

Research Frontiers for the Creative Class

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Abstract

Richard Florida's book, *The Rise of the Creative Class: And how it's Transforming Work, Leisure, Community, and Everyday Life* has stimulated considerable interest from economic developers, city managers, and academics. A brief sampling of literature on creativity is presented for comparison to the literature on the creative class in a region, their effect on regional growth, and strategies to increase their presence in a region. The authors suggest opportunities for future research to serve as examples of how the two strains of extant literature, taken together, can stimulate new research ideas.

Introduction

Creativity is a process that can result in the development of novel and useful ideas or processes by an individual or a group (Shalley 1995). Creativity is associated with a variety of positive workplace outcomes including innovation and productivity. In fact, some proponents even consider creativity necessary for innovation (e.g., Amabile, Conti, Coon, Lazenby, & Heron 1996; Shalley 1995). Numerous researchers have approached creativity from a variety of different perspectives (e.g., Amabile & Conti 1999; Amabile et al. 1996; Shalley 1995). For example, much of the extant literature on creativity explores it both on the individual and firm level. However, more recently, Florida (2002) introduces the novel idea of a "creative class." In his 2002 book *Rise of the Creative Class*, Florida argues that economic growth is in part driven by the generation of new ideas stemming from the combination of knowledge in new ways. The creative class are a group of people with jobs that require being creative. Florida identifies occupations such as scientists, engineers, writers, poets, graphic designers, architects, and performers as part of the creative class. He makes a strong case that creative people who generate most of these ideas work in certain fields, such as engineering and the arts, and that these types of people can be encouraged to locate and stay in a region and thus increase the region's economic prosperity. He argues that an important task for economic developers under this scenario is designing their communities to be attractive, in terms of certain amenities, to the creative class.

In *Cities and the Creative Class*, Florida (2004) describes three requirements, referred to as the "three Ts," for cities to be magnets for the creative class: Talent (i.e., an educated, talented, and skilled population), Tolerance (i.e., a diverse and tolerant community), and Technology (i.e., a technology infrastructure supportive of the entrepreneurial culture). Florida's assertions have gained significant support among urban planners and regional economic development professionals seeking a formula for marketing their regions. However, a paucity of both theoretical and empirical work in the area still exists. Researchers have not yet drawn significantly from the vast body of literature on creativity to further explore the idea of the creative class. We believe that the opportunities are many.

Drawing from Florida's ideas, we further explore the conceptualization of the creative class. This paper is to advance the notion that the existing diverse literature on the creativity of individuals and of firms can be more fully linked with the notion of the creative class for advancing research into this newly developed area. The National Collegiate Inventors and Innovators Alliance (NCIIA) is an example of a group in the United States whose members tend to hold jobs included in the definition of the creative class and who tend to be creative. Research into ways to augment the creative class in a region directly relates to members of such groups.

Review of the Creative Class Literature

Extant research addresses a variety of topics such as how creativity relates to entrepreneurship, the geography of talent and regional economic development, and the university's role in the creative class.

Creativity is frequently associated with entrepreneurship. Entrepreneurs set themselves apart from small business owners by the creativity they exhibit in deploying innovative new products and business models (Carland, Hoy, Boulton, & Carland 1984). Further, income and job growth are often associated with entrepreneurship. Schumpeter (1947) makes the case that innovation and technological change come from entrepreneurs who exhibit the “creative response,” solving new problems or old problems in new ways (i.e., innovation). Schumpeter believed that when those with an entrepreneurial spirit were working at large companies with the resources to invest in research and development, the economy was best situated for growth. Taking a very long-run perspective, Gray (1966) argued that the ebbs and flows of development of civilized western nations could be seen in his measures of creativity over time. Thus, the notion that the presence of creative people is required for entrepreneurship to take place and an economy to grow is not new. However, the application of this idea to regional development strategies, such as attempting to increase the presence of creative people, is novel. Florida’s *The Rise of the Creative Class* has sparked the production of a growing body of literature on the creative class. The research has been conducted in the broader context of the relationship between the creative class and regional economic growth. The composition and measurement of the creative class and the metric for growth has varied across studies. Data sources have varied from Census and Bureau of Economic Analysis (BEA) data to surveys and non-profit foundation sources.

Florida (2002a) examines the economic geography of talent, exploring the factors that attract talent and the effect talent has on high-tech industry and regional income. He argues that talent is a key intermediate variable in attracting high-tech industries and generating higher regional incomes. He subsequently (2002b) examines the geography of bohemia and its relationship to human capital and high-tech industries. He finds that bohemians attract talented individuals, which in turn attract and generate innovative high-tech industries. In addition, researchers have investigated how the density of the “creative class” affects metropolitan innovation, suggesting that density and creativity affect innovation in metropolitan areas (Knudsen, et al. 2005).

Traditionally, regional growth and development have focused on the role of firms in cities, on how they make relocation decisions and to what extent they concentrate into clusters. Following Florida, this research has shifted focus to social functions of neighborhoods, communities, and cities and human capital, consumption, and cities as lifestyle and entertainment districts. If the creative class is important for regional or local economic growth, the focus needed to widen to include the individual location decisions of people in addition to location decisions of firms, as sources of regional and national economic growth (Florida 2003).

In an attempt to sort out the role of the creative class versus the broader impact of human capital, Florida et al. (2007) demonstrates that these two designations affect regional development. He concludes that the creative class outperforms conventional educational attainment measures in accounting for regional labor productivity measured as wages, while conventional human capital does better in accounting for regional income. He finds that tolerance was significantly associated with both human capital and the creative class, as well as with wages and income.

Research on the creative class has considered data from a variety of different countries. Florida and Tinagli (2004) extend the concepts and indicators introduced in Richard Florida’s *The Rise of the Creative Class* to the European context. It develops new indicators for the creative class and competitiveness that are based on the “3Ts” of economic development—Technology, Talent and Tolerance—for fourteen European, Scandinavian, and Nordic countries and compares them to the United States. For example, it is argued that a low level of tolerance in a region dampens creativity in the same way that allowing criticism of ideas during a brainstorming session dampens it: participants are reluctant to be creative if their seemingly “wild or unusual” ideas are criticized by the intolerant.

In addition, Stolarick and Florida (2006) examine the specific interactions among the creative, technical, business, and design communities of the Montreal region. It is demonstrated that such connections are possible and can have a positive impact on the innovative and total business activity across the region. Mellander and Florida (2006) employ structural equations and path analysis models to examine the independent effects of human capital, the creative class, and technology on regional development. They also seek to account for the factors that shape and affect the geographic distribution of human capital and the creative class across eighty-one Swedish regions. The authors find that the creative class measures outperform conventional educational measures in accounting for regional development and that universities, amenities or service diversity, and tolerance affect the distribution of human capital.

Definitions of the creative class differ across studies, typically related to occupation. McGranahan and Wojan (2007) define and measure the creative class more narrowly than Florida and others. They apply Florida's model more generally to rural and smaller urban areas rather than just large metropolitan areas. They also differentiate for human capital variables so that the percentage of employment represented by the creative class is shown to be a separate influence on economic growth rather than merely a proxy for the human capital endowment.

Florida et al. (2006) examines the university's role in the Creative Economy in the context of the "3Ts." They examine a wide range of data and trends on technology transfer, startup companies, talent, brain drain, tolerance, and creativity for US metro regions. The authors believe that the university comprises a powerful creative hub in regional development; however, alone, the university is insufficient for successful regional economic development. They conclude that, to harness its capability to generate innovation and prosperity, the university must be integrated into the region's creative ecosystem. Florida (2006b) argues that the old model of a university pumping out research results and educated students, or even commercial innovations and start-up companies, is no longer sufficient for the era of creative-knowledge-based capitalism. Universities and their communities must take talent and tolerance seriously, as they have with the technology agenda.

Lee et al. (2004) examines the effect of creativity and diversity on entrepreneurship at the metropolitan statistical area (MSA) level. They find that new firm formation is strongly associated with cultural creativity when controlled for the variables suggested in the literature. They also find that firm formation is positively and significantly associated with the Diversity Index but insignificantly with the Melting Pot Index.

In "The Creative Compact" Florida introduces the idea of a Creative Compact which would expand participation in the Creative Economy to industrial and service workers, leverage new private and public investment in human infrastructure, restructure education around creative endeavor, bolster universities, provide mobile benefits, recast urban policy as a cornerstone of economic policy, and ensure that America remains an open and tolerant nation. He offers ten core principles around which to base the Creative Compact: 1) Every Human Being is Creative, 2) Encourage Entrepreneurship across the Board, 3) Expand Innovation, 4) A Social Agenda for Creativity, 5) Restructure Education for Creativity, 6) The University as Creative Hub, 7) Make Every Community a Creative Community, 8) Leverage the Local, 9) Recommit to Openness and Diversity, and 10) A Global Agenda.

Review of Relevant Creativity Literature

The number of papers included in the review of the literature specifically related to Florida's work shows that the creative class is a new, but growing, area of research. An exhaustive review of the vast body of research on creativity in general is beyond the scope of this paper. Therefore, we believe that a few examples of the extant literature on creativity will be useful in stimulating ideas for research focused on the relation between economic growth and creativity, and, by extension, the creative class. Much of the research about creativity has been conducted at the individual, team, or firm levels and may be useful in further advancing the notion of the creative class. We believe that work by Sternberg and Lubart (1993) will be particularly helpful in providing a framework for future research.

Sternberg and Lubart (1993) describe six resources needed for creativity to occur: intelligence, knowledge, thinking style, personality, self-motivation, and environment. Intelligence is characterized by the ability to redefine problems and to think insightfully. Knowledge is required for creativity because it prevents rediscovering what is already known and in use. For creative activity to have occurred, the outcome must be both novel (Sternberg 1988) and useful and valuable to society (Welsberg 1986). According to Sternberg and Lubart (1993), creative people have a thinking style built on the desire to create new systems of rules which are global in scope. That is, they think about both the forest and the trees. Creative people share personality attributes such as a tolerance for ambiguity, the willingness to persevere, self-confidence, and a willingness to leave the status quo behind. Creative people are self-motivated and are task-oriented. Finally, in addition to self-motivation, creative people are at their best when their environment fosters and rewards creativity. Thus, the degree of self-motivation is enhanced by environmental factors. Drawing from Sternberg and Lubart's (1993) categorization, we categorize the examples from the literature.

Intelligence: Abinun's (1981) description of creativity includes the assertion that while a high IQ is not a guarantee that the individual will be creative, a low IQ "means that creativity is impossible" (23). Thus, creativity seems to require a special kind of intelligence, not necessarily captured in IQ tests. Glynn (1996) relates individual intelligence to her concept of "organizational intelligence" and its role in creativity at the firm level.

Knowledge: Diakidoy and Kanari (1999) may be categorized under the heading of knowledge. These authors surveyed elementary school teachers' views as to when their students were engaging in creative behavior. The teachers were found to define many behaviors as "creative" that were novel, but not useful and the teachers tended to discount the importance of knowledge to the incidence of creativity. Wierenga and van Bruggen (1998) compare creative output by students with and without software tools by measuring quantity of new ideas and using independent judges to rate their usefulness. Thus, their article is an example of the adoption by researchers of the notion that actors must have both novel ideas and knowledge that makes those ideas useful in order to be truly creative. It is noteworthy that the US Patent and Trademark Office requires that inventions be both novel and useful before they can be patented.

Thinking style: Creativity involves "bisociation," the bringing together of (on the surface) incompatible perspectives on the same problem or question (Koestler 1964). The creative person needs to concentrate on problems, sometimes for long periods and with periods of disengagement, so that their ideas "incubate" into creative solutions (Smith and Dodds 1999). Some people are better than others at thinking in these ways. Related to this need to incubate their thoughts is the need for freedom to think and concentrate on the problem, without interruption. This need for autonomy (Swann and Birke 2005) is important to creativity. How well this creative thinking style can be learned is still under discussion. Kabanoff and Bottger (1991) compared the creative behavior of MBA students who were given instruction in brainstorming and other creativity training to a control group and found an increase in creative behavior.

Personality: Dacey and Lennon (1998) list ten personality traits that contribute to creativity: Tolerance of ambiguity; Thinking "out of the box"; Imagining different uses from the original; Flexibility; Willingness to take a risk; Preference for complexity and asymmetry; Willingness to delay gratification; Freedom from sex-role stereotyping; Perseverance; and Courage and passion.

Self-motivation: Researchers such as Hennessey (2000) work under the heading of self-motivation because the degree of motivation is correlated with the creativity manifested. The perceived urgency of the problem itself and level of gain to be had from solving the problem are both important. Amabile (1994) argues that self-motivation is more conducive to creativity than external motivation, yet there is room for both. Andrews and Smith (1996) investigate the factors that make a marketing program truly creative and find that the intrinsic motivation of the marketer is almost as important as the marketer's knowledge of market conditions. Unsworth (2001) discriminates between the motivation and the significance of the problem in a four-segment typology that highlights the relatively less-researched area of creativity that stems from proactive attitudes and behavior.

Environment: Under the category of environment, Sternberg (1996) argues that teachers should create an environment that encourages questioning of assumptions, allows mistakes and risk taking, lets students define the problems, and rewards creative ideas. Another example of work under the category of environment is Shalley, Gilson, and Blume (2000) who found employees exhibited lower intentions to leave their jobs when their work environments complemented the creative requirements of their jobs. Their research involved surveys at the firm level. Also under the environment category, Zhou and George (2001) found a relation between job dissatisfaction, the work environment fostered by the firm and creative behavior.

Woodman, Sawyer, and Griffin (1993) present a series of propositions that build on the extant literature on creativity and provide a model for the drivers of creative behavior based on whether the creative behavior originates with the individual, the group, or the overall organization. Their propositions can be organized according to whether they relate to the creative performance of the individual, group, or organization. Individual creative performance is increased by: (a) groups that promote open sharing of information; (b) groups that reduce the need for conformity; (c) organizational cultures that promote risk taking activity, (d) reward systems within organizations that are not tightly linked to creative performance. Group creative performance is increased by: (a) increased group diversity; (b) non-autocratic styles of leadership; (c) group cohesiveness (to a point); (d) very participative structures and cultures

in the organization. Finally, organizational (firm) creative performance is increased by: (a) availability of slack, or unused, resources; (b) free-flowing information across multiple channels within the organization; (c) loose and flexible organizational structures; (d) free-flowing information with other organizations. Considered together with the six resources of Sternberg and Lubart (1993), these propositions can stimulate new research ideas. Some examples are provided in the next section.

Suggestions to Advance Research on the Creative Class

Creativity and the innovative capacity of a region (and the economic growth that results therefrom) is partly a result of the mere presence of creative people in the region and partly a result of the creative behavior of those individuals within groups, teams, firms, and governmental organizations. Thus, it is important not only to evaluate the number of creative people that work in a region, but also to consider additional characteristics such as their diversity or their specific occupation, training, or personality. In addition, we think there is opportunity for additional research on a region's characteristics, including the nature of its firms and organizations in relation to the needs of a specific sub-grouping of the creative class.

The hypotheses of Woodman, Sawyer, and Griffin (1993) may suggest new approaches for research into the creative class. For example, Swann, and Birke (2005) argue that the need for bisociation makes firms with loosely defined job descriptions, a fluid (and flat) organizational structure, and limited specialization foster creativity better than firms with rigid, hierarchical structures and specialized job descriptions. They also point out that the need for autonomy and incubation explains why it is so hard to manage creativity or to put quotas on it. 3M Company is an example of a firm that encourages employees to spend a certain percentage of their time on their own ideas, but the rest of their time is specified more carefully by management. Is it possible that regions can foster such cultures of creativity through policy?

In our opinion, there remains substantial opportunity to build on the work of McGranahan and Wojan (2007) by further refinement of the definition of the creative class; and methods for identifying class members within econometric data would be very useful. In particular, there is value in differentiating between key creative people and those whose presence is required to support them, but whose presence, apart from creative types, does not insure the creative process takes place. For example, lawyers and accountants are needed by creative people to protect their intellectual property and to help organize their endeavors, yet not all (some might argue, not most) lawyers and accountants are creative themselves. It can be argued that the effect on the economy of a region from creative people who work in the arts, for example, should be different from the effect from creative people who work in engineering. Research on these differing effects can be conducted. In addition, the question can be considered as to whether there is a combination of both types required for optimal economic growth. The possibility exists that one type may draw, or presage a future increase, in another type of member of the creative class.

Assuming it is possible to train groups within an organization to be creative (see for example Kabanoff and Bottger 1991), is it productive to initiate programs for training the existing population in a region to be more creative, rather than encouraging in-migration by changing the amenities offered? After all, many of the current residents have made a decision to live where they live and must therefore be reasonably satisfied with the existing stable of amenities offered. Might such training “backfire” in that, once exposed, these newly trained creative people seek to live elsewhere?

How much of the job growth and income growth associated with the presence of the creative class results from rising wages of the creative class within the region and how much “spills over” to other classes in the region as a result of the efforts of class members? Essential service occupations like health care workers, teachers, performing artists and, we argue, the creative class, in general are subject to a phenomenon in which wages rise faster than the average because of slower productivity growth. Baumol and Bowen (1966) first referred to this phenomenon as the “cost disease of the performing arts” in which the wages of performing artists were shown to rise faster than average because their creative talent could not be made more efficient and productive. Essentially, artists are not able to enhance the production of their art as easily and effectively as, for example, a manufacturer can use automation to enhance production. This is similar to the problem of health care workers, who although

there is some possibility of automation, for the most part can only treat one patient at a time and to teachers, who can only effectively educate a certain class size.

Creative people, like these other service occupations, are limited in their productivity. They can work on and solve only a finite number of pressing problems. Thus, for the number of problems being solved per unit time to rise, more creative people must be employed. Because the number of problems needing input from creative individuals is rising and society is accustomed to rapid change and innovation, the wages of the creative class should rise faster than the average wage. Meanwhile, the solutions to problems (innovations) developed by the creative class improve the quality of life and productivity of other elements of the region as the solutions diffuse into general use. Thus the efforts of the creative class improve the number of jobs and wages of everyone else in the region. An interesting opportunity for future research, then, is to gauge the contribution to the region that results from the two types of effects: wage growth of the creative class and wage growth of the other members.

Another possibility for future research is to attempt to shed light on the following question: Do regions with particular types of problems benefit more from the addition of creative minds to the local population compared to other regions? For example, if the region's population is far below the average in productivity, as might be the case in some rural areas, does an increase in the creative class result in better than average increases in productivity? Sternberg and Lubart (1993) argue that creative people should engage in a "buy low sell high" approach in which they invest their creative skills in solving problems with ideas that will be, but have not yet been, highly valued.

Finally, we suggest that if the presence of the creative class causes high growth at the regional level, then it should also cause above average growth at the firm level. Thus firms employing large numbers of people who are members of the creative class should grow faster. This would be a significant data challenge, but would be a nice addition to earlier literature on high performance work organizations from the early 1990's. Related to such investigations at the firm level is the impact of firms that downsize on their regions (Conti 1999). Is the creative class affected disproportionately in the region when a firm downsizes? If the creative class is relatively "unscathed" by downsizing, is it possible that the region's creativity increases after downsizing events?

Summary

In summary, we believe that the research on the creative class would benefit from a stronger connection with the creativity literature and that numerous avenues for future research could emerge from this connection. Developing the relationship between the creative class literature and the broad offerings in creativity literature (from psychology to management) could not only generate new empirical work, but also further the development of the theoretical foundation of the creative class concept. The purpose of this paper was merely to highlight opportunities for others interested in the creative class, rather than to carry out specific parts of these research opportunities. In addition it can be used to stimulate new ideas for research. The ideas proposed here should be viewed as a starting point for additional work in which universities can play a significant role.

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