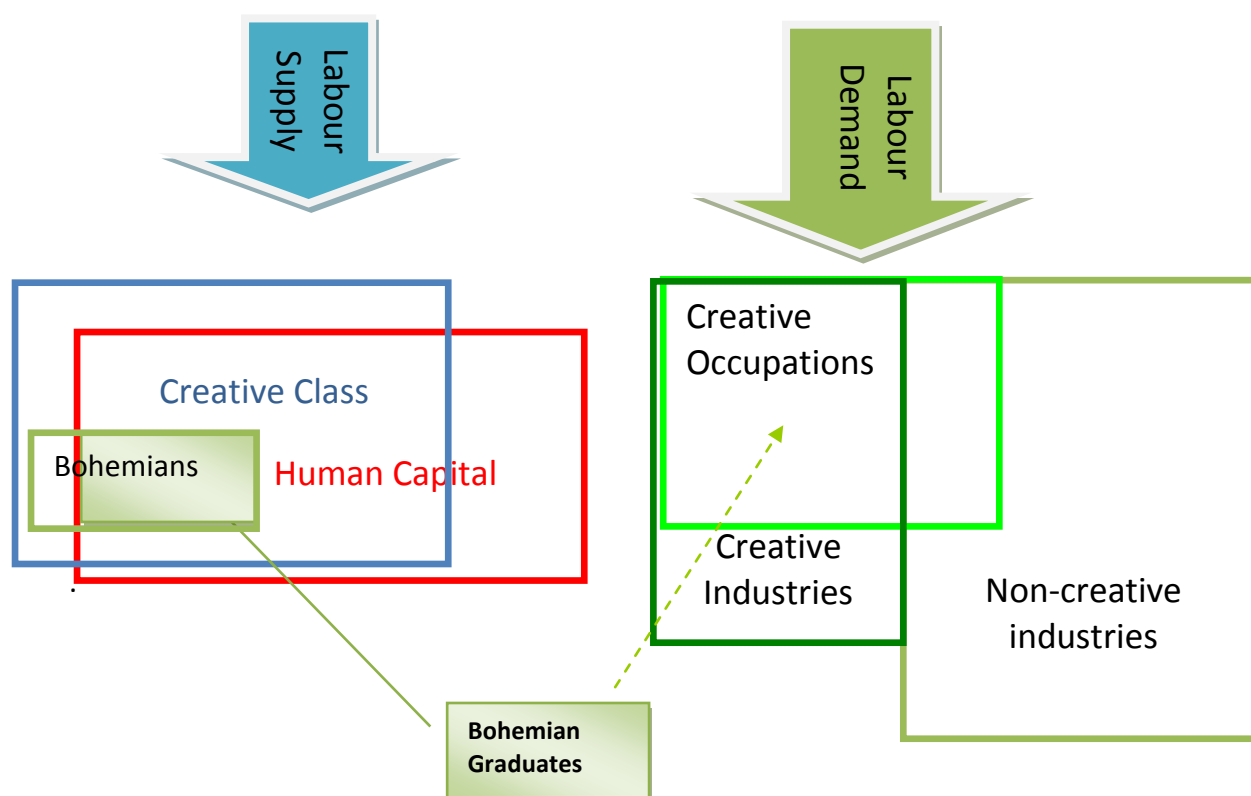
In light of the possible relations between HEIs and the creative city identified in the previous paragraph, the paper explores the geography of creativity in UK using the concept of ‘Bohemian graduates’ (Comunian et al., 2010).

Bohemian graduates, i.e. graduates who obtained a degree in a ‘bohemian’ subject (creative arts, performing arts, design, mass communications, multi-media, software design and engineering, music recording and technology, architecture and landscape design) can be considered as the intersection between creative class, creative industries and human capital (see Figure 1).

In particular, the paper is concern not only with the subjects that these bohemian graduates undertake but also what the kind of occupations and employment opportunities they enter after graduation and whether they find it difficult to enter creative occupations. While it is clear that ‘bohemian’ graduates might find other career opportunities and economic benefit in other careers, it is assumed here that, having spent three years in developing specific creative skills at higher education level, their first career choice would be to enter a creative occupation. Creative occupations are defined in relation to the DCMS (Department for

Culture, Media and Sport) definition of creative industries and creative occupations⁶. The DCMS (1998) defines them as “those industries 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.” (p. 04). These include: Advertising; Architecture; Arts and antique markets; Crafts; Design; Designer Fashion; Film, video and photography; Software, computer games and electronic publishing; Music and the visual and performing arts; Publishing; Television and Radio. The DCMS framework (2009) is used to identify occupations within the creative industries (through Standard Industrial Classification codes) and creative occupations outside the creative industries (using Standard Occupation Classification codes).

Figure 1: The ‘Bohemian’ graduate



Their location choices are important when studying the impact of HEIs on the creativity of cities, because of the embodied knowledge and skills they possess. Not only they studied a ‘creative’ subject to a high level (investing consciously in their human capital), they often combine this with a passion and a natural innate ability in the creative disciplines (what some authors might call ‘talent’, while others simply include it in the human capital

⁶ We acknowledge that this definition has quite a few limitations (see for further discussion Oakley, 2006) and might not be applicable to other countries but considering that our analysis is set in the UK, this seems to be the most suitable definition to adopt. Therefore, it is important to clarify that ‘creative occupations’ here are not defined as occupations that are creative (this could include for instance scientific inventions and other creative jobs) but as occupation within the creative (and cultural) sector as defined by the DCMS.

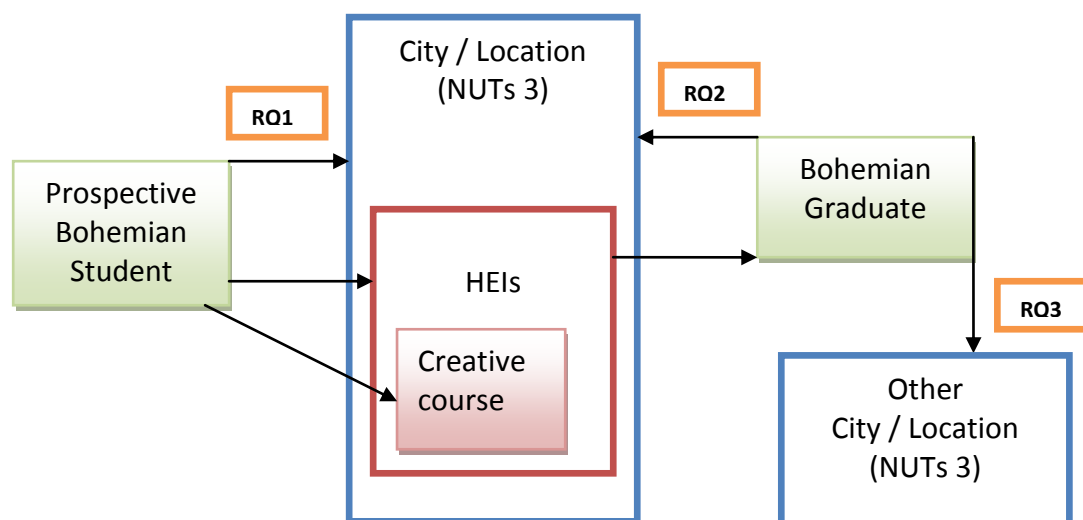
concept). As Bohemian graduates combine creativity and human capital, their role in contributing to the local economy should be almost unanimously accepted by both the advocates of the creative class theory and the human capital theory. Furthermore, because of their interest and passion for creative activities, they also have a ‘sophisticated consumer demand’ (Porter, 1998) for the local cultural services and hence provide support for the local cultural production.

The UK offers an array of opportunities for students who want to graduate in a ‘Bohemian’ subject. Although the role of London as a creative city appears to be dominant, there are other creative cities in the UK whose ‘pull effect’ on students should not be disregarded.

As Figure 2 shows, students are faced with two fundamental migration decisions, one upon ‘entering’ higher education, the second upon ‘leaving’ it. When a prospective student decides they want to enrol in a creative course, their first decision is whether to stay in the local area or migrate to study in another city. This is obviously dependant on a series of considerations including the provision of creative courses in their local area.

Upon graduation bohemian graduates are faced with a further location decision: staying in the city where they studied or move elsewhere. One of the main determinants of this decision is the availability of creative jobs both locally and in other locations. The location choice for jobs should therefore reflect the geography of the creative economy, i.e. graduates should be attracted to cities and places able to offer them jobs in creative occupations. In this sense, ‘creative cities’ should have an advantage in attracting them and might benefit from a self-reinforcing virtuous cycle.

Figure 2: ‘Bohemian’ graduates and their location choices



The aim of the present paper is to study the role that the ‘creative city’ plays in these location and migration dynamics addressing the following research questions:

RQ1: Are ‘Bohemian’ courses mainly offered by HEIs located in ‘creative cities’, so that the likelihood of a student choosing to study a creative subject is influenced by living in a creative city to start with?

RQ2: How successful are the areas with the best provision of creative courses in retaining creative graduates?

RQ3: What places offer the best opportunities to enter a creative occupation? Are these creative occupations just restricted to few creative cities?

In linking the location choices of students and graduates to the creativity of an area, we use the indexes proposed by Clifton (2008) as measures of the ‘creative city’ phenomenon. Clifton (2008) critically applies a methodology *à la* Florida to provide insights into the creative class in UK. He proposes three different indexes. It is easy to see that these indexes correspond to diverse interpretations of the creative city and hence allow us to test the relationship between the bohemian graduates’ location choices and these interpretations. These are:

- **The creative city as city of ‘cultural consumption’:** Clifton (2008) ‘*cultural opportunity index*’ (i.e. the proportion of employees in the cultural and recreational industries within an area) is used to measure the level of employment in recreational, cultural and entertainment sectors, which is linked to the interpretation of the creative city as a place of cultural consumption (Bell and Jayne, 2004) and the flourishing of tourism and entertainment economies around cultural investments (García, 2005);
- **The creative city as city of ‘cultural production’:** Clifton (2008) calculates the ‘*bohemian index*’ (based on the bohemian index by Florida, 2002) as the level of employment in artistic and creative occupations using the Standard Occupational Classification 2000 and the DCMS guidelines (DCMS, 2009). The view that a creative city is a place where production activities in the creative economy concentrates is supported by many in the literature (Montgomery, 2005), especially in relation to the study of creative industries and their production systems (Pratt, 2008, Markusen, 2006);
- **The creative city as the ‘knowledge economy city’:** Clifton (2008) ‘*creative professional index*’ is closely related to the concept of ‘creative class’ (Florida, 2002) and is linked to the interpretation of a creative city as a place able to attract creative workers and professionals. This interpretation is also shared by Hospers (2003) and Musterd and Ostendorf (2004) in their contribution about the creative cultural knowledge cities.

3.2 Data and Methodology

Our empirical analysis is based on data collected by the Higher Education Statistical Agency (from now on referred to as HESA). Two different datasets are used. Firstly, we employ the ‘Students in Higher Education’ data stream - which includes 1,723,260 student records for students enrolled in undergraduates courses in 2007 across the 166 British HEIs - to build a picture of the provision of ‘Bohemian courses’ in the UK. For each student, the survey includes information on personal characteristics (such as age, gender, ethnicity), course

characteristics (including subject studied at 4-digit JACS code⁷, mode of studying, i.e. full-time or part-time, institution attended, final grade achieved for finalists) and location of parental domicile (at unit postcode level). According to the JACS codes, 10.72% (184,750) of the students in 2007 were registered for a 'creative' course either in 'media' (JACS code P⁸) or 'arts and design' (JACS code W⁹). To present the geography of 'creative' higher education provision in the UK, we analyse the student data at NUTS 1 level, as here the focus is on the critical mass and concentration of institutions and provision at the regional level. Considering that, as Charles (2003) suggests, the regional dimension is becoming more and more important in recent years in defining universities' missions, this geographical level seems the most appropriate.

Secondly, we combine the 'Students in Higher Education' data stream with the 'Destination of Leavers from Higher Education Institutions' (also known as DHLE) for students who graduated in the year 2007. The DHLE provides us with information on graduate employment between six and eighteen months after graduation. For the academic year 2006/07 information on 332,110 graduates was collected and it included not only the salary and location of their job, but also a brief description of their tasks and the SOC4 and SIC4 codes of their occupation. In the final combined database we had 242,470 'valid' cases (i.e. with no missing information). The location and migration decisions of graduates are presented at NUTS3 regional level. This allows a more detailed view of the local/urban dynamics and helps identifying more clearly where graduates tend to cluster. The analysis of

⁷ For more information on the Joint Academic Coding System (or JACS) see

http://www.hesa.ac.uk/index.php?option=com_content&task=view&id=158&Itemid=233

⁸ These include: *Information Services*: P110 Information Management, P120 Librarianship, P121 Library Studies, P130 Curatorial Studies, P131 Museum Studies, P132 Archive Studies, P190 Information Services not elsewhere classified; *Publicity Studies*: P210 Public Relations, P290 Publicity studies not elsewhere classified; *Media studies*: P301 Television studies, P302 Radio studies, P303 Film studies, P304 Electronic Media studies, P305 Paper-based Media studies, P310 Media Production, P311 Television Production, P312 Radio Production, P313 Film Production, P390 Media studies not elsewhere classified; *Publishing*: P410 Electronic Publishing, P411 Publishing on audio/video tape, P412 Publishing on CD-ROM, P413 Publishing via the World Wide Web, P420 Multi-media Publishing, P430 Interactive Publishing, P490 Publishing not elsewhere classified; *Journalism*: P510 Factual Reporting, P590 Journalism not elsewhere classified; *Others in Mass Communications and Documentation*: P990 Communications and Documentation not elsewhere classified.

⁹ These include: *Fine Arts*: W110 Drawing, W120 Painting, W130 Sculpture, W140 Printmaking, W150 Calligraphy, W160 Fine Art Conservation, W190 Fine Art not elsewhere classified; *Design*: W210 Graphic Design, W211 Typography, W212 Multimedia Design, W213 Visual Communication, W220 Illustration, W230 Clothing/Fashion Design, W231 Textile Design, W240 Industrial/Product Design, W250 Interior Design, W260 Furniture Design, W270 Ceramics Design, W280 Interactive and Electronic Design, W290 Design studies not elsewhere classified; *Music*: W310 Musicianship/Performance studies, W330 History of Music, W340 Types of Music, W350 Musicology, W360 Musical Instrument History, W390 Music not elsewhere classified; *Drama*: W410 Acting, W420 Directing for Theatre, W430 Producing for Theatre, W440 Theatre studies, W450 Stage Management, W451 Theatrical Wardrobe Design, W452 Theatrical Make-up, W460 Theatre Design, W461 Stage Design, W490 Drama not elsewhere classified; *Dance*: W510 Choreography, W520 Body Awareness, W530 History of Dance, W540 Types of Dance, W590 Dance not elsewhere classified; *Cinematics and Photography*: W610 Moving Image Techniques, W611 Directing Motion Pictures, W612 Producing Motion Pictures, W613 Film & Sound Recording, W614 Visual and Audio Effects, W615 Animation Techniques, W620 Cinematography, W630 History of Cinematics and Photography, W631 History of Cinematics, W632 History of Photography, W640 Photography, W690 Cinematics and Photography not elsewhere classified; *Crafts*: W710 Fabric and Leather Crafts, W711 Needlecraft, W712 Dressmaking, W713 Soft Furnishing, W714 Weaving, W715 Leatherwork, W720 Metal Crafts, W721 Silversmithing/Goldsmithing, W722 Blacksmithing, W723 Clock/Watchmaking, W730 Wood Crafts, W731 Carpentry/Joinery, W732 Cabinet making, W733 Marquetry and Inlaying, W734 Veneering, W740 Surface Decoration, W750 Clay and Stone Crafts, W751 Pottery, W752 Tile Making, W753 Stone Crafts, W760 Reed Crafts, W761 Basketry, W762 Thatching, W770 Glass Crafts, W771 Glassblowing, W780 Paper Crafts, W781 Bookbinding, W782 Origami, W790 Crafts not elsewhere classified; *Imaginative Writing*: W810 Scriptwriting, W820 Poetry Writing, W830 Prose Writing, W890 Imaginative Writing not elsewhere classified; *Others in Creative Arts and Design*: W990 Creative Arts and Design not elsewhere classified.

the relationship between the concentration of students/graduates and the indexes developed by Clifton (2008) is also carried out at the NUTS3 regional level, since the focus is here on creative ‘cities’ and not larger regions.

4 Results and discussion

4.1 The geography of the creative Higher Education provision

The provision of Higher Education courses in the creative subjects is certainly not uniform across the UK, as shown in Table 1. In absolute terms, Greater London and the South East attracted 37% of the total UK number of students in these disciplines in 2007. Greater London on its own accounted for 24%. The North West and Yorkshire follow with about 10%, while last are the North East and Northern Ireland. However, it is clear that these percentages partially reflect the size of the population of each region.

Table 1: Bohemian graduates student numbers per UK regions (HESA, 2007)

REGION	Population (Census, 2001)	TOTAL STUDENTS	BOHEMIAN STUDENTS	% BOHEMIANS IN THE REGION	% OVER TOTAL NO. BOHEMIAN STUDENTS IN UK
Greater London	7,172,036	281,905	44,420	15.76	24
South East	8,000,550	248,700	23,995	9.65	13
North West	6,729,800	189,375	19,605	10.35	10.6
Yorkshire & the Humber	4,964,838	163,555	16,845	10.29	9.1
South West	4,928,458	121,100	15,920	13.15	8.6
East Midlands	4,172,179	111,335	12,545	11.27	6.8
Scotland	5,062,011	164,130	11,235	6.85	6.1
West Midlands	5,267,337	128,270	10,980	8.56	5.9
Wales	2,903,085	93,265	10,365	11.12	5.6
East of England	5,388,154	105,925	10,440	9.85	5.7
North East	2,515,479	78,270	6,560	8.38	3.6
Northern Ireland	1,685,267	37,430	1,840	4.91	1
UK Total	58,789,194	1,723,260	184,750	10.72	100

A different geography emerges when looking at the concentration of Bohemian students as a percentage of the number of students in the region (Table 1, column 5). Though Greater London still shows the highest ‘specialisation’ in creative courses, the role of other regions emerges. The South West, maybe unexpectedly, has over 13% of students enrolled in Bohemian courses and both the East Midlands and Wales have a percentage of Bohemian students above the national average. Northern Ireland still has the lowest percentage.

It is important to notice that, in certain regions, some ‘specialised’ institutions dominate the scene. If we look at the geography of the most important HEIs in terms of absolute number of bohemian students (Table 2), it is clear that the University of the Arts in London has a

dominant role with over 12,000 students enrolled (almost 7% of the national total). Former known as the London Institute, this recently established university (it gained university status in 2004) comprises six separate colleges: the Camberwell College of Arts, Central St Martin's College of Art & Design, Chelsea College of Art & Design, London College of Fashion and the London College of Printing. It claims to be the largest HEIs in the field not only in UK but in Europe. While the size might not be comparable with the University of the Arts, the other institutions in the top 10 still educate a considerable number of Bohemian students (more than 3,000 each, which represents about 2% of the total number educated in the UK). The geographical spread is also interesting. Although the top four HEIs are located either in Greater London or in the South East, the North West and the Midlands are also well-represented (with three HEIs each and a total number of enrolled students around 10,000).

Table 2: Top ten 'creative' HEIs (absolute number of bohemian students and % over total national number)

INSTITUTION	REGION	TOTAL NUMBER OF BOHEMIAN GRADUATES	% NATIONAL BOHEMIAN STUDENTS
1. University of the Arts, London	Greater London	12470	6.8
2. University for the Creative Arts	South East	4795	2.6
3. Middlesex University	Greater London	3800	2.1
4. Southampton Solent University	South East	3610	2.0
5. The Nottingham Trent University	East Midlands	3475	1.9
6. De Montfort University	East Midlands	3395	1.8
7. The Manchester Metropolitan University	North West	3350	1.8
8. The University of Central Lancashire	North West	3320	1.8
9. Birmingham City University	West Midlands	3120	1.7
10. The University of Salford	North West	3075	1.7

The role of Greater London is clear not only when we look at the absolute number of Bohemian students, but also when we look at the location of smaller but highly specialised Colleges. In the UK there are 21 HEIs whose percentage of students enrolled in Bohemian subjects is above 50% (see Table 3), eight of them educate *exclusively* Bohemian students. Of these 21 HEIs, 10 are based in the Greater London area. This means that in Greater London not only the number of places is larger, but there is also a wider variety of options for students who want to study a creative subject, hence adding to the general feeling of London being a 'creative city'. It is therefore easier for Greater London to attract these students and, later on, retain them after graduation.

Table 3: Top 'specialised' HEIs in Bohemian courses

INSTITUTION	REGION	NO. OF BOHEMIAN STUDENTS	% BOHEMIAN STUDENTS OVER TOTAL
-------------	--------	--------------------------	--------------------------------

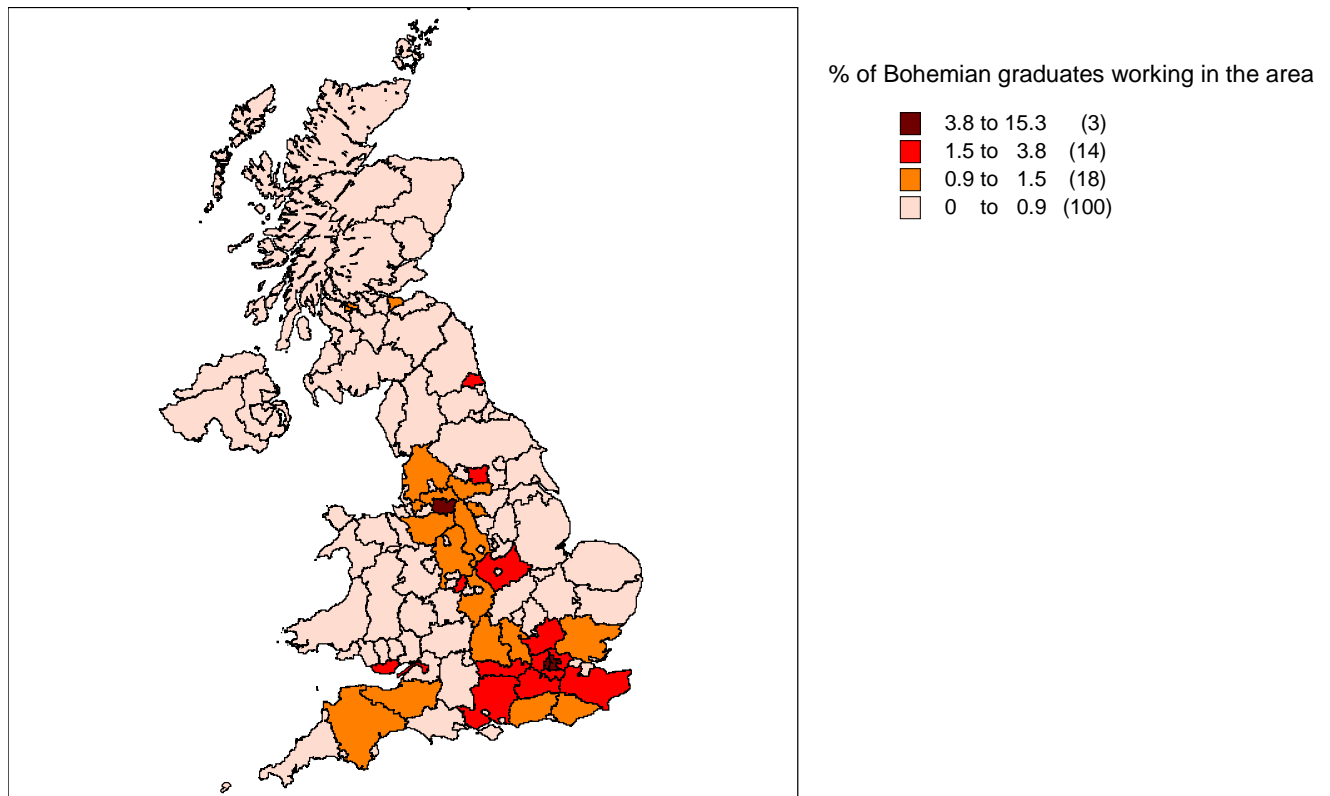
1. Leeds College of Music	Y&H	680	100.00
2. Royal Northern College of Music	NW	675	100.00
3. Dartington College of Arts	SW	585	100.00
4. Trinity Laban	GL	830	100.00
5. Norwich University College of the Arts	EoE	1165	100.00
6. Conservatoire for Dance and Drama	GL	1095	100.00
7. Guildhall School of Music and Drama	GL	705	100.00
8. Royal College of Music	GL	590	100.00
9. Royal Academy of Music	GL	670	97.59
10. Central School of Speech and Drama	GL	805	96.52
11. University for the Creative Arts	SE	4795	95.52
12. Rose Bruford College	GL	735	95.42
13. The Arts Institute at Bournemouth	SW	1835	93.49
14. Royal College of Art	GL	795	89.68
15. University College Falmouth	SW	1950	88.33
16. The Liverpool Institute for Performing Arts	NW	620	88.06
17. The Royal Scottish Academy of Music and Drama	Scotland	665	87.94
18. University of the Arts, London	GL	12470	83.28
19. Ravensbourne College of Design and Communication	GL	840	75.91
20. Edinburgh College of Art	Scotland	1025	66.74
21. Glasgow School of Art	Scotland	1120	66.43

4.2 Bohemian students' and graduates' location choices for studying and working purposes

Now that we have provided a brief description of the provision of 'Bohemian' courses in the UK, it is interesting to turn our attention to the location choices of Bohemian graduates. The DHLE HESA data provide us with information on graduates' job location between 6 and 18 months after graduation. Although we recognise that this is a relatively short period, it still gives us insights on the ability of regions to retain their Bohemian graduates in the short term. As Map 1 shows, and as expected, a high percentage of Bohemian graduates choose to work in the London area, followed by Greater Manchester and the South East. The urban environment with its 'buzz' is vital for artists. The city environment offers a wider cultural infrastructure as well as creative networks and informal learning environment for artists and creative practitioners (Comunian, 2010). It also provides a wider range of job opportunities and contracts that is essential for Bohemian graduates to develop their portfolios and make a living. What is interesting, however, is the role of other 'regional' hubs such as Cardiff, Leeds and Newcastle. Newcastle – benefiting from the cultural investments taking place mainly in Gateshead - has been able to develop a strong profile as 'creative city' (Minton, 2003), which can be clearly seen in its ability to attract students in this field. However, the lower profile in reference to creative occupations, highlights the difficulty to create a

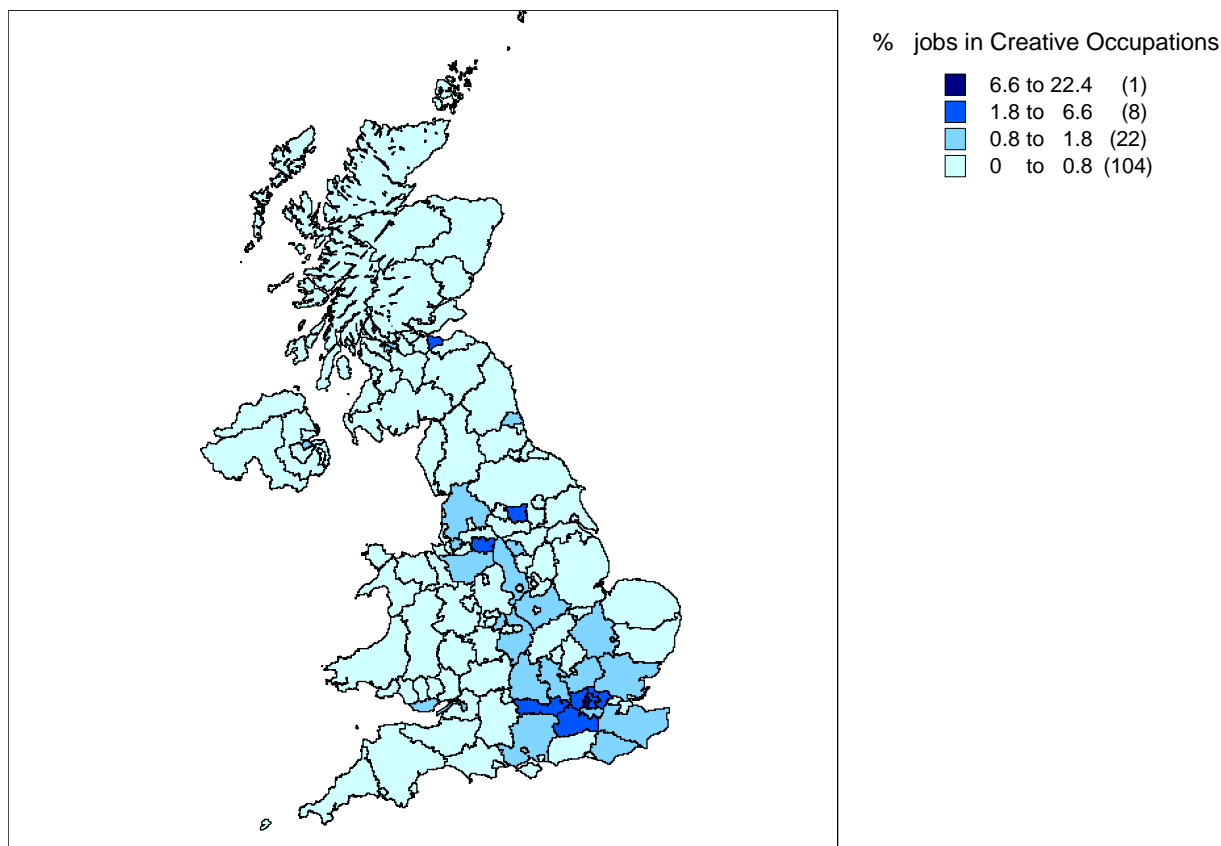
stronger profile in the creative economy (Comunian, 2009) despite the policy rhetoric (ONE North East, 2007)

Map 1: Percentage of Bohemian graduates (over total) working in the area



What Map 1 does not show, however, is in what kind of professions these Bohemians are employed in. Map 2 shows the geographical distribution of graduates working in creative occupations (as defined by Comunian et al., 2010). When comparing the two maps, some similarities are clear. The role of London and the South East is confirmed, together with Manchester and Leeds. Fingleton et al. (2007) in their analysis of creative industries employment growth between 1991 and 2000 underline the high performance of districts in London and the South East, providing further evidence to this patterns of concentration. Similar results about the role of London are reached in the recent NESTA (2009) report for all types of creative industries, although some regional clusters emerge in specific sub-sectors (e.g. the Designer and Fashion sector in the East Midlands). Two are the main differences emerging from the comparison of Maps 1 and 2. Firstly, Cardiff has less of a concentration of creative occupations than Bohemian graduates, while the opposite holds for the city of Edinburgh, which benefit from being a recognised centre for performing arts and literature. Both cities enjoy a position of cultural capital within their national boundaries and this emerges in the maps, as their surroundings do not present similar profiles. Secondly, creative occupations seem to be even more concentrated in the Greater London area than Bohemian graduates.

Map 2: Graduates (over total) working in creative professions



To check this, Table 5 presents the top 20 areas in terms of percentage of Bohemian students enrolled in local HEIs, percentage of Bohemian graduates in the local labour force and percentage of graduates working locally in creative occupations.

The West part of Inner London tops all three rankings, even though the percentage (and hence absolute number) of graduates working in creative occupations is more than double the percentage of Bohemian students. As such, this area of London appears to be the 'mecca' for the creative economy and the best location to get a Bohemian type/artistic job. The other half on Inner London fairs relatively well in terms of creative job market (both the percentage of Bohemian graduates working there and percentage of graduates working in creative occupations are well above 5%) despite not having nearly as many 'creative' HEIs located there.

Greater Manchester, on the opposite, ranks second for percentage of Bohemian students trained, but third for percentage of Bohemian graduates working in the local area and only fourth for percentage of graduates working in creative occupations. This seems to suggest that the local labour market for creative jobs is not strong enough to retain all the Bohemian graduates educated by the local HEIs. This could also be linked to some potential occupational mismatch (Comunian et al, 2010) that might have further implication for the local creative economy. Previous studies have found that a very high percentage of bohemian graduates do enter a 'creative' occupation and that this is true not only in the short-term (Comunian et al. 2010) but also in the medium-long term (Abreu et al. 2010).

In general the picture coming out from Table 4 is that creative occupations are a lot more concentrated in fewer areas - with Greater London accounting for over 34% - while higher education provision of Bohemian subjects, despite still being skewed towards Greater London, displays a lower concentration level.

It is interesting to highlight this interconnection between the place of study and the place of work. Knell and Oakley (2007) point out that London HEIs are a key part of the public infrastructure around the London creative economy. They suggest that HEIs (like publicly supported cultural institutions) function as “R&D lab, providing risk funding and an atmosphere of experimentation” (p.23) for the creative sector. They also see HEIs as vital for the development of – often exclusive – “tightly bound social networks” (p. 18). This is also underlined in a different context (designers’ careers in Toronto), by Vinodrai (2006) that finds that local design schools provide a share institutional context for designers to work together as well as enable some of the leading designers to teach courses in the city. This can create further networks and interconnections “instructors use this teaching experience as an opportunity to assess students whom they may hire for themselves or recommend to others” (p.258). Therefore, higher education does not simply relate to student numbers but also to a more complex ecology of creative work. As other authors suggest (Gill, 2002, NESTA, 2008) one of the most common (second) occupation for creative workers is teaching in FE and HEIs. In Ball et al. (2010) survey one third of creative graduates has had experience in teaching: “when graduates changed from their initial career goal, it was most frequently towards teaching” (p.6)

Table 4: Bohemian students, graduates and creative occupations: top 20 areas

	BOHEMIAN STUDENTS	%	BOHEMIAN GRADUATES	%	CREATIVE OCCUPATIONS	%
1.	Inner London - West	10.44	Inner London - West	15.27	Inner London - West	22.39
2.	Greater Manchester South	4.35	Inner London - East	5.46	Inner London - East	6.56
3.	Leeds	4.07	Greater Manchester South	3.81	Outer London - West a	3.88
4.	Outer London - West a	3.63	Outer London - West a	3.59	Greater Manchester South	3.74
5.	Inner London - East	3.62	Leeds	2.52	Surrey	2.04
6.	North and North East Somerset, South Gloucestershire	3.09	Outer London - East a	2.02	Leeds	2.00
7.	Liverpool	3.04	Birmingham	1.98	Berkshire	1.93
8.	Leicester	2.88	Hampshire CC	1.93	Edinburgh, City of	1.88
9.	Sheffield	2.81	Surrey	1.83	Outer London - East a	1.85
10.	Southampton	2.60	Tyneside	1.77	Hampshire CC	1.79
11.	Bournemouth and Poole	2.43	Kent CC	1.68	Oxfordshire	1.76

12.	Nottingham	2.41	Bristol, City of	1.61	Tyneside	1.65
13.	Birmingham	2.36	Outer London - South	1.55	Birmingham	1.62
14.	Lancashire CC	2.28	Cardiff and Vale of G	1.54	Hertfordshire	1.62
15.	Surrey	2.17	Hertfordshire	1.53	Glasgow City	1.52
16.	Tyneside	2.17	Berkshire	1.52	Bristol, City of	1.51
17.	Lincolnshire	2.08	Leicestershire CC and	1.52	Kent CC	1.35
18.	Outer London - South	2.03	Glasgow City	1.46	Essex CC	1.29
19.	Brighton and Hove	1.96	Edinburgh, City of	1.41	Cardiff and Vale of G	1.26
20.	Cardiff and Vale of G	1.92	Essex CC	1.38	Leicestershire CC and	1.14

4.3 Bohemian graduates in the Creative city

The last part of this section explores the relationship between students' and graduates' locations and the three measures of 'city creativity' à la Clifton (2008) introduced in the previous section, i.e. the Bohemian Index, the Creative Professionals Index and the Cultural Opportunities Index.

As Table 5 shows, there is a general positive correlation between students' location choices (both to study and to work) and the proxies used to identify the 'creative city'.

Table 5: Correlations between Bohemian students' and graduates' locations and indexes of city creativity¹⁰

	<i>Graduates' Locations</i>			<i>Creative City</i>		
	<i>BS</i>	<i>BG</i>	<i>GCO</i>	<i>BI</i>	<i>CP</i>	<i>CO</i>
<i>Bohemian Students (BS)</i>	1.0000					
<i>Bohemian Graduates (BG)</i>	0.8208*	1.0000				
<i>Graduates in Creative Occupations (GCO)</i>	0.7909*	0.9873*	1.0000			
<i>Bohemian Index (BI)</i>	0.6913*	0.8250*	0.8225*	1.0000		
<i>Creative Professionals (CP)</i>	0.4209*	0.6161*	0.6050*	0.7063*	1.0000	
<i>Cultural Opportunities (CO)</i>	0.2251*	0.3282*	0.3471*	0.4317*	0.3766*	1.0000

¹⁰ The data provided by Clifton (2008) are used as percentage over the national figures (using the % or the LQ does not change our correlations as the two measures are proportional to each other). The correlation was only possible for England and Wales, where complete data series were provided.

However, the size and significance of these correlations do differ. The creativity of a city is more highly correlated to the number of Bohemian graduates and graduates in creative occupations than the number of Bohemian students. This suggests two things. Firstly, city creativity is more likely to influence labour market conditions rather than higher education provision. Secondly, as seen before, the geographies of higher education provision of Bohemian courses and creative jobs are not completely overlapping (and in fact the correlations between BS and the other two measures, BG and GCO, are respectively 0.82 and 0.79, which are lower than the correlation between the two graduates labour market indexes, BG and GCO (equal to 0.98). In other words, cities which have HEIs specialised in Bohemian courses do not necessarily have a job market dominated by the creative sector.

Another interesting result is that the 'cultural opportunities' index does not exhibit a very high correlation with any of the other indexes and especially the measures of students' and graduates' location. The lowest correlation is between cultural opportunities and Bohemian students with a value of around 0.22 and a significant of 0.02. This seems to suggest that when students choose which HEI to attend a Bohemian course other factors (such as University quality) are more important. The consumption of cultural activities is not one of the main determinants of students' location choices. This could be linked to the fact that the cities with a more predominant cultural and entertainment sector are also the ones which are more attractive to tourists or outside visitors, which probably influence the house prices and cost of living and become unattractive to students. Perhaps more surprisingly, the correlations between the index of cultural opportunities and the locations of graduates (either Bohemians or working in creative occupations) are also not very high, although more significant. Without inferring any directional causality, this seems to imply that the concept of creative city as a place for 'cultural consumption' (broadly speaking) is not what Bohemian students and graduates are attracted to. Rather, they think of a 'creative city' as a place of 'cultural production' with a strong knowledge and creative sector.

5. Conclusions

This chapter presents a first investigation of the link between the 'creative' higher education provision and 'creative cities'. This is an important issue because, as Murphy (2010) points out, there is *"no better place to support the creative triad of talent, technology and tolerance than an art classroom"*.

Results suggest a general high degree of concentration in the spatial distribution of both the provision of creative higher education and the creative job market. Especially for the latter, the role of London is dominant confirming recent research on creative industries clusters (NESTA, 2009, Pratt, 2004b). Greater London and the South East of England have a leading role in the UK creative economy also thanks to a self-reinforcing and endogenous mechanism stemming from the interaction between creative HEIs and the creative sector. Clearly these areas benefit from historical and infrastructural advantages in the creative higher education provision, and these advantages are well exploited by the local creative production system creating a long-lasting and embedded symbiosis. As Törnqvist (2004, p.241) highlights a milieu of creativity consists primarily of *"places and groupings that have attracted competencies within specialized disciplines"* often over a long period of time.

Issues of agglomerations are also justified in the case of the creative city by Hall (1998) and Scott (2006). This issue has relevant policy implications and deserves further research, especially in the light of what Fingleton et al. point out in one of their recent contribution (2007), i.e. that the science base of local universities results negatively correlated with the growth of employment in the creative industries, so that *“it appears that the arts and science do not mix [...] areas where the science base is strong, creative industries employment growth is weak”* (p.77).

The fact that creative activities are highly concentrated in few, normally urban, areas raise issues of the role of policy makers in sustaining more peripheral areas where the creative economy is more of an aspiration than a reality. To what degrees this aspiration should be questioned or supported has already emerged as a critical issue (Oakley, 2006). While creating new courses and infrastructures for creative subjects in old and new HEIs appears to be an easy solution, the issue of long-term sustainability and real job opportunities should be considered (Heartfield, 2005). Furthermore, ‘creative city’ policies might play a role in increasing local inequality when the need to attract the ‘creative class’ might clash with the needs of local residents and local artists (McCann, 2007). The literature also suggests that Bohemian graduates are likely to have more temporary, part-time and poorly paid jobs (Abreu et al., 2010) than other graduates and therefore the issue of sustainability and possible polarisations has never been more central (McRobbie and Forkert, 2009).

The fact that the number of Bohemian graduates and graduates working in creative occupations is more strongly correlated to the indexes of ‘cultural and creative production’ rather than ‘cultural consumption’ is yet another confirmation of the fact that creative HEIs and the local creative labour market work as an integrated system.

While this work was a first attempt to highlight the issues surrounding HEIs in the creative city, our focus was specifically on the role of ‘bohemian graduates’ in the defining the contribution of HEIs to local economies and creative cities. This is obviously a limited perspective as it does not take into account the role other immigrants (such as low-paid international migrants in non-creative sectors) play in the development and growth of cities (for an analysis of the MSAs in the USA see for instance Glaeser and Gottlieb, 2006).

Moreover our analysis could be expanded and improved by considering the overall role of ‘creative’ HEIs in creative cities, including the role of research capacity and academic leadership and partnerships (Powell, 2007). Chatterton (1999) referring to research in more artistic subjects states that *“universities ...are one of the few remaining places where artistic experimentation and integrity is financially viable [...]; and their staff and student populations play a crucial role in sustaining the viability of many local cultural events and facilities”*.

Acknowledgements

We acknowledge the support of the “Impact of Higher Education Institutions on Regional Economies Initiative” (ESRC grant number RES-171-25-0032 co-funded by HEFCE, Scottish Funding Council, HEFCW and DELNI). The authors also wish to thank HEFCE and HESA for

providing access to the data used in this study. Nevertheless, all views expressed are solely the responsibility of the authors.

Bibliography

- ABREU, M., FAGGIAN, A., COMUNIAN, R. & MCCANN, P. 2010. "Life is short, art is long": From Bohemian graduates to the creative class. *Western Regional Science Association, 49th Annual Meeting* Sedona, Arizona, February 21-24, 2010.
- ARTS COUNCIL OF ENGLAND 2009. Capital case study: The Creative Foundation, Folkestone - Kent. London: Arts Council of England (UK).
- BALL, L., POLLARD, E. & STANLEY, N. 2010. Creative graduates, creative futures. . Available at www.creativegraduates.com (last accessed May, 2010). London: Creative Graduates Creative Futures Higher Education Partnership and the Institute for Employment Studies.
- BELL, D. & JAYNE, M. 2004. *City of Quarters: Urban Villages in the Contemporary City* Aldershot, Ashgate
- BIANCHINI, F. & LANDRY, C. 1995. The Creative City. London: Demos.
- CAMERON, S. & COAFFEE, J. 2005. Art, Gentrification and Regeneration - From Artist as Pioneer to Public Arts. *European Journal of Housing Policy*, 5, 39-58.
- CANTOR, N. 2005. Collaborations on the Creative "Campus". *Conference on Campus-Community Art Connections and the Creative Economy of Upstate New York*. Cornell University, Ithaca, New York.
- CHAPAIN, C. A. & COMUNIAN, R. 2009. Creative Cities in England: Researching Realities and Images. *Built Environment*, 35, 212-229.
- CHARLES, D. 2003. Universities and territorial development: reshaping the regional role of English universities. *Local Economy*, 18, 7-20.
- CHARLES, D. 2006. Universities as key knowledge infrastructure in regional innovation systems. *Innovation*, 19, 117 - 130.
- CHATTERTON, P. 1999. The cultural role of universities in the community: revisiting the university - community debate. *Environment & Planning A*, 32, 165-181.
- CHATTERTON, P. & GODDARD, J. 2000. The Response of Higher Education Institutions to Regional Needs. *European Journal of Education*, 35.
- CLIFTON, N. 2008. The "creative class" in the UK: an initial analysis. *Geografiska Annaler: Series B, Human Geography*, 90, 63-82.
- COMUNIAN, R. 2009. Questioning creative work as driver of economic development: the case of Newcastle-Gateshead. *Creative Industries Journal*, 2.
- COMUNIAN, R. 2010. Rethinking the creative city: the role of complexity, networks and interactions in the urban creative economy. *Urban Studies* forthcoming.
- COMUNIAN, R., FAGGIAN, A. & LI, Q. C. 2010. Unrewarded careers in the creative class: The strange case of Bohemian graduates. *Papers in Regional Science*, 89 389 - 410
- COMUNIAN, R., SMITH, D. & TAYLOR, C. F. 2007. A new "Triple Helix"? Universities, Creative Industries and Cultural Policy. *Triple Helix Conference VI*. National University of Singapore, Singapore.
- CRAMPHORN, J. & WOODHOUSE, J. 1999. The role of education in economic development. *Industry & Higher Education*, 13, 169-175.
- CREWE, L. & BEAVERSTOCK, J. 1998. Fashioning the city: Cultures of consumption in contemporary urban spaces. *Geoforum*, 29, 287-308.
- CROSSICK, G. 2006. Knowledge transfer without widgets: The challenge of the creative economy. *Lecture, Royal Society of Arts*. Goldsmiths University of London: London.

- CUNNINGHAM, S. 2004. The humanities, creative arts, and international innovation agendas. In: KENNAWAY, J., BULLEN, E. & ROBB, S. (eds.) *Innovation & Tradition : The Arts, Humanities and the Knowledge Economy*. New York: Peter Lang.
- CUNNINGHAM, S., CUTLER, T., HEARN, G., RYAN, M. & KEANE, M. 2004. An innovation agenda for the Creative Industries: Where is the R&D? *Media International Australia: incorporating Culture & Policy*, 112, 174-185.
- DCMS 1998. Creative Industries Mapping Document London: Department for Culture, Media and Sport.
- DCMS 2009. Creative Industries Economic Estimates. London: DCMS.
- ETZKOWITZ, H. & LEYDESDORFF, L. 2000. The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university-industry-government relations. *Research Policy*, 29, 109-123.
- EVANS, G. & SHAW, P. 2004. The Contribution of Culture to Regeneration in UK: a Review of Evidence. London: DCMS.
- FAGGIAN, A. & MCCANN, P. 2006. Human capital flows and regional knowledge assets: a simultaneous equation approach. *Oxford Economic Papers*, 58, 475-500.
- FAGGIAN, A. & MCCANN, P. 2009. Human capital, graduate migration and innovation in British Regions. *Cambridge Journal of Economics*, 33, 317-333.
- FINGLETON, B., IGLIORI, D. C., MOORE, B. & ODEDRA, R. 2007. Employment Growth and Cluster Dynamics in Creative Industries in Great Britain. In: POLENSKE, K. (ed.) *The Economic Geography of Innovation*. Cambridge (UK): Cambridge University Press.
- FLORIDA, R. 2002a. Bohemia and economic geography. *Journal of Economic Geography*, 2, 55-71.
- FLORIDA, R. 2002b. *The Rise of the Creative Class*, New York, Basic Books.
- FRITSCH, M. & SCHWIRTEN, C. 1999. Enterprise-University Co-operation and the Role of Public Research Institutions in Regional Innovation Systems. *Industry & Innovation*, 6, 69 - 83.
- GARBER, M. 2008. *Patronizing the arts - The University as patron*, Princeton, Princeton University Press.
- GARCÍA, B. 2005. De-constructing the City of Culture: The long term cultural legacies of Glasgow 1990. *Urban Studies* 42, 1-28.
- GILL, R. 2002. Cool, Creative and Egalitarian? Exploring Gender in Project-Based New Media Work in Europe. *Information, communication and society*, 5, 70-89.
- GLAESER, E.L. and GOTTLIEB, J.D. (2006) Urban resurgence and the consumer city, *Urban Studies* , 43, pp. 1275—1299.
- GRIFFITHS, R. 2006. City/culture discourses: Evidence from the competition to select the European capital of culture 2008. *European Planning Studies*, 14, 415 - 430.
- HALL, P. 1998. *Cities in Civilization: Culture, Innovation and Urban Order*, London, Weidenfeld & Wishart.
- HEARTFIELD, J. 2005. The Creativity Gap. London: Blueprint, ETP Ltd.
- HM TREASURY 2003. The Lambert review of business-university collaboration. London: The Stationary Office.
- HOSPERS, G.-J. 2003. Creative Cities in Europe: Urban Competitiveness in the Knowledge Economy. *Intereconomics*, September / October 2003, 260 - 269.
- KNELL, J. & OAKLEY, K. 2007. London's Creative Economy: An Accidental Success? London: The Work Foundation.
- LANDRY, C. 2000. *The Creative City: A toolkit for Urban Innovators*, London, Earthscan Publications.

- MARKUSEN, A. 2006. Urban Development and the Politics of a Creative Class: Evidence from the case Study of Artists. *Environment and Planning A*, 38, 1921 - 1940
- MATHESON, B. 2006. A culture of creativity. design education and the creative industries. *Journal of Management Development*, 25, 55-64.
- MATHUR, V. K. 1999. Human Capital-Based Strategy for Regional Economic Development. *Economic Development Quarterly*, 13, 203-216.
- MCCANN, E. J. 2007. Inequality and Politics in the Creative City-Region: Questions of Livability and State Strategy. *International Journal of Urban and Regional Research*, 31, 188-196.
- MCROBBIE, A. & FORKERT, K. 2009. Artists & Art Schools: for or against innovation? A reply to NESTA. *Variant*, Spring 2009, available <http://www.variant.randomstate.org/pdfs/issue34/nesta34.pdf> (last accessed 20th April 2009).
- MINTON, A. 2003. Northern Soul: Culture, Creativity and quality of place in Newcastle and Gateshead. Published by DEMOS & RICS.
- MONTGOMERY, J. 2005. Beware "the Creative Class". Creativity and Wealth Creation Revisited. *Local Economy*, 20, 337-343.
- MOULD, O., ROODHOUSE, S. & VORLEY, T. 2009. Realising capabilities - Academic creativity and the creative industries. *Creative Industries Journal*, 1, 137-150.
- MUSTERD, S. & OSTENDORF, W. 2004. Creative Cultural Knowledge Cities: Perspectives and Planning Strategies. *Built Environment*, 30, 189-193.
- NESTA 2007. How linked are the UK's creative industries to the wider economy? An input-output analysis. In: PAPER, W. (ed.). London: NESTA
- NESTA 2008. *The art of innovation: how fine arts graduates contribute to innovation*, London, NESTA.
- NESTA 2009. The geography of creativity. London: NESTA.
- NOBLE, M. & BARRY, T. 2008. Supporting Regional Regeneration and Workforce Development: Establishing a new University Centre in Folkestone *UVAC Annual Conference Higher Education - Skills in the Workplace: Delivering employer-led higher level work-based learning* Royal York Hotel, York
- O'CONNOR, J. & WYNNE, D. (eds.) 1996. *From the Margins to the Centre: Cultural production in the Post-Industrial City*, Arena: Aldershot.
- OAKLEY, K. 2006. Include Us Out—Economic Development and Social Policy in the Creative Industries. *Cultural Trends*, 15, 255 - 273.
- ONE NORTH EAST 2007. Commercial Creative Industries Sector. Newcastle Upon Tyne: One North East and Culture North East.
- PORTER, M. 1998. *On Competition*, Boston, Harvard Business School.
- POWELL, J. 2007. Creative universities and their creative kity-regions. *Industry and Higher Education*, 21, 323-335.
- PRATT, A. C. 2004a. Creative Clusters: Towards the governance of the creative industries production system? *Media International Australia*, 50-66.
- PRATT, A. C. 2004b. Mapping the cultural industries: Regionalization; the example of South East England. In: POWER, D. & SCOTT, A. J. (eds.) *Cultural industries and the production of culture*. London: Routledge.
- PRATT, A. C. 2008. Creative cities: the cultural industries and the creative class. *Geografiska Annaler: Series B, Human Geography*, 90, 107-117.
- PRESTON, J. & HAMMOND, C. 2006. The Economic Impact of UK Higher Education Institutions. London: Universities UK.

- RANTISI, N. M. 2002. The Local Innovation System as a Source of Variety: Openness and Adaptability in New York City's Garment District. *Regional Studies: The Journal of the Regional Studies Association*, 36, 587-602.
- SCOTT, A. J. 2006. Creative cities: conceptual issues and policy questions. *Journal of Urban Affairs*, 28, 1-17.
- STANFORD ARTS INITIATIVE 2007. Engaging the Arts & Creativity. accessed 20th February 2010. http://arts.stanford.edu/assets/ArtsInitiative_L2.pdf.
- TAYLOR, J. 2005. Unweaving the Rainbow: Research, Innovation and Risk in a Creative Economy. *AHRC Discussion Paper*. London: AHRC.
- TEPPER, S. 2004. The Creative Campus: Who's No.1? *The Chronicle of Higher Education*, 51, B6.
- TEPPER, S. 2006. Taking the Measure of the Creative Campus. *peerReview*, Spring 2006.
- TÖRNQVIST, G. 2004. Creativity in time and space. *Geografiska Annaler: Series B, Human Geography*, 86, 227-243.
- VINODRAI, T. 2006. Reproducing Toronto's Design Ecology: Career Paths, Intermediaries, and Local Labor Markets. *Economic Geography*, 82, 237-263.
- WOOD, P. & TAYLOR, C. 2004. Big ideas for a small town: the Huddersfield creative town initiative. *Local Economy*, 19, 380-395.