

**The attraction/retention of knowledge workers
and the creative city paradigm:
can we plan for the *talents* and at what cost?
The case of Montreal**

Sébastien Darchen and Diane-Gabrielle Tremblay

**Research Note of the
Canada Research Chair on the Socio-organizational
Challenges of the Knowledge Economy**

No 11-1A

**Téluq-UQAM
March 2011**

Distribution

Canada Research Chair on the Socio-organizational Challenges of the Knowledge Economy

Télé-université

Université du Québec

100 rue Sherbrooke west , Montréal, Québec, Canada H2X 3P2

Telephone : 514-843-2015

Fax : 514-843-2160

Email : dgtrembl@teluq.uqam.ca

Biographical note

Diane-Gabrielle Tremblay is the Canada Research Chair on the Socio-Organizational Challenges of the Knowledge Economy and director of the CURA on work-life articulation over the lifecourse (www.teluq.uqam.ca/aruc-gats). She is professor at the Télé-université of the Université du Québec. She is past president of the Committee on Sociology of Work of the International Sociological Association, cochair of the Gender Work and Family network of the Society for the Advancement of Socio-Economics (SASE), as well as co-chair of the "social times and working times" committee of the Association internationale des sociologues de langue française (AISLF). She is also president of the Association d'économie politique and editor of the electronic journal *Interventions économiques* (<http://interventionseconomiques.revues.org>). She has published in many journals, including: *Cities, New Technology, Work and Employment, Applied Research on Quality of Life, Social Indicators Research, the Journal of E-working, the Canadian Journal of Urban Research, International Journal of Entrepreneurship and Innovation Management, the Canadian Journal of Communication, the Canadian Journal of Regional Science, Leisure and Society, Women in Management, Géographie, économie et société, Carrièreologie, Revue de gestion des ressources humaines*. She has been invited professor in many universities, such as the Université de Paris-I, Panthéon-Sorbonne, Lille I, Angers, Toulouse, IAE of Lyon III, IAE of Lille I, in France, Louvain-la-Neuve in Belgium, Université des sciences sociales de Hanoi, in Vietnam, and the European School of Management. She is very active in research on clusters and local development, employment and work-life issues, and she has published many articles and books on employment and types of employment, job training, innovation in the workplace and work organization, as well as the articulation between work and family life. See websites for details:

www.teluq.uqam.ca/chaireecosavoir

www.teluq.uqam.ca/chaireecosavoir/cvdgt

www.teluq.uqam.ca/aruc-gats

<http://interventionseconomiques.revues.org>

Sébastien Darchen is a Lecturer in Planning at the School of Geography Planning and Environmental Management (University of Queensland, Brisbane). Previously, he was an Assistant Professor at the Faculty of Environmental Studies (York University) in Toronto and is still affiliated to this Faculty (as an adjunct professor). He holds a PhD in Urban Studies (INRS-UCS, Montreal) and was a postdoctoral fellow at the Canada Research Chair on the Socio-Organizational Challenges of the Knowledge Economy (Montreal). He is a faculty member of the City Institute (York University, Toronto). His research focuses on the political economy of the built environment. He studies the interplay between urban stakeholders in the case of culture-led regeneration initiatives. His current research considers the impacts of creative city strategies at the metropolitan and local scales in Canadian and Australian cities. He is also interested in the influence of the new media and transnational networks on the circulation of planning/urban design models on a global scale.

Email: s.darchen@uq.edu.au

Note: This research note was done in the context of the work of the Innovation Systems Research Network ; the article has been proposed for publication a collective book of the research network and should be published in a slightly modified version, after evaluations.

**The attraction/retention of knowledge workers and the creative city paradigm:
can we plan for the *talents* and at what cost? The case of Montreal**

Key-words: Creative class thesis, Creative city, Junior knowledge workers, Attraction/retention, City planning, Montreal.

1. Introduction

In this article, we try to anticipate some of the consequences of the implementation of the creative city paradigm in urban planning practice in conjunction with the objective of attracting *talent*. The conclusions of this paper are based on the results of previous research on the factors influencing the attraction and retention of junior knowledge workers in Montreal. Our paper is divided into three main sections. In the first section, we define what we qualify as the creative city paradigm based on the most recent literature on the subject. We also draw on the creative class thesis in economic development to explain that the debate also concerns urban regeneration. In the second part, we summarize our findings on the factors influencing the mobility of junior knowledge workers; it appears that amenities may not be as important as some think, while job opportunities seem to dominate. We also differentiate the views of students according to their origin (from Québec, outside of Montreal, from Canada or from outside of Canada). In the third section, we discuss the transferability of creative city ideas into urban planning practice and the possible social and economic outcomes of such an approach to city planning. In conclusion, based on our results, we argue that the implementation of creative city ideas in city regeneration initiatives might contradict the concept of a diverse city that integrates different classes, cultures and tastes within urban environments - a characteristic that is considered by many to be more conducive to innovation and creativity than a city that is relatively homogeneous in terms of ethnicity

and that is made up of distinct and segregated neighborhoods¹. Moreover, based on our empirical research, it is unlikely that any city building initiatives based on the creative-city paradigm will have a real impact on the migration of *talent*² between cities but rather will increase gentrification processes within cities when applied by private stakeholders, which is often the case in a neo-liberal context where there are limited public funds for the improvement of the built environment.

2. The creative city paradigm and the attraction of *talent*

Edensor et al. (2009) state that the two most influential set of works that have shaped the concept of the creative city are the publications of Landry and Bianchini (1995) *The creative city* and of Landry (2000), a repackaged version for a policy audience: *The creative city: a toolkit for urban innovators*. The basic tenet of this concept is that cities are facing immense challenges with the transition from an industrial to a post-industrial era and need to be creative in thinking of solutions in urban problems.

As stated by Costa, the creative-city as a concept is characterized by three basic components which support its' conceptual construction: the first being the idea of creativity as a toolkit for urban development, the second is that the notion of the creative-city is based on the use of creative activities and industries, and the third supports the concept of the creative-city as a capacity to attract creative competences as human resources (2008). It is the third component that we analyzed during our research. However, we also took into consideration the first component which concerns the implementation of the creative-city paradigm in city planning.

2.1 The creative class thesis in economic development

¹ See the articles in the book by R. Tremblay and D.-G. Tremblay (2010), particularly those by Pilati and Tremblay, which also cover the theory of the evolved cultural district, which supports this view.

² In this paper, we refer only to the professional category of the junior knowledge workers.

Initially, as the creative class thesis concerns the area of urban economics, it can be considered as an extrapolation of the human capital model, however it remains a thesis of economic development.

This thesis was introduced by the American economist Richard Florida through his work on three major books: *The Rise of the Creative Class: And how it's transforming Work, Leisure and Everyday Life* (2002), the *Flight of the Creative Class* (2005), and *Who's your City* (2008). Richard Florida has also promoted his ideas through numerous presentations in different countries to ensure the dissemination of his thesis of economic development. Both he and Charles Landry, another mentor of the creative-city paradigm, have highly promoted their ideas through extensive marketing in Australia, for example (Gibson and Klocker 2004). Florida's work has had an impact in the field of urban economics, especially in regard to the creative capital thesis, but also increasingly on the field of urban planning, urban development and the development of urban policies.

Prior to promoting the creative-city paradigm and seeking to influence city planning, Richard Florida was best known for his work on the influence of the creative class on urban economics. In regards to the link between the quality of place, as defined in Florida's criteria, and economic development at the regional level, it is important to recognize that there is not yet a clear consensus. Beckstead and Brown (2006) indicate, for example, that a combination of human capital (e.g., knowledge workers associated with professionals working in the cultural sector) remains a better indicator to predict urban growth than urban amenities. They demonstrate that there is a link between the size of the city and the proportion of people employed in science and technology fields, as well as to its prospect for potential growth. They concluded that the size of the city is the best indicator of urban growth, as larger cities have a larger number of firms which require more specialised types of human capital such as scientists and engineers. This research by Beckstead and Brown (2006) indicates that economic growth can be predicted on the basis of the concentration of human capital, however, this is not necessarily linked to the influence of urban amenities since metropolitan areas have

experienced rising wages with or without urban amenities, as various writings have shown (Glaeser et al., 2001; Glaeser and Saiz, 2004).

The creative class thesis can thus be considered as a complementary approach to the human capital model. Florida (2002, 2005) and Florida et al. (2008) suggest an alternative measure of human capital based on the professional occupations included in the acronym TAPE (Technology and Innovation, Arts and Culture, Professionals and Management, Education). Florida sees his approach to economic development (the creative-capital perspective) as a better approach than the human capital model (Manning Thomas and Darnton, 2006), but many authors feel that it has not been empirically tested (Shearmur, 2006; 2010). This model puts forward a link between a concentration of human capital and economic growth at the regional level, but this only takes into account the level of education as a measure of human capital (Glaeser and Saiz, 2004; Shapiro, 2003; Simon, 1998), whereas Florida integrates specific categories of human capital.

Florida (2003, p. 8) indicates that his theory of creative capital differs from the human capital model in two ways. First, he affirms that it identifies a specific type of human capital, people who occupy “creative” professions, as being key to economic growth. Second, he identifies the underlying factors that shape the locational decisions of people in these professional categories. Creative capital is thus an important output from this theory. Various professional categories grouped under the acronym TAPEⁱ are said to be attracted to metropolitan areas that have such characteristics as high levels of tolerance of cultural diversity and a large variety of social activities. According to Florida (2002), this type of human capital (creative capital) is attracted to locations where their creativity can flourish. We have already mentioned the main criticisms on this thesis in economic development (Darchen & Tremblay, 2009; 2010a, b, c; Tremblay & Darchen, 2010).

2.2 The creative-city paradigm in city planning

In this chapter, we argue that the ideas and principles of the creative class have now translated into city planning, and especially into city regeneration, to form an influential

and universal paradigm. This paradigm has had, for approximately ten years, a growing influence on both economic development policies and urban regeneration strategies in different geographic areas of the world, including Europe, North America, Australia and Asia.

We explain how we define this paradigm and in section 5, we explain what the possible outcomes are if we plan for the attraction of *talent*. This is an emerging field of research and the consequences of creative city concepts on city planning are still loosely understood, despite the growing popularity of this paradigm. Research has mainly focused on the consequences of creative city ideas on urban policies but seldom on planning practice. This paradigm has also been strongly influenced by the works of Charles Landry (2008, 2006) and Landry and Bianchini (1995). Landry defines a creative city as a city that promotes urban environments that are designed and suitable for the *talents*, according to the criteria listed in both works: openness to creativity, high levels of tolerance, concentration of cultural activities, concentration of gay and bohemian populations, concentration of authentic places, etc. However, recent works have indicated that the creative class conceptual model (from which is derived the creative city paradigm) does not really hold up under empirical analysis (Reese, Faist and Sands, 2010). Landry and Bianchini (1995) state that: “*Creativity involves thinking a problem afresh and from first principles; experimentation; originality; the capacity to rewrite rules; to be unconventional; to discover common threads amid the seemingly disparate; to look at situations laterally and with flexibility*”. In regards to urbanism, it is not very clear how this approach might translate into practice. Keil and Boudreau (2010) define the creative city as a concept in urban politics and as a dominant form of entrepreneurial governance, particularly in the case of Toronto.

The creative city paradigm is however currently an influential urban paradigm driving urban development and influencing the strategies of urban stakeholders involved in regeneration initiatives. According to Edensor, Leslie, Millington & Rantisi (2009), “creativity” has become part of the language of regeneration experts, urban planners and urban policy makers. However, Rantisi and Leslie (2006) warn us that there is a major

risk associated with the creative-city script, and its governance paradigm can hinder the potential for long-term sustainable policies. According to Miles and Paddison (2005) the idea that culture can be used as a driver for economic development has become part of a new orthodoxy for cities to enhance their position in a context of economic competitiveness, and the “creativity agenda” is becoming an organizing principle for urban economic development (e.g., job creation and skills development). The popularity of creative city ideas and the appeal of arts and culture to local planners and regional economic development policy makers has already been documented (Evans, 2009, 2003; Gibson and Klocker, 2004; Gibson, 2008). For example, Gibson and Klocker (2004) insist on the lack of critical thinking in the creative-city discourse in regard to city planning; indeed, policy makers might brush aside local cultures by applying creative approaches to city building that have previously been applied elsewhere, in areas that have a different local context (e.g., Britain, U.S). Christopher and Righthor (2010) also state that culture and the arts are becoming tools for a wide variety of economic goals including the revitalization of downtowns. However, critiques have also flourished in regard to the possible outcomes of culture-led development (Peck, 2005; Miles, 2005) and about the manner in which culture and creativity have been commodified and neo-liberalized (Zukin, 1995; Hetherington, 2007; Christophers, 2008).

The works of Boudreau et al. and Peck emphasize that creative city strategies constitute new objects of governance and reinforce neo-liberal forms of politics (Boudreau et al., 2009; Peck, 2005; Peck, 2009). Peck (2005), insists on the possible consequences of urban policies that embrace the “creativity package” proposed by Richard Florida. According to Peck (2005), creative city strategies actually commodify arts and cultural resources to serve urban competition. Peck (2005) also warns that creative city strategies constitute new objects of governance that lead to gentrification and are organized around short-term projects rather than progressive goals, such as poverty alleviation and environmental sustainability. In a more recent work, Peck (2009) argues that these strategies – also labeled as “fast [fixes] in a neoliberal urban conjuncture” – are based on the creation of localized lifestyle facilitation instead of promoting meaningful social action on a broader scale and are managed by governmental intervention (Peck, 2009).

Peck's arguments are highly critical of Florida's discourse but his point regarding the transferability of the creative city approach is certainly relevant. In the context of Toronto, Boudreau, Keil, and Young (2009) view the creative city strategy as a discourse that was crafted to foster economic competitiveness, which they label "creative competitiveness", in the period following the economic austerity of the 1990s. The creative-city discourse is undoubtedly very attractive to elected officials especially in a context of economic recession.

The work of Rantisi and Leslie (2008, 2009) identified the material dimension of neighborhoods (referring to the case of *Mile End* in Montreal) as a key component in the attraction of creative workers, such as artists and designers, but the authors emphasize the fact that both spaces of creation and socialization within these neighborhood tend to develop spontaneously. In other words: can we plan for the emergence of creative neighborhoods? Can we plan for creativity and can we plan the creative city?

As stated by Mommas (2004), the most historically recognized creative neighborhoods (Soho, New York; Montmartre, Paris) have never been planned. Therefore, the translation, and the effectiveness, of creative city ideas into city planning is questionable. Based on our empirical results on the attraction and retention of junior knowledge workers, we discuss the transferability of the creative city paradigm into city regeneration initiatives. We also argue that the creative city paradigm, fuelled by massive promotion, has become a globalized discourse in city planning which is highly questionable from an empirical perspective but which nevertheless has a growing influence on the planning practice of professionals, especially in a context of urban regeneration.

3. Method

In order to evaluate if various characteristics of cities have an influence on the attraction of scientists and engineers, which is one specific part of the creative class related to creativity in technology, we conducted empirical research based on qualitative and quantitative methods.

Our data collection is based on an on-line questionnaire filled by students in the field of science and technology. The sample includes 529 students from programs in science and technology in universities in Montreal: UQÀM, Université de Montréal, ETS (École de Technologie Supérieure), École Polytechnique de Montréal. We developed the questionnaire in order to evaluate the criteria influencing the mobility of students once they have graduated. Therefore, we asked them to anticipate some of the decisions they would take regarding their career orientation once they had graduated (regarding the place of work and the factors influencing this choice). The questionnaire aimed at analyzing the following: the criteria influencing the attractiveness of Montreal as a place to study, the retention factors for graduate students, the factors influencing attraction of the workforce, the influence of the lifestyle in Montreal as a retention factor, the issue related to their preferred residential location in the metropolitan area (city-centre vs. suburbs), and the factors influencing their choice of destination once graduated. Regarding the criteria used in the questionnaire, we proposed the following definitions:

- *Quality of the university*: this refers to the quality of the university as an institution and also to the quality of the programs available in science and technology.
- *Quality of work*: this refers to an employment which is stimulating and corresponding to the academic background of the student and to his or her career objectives.
- *Quality of life*: this refers to characteristics such as the level of security, social welfare, the quality of the urban environment, the quality of public transport, etc.
- *Level of tolerance*: this refers to low barriers of entry to human capital (e.g: ethnic and cultural diversity are elements having a positive impact on the level of tolerance of a city according to the creative class thesis).

- *Lifestyle*: this refers to the elements offered by a city in terms of lifestyle. It includes the possibility of access to cultural and social activities, and to a diverse array of restaurants and urban amenities in general.
- *Openness to creativity*: this criteria is linked to the level of tolerance of a city. According to Florida (2003), places gain a creativity advantage from their ability to attract people from a wide range of backgrounds.
- *Authenticity of the urban milieu*: this refers to the capacity of the urban milieu to offer a variety of opportunities in terms of entertainment, nightlife, and cultural activities.

As concerns the data analysis, we did statistical tests (Wilcoxon tests) to determine the order of ranking for the different criteria used in the questionnaire³. We also conducted nine interviews, in order to get some more qualitative information from the students and complement the quantitative part of the research; for this, we used a thematic analysis using NVIVO8 software. We explored pretty much the same criteria.

4. The attraction of creative capital: results with junior knowledge workers

From our quantitative analysis, we confirmed that the criteria related to the quality of place played a secondary role compared with criteria regarding career opportunities.⁴ We completed the results with an analysis of interviews, which demonstrated that the criteria related to the quality of place played a part in the decision of choosing a place to work, but that these criteria alone cannot explain the attraction or retention of graduate students in science and technology.

³ Given the limited space, we do not go into technical details and refer to the details and tables in Darchen and Tremblay (2010c).

We also evaluated the size of the difference between the criteria using the scale of Cohen's standard. Criteria are ranked in the tables according to their level of relevance. We present in the tables the means regarding the ranks and we discuss the results according to the two types of tests presented in this paper.

⁴ For detailed data, see Darchen and Tremblay (2010c). Data on Ottawa is also available in Darchen and Tremblay (2010b).

The theory of human capital or of the creative capital implies that the workforce in science and technology is mobile and according to Florida (2002), looking for cities which offer urban environments with characteristics appealing to creative workers. In our sample, however, all the students did not consider themselves a mobile workforce. Table 1 gives details on this, while giving details on the sample, useful for the rest of observations.

Table 1. Mobility according to the origins of students (%)

	Montreal (n=115)	Quebec (n=252)	Abroad (n=116)	Total (n=483)
Mobile	59.1	46.8	59.5	53.2
Non- mobile	40.9	53.2	40.5	46.8

Source: Our research questionnaire.

About half of the students already had an idea of the place where they wanted to work after their studies, and were less influenced by the criteria related to different places in the process of looking for employment; we considered these students as rather non-mobile. The part of the sample considered mobile did not have a clear idea where it wished to work once graduated and was still hesitating between different destinations. Our data show that students from abroad and born in Montreal tend to be more in the category of the non-mobile in comparison with students coming from the rest of the province of Quebec, who have a tendency to be less mobile (or already have a clear idea where they intend to realize their career objectives).

Table 2. Montreal as a place to work: retention factors

	Montreal (n=525)
Quality of work	2.02
Social network	2.69
Lifestyle	3.09
Quality of life	3.30

Cost of living	3.88
----------------	------

(scale: 1= very important; 2= important; 3= somewhat important; 4= not so important; 5= not at all important)

Source: Our research questionnaire

Table 2 shows the results regarding the factors influencing the retention of students in Montreal once they have graduated. Students were asked to rank five factors: the quality of work, the social network, the lifestyle, the quality of life and the cost of living. We have significant differences between these factors. The quality of work comes first, followed by the social network, the lifestyle, the quality of life and finally the cost of living. The criteria regarding the quality of place (the lifestyle and the quality of life) are thus less important than the quality of work or of the social network, contrarily to what some writings on the creative class hypothesize.

The interviews confirm that the quality of work is the most important criteria related to their decision of staying in Montreal once they graduate. The students also reckon that they often compromise and that they consider different elements in their choice of staying in Montreal once they graduate. They prioritize the criteria related to the quality of work, but they also take into consideration the quality of Montreal as a place to live, in terms of ethnic diversity, cultural activities and social interactions (6 interviews). The interviews thus confirm that the quality of work (work related to their program of studies and to their career objectives) would be the main criteria. To summarize, students interviewed balance the different criteria (social network, career opportunities, criteria related to the quality of place) in their choice of staying in Montreal and elements related to the quality of place are part of this decision, but these criteria alone are not significant enough to explain the decision.

Table 3. Montreal as a place to work: attraction factors

	Montreal (n=528)
Quality of work	1.53

Level of salary	2.35
Openness to creativity	2.82
Level of tolerance	3.28

(scale: 1= important; 2= somewhat important; 3= not so important; 4= not at all important)

Source: Our research questionnaire

We asked the students, if they were not living in Montreal, what would attract them to this city as a place to live. They were asked to rank four factors: the quality of work, the level of salary, the openness to creativity and the level of tolerance (table 3). The criteria related to the quality of work still comes first, then the level of salary and only after, the openness to creativity and level of tolerance. The interviews confirm that the quality of work is more important than the level of salary to explain the attraction of students in Montreal. The salary is mentioned in two interviews, and when the criteria is compared with the quality of work, and the latter remains a priority. The openness to creativity is mentioned twice in the interviews, and students refer to it as a characteristic which is linked to social interactions in the urban environment and contributing to a better productivity at work. The level of tolerance is mentioned in three interviews and is understood as the capacity of a city to welcome newcomers. Regarding this point, the ethnic diversity and the two cultures (francophone and anglophone) characterizing Montreal are perceived as an asset.

Table 4. A city as a place to work: attraction factors

	Montreal (n=525)
Quality of work	1.44
Level of salary	2.22
Authenticity of the urban milieu	2.86
Level of tolerance	3.46

The students were asked to rank four factors regarding what would attract them in a city in general. According to the Wilcoxon tests, there are significant differences between the four factors proposed. The criteria related to the quality of work come first, followed by the level of salary, the authenticity of the urban milieu and the level of tolerance.

The authenticity of the urban milieu is never mentioned directly in the interviews, but students refer to the lifestyle characterizing Montreal, and mention that ethnic and cultural diversity contribute to create a vibrant living environment which is not necessarily found if one stays outside of the city, elsewhere in the province. The lifestyle of Montreal is viewed as an asset because it is easy to find a multitude of entertaining activities. However, one student mentioned that you can find social activities anywhere and that you do not have to be in an urban environment to find entertainment.

Table 5. Activities contributing to the quality of the lifestyle

	Montreal (n=524)
International festivals	2.03
Variety of restaurants	2.24
Nightlife	2.56
Art galleries	3.15

We asked the students to rank various activities regarding their contribution to the quality of the lifestyle and they estimated that the criteria related to international festivals are more important than the variety of restaurants, followed by nightlife and finally art galleries.

Our aim was also to measure if these activities could have an impact on the retention of students compared with career opportunities available in another city. We then asked the students if a lack of these activities in another city but with better career opportunities could make them hesitate to leave Montreal. They had four choices: Yes (they would

hesitate); It is likely (that they would hesitate); It is unlikely (that they would hesitate); No (they will not hesitate).

Table 6. Impact of social and cultural activities on the retention of students in Montreal compared with career opportunities in another city (%)

Montreal (n=524)	Yes	Likely	Unlikely	No
Activities	13.5	23.7	38.5	24.3

Career opportunities still dominate; indeed, a majority of students (62.8%) considers that it is unlikely or that they would not hesitate to leave Montreal for better career opportunities. However, 37.2% of the students say that they would hesitate or likely hesitate to leave Montreal for better career opportunities. This indicates that the lifestyle factor that characterizes Montreal is an asset regarding the retention of students, but that career opportunities have a stronger impact on the attraction of students.

We also asked the students where they would rather live once they have graduated: in the suburbs or in the city-centre. We wanted to see if, in line with the theories presented above, the workforce in science and technology is attracted towards an urban living environment. Almost two third of the students would rather live in the suburbs of Montreal rather than in the city-centre. This confirms that students in science and technology are not necessarily looking for vibrant living environments to live in, even if they appreciate the lifestyle of Montreal; .this appears to contradict the creative class thesis. Regarding the reasons for choosing the suburbs as a place to live, students indicate that the space available in the suburbs is significantly more important than the lifestyle, and the cost of living is less important. As for those who chose the city-center, the lifestyle is significantly more important than the proximity of commercial activities, and the level of tolerance comes last. In a way, this contradicts the assertion of Florida regarding the fact that creative workers find urban lifestyles more appealing than the lifestyle characterizing the suburban way of life. This also confirms the findings of

Markusen (2006) who indicated that the creative class includes professional categories with different tastes regarding their ways of living.

In our interviews, students mention the fact that living in the city-centre offers better opportunities regarding the accessibility to transportation and cultural activities, as well as more social interactions. It is mainly when students consider having a family that they might consider the suburbs more attractive.

5. Discussion

Our results show that the criteria related to the quality of work is the most relevant to understand the mobility of students in science and technology once they have graduated: graduate students will go where they can find work corresponding to their career objectives. This can also be considered an indicator of the factors influencing the mobility of knowledge workers. Although the level of salary has an influence, it has a lesser influence on the mobility of students than the quality of work. The criteria related to the quality of place are thus less relevant than the criteria related to work opportunities to explain the mobility of students once they graduate.

In the case of the retention of students, the criteria related to the quality of work and to the social network are more relevant with regard to the retention of students in Montreal than the criteria related to the quality of place (lifestyle and quality of life). Moreover, regarding the retention of students, activities contributing to the quality of the lifestyle are not considered by a majority of students (62.8%) as having a major impact on their decision of leaving Montreal if they had better career opportunities elsewhere.

We also observed that a majority of students in science and technology would rather live in the suburbs. It is a clear indication that students in science and technology are not necessarily looking for vibrant urban environments to live in. Our research also shows that other criteria may influence the mobility of graduate students. In fact, students coming from the province of Quebec tend to be less mobile than the ones coming from abroad or elsewhere in Québec or Canada (table 1). It is interesting to note that the origins of students has an influence on the results, something which has not been

highlighted before to our knowledge, although there is a need for further investigation of this point.

6. Discussion: can we plan for *talent*?

Based on our results of the study of the mobility patterns of junior knowledge workers, it is likely that policies based on the creative class thesis in economic development and the city building goals of improving the appeal of urban environments would have no major impacts on the migration of junior knowledge workers inter-cities. We have shown that there are other criteria having more influence on the mobility of this professional category: criteria linked to career opportunities and the social network. Therefore, the translation of the creative class thesis into urban policies is not achieving its goal, namely to attract *talent* or in our case junior knowledge workers, and is not likely to influence the mobility patterns of this population.

In this section, our aim is to anticipate how the creative city paradigm might translate into planning practice and what might be the benefits or the negative effects of such an approach.

First, there is no consensus yet on either the definition of a creative city or the ways in which to implement it. However, Smith and Warfield (2008) identify two orientations: the culture-centric and the econ-centric orientations. We argue that the lack of clarity regarding the definition of what is exactly a creative city is likely to lead to different interpretations in practice, and in a neo-liberal context where local governments are less involved with planning matters, it is likely that the private sector will take on the lead in regard to the implementation of this paradigm in practice. In this section, we are not drawing on an empirical research but we are referring to the existing literature on the topic. Unfortunately, the issue of the translation of the creative city in planning practice in the case of Montreal seems to have been a bit forgotten. Therefore, we refer here more to the Canadian and international context, as well as to the case of Montreal and our results regarding the mobility of junior knowledge workers.

In terms of the implementation of creative city strategies⁵ in city planning, especially in the context of urban regeneration, a set of literature in urban planning has emphasized the possible outcomes. Peck (2005) is probably the most critical of the implementation of the creative city paradigm; he anticipates that the creation of innovative and tolerant milieus could also lead to the dislocation of low-income households. Rantisi and Leslie (2009, 2008) state, in the case of Montreal, that even if creative workers might look for urban environments conducive to creativity, it is another story to say that we can plan for *talent* or plan to foster creativity. Research on creative neighborhoods has already emphasized that spontaneity is a key component of success.

Drawing on the existing literature on the creative city, we argue that the translation of creative city ideas into planning practice is likely to lead to a piecemeal approach to urbanism like in the case of Toronto and to a lesser extent in Vancouver. The appropriation of this paradigm by city boosters from the private sector, Business Improvement Areas Associations (BIAs) especially, results in the use of this paradigm as a mean for the production of distinctive upper-class areas and thus often forces the relocation of local artists (Catungal, Leslie and Hii, 2009; Darchen, 2010; McLean 2010) as was the case in the Montreal Multimedia City (Tremblay and Rousseau, 2006).

Recent research in different areas of the world has warned us against the possible outcomes of the implementation of creative city strategies. In Australia, for example, the implementation of creative city strategies has led to a revanchist strand and to the increased control of public spaces (Adelaide, Brisbane and Melbourne) (Atkinson and Easthope, 2009).

We argue that the rush for the implementation of creative city ideas is not based on solid empirical research. Based on our research on the mobility of knowledge workers, it is likely that the city planning initiatives on urban environments without any incentives to

⁵ We actually prefer the term creative-city paradigm that emphasizes a paradigm shift with the modernist paradigm in city planning.

create job opportunities will not lead to an efficient economic development strategy. Also as argued by Smith and Warfield (2008), the creative city paradigm is too generic and does not make any distinction between arts and culture values and creative industries values, for example. In the case of Toronto, where there is a shortage of public funding, the creative city rhetoric is taken over by private stakeholders in city planning, and the paradigm actually deviates from its initial objective of the production of distinctive urbanscapes (e.g, Liberty Village, Toronto Entertainment District). In Montreal, while Florida's discourse initially helped push the arts and culture scene to the forefront of economic development, the media and population have been more critical after his last speech at the Montreal Chamber of Commerce in 2009. Many organizations are now distancing themselves from his theory, while researchers are highlighting the importance for Montreal to maintain its preoccupation with social cohesion and the inclusion of all in the governance processes and to take this into account when thinking of the creative sectors, and development of the city (Klein and Tremblay, 2010). This results in many projects focusing on the local community, and not solely considering the attraction of outside "talent".

Conclusion

Let us start by mentioning a few limits and future research directions. Our research has analyzed the intentions of students who will soon be part of the creative class and population of knowledge workers, as scientists and engineers are considered to be part of these categories; certainly, a study on students' aspirations may be different from actual behaviour of these students in the future. Nevertheless, our results present a first exploratory analysis of the impact of criteria related to the quality of place in the decision process of these professional categories when choosing a place to work. We are also aware that our research analyzes the mobility of a given professional category of the creative class, and not the entire creative class, but since there is little empirical research on this, our research highlights some elements.

We have shown in this chapter that the origin of students has an influence on the results concerning their mobility, and regarding their destination once the students have graduated. The results obtained for Montreal could also be compared with another city. We have collected the same kind of data for Ottawa and compared the results on these two cities (Darchen and Tremblay, 2010b), but there remains the potential for further illuminating research on other cities.

The work of Richard Florida has certainly opened a new field in urban economics and urban research, but to only rely on this paradigm in city politics and in the creation of economic development strategies is an exaggeration that has been propelled by intensive promotion not only in Canada but also around the world since the last decade. If cities around the world embraced the creative city paradigm, massive promotion and the globalization of this phenomenon might have blurred the initial meaning of this approach in economic development and now in city planning. The interpretation made by private stakeholders of this paradigm is also an important component to take into consideration when anticipating the possible outcomes of the implementation of this paradigm.

References

- Atkinson, Rowland, and Hazel Easthope. 2009. The consequences of the Creative Class: The pursuit of creativity in Australian cities. *International Journal of Urban and Regional Research* 33 (1):64-79.
- Beckstead, Desmond, and W. Mark Brown. 2006. *Capacité d'innovation: l'emploi en sciences et en génie dans les villes canadiennes et américaines*. Ottawa : Statistique Canada.
- Boudreau, Julie-Anne, Roger Keil, and Douglas Young. 2009. *Changing Toronto: Governing urban neo liberalism*. Univ. of Toronto Press: Toronto.

- Catungal, John, Deborah Leslie, and Yvonne Hii. 2009. Geographies of displacement in the creative city: The case of Liberty Village in Toronto. *Urban Studies* 45(5/6):1095-1114. Doi: 10.1177/0042098009103856.
- Christophers, B. 2008. The BBC, the creative class and neoliberal urbanism in the north of England. *Environment and Planning A* 40 (10):2313-29.
- Christopherson, Susan, and Ned Rightor. 2010. The creative economy as “big business”: Evaluating state strategies to lure filmmakers. *Journal of Planning Education and Research* 29 (3):336-52.
- Costa, Pedro. 2008. “Creativity, innovation and territorial agglomeration in cultural activities: The roots of the creative city.” In *Creative cities, cultural clusters and local economic development*, edited by Philip Cooke and Luciana Lazzeretti, 183-201. Cheltenham, UK: Edward Elgar Publishing Ltd.
- Darchen, Sébastien. 2010. The creative-city approach and the production of urban designscapes: a comparison of redevelopment processes in Toronto and Vancouver. Presented at the City Institute Seminar, York University, December 3, in Toronto, Canada.
- Darchen, Sébastien, and Diane-Gabrielle Tremblay. 2010a. La thèse de la ‘classe créative’: revue des écrits et perspectives de recherche. In *La classe créative : analyses critiques*, edited by Remy Tremblay and Diane-Gabrielle Tremblay, 13-35. Rennes, France: Presses Univ. de Rennes.
- . (2010b). What attracts and retains knowledge workers/students: The quality of place or career opportunities? The cases of Montreal and Ottawa. *Cities* 27 (4):225-33. Doi: 10.1016/j.cities.2009.12.009.
- . (2010c). Attracting and retaining the workforce in science and technology: the case of Montreal. In *Knowledge-Based Development of Cities and Societies: an Integrated*

Multi-level Approach, edited by Kostas Metaxiotis, Francisco Javier Carrillo and Tan Yigitcanlar, 42-58. Hershey, PA: IGI Global.

Edensor, Tim, Deborah Leslie, Steve Millington, and Norma Rantisi. 2010. *Spaces of vernacular creativity: Rethinking the cultural economy*. London: Routledge.

Evans, Graeme. 2009. Creative city, Creative Spaces and Urban policies. *Urban Studies* 46(5&6):1003-1040. Doi: 10.1177/0042098009103853.

———. 2003. Hard Branding the Culture City - From Prado to Prada. *International Journal of Urban and Regional Research* 27(2):417-440. Doi: 10.1111/1468-2427.00455.

Florida, Richard. 2008. *Who's your city? How the creative economy is making where to live the most important decision of your life*. New York: Basic Books.

———. 2005. *Cities and the creative class*. New York: Routledge.

———. 2002. *The rise of the creative class: And how it's transforming work, leisure, community and everyday life*. New York: Basic Books.

Gibson, Chris. 2008. Creative arts, people, and places: Which policy directions? In *How are we going? Directions for arts in the creative edge*, edited by Lisa Anderson and Kate Oakley, 42-56. Cambridge, UK: Cambridge Scholars Press.

Gibson, Chris, and Shane Homan. 2004. Urban redevelopment, live music and public space. *International Journal of Cultural Policy*, 10 (1):67-84. Doi: 10.1080/1028663042000212337.

Gibson, Chris, and Natascha Klocker. 2004. Academic publishing as 'creative' industry, and recent discourses of 'creative economies': Some critical reflections. *Area*, 36(4):423-34. Doi: 10.1111/j.0004-0894.2004.00242.x.

- Glaeser, Edward Ludwig, Jed Kolko, and Albert Saiz. 2001. Consumer city. *Journal of Economic Geography* 1(1):27-50. Doi: 10.1093/jeg/1.1.27.
- Glaeser, Edward Ludwig, and Albert Saiz. 2004. The rise of the skilled city. *Brookings-Wharton Papers on Urban Affairs*, 47-105.
- Keil Roger, and Julie-Anne Boudreau. 2010. Le concept de la ville créative : la création d'un réelle ou imaginaire forme d'action politique dominante. *Pôle Sud* 32(1):165-78.
- Klein, Juan-Luis, and Diane-Gabrielle Tremblay. 2010. Can we have a "creative city" without social cohesion? Some avenues of reflection. *Plan Canada* 52(2):27-29.
- Landry, Charles. 2008. *The creative city: A toolkit for urban innovators*. Sterling, VA: Earthscan Publications Ltd.
- . 2006. *The art of city building*. Sterling, VA: Earthscan Publications Ltd.
- Landry, Charles and Franco Bianchini. 2005. *The Creative City*. London: Demos.
- Markusen, Ann, and Amanda Johnson. 2006. Artists' centers: Evolution and impact on careers, neighborhoods and economies. Project on Regional and Industrial Economics, presented at the Humphrey Institute, Univ. of Minnesota, February, in Minneapolis, USA.
- McLean, Heather. 2010. The politics of creative performance in public space. Towards a critical geography of Toronto case studies. In *Spaces of vernacular creativity. Rethinking the cultural economy*, edited by Tim Edensor, Deborah Leslie, Steve Millington, and Norma Rantisi, 200-213. London: Routledge.
- Miles, Steven, and Paddison, Ronan. 2005. Introduction: The rise and rise of culture-led urban regeneration. *Urban Studies* 42(5/6):833-39. Doi: 10.1080/00420980500107508.

- Peck, Jamie. (2009). The cult of urban creativity. In *Leviathan undone? Towards a political economy of scale*, edited by Roger Keil and Rianne Mahon, 159-176. Vancouver: Univ. of British Columbia Press.
- . 2005. Struggling with the creative class. *International Journal of Urban and Regional Research* 29(4):740-770. Doi: 10.1111/j.1468-2427.2005.00620.x.
- Pratt, Andy C. 2008. Creative cities: the cultural industries and the creative class. *Geografiska Annaler: Series B, Human Geography* 90(2):107-17. Doi: 10.1111/j.1468-0467.2008.00281.x.
- Rantisi, Norma, and Deborah Leslie. 2009. *Montreal: The Small, Big City: Theme II Report on The Social Foundations of Talent Attraction and Retention*. Research report for the Innovative Systems Research Network project.
- . 2008. *The social and material foundations of creativity for Montreal independent designers*. Presented at the Annual Meeting of the Innovative Systems Research Network, Montreal, Canada.
- Reese, Laura A., Faist, Jessica M. and Gary Sands. 2010. Measuring the creative class: do we know it when we see it? *Journal of Urban Affairs*, 32 (3): 345-366.
- Shapiro, Jesse M. 2003. *Smart Cities: Explaining the Relationship between City Growth and Human Capital*. Unpublished manuscript.
- Shearmur, R. 2010. L'aristocratie du savoir. Quelques réflexions sur les thèses de Richard Florida. In *La classe créative selon Richard Florida : un paradigme urbain plausible?* Edited by Remy Tremblay and Diane-Gabrielle Tremblay, 107-126. Québec: Presses de l'Univ. du Québec.

Tremblay, Diane-Gabrielle, and Sébastien Darchen. 2010. The creative class thesis and the mobility patterns of knowledge workers considering the place of birth: The case of Montreal. *International Journal of Knowledge-Based Development* 1 (3): 176-203.

Tremblay, Diane-Gabrielle, and Thomas Pilati. 2007. Tohu and artist-run centres in Montreal: contributions to the creative city? *Canadian Journal of Regional Science* 30(2):337-356.

Tremblay, Diane-Gabrielle, and Serge Rousseau. 2006. The Montreal multimedia sector: a cluster, an 'innovative milieu' or a simple colocation ? *Canadian Journal of Regional Science*.vol. 28, no 2 Pp.299-327.

Tremblay, Remy, and Diane-Gabrielle Tremblay, editors. 2010. *La classe créative selon Richard Florida: un paradigme urbain plausible?* Québec/Rennes: Presses de l'Univ. du Québec and Presses de l'université de Rennes.

Zukin, Sharon. 2005. *The Culture of Cities*. London: Wiley-Blackwell.

ⁱ This acronym includes the following sectors: Technology and Innovation, Arts and Culture, Professionals and Management, Education.