

Innovation and Creativity: Is there economic significance to the *creative city* ?

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Volume 13, Special Issue, 2009

Les villes créatives : une comparaison Barcelone – Montréal
Creative cities: Comparing Barcelona and Montréal
Ciudades creativas: Una comparación Barcelona Montréal

URI: <https://id.erudit.org/iderudit/037502ar>
DOI: <https://doi.org/10.7202/037502ar>

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Publisher(s)

HEC Montréal et Université Paris Dauphine

ISSN

1206-1697 (print)
1918-9222 (digital)

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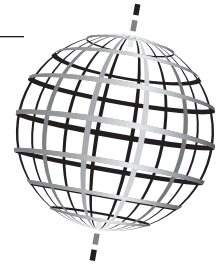
Cite this article

Cohendet, P. & Zapata, S. (2009). Innovation and Creativity: Is there economic significance to the *creative city* ? *Management international / Gestió Internacional / International Management*, 13, 23–36.
<https://doi.org/10.7202/037502ar>

Article abstract

This article aims at defining the concept of creative city. It attempts to clarify the notions of creativity, innovation and invention, often used interchangeably in academic or professional debates. It is argued that creativity does not result from the talents of a few individuals, but that it nourishes itself from the repeated exchanges among a variety of heterogeneous entities that contribute in their own way to foster the development of new ideas. Creative cities can be considered as specific innovative clusters that allow the creative process to be fully expressed, illustrated by the case studies on Montréal and Barcelona.

Innovation and Creativity: Is there economic significance to the *creative city*?



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RÉSUMÉ

Cet article vise à définir le concept de ville créative. Il tente de clarifier les notions de créativité, innovation et invention, souvent utilisées de manière interchangeable dans les débats académiques et professionnels. Il avance que la créativité n'est pas seulement le résultat du talent de certains individus, mais qu'elle se nourrit également des échanges répétitifs entre des entités hétérogènes qui contribuent à leur manière à favoriser le développement de nouvelles idées. Les villes créatives peuvent ainsi être considérées comme des grappes innovatrices particulières qui permettent l'expression entière du processus créatif, illustré par les études de cas de Montréal et Barcelone.

Mots clés : Créativité, innovation, invention, milieux créatifs, underground, industries créatives, Montréal, Barcelone

ABSTRACT

This article aims at defining the concept of creative city. It attempts to clarify the notions of creativity, innovation and invention, often used interchangeably in academic or professional debates. It is argued that creativity does not result from the talents of a few individuals, but that it nourishes itself from the repeated exchanges among a variety of heterogeneous entities that contribute in their own way to foster the development of new ideas. Creative cities can be considered as specific innovative clusters that allow the creative process to be fully expressed, illustrated by the case studies on Montréal and Barcelona.

Keywords: Creativity, innovation, invention, creative spaces, underground, creative industries, Montréal, Barcelona

RESUMEN

El objetivo de este artículo es definir el concepto de ciudad creativa y clarificar las nociones de creatividad, innovación e invención, usadas frecuentemente de forma intercambiable en los debates profesionales y académicos. Se propone que la creatividad no solo es el resultado del talento individual de algunos, sino que es una retroalimentación originada a través de intercambios repetidos entre entidades heterogéneas que contribuyen cada una en el desarrollo de nuevas ideas. Las ciudades creativas pueden ser consideradas como clusters innovadores que permiten que el proceso creativo sea expresado enteramente, ilustrado por los estudios de caso de Montreal y Barcelona.

Palabras claves: Creatividad, innovación, invención, espacios creativos, underground, industrias creativas, Montreal, Barcelona

The concept of the *creative city* – a domain reserved until recently primarily for urban planners, sociologists or historians – has suddenly emerged as a growing interest for economists and policy makers. The success of the concept is inherently associated with the “buzz” that followed the provocative and controversial essay by Florida (2002). Florida posits the idea that for countries, cities and regions to develop, they need to attract a *creative class* of workers by providing, through investment in cultural facilities and other related amenities, a fertile place for this population to imagine new products, technologies, or processes that will ultimately bring economic growth and wealth. Florida defines the creative class as workers whose job is to create *new* forms in scientific as well as cultural domains. It is composed of scientists, engineers, university professors, poets, and architects, and so on¹.

In spite of its appealing perspective for city planners, Florida's theory has received a significant amount of criticism both from neo-liberal economists, who see it just as a new argument for promoting government spending (in the cultural realm, for instance) instead of tax cuts as incentives for job creation, and left-wing economists who perceive it as an elitist theory which does not address the rising inequality issues and increasing economical divide that the new economy has brought. Amongst others, Peck (2005) states that the creativity-led development strategies packed in Florida's discourse are a “form of soft law/lore for a hypercompetitive age”². These strategies, from Peck's perspective, barely propose anything new besides urban policy orthodoxies based on inter-local competition, place marketing, property development, and gentrification and normalised socio-spatial inequality. They only reword already existing tendencies in neo-liberal urban politics,

1. Florida divides the creative class into knowledge workers – those working primarily with information and who develop knowledge – and the super creative core of workers, which includes professions such as computer programming, architecture, design, arts, and media occupa-

tions. People in these occupations, according to him, are drawn to places that already have a critical mass of creative people and activities.

2. Peck, J (2005), “Struggling with the Creative Class”, *International Journal of Urban and Regional Research*, Vo. 29, No 4, p768

repackaging them in a soft term of cultural policy, hence elevating creativity to a new urban imperative. In doing so, they canalise and constrain urban-political agency, even if their payoffs are very elusive. On the same vein, Malenga (2004) argues that Florida's essay "is little more than Mr. Florida's depiction of the Internet bubble's go-go culture"³, and cities that have based their strategies on his ideas have not realised that the Internet generation formed this eccentric culture during a speculative bubble. In relation to creative capital theory, Scott (2006) also points out a several limitations of the Florida "effects". First, he indicates that Florida fails to articulate the necessary conditions under which skilled, qualified, and creative individuals will actually come together in particular places and remain there over a reasonably long period of time. Furthermore, Florida's argument that once a creative class has been brought to any particular place, its innate entrepreneurial and cultural energies will automatically construct a local vibrant economy, neglects the synchronic and diachronic interrelationships that must be present before a dynamic creative environment will emerge. Finally, for this author, any attempt to build a creative city, must deal – minimally – with setting up a production system, training or attracting a relevant labour force, appropriate programming of urban space, and ensuring that the different elements involved work in harmony with one another.

In the present contribution, we would like to put aside all the buzz and controversy regarding creative cities and creative capital theory for a moment and argue that – despite the multiple flaws well articulated by Florida's critics – we can use the concept of creative cities as a platform to bring forward new research avenues in economics and analyse emerging phenomena. More precisely we will advocate that *creative cities* may be considered as a specific context of innovative cluster that captures important and new aspects of the innovation process in a globalised environment. At the same time, we posit that the previous utility of the concept has been severely impeded by some major weaknesses in Florida's approach – as well as the "buzz" created by his works – namely: Florida considers who these creative people *are*, but he does not explain and analyse what they really *do*. As a result, what Florida suggests is at best a necessary condition for having a creative city (accumulating creative workers), but not a comprehensive vision of the actual processes that lead an urban milieu towards creativity. Our objective is thus to analyse these creative processes in order to better characterise the notion of *creative cities* viewed as a specific context of local innovative agglomeration.

Our objective in this paper requires a preface: to better clarify the notion of *creativity* in economics. While researchers in the field of psychology have focused on creativity

for more than eight decades, and creativity has become an important topic across the social and behavioural sciences since the 1980s, economists have yet to extensively engage with the concept. They consider that innovation is the process that brings creative ideas to the market but, in the vast majority of the economic literature, creative ideas are reduced to *inventions*. The fine distinctions between invention and creation deserve specific attention. Invention is an emerging phenomenon that results from the interactions between two well-regulated and institutionalised universes: the domain of *science* and the domain of *industry*. We argue in this contribution that creativity is not synonymous with invention, and that innovative firms are generally not backed in their efforts solely by the well organised universe of science, but also by an informal world, called *underground*, from which a myriad of creative ideas emerge and develop. As a consequence, the *creative city* could be seen as a specific case of innovative cluster, where the creative forces are issued from the scientific world *as well as* from the underground and are brought to the market through a complex coupling with the industry. Thus, it is not the accumulated number of creative workers that characterises a creative city, but the subtle and complex processes of creativity-based interactions between industry, science, and the underground.

The arguments developed in this article are supported by a series of ethnographic studies focusing on a number of key creative activities in Montréal in the past decade (in the domains of videogames, entertainment, advertising, including others) and a series of interviews with representatives of the creative industries in Barcelona conducted during the workshop on Creative Cities held on the comparison between Barcelona and Montréal in April 2008 at HEC Montréal.

Based on this perspective, the outline of this contribution is as follows. In part 1, we distinguish innovation, invention, and creation, in order to better understand why economists have faced so many difficulties in capturing the notion of creation, and why they have restricted their analysis to the sole relationship between innovation and invention. In part 2 on industrial clusters, we focus on innovative agglomerations, and emphasise that in the analysis of these innovative milieus (industrial clusters, technological parks, local innovative systems, etc.), economists have generally transferred the classical results of the interactions between science and industry. In part 3, focusing on cultural cities and the "*underground*", we pinpoint the creative role played in cultural milieus by the "*underground*", considered as the creative source of innovations in some specific cultural cities. This is to emphasise that, besides the scientific universe, there is another universe of creativity, rules and habits of which strongly differ from those of the world of open science. In part 4, we argue that creative cities are

3. Malenga, S (2004), "The Curse of the Creative Class", *The Wall Street Journal*, (January), 2004 [Online], [Consulted on March 22, 2008], www.opinionjournal.com/extra/?id=110004573

an important approach to studying the dual role played by communities of scientists (open science) and artists (underground) in the creativity of some cities, as revealed by our case studies on Montréal and Barcelona.

Part I: Innovation, invention, and creativity

The artist knows that, in creating, to quote the poet Yeats, “one is wrestling with a god”. This is the arena of creating. One is not wrestling with one’s abilities, ambitions or limitations. Those are things to transcend, if one has the grace to engage with the unknown... Creativity is a way of life. Invention, innovation are the quick harvest; they call for cleverness and some application to negotiate new-level growth. Invention and innovation are what progress is made of; they are not the life-blood of what impels creation. “Progress” stumbles on ideals; creativity hunts a vision.

Pier Giorgio Di Cicco, poet.

If there is a wide consensus in defining *innovation* as “the process of bringing new ideas to the market”, opinions significantly differ amongst disciplines with respect to the definition and vision of the sources of innovation. Economists and engineers tend to focus on *invention*, while most of social sciences refer to *creation*. Of course, these two concepts overlap: *creation* is generally considered as the broadest concept, while *invention* is viewed as one type amongst many of creative processes.

According to the Competitive Intelligence Glossary (2008), *creation* refers to “the generation of new and useful ideas, or of the re-evaluation or the combination of old ideas, so as to develop new and useful perspectives in order to satisfy a need”. In other words, creation aims both at changing the way things are produced (new combinations) and changing the modes of usage (breaking the existing rules of usage and suggesting new ones). Thus, *originality*, which is considered to be a sufficient condition for creativity (Amabile, 1997), not only applies to the domain of production (the ways objects or services are produced), but also to the domain of perception and usage of what is produced (the ways objects or services are consumed). In this sense, creation is more about bringing together different streams of existing knowledge in order to create a new style, than about producing completely new knowledge in a particular specialised domain of science in order to produce an invention. The fields of psychology and behavioural sciences emphasise the role played at the sources of creation by *creativity*, which is the capacity to select, re-arrange, combine, or synthesise existing facts, ideas, images, or expertise in original ways. Creativity is fuelled by “lateral thinking” which refers to a means of escaping from habitual mind patterns in order to solve problems or explore new ideas. Techniques include the deliberate and provocative challenging of preconceptions, and the rejection of yes/no thinking.

Amongst the different types of creative processes, *invention* is the act of creating a novel device, method, product, process, or technique. Unlike creation, where only originality is required, both *originality* and *appropriateness* are necessary for *invention* (Amabile, 1997). This supposes that the act of invention is accompanied by a certification process about the new knowledge produced (such as a patenting process for instance). Invention also entails a focus on the process to produce new knowledge: As Tymieniecka (1987) underscored, “while the creative work aiming at a complex construction is perpetually involved with an infinite number of particular tasks, problems, and selections... invention aims at resolving *one particular problem*, to accomplish *one specific task or endeavour* which enters into a vast complex of other problems”.

Invention as the main creative context in economics

Our objective in this contribution is not to go in-depth into the discussions on the definitions of both terms, but rather to argue that the choice to analyse in economics the sources of innovation in terms of *invention* is not neutral: it refers to the specific context that economists, classical as well as evolutionary ones, use to analyse the innovative process. This context pinpoints invention as an emerging phenomenon having the following characteristics: 1) it refers to the production of new knowledge in terms of product, process, technique or method, 2) this production of new knowledge increases the state-of-the-art frontier, 3) this production of new knowledge is certified by some legal authority (for instance through a patent), 4) the main loci of inventions are in the applied research departments of firms, where creative ideas issued from science are turned into inventions that lead to innovative devices. It is important to underline here that according to most of the economic approaches, the creative ideas that lead to invention are issued from the *scientific world* and certified by it. To a large extent, inventions result from interactions between two institutionalised universes: the domain of *science* and the domain of *industry*. As an example, in a seminal paper, Arthur (2006) defines an invention as a process of linking a determinate purpose or need with an effect that can be exploited to satisfy this need. The *effect* is revealed and analysed by the scientific institutions. In other words, invention is a process of recursive problem-solving: this conceptualisation is articulated around the definition of technology (a means to a human purpose), its base principle (the method used by it), and the exploitable phenomenon from which the base principle emerges.

Thus, what the economic literature suggests is that, explicitly or implicitly, in their innovative efforts, firms focus on a main creative process, invention, to solve problems and answer the market needs. This means that the economic literature does not consider other sources of creativity. Von Hippel (1988, 2008), for instance, has clearly pinpointed the innovative role played by users; however, in the vast majority of economic analyses, invention is the

main step towards innovation, in a context where behind the scene of the process of innovation, firms are backed by one main source of creativity, the scientific world. This context has been particularly useful for a number of key economic problems: understanding the process of defining property rights on what is invented and determining the allocation of property between scientists and firms; analysing the frontier between in-house and external research for firms; or, as we will analyse further, understanding the nature of innovative clusters. However, this context has tended to reduce the understanding of the creative sources to the sole formation of inventions emerging from interactions between science and industry. We argue in the following that the changing nature of the economy requires the enlargement of the creative sources to much broader domains of origin, in particular by taking into account those creative inputs from the artistic and cultural milieus.

The growing need for economics to think in terms of creativity rather than invention

There is growing evidence that in our modern economy, the sources of innovation are composed of a large range of creative processes that are not limited to mere inventions. As an example, consider the iPod: as a standalone product iPod is really not very *inventive*. It relies on numbers of elements previously invented (for example, MP3 players had been in existence for several years before the iPod). However, iPod can be considered as a truly *creative* device: 1) it combines aesthetic design, elegant ergonomics, and ease of use, and 2) It changes the rules of usage of music listeners through the creation of the iTunes software and website that enable listeners to actually use their iPod.

The example of iPod illustrates the fact that creative activities tend to play a growing role in all types of industry, from traditional ones to high-tech ones, where final outputs compete against not only on cost but also more and more on their qualitative attributes. However, amongst the different sectors, these “creative industries” have received particular attention both from economists and policy makers who underline the fact that these industries tend to occupy a rapidly increasing share of the scene of industrial activities.

Generally speaking, the *creative industries* are identified as the overlap between cultural and commercial activities.⁴ They involve the supply of goods and services that contain a substantial element of artistic, imaginative or intellectual effort or that are associated with a vital role in sustaining cultural activities (Turok, 2001). The boundary of these industries is still a matter of debate. For the British Government’s Department of Culture and Media (2001) the creative industries are composed of: Advertising, Architecture, Art and Antiques Markets, Craft, Design, Designer Fashion, Film and Video, Interactive Leisure Software, Music, Performing Arts, Publishing, Software and Com-

puter services and Television and Radio. Regarding this definition, Flew (2005) remarks the fact that “such listings inherently carry an ad hoc and pragmatic element to them. In the UK case, the inclusion of sectors such as architecture and antiques is connected to the institutional alignment of culture with the heritage sector, while the inclusion of areas such as designer fashion may reflect both the fact that Britain is a world leader in this area [...]”⁵. This puts into perspective the subjectivity of the different categories. This definition was chosen purely on the base of its practicality.

According to Turok (2001), the creative industries present several properties that affect their organisation, economic impact, and geography, as well as distance them from more traditional industries. These characteristics also pose a challenge in their analysis. First of all, there is a special uncertainty about how consumers will value a new product because of its original, often unique character (Caves 2000). Second, there is often a high degree of individual skill, talent, and commitment involved. Creative producers care about many attributes that very often consumers do not, such as purity, meaning, aesthetics, integrity, or technical proficiency. Third, some creative outputs – like feature films or television drama – require very diverse and specialised skills and knowledge to be brought together only temporarily, complicating their organisation and increasing costs. Fourth, creative products are often heterogeneous and irregular in scale and character, creating an awkward and inefficient discontinuity in production. Flexible organisational agreements and labour markets can help in the process. Social networks among individuals and associated institutions may facilitate essential exchange of ideas and information (Scott, 2000).

Another issue faced in analysing the creative sector is its conceptual differences with the traditional sector when it comes to measures of input and output, and value chain characteristics. Most creative industries have a strong dependence on human resources. Advertising, for example uses not only graphic supplies – for printing, for the actual physical design, for computer aided drafting – but relies heavily on the advertiser’s education, experience, and creativity. It is these last elements that contribute to the increased value added of the final product. Similarly, in the case of artistic products – the performing or the visual arts, for example – there exists a process of communicating symbolic information between the artist as the ‘encoder’ and the audience as the ‘decoder’ (Brecknock, 2003). This is the basic process in arts creation, but it is also necessary to consider supporting industries that assist in the production of arts activities such as suppliers, framers, distribution networks, art galleries, or record producers, for example.

To sum-up, we have advocated that the theoretical frame built on the concept of *invention*, through which economists have dealt with novelty, should be broadened in order to

4. See Flew (2002) for a review of the creative industries definition.

5. Flew (2005), *Defining the Creative Industries*.

take into account the characteristics and properties of creativity in a modern economy. We consider that one of the main consequences of broadening the scope is to enlarge the vision of the processes that lead to the production of new knowledge, from a traditional approach focused on the sole interactions between industry and science to a global context of creation that, besides industry and science, also includes the artistic and cultural domains (what we will call the *underground* in the following). Such a perspective has strong impacts on the way to conceive and analyse innovative proximity and the localisation of creative activities. To a large extent, economists have characterised the local innovative contexts (districts, clusters, innovative agglomerations, local networks, and so on) through the lens of the sole interactions between the industrial and scientific domains. From a different perspective, urban planners have investigated the concept of *cultural cities* by emphasising the creative potentials of the artistic and cultural milieus. We will recall in the following these different approaches of innovative agglomerations, in order to better develop the main purpose of this contribution: arguing that creative cities aims at capturing and defining a specific context of local innovative agglomeration which combines the creative forces fuelled by the interactions between the industry (in particular, but not exclusively, creative industries), science, and the underground. The *creative city* belongs to the economic category of innovative agglomerations, but with unique traits: it clearly refers to a local ecosystem where the interactions between innovative firms, research units, and the creative underground require an in-depth analysis.

Part II: Local innovation systems and industrial clusters (within the “invention” paradigm)

Ever since the study of innovation and creativity has taken a more prominent place in economic research, many approaches to understand the nature of the innovative and creative processes within a determinate agglomeration have been developed. Different terminologies, such as innovation systems, industrial clusters, technological parks, and innovative milieus try to explain, among other things, the origin and the intricacies of these processes. In this part, we briefly recall the main types of innovative agglomerations as analysed in economics. We underline that each of them is constructed upon the “invention paradigm”, which signifies that for all these territorial concepts, the main sources of creativity emerged at the interactions between science and industry. The creative sources from the artistic and cultural milieus are left apart.

The *innovations systems* approach is a framework that emphasises the importance of the systemic character of innovation and attempts to explain more specifically the local institutional context as well as the interrelations

between businesses and public institutions (such as universities, public research institutes, and public policy) dedicated to research and to the development and commercialisation of innovations. This approach, originally proposed by Freeman (1987) and Lundvall (1992), was applied initially at the national level, though it has also been used at a regional and a metropolitan level, as we will explore later. According to Fischer et al (2001), who explored the innovations systems of three metropolitan areas in Europe, “a system of innovation may be thought of as a set of actors, such as firms, organisations and institutions, that interact in the generation, diffusion and use of new – and economically useful – knowledge in the production process.”⁶ In order for a territorial system of innovation to exist, however, geographical proximity is a necessary but insufficient condition alone. The potential for an innovation system depends above all else on two factors: geographical and technological proximity. Geographical proximity indicates the positioning of actors within a predetermined spatial framework. Technological proximity is the association with the set of horizontal or vertical interdependencies within the scope of production relationships.

Furthermore, systems that attempt to enclose the whole process of innovation can be expected to have the following four key building blocks: 1. *Firms* and their R&D laboratories; 2. The science and research sector, which has a training component of educational *organisations* and a research component including universities and other research organisations; 3. The innovation support units, that may be producer service providers such as financial, technical, marketing or IT related advice or expertise; and 4. The *institutional* sector, which regulates the relations between the actors of the system, enhances their innovation capacities, and manages conflicts and cooperation.

The innovations systems concept was introduced as an option to neo-classical considerations and puts innovation and learning at the centre of the framework. Innovations systems include all the important factors we have mentioned such as economical, political, social, organisational and institutional factors that have an effect on the development, the diffusion, and the uses of innovation.

Another way to address the study of innovation has emerged from the prevailing question about the relationship between the manner in which enterprises cluster in a given geographic space, and its influence on regional development. This has been explained through two main conceptual approaches: 1) Industrial location theory that builds on Weber and Hoover (1937, as cited in Bergman and Feser, 2000), in which the benefits of location are called agglomeration economies, and 2) the Marshallian perspective that presents Marshall’s [(1890) 1961] analysis of external scale economies and their presence in ‘industrial districts’.

6. Fischer et al (2001), “Metropolitan Innovation Systems. Theory and Evidence from Three Metropolitan Regions in Europe”, Germany Springer-Verlag, p. 1.

Of relevance here, Marshall illustrates *industrial districts* as places where companies enjoy the benefits of skilled pools of labour, provision of specific goods and services by specialised suppliers, greater opportunities for specialisation and, more significantly, diffusion of industry-specific knowledge and information. As newly created knowledge can be appropriated only to a limited extent, knowledge created by one firm may spill over to others. Behind the dynamics of this district are not only the size but also the social and political factors that apply to it. Marshall's theory defines external scale economies⁷ as cost savings adding to the firm because of size or growth of output in industry. Economies of scale are increased levels of output into downward sloping average cost curves, and may be internal or external to the firm. Externally, this means that an increase in industry-wide output within a given geographical region decreases average costs for the individual firm. The increase in output for a given region translates into the agglomeration of certain industries or industries in clusters for example. In short, Marshallian externalities refer to: 1) Economies of specialisation such as the benefit from local concentration of specialised suppliers, which increases competition and variety, and reduces costs; 2) The availability and development of a specialised labour force; 3) The knowledge flows and spill-over effects that flow more easily within spatially bounded areas thanks to face-to-face contacts.

On the other hand, Weber (1929) developed a location triangle in order to calculate the optimal location of a firm. In his model, he also suggests that labour costs and *agglomerative* forces can make the location of a firm change from a previously calculated site. Within this view, *agglomeration economies* – defined as cost savings firms enjoy as a result of increased spatial concentration – are seen as one of three primary causes of spatial clustering. There is a debate, however as to whether agglomeration economies arise between firms belonging to different or related industries. According to the Marshall, Arrow, Romer model, formalised by Glaeser et al (1992), knowledge is predominantly industry-specific and the spill-overs may arise between firms within the same industry. These intra-industry spill-overs are known as localisation or specialisation externalities. On the other hand, Jacobs (1969), argues that knowledge may spill-over between complementary rather than similar industries since ideas developed by one industry can be applied to others. This exchange of complimentary knowledge between diverse firms and economic agents eases the search and experimentation in innovation.

A related concept to explain and analyse industrial location is Porter's (2000) explanation of *geographical clusters*, and its advantage in terms of productivity and innovation. It lowers transaction costs through sharing facilities, fostering the presence of incubators and increasing the level of trust,

thus increasing productivity. Clusters stimulate innovation through the proximity to knowledge sources and the generation of knowledge spill-overs. Finally, clustering also allows access to local demand and stimulates entrepreneurship. For Bergman and Feser (2000), an industry cluster may be generally defined as a group of business enterprises and non-business organisations for which membership within the group is an important element of each member firm's individual competitiveness. It refers to the tight connections that bind certain firms and industries together in various aspects of common behaviour (for example, geographic location, sources of innovation, shared suppliers, and factors of production). Clusters applied to creative industries have received a growing interest in recent literature (Andersen et al., 2004; Rullani, 2001; Saxenian, 1995). Creative clusters are generally viewed as small geographic locations centred on a particular industry. They make close face-to-face communications between the participants of the cluster easier. A creative cluster can be thought of as a localised network that uses the territory to provide the dissemination of creative ideas (Rullani, 2001).

The classical views of the study of localised innovative milieus viewed above (innovation systems, districts, agglomeration economies, industrial clusters, and so forth) offer not only useful contexts to study the formation of innovation, but also practical frameworks to guide the decisions of local policy makers in order to sustain, support, and reinforce the innovative potential of these local milieus. These recommendations focus on the coupling of the industrial sector and a series of formal institutionalised actors such as research laboratories, universities, or industry associations. As we suggested, this coupling is conceived within the "invention paradigm", which is expressed, for instance, by the fact that the performance of these innovative milieus is often measured in terms of the number of patents that emerge from the local agglomeration. All these actors are tied through relationships that are inscribed once more in an institutionalised set of rules of interaction such as buyer-supplier relationships and competitor and collaborator ties. While one of the constants (and what we consider to be a limitation) in all of these economic approaches is the continuous relationship between science and industry, other disciplines (including urban planning, geography, and sociology) have investigated the contexts of local innovativeness through the lens of the relationships between industries and the cultural sector (which generally exclude scientific institutions from the analysis of the local scene).

Part III: Cultural cities and the 'Underground'

A cultural city is typically viewed as a metropolitan region that, through the policies of its government agencies, the development of its cultural sector and industries and its branding initiatives, puts culture and the arts at the centre

7. Such economies contrast with internal scale economies, which are the source of increasing returns from growth in the size of plant.

of its overall development strategy. It is through this optic that cultural cities have been studied by urban planners and sociologists, and have also been in the spotlight in relation to development initiatives throughout the world. In the cultural city view, the development of a region and its people's cultural heritage and organisations, the role of culture, cultural institutions, policies and industries is paramount to its economic development.

Cultural planning and cultural resources are core concepts in this terminology. Resources like language, food and cooking, leisure activities, clothing, and subcultures or intellectual traditions that exist everywhere are neglected but constitute the particularity of a location. Furthermore, the cultural sector, much like many others is believed to *cluster* in certain areas and their surroundings. Most of the current economics literature on this topic studies the role and development of culture in different geographical areas, in which cities take a special position.

Some studies use approaches described above to analyse the formation of cultural clusters, their size in the economy and their influence in the economic development of the cities in which they are present. Coish (2004) studies several census metropolitan areas (CMA) in Canada and the cultural clusters that are present in them. Through the analysis of census and other statistical data the author proposes that certain CMAs, through concentration of culture industries, firms, organisations, employees, students and graduates, act as urban culture clusters. The author also provides information on the socio-economic characteristics of culture workers in several Canadian cities and their mobility patterns, with differences and similarities across the different cities⁸.

Within this group of cities, Montreal is seen as a dynamic and cultural metropolis that holds creation, invention and emerging talent in high esteem. The fact that the local market for culture is relatively small makes the culture community continuously create, renew itself and export multiple products. The number of cultural events per square kilometers is above average. According to the Montreal Metropolitan Community agency's development plan (2005), the cities' clusters are divided into four types. The culture cluster in particular is part of the visibility cluster together with Tourism and Services. More importantly however, is the diversity of industries present in the city ranging from nanotechnologies and advanced materials to textiles and clothing and aerospace.

In the case of Barcelona we find a similarly connected city in which its culture cluster is seen as the motor of its strategic development into the new economy. According to a n industry expert consulted for this study, Barcelona

now produces cultural and creative products that it exports to other parts of Spain and also internationally. This need comes from the fact that a "culture of design" has been historically programmed into the city and its population. If there is not an internal demand for all these cultural products, professionals and firms in this sector will look for markets abroad.

Other studies analyse the best public policy practices put in place in order to foster a healthy cultural sector. Mommas (2004) also explores the phenomenon of cultural clustering, through the investigation of five cultural clustering projects in the Netherlands, and argues that for the cultural sector to be more strategically involved in the governance of cultural cluster projects, it is necessary to explore in greater depth the complex dynamics involved. There needs to be, according to the author, a locally specific appreciation of the interaction between culture and commerce in today's leisure-culture-creativity economy⁹.

We found Barcelona an example of this interaction. The city is also host all year round to cultural and artistic events that provide spaces for knowledge exchange that can ultimately be accumulated and further refined within the territory's R&D and educational institution networks. According to another respondent, when the city generates spaces and events of the sort, this transforms into a positive catalytic event. The existence of these events, as well as the provision of safe public space, with movement and activity, is a catalytic element for culture that allows citizens to be proud of their city and to take part in it.

In another example of this kind of contribution, Basset et al (2002) explore the structure of the natural history film-making cluster in Bristol, UK. Their framework, like in the previous case and in studies of this sort, is based on relevant literature concerning clustering in the cultural industries in which the sector is analysed according to institutionalised relationships between the different actors that make up the cluster. Through this cluster-oriented analysis, the cultural industries for example are characterised by an output that consists of products of high aesthetic value, and distinct production and distribution relationships.

Cultural cities are also used as a branding strategy to attract investment of different types, and especially tourism. For example, Evans (2000), argues that the creation of cultural flagships, architectural masterpieces and their re-location of industrial districts, waterfronts and depopulated downtown areas, has not been paralleled since the Victorian civic building era and those of earlier societies which related museums and the public. In spite of increasing competition for the cultural and entertainment capital and festival-city status, several cities have invested heav-

8. David Coish (2004), *Census Metropolitan Areas as Culture Clusters*, Statistics Canada.

9. Hans Mommas (2004), Cultural Clusters and the Post-industrial City: Towards the Remapping of Urban Cultural Policy, *Urban Studies*, Vol. 41, No. 3, 507–532, March 2004.

ily in this sort of high-risk venture.¹⁰ For Gertler (2004), who explains several of the reasons behind the importance of the creative city concept, he argues that because there remains significant value in developing unique cultural products within cities and regions, “places have become ever more closely identified with (and by) their cultural stars and the distinct cultural movements and products they produce: their music, their architecture, their films, literature, art, fashion, and so on. This has obvious spillover benefits for both the city-region and the entire country, whose status and image abroad is strongly enhanced.”¹¹

Barcelona has become, partly because of its branding as a cultural city, as an “edgy” city within the Spanish context, and as a cultural tourism destination in the European context, a city that is very attractive to the hosting of events of different scales. We found cultural events such as the “Bread and Butter” fashion festival or Sonar music festival for example, to be enhanced by the cultural attractiveness of the city. Tourists and locals enhance attending the festival enhance it because of their presence but the whole cultural ecosystem attracts other visitors and locals to explore their city and find new events and companies they had never heard about.

According to another expert consulted, when one of these companies decides to sponsor an event of the sort it is because it will obtain a return in terms of image. But this image comes from two things, the promotion it will obtain because of the amount of people that will attend, and the associations, which will it, obtain as a result of the event. These are both determined by the quality of the event, which is in turn given by the city. The city acts as a brand that can influence enormously. If there is an image of a creative city, and you do a creative industry oriented event, both elements work together, and the event has more strength.

Moving on, the term ‘Cultural cities’ is also synonymous with the formal analysis of relationships between economic development and the cultural sector, and of the cultural sector and the policy initiatives that promote it. They are also a branding construct that has acquired much publicity in recent times.

Furthermore, in recent studies, the terms cultural cities and creative cities are used interchangeably, as are the terms culture industry and creative industry. Duxbury (2004) for example argues for the centrality of cultural development in building creative cities. According to this author, creative cities are those where “the arts are respected for their aes-

thetic importance and for their ability to foster understanding and communication; cultural diversity is embraced and the expression of creativity in all its forms is encouraged”¹².

In spite of the valuable contributions cited above, we are of the view that the term cultural city will acquire added relevance if it also includes the study of the dynamics of interaction of the ‘underground’ and the industrial organisations and institutions. In other words, we propose that the term cultural city should be representative of the conceptualisation of the intersection of the world of industries and the underground culture of a city. But what exactly is the *underground*?

Most literature in economics refers to the underground economy and underground activities as those that take place outside of the view of the government and tax control organisations. They constitute activities that take place within the household or that are criminal in nature and do not generate an output that can be considered valuable to society, in spite of the gains that they can produce and generate to the people that engage in them (Tanzi, 1999)¹³. Instead, we focus here on an alternative definition of the ‘underground’, namely the “*creative underground*” that “refers to relatively autonomous processes of cultural production that unfold in the urban environment, often in connection to some ‘sub-cultural’ (another difficult term nowadays) ‘scene’.”¹⁴ These are typically processes of unpaid productive cooperation, which are present especially in the city. As Arvidsson (2007) notes, “advertising professionals as well as underground producers themselves understand these autonomous forms of creative production to be both more innovative, experimental and cutting edge, more authentic, rebellious and ‘cool’ than others, and thus intrinsically opposed to the corporate logic of standardization and ‘commodification’ (cf. Poutain and Robbbins, 2000).

Cooperation between the underground and the creative industries, in particular, the ‘conquest of cool’ as Thomas Frank (1997) has called it, has of course a long history. Already in the 1930s advertising aesthetics began to draw on the Italian and Russian avant-garde (Salaris, 1986). In the 1950s the music industry practically incorporated the emerging youth culture as a source of product development, constantly surveying it for new marketable fads and fashions. In the 1960s, the New York Pop Art scene and large parts of the Counter Culture were a constant source of inspiration for advertising’s ‘creative revolution’ (Frank, 1997). At the same time, the ‘underground’ has changed as

10. Graeme Evans (2003), *Hard-Branding the Cultural City- From Prado to Prada*, International Journal of Urban and Regional Research, Vol 27.2, (June) pp 417-40.

11. Gertler, M. (2004), “Creative Cities: What Are They For, How Do They Work, and How Do We Build Them?”, Canadian Policy Research Networks, August 2004, pg 6.

12. Duxbury, N. (2004) “Creative cities: principles and practices”. Background paper F47, Family Network. Canadian Policy Research Networks, Ottawa, pg 1.

13. Vito Tanzi (1999) *Uses and Abuses of Estimates of the Underground Economy*. The Economic Journal 109 (456) , 338-347.

14. Adam Arvidsson (2007) *Creative Class or Administrative Class?, On Advertising and the ‘Underground’*, Ephemera, Theory and Politics in Organization, Vol 7, No 1 (February), pg 16.

well. It has become less political, more individualised and competitive, and more open to cooperate with the creative industries and with business in general.

As an art director from a well-known advertising agency in Montreal explained, the company had to turn creative “fires” found in different places, into a product that would be more in touch with what the client wanted. They recognised that the end client, a sports apparel company wanted their image and advertising to be close to the ‘street’, and hence the agency knew that if they did not have a foot within this underground they would distance themselves from what the client wanted. This allows the firm to have a foot in the underground and look for the middle ground in the city.

The underground is a hierarchical conglomeration of networks in which the status of the members within the network hierarchy depends on the amounts of contacts, social capital or respect one can command. In other words, the standing within this hierarchy depends on the ability to function as a node and being able to diffuse information and call attention and participation. The underground is configured in such a way that at one end we find the ‘deep underground’ with products that would hardly appeal to a wider audience and rarely be of interest to business. Members of this deeper end of the underground are often very anti-business, precisely because they have nothing to sell, but are at the same time deeply respected within their community since they are perceived to be artistically at the cutting-edge (Arvidsson, 2007).

Respect within the underground plays a key role since it is through it that the artist is able to get jobs, and opportunities for artistic expression and are able to break out of the deep underground. Respect is accumulated through acquiring a network of people that recognize the artists’ names. The respect within the underground is thus crucial for success. Another factor mentioned by the author is authentic or apparent altruism. It seems that it is by providing ‘free goods’ that respect is accumulated. It becomes important that the activities of the artist in this case produce no capital gain, but that sufficient resources are spent to ensure a successful project (a gig, party or pleasurable artistic experience, for example).

Now, the link between the focus on respect and the cooperation with business that occurs within the cultural and creative industries comes from the fact that the monetary resources gained through collaboration with institutionalised business can be used to advertise the artist’s name and garner respect. This can be realised through media exposure or by relating to the “right” people.

In conclusion, we are of the view that cultural cities are particular, in the sense that typical cultural activities, such as museums, festivals, and events are originated either through active public policy formulation or through the institutionalisation of previously underground events, exhibitions, and art. The important aspect here, we argue, is to

identify cultural cities as environments where the intersection between these two worlds, the industrial one (with its clusters, organisations and enterprises) and the underground world (of street events, performances, alternative music and artist scenes) is especially strong. We believe such a view will bring greater clarity to the conceptual picture of cultural cities, when compared to other concepts such as knowledge and creative cities, which we will now address.

Part IV: Creative Cities: the fundamental interactions of innovative firms, research units, and the creative underground

Montréal formed the second largest cluster in terms of wages paid and revenue earned for most culture industries, but led on all measures for the performing arts. It also had more firms than Toronto for the film production, performing arts, book publishing, and sound recording industries.

(Coish, 2004)

The notion of creative cities comes primarily from two strands of literature. On one hand there is a body of work that studies social practices of inclusiveness and social development and applies them to the urban agglomeration. These sources are also complimented by studies that apply the organisational creativity literature to the municipal administration domain and thus promote innovative ways to solve problems faced by governments and the public sector. On the other hand, the term is also popular in the economic geography and regional science literature. These explanations of urban growth often touch on human capital factors such as initial and developed skill endowments of different locations as well as more traditional determinants of location such as natural factors, or the presence of agglomeration economies. The creative city concept emerged in the late 1980s and has evolved across a wide trajectory of subjects that have enriched and confused the subject (Landry 2006).

When looking at classical examples of creative cities such as Barcelona, Sidney, Milan or San Francisco, our view is that what characterises the creativeness of such geographical agglomerations is not only the fact that these cities are cultural cities backed by traditional and historical activities rooted in a specific culture, but rather that all these cities also contain strong and renowned universities. More precisely, we consider that what characterises these cities in terms of creativity is the fact that they exhibit a “dual system of creativity” that mixes the creative potential of the local science system and the creative potential of the local underground. This is what nourishes the emergence and growth of creative industries, which are not in general “high tech” industries with double digit of R&D turnovers, or industries that have just a cultural flavour. Creative industries tap into both creative soils: the rather structured soil of science, and the informal creative underground. Creative cities are matrices on which the diversity of creative forms from scientific organisations and of the artistic underground can interact,

give birth to new and produce unexplored forms of creativity and, in doing so, nourish the creative industries. As an example of this, we view the case of the Catalan cuisine in Barcelona and the Cirque du Soleil in Montreal.

One good practical example of a successful interplay between science and gastronomy can be found in the work of Ferran Adrià in his restaurant el Bulli, where art and science are systematically blended together and, more recently, the foundation Alicia, near Barcelona.¹⁵ Catalan cuisine in this case may be seen as the scientific discipline that deals with the development, creation, and properties of foods normally prepared in a kitchen. Regarding cooking, one may differentiate between traditional versus creative approaches. Whereas the first is primarily concerned with the skillset of cooking and often involves highly specific but often recipes without scientific depth, which function only in a narrow context, the latter approach is based on innovative and creative ideas. As, however, most chefs lack the basic understanding of the principal physical and chemical transformations during cooking, creative cooking often end up being implemented by trial-and-error rather than being guided by fundamental insights. As creative cooking is often dealing with novel combinations of ingredients and preparation methods, it is more open to a scientific approach than traditional cooking is.

In this sense the view that we have of the creative city as a valuable contribution to the economics literature finds its strength in the possibility of incorporating new, non-formalised, non-institutionalised elements, to the innovative milieu. We argue that this is done through the interaction of not only individuals but also of communities within and outside the firm and that it is this interaction that produces a great amount of the ideas that may turn into creations which may become innovations. There exists a coupling, within the creative city view, of the firm and especially of the firm dedicated to creative activities and the underground, which we mentioned in our introduction.

We view this underground as the set of informal interrelationships that occur within the cities as a sociologically, culturally and historically composed field. It is the relationships that are formed through specialised events that take place in the city as well as the exchange of ideas that are a source of inspiration that happen within the city's local cultural scene. A new style of music for example will not be invented, but rather be *created* thanks to the possibilities of local artists to experience a diversity of other styles, of other influences and rhythms which will in turn become an inspiration to record a new song. An artist may specialize in a particular genre of music, but it is through the constant interactions with other artists and other sources of inspiration that their own creative abilities will be heightened.

Two components are central to our conceptualisation of the underground from which creative-industry firms may profit. First of all, there is the articulation of the learning and innovation that happen not only through the interactions within the organisation, but also through the knowledge acquired and generated through informal communities of practice (Brown and Duguid, 1991). The connections that occur between the practice within the firm and the interactions between professionals in similar and dissimilar communities also foster connections between learning, innovation and reassessing work. In this sense we believe a professional in the fashion design field will not only learn and be more capable of innovating within his own field through the interactions with other design professionals in similar occupations, but also through the diverse set of connections they can establish within a healthy creative sector within the city.

The interactions between these informal communities were evidenced in our cities in question, through several events. In Barcelona, L'Alternativa Barcelona Independent Film Festival (*L'Alternativa Festival de cinema independent de Barcelona*) is a good example. This festival is described as a "platform for the promotion and distribution of films, which for their innovative character, have difficulties to find a way into main exhibition and distribution circuits. In 2007, the festival screened over 360 films from more than 40 countries.

L'Alternativa is also a meeting place for filmmakers, producers, programmers and distributors, and offers festival guests a video à la carte service, which includes all films in competition."⁵⁸ This festival takes place in November of each year and should have its 6th edition in 2008. Besides the screening of the official selected films it also offers workshops and round tables, and acts as a meeting place where ideas can be exchanged, and hence it provides a space for historians, filmmakers and other film professionals to analyse and debate matters related to cultural influences, social commitment and the relationship between film and music.

Similarly, the FIFA in Montreal (International Festival of Films on Art) whose primary mission is to increase awareness, knowledge and appreciation of the arts by promoting works by artists and professionals from the fields of film, television and video. FIFA encourages the film industry, both nationally and internationally, to increase its annual production of films on art. To this end, it strives to develop international markets by inviting both Canadian and foreign filmmakers, professionals and artists to participate in exchanges and networking forums.

These events, the professionals that interact in them, and the public and participants benefit from the culture

15. van del Linden, McClements, Ubbink (2008) Molecular Gastronomy: A Food Fad or an Interface for Science-based Cooking?, Food Biophysics, (June).

present in the city. Both Montreal and Barcelona offer not only venues and a market significant enough to make these events possible, but they also have a diverse industry system and diverse pool of professionals that provide a fertile ground, and an even more fertile underground from which everyone can be inspired.

Secondly, in line with Cohen and Levinthal (1990) we believe that the ability of a firm to recognize the value of new external information, assimilate it and apply it for commercial purposes is crucial to its innovative capabilities. Furthermore, we agree that this *absorptive capacity*, which is a function of the firm's level of prior related knowledge, is a source of inspiration in the innovations process. According to this view, the cognitive basis for the absorptive capacity of an individual resides on his prior related knowledge as well as his *diversity* of background. Within the creative city view, the diversity of the communities as well as of the individuals that compose the communities that make up the city underground will undoubtedly affect positively the absorptive capacity of the firm, making it more open and more efficient in incorporating new ideas that can be transformed into innovations.

An interesting observation to be made here is how immigration has affected the resurgence or the revitalisation of previously declining industries, both cultural and non cultural. Barcelona and Montreal are geographically close to a border even if it's a border that belongs to a nation-state model they transcend, in high transit places. Both have seen the paths and ideas of immigrants coming from close and

far. One is a continuously evolving mix of cultures that started with the unlikely cohabitation of the French, English and Irish cultures feeding of waves of immigrants coming from all around the world, while the other one grows from Mediterranean, Castillian and Catalan culture put together in an amalgam that welcomes people from other corners of the earth. These areas industrialise throughout different historical periods and both these cities see times of liberty, progressive ideas and societies followed by times of repression and anxiety. They still manage to renovate themselves and create something new.

Finally, another interrelated component is the presence, and development of a diverse amount of cultural events in the creative city that bring together not only local communities and practitioners so that they share their knowledge and increase their innovative ability but that also bring professionals from other areas that interact with the local communities, and in so doing, interconnect the cities creative field with the rest of the world. These events and spaces of knowledge, sharing and creation are often evidence of the direct interaction of the creative industry firm and the cultural liveliness of the city in which they develop. According to our view, firms are aware of the importance of promoting the assistance of their employees to these events because they are occasions to further develop their own capacity to assimilate new techniques and new sources of inspiration which will ultimately result in profitable products or services, if they are properly channelled. New genres of music may occur thanks to the participation of local artists in international or even local events hosted in their own

TABLE 1
Creative City as a form of innovative agglomeration

Industrial district	Economies of specialisation: specialised suppliers, increases competition and variety, reduces costs The availability and development of a specialised labour force Knowledge flows and spill-over effects that flow more easily within spatially bounded areas thanks to face-to-face contacts
Innovation System	Emphasis on the systemic character of innovation Local institutional context and interrelations between businesses and public institutions (such as universities, public research institutes and public policy)
Industry Cluster	Business and non-business organisations for which their membership to the cluster is an advantage to their competitiveness Stimulate innovation through the proximity to knowledge sources and the generation of knowledge spill-overs
Cultural City	Relationships between economic development and the cultural sector, and of the cultural sector and its policy initiatives Branding construct Dynamics of interaction of the 'underground' and the industrial organisations and institutions
Creative City	Creative potential of the local science system and the creative potential of the local underground Matrices on which the diversity of creative forms from scientific organisations and of the artistic underground can interfere, give birth to new and produce unexplored innovations

towns. These experiences occur within the city, and not within the recording studio or within a university's music faculty (although it may happen), but they will most likely happen during the festivals that form an integral part of the city's cultural vibe. The firms, which transform these creations into commercially viable products through a series of commercial steps such as marketing or distribution for example, have an interest in promoting these events and these opportunities for sharing, so that the creativity they need to be competitive does not become trapped in their own organisations.

Conclusion

We believe that Barcelona and Montreal are cities which, because of the diversity of their inhabitants, their history and their cultural distinctiveness, are appropriate places to explore in more depth the reach of the creative city view we have explained above. Undoubtedly both regions have grown a set of local, diverse institutions and support organisations, which are essential in supporting the local innovative processes that occur within their industries such as the aeronautics or automotive sectors in both cities respectively. In both cities we find a consolidated university system as well as evolving research establishments and interconnected research systems. The university system and the research and development infrastructure especially deserve special attention, as they have been the fruit of an active local technology and innovation development policy. They are also home to anchor firms, in a diverse set of industry clusters ranging from biotechnologies to aeronautics, but also in the cultural sector. When we think about other sources of innovations, which are based more on creativity than on inventions such as the circus arts or video games sector in Montreal or the design and architecture sector in Barcelona we ask ourselves where the inspiration to come up with new styles and the creation of new products comes from. When we think about these cities often images of alternative methods and lively cultural and underground scenes come to mind.

Barcelona and Montreal both offer a combination of industries and services organised in different clusters, which feed the local economy and are globally interconnected. This is of major importance for a city to develop different possibilities of development and not be trapped by the ups and downs of specific sectors. Barcelona in particular, is an entry point to Europe and its metropolitan area hosts a diversified business structure. The city is known for its economic clusters in the ICT, graphic and automotive design, electronics and the automotive supply chain sectors. Currently, the city and its surrounding regions make up a business activity centre related with new technologies and with advanced services within the framework of the knowledge society.

Barcelona has been and still is, in similar ways to Montreal, a bridge and point of entry from and into differ-

ent cultures. In the first case the Catalan capital is a point of entry to Europe from the Mediterranean and connects in some way immigration from Africa and Latin America to Western Europe. The reassertion of its own culture, its own language and traditions, like in Montreal, give it a *doing-different* character that fosters innovation and a different kind of atmosphere than in other cities. Montreal's location, close to Europe and the United States as well as its past and its present need for cultural reassertion works in the same manner. These cities, just as many around the world—which are at an apparent disadvantage because of the need for their population to maintain their own culture and the costs that this implies—find in their need for identification a source of inspiration for new ways of combining existing knowledge.

These two cities are also remarkable in terms of the events they host. Going beyond major international events and the international exposure and economic consequences associated with them, these two cities are also host to multiple smaller scope events and organisations that make of them attractive environments for workers from a wide range of differing sectors which form an integral part of their production systems. The summer Olympics of 1976 and 1992 and the diverse world fairs, world forums and other events, have left a footprint of new infrastructures in each city, such as transportation systems, stadiums, villas, civic structures on waterfronts and museums of different kinds that attract the local population and entice it to spend on cultural activities, and also attract tourists and people from different walks of life to immigrate to these cities. In Montréal, two major events – the Olympics and the 1967 world fair—left the city not only with significant infrastructures but also with overwhelming debt. In spite of this, it is the only Canadian city to have ever hosted the summer games. Similarly Barcelona remains the only city to have hosted the Olympics (summer or winter) in Spain.

However, it is not the high expenditure events that make these cities truly remarkable but rather the myriad of smaller festivals, shows, concerts and activities in general where the streets of the cities are made into veritable sharing environments for both locals and tourists alike. It allows the knowledge and the culture produced in these cities to be exposed to other ideas, as well as facilitate the export of this knowledge and culture.

Montréal and Barcelona are described not only by locals but also internationally as lively, “edgy” cities in which things are done “differently”. There is indeed a large amount of research through formal activities that takes place to develop these cultural products that are famous worldwide, such as research in new materials, visualisation technologies or music technologies, but the main research laboratory in the case of human ideas must be largely supported by the everyday interactions of the creators, artists and collaborators that happens within the local cultural scene. More importantly, the formal productive system

composed of innovative creative sector firms are increasingly recognising this and acting upon it.

The creative economy is about much more than the contribution of culture and the arts. It embraces not only the nation's great writers, filmmakers and artists, but also those designers who have contributed to the revolution in banking and finance, the technical writers who help make our export industry strong, and the legions of amateur bloggers and animators who are triggering the explosion of digital content (Cunningham, 2006). What sets creative industries¹⁶ apart in the economy is the fact that 'creativity' is their primary source of value, something that is increasingly recognised as important for growth in contemporary knowledge-based societies¹⁷. Following from the work of Scott (1998), industries that are characteristic of such an economy represent a blurring of the cultural and the economic line; their outputs are valued because of aesthetic rather than solely utilitarian functions. While conglomerates dominate some areas of the creative-economic landscape, creative industries are generally made up of small, agile firms that operate within a networked chain of interrelated activities. Along with creation and production, marketing and distribution are key links of this chain, critical to commodities that rely on capturing (and manipulating) consumer sensibilities (Hirsch, 1972; Pratt, 1997). Along with these contributions, Florida (2002) and Howkins (2001) also put the spotlight on the increasing relevance of the creative economy in terms of employment as well as sheer monetary value.

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16. Generally speaking, the creative industries are identified as the overlap between cultural and commercial activities. They involve the supply of goods and services that contain a substantial element of artistic, imaginative or intellectual effort or that are associated with a vital role in sustaining cultural activities (Turok, 2001).

17. Cunningham, S. (2006), What price a creative economy?, Paperback. Publication July 2006

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