

Academic Entrepreneurship and the Creative Economy

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You need chaos in your soul to give birth to a dancing star.

Nietzsche

Creativity is a type of learning process where the teacher and pupil are located in the same individual.

Koestler

Abstract

The paper explores the relationships among several notions: the 'creative economy'; New Growth Theory and the primacy of ideas; academic entrepreneurship; and the new paradigm of cultural production. Broadly conceptualised, the creative economy links the primacy of ideas in both arts and sciences in a more embedded and social framework of entrepreneurship which positions education as central, since its institutions are the primary knowledge institutions that provide the conditions for the transmission and development of new ideas. Entrepreneurship develops within networks that use new information and communication technologies. The role of the arts, humanities and social sciences becomes re-profiled as crucial in the generation of new ideas within the creative economy, moving discussion and analysis away from a single focus on STEM and the hard sciences such that the redesign of institutional/academic environments is necessary in order to capitalize on ideas and move from creativity to systems of innovation.

The Creative Economy

The notion of the creative economy has been around since the early 1990s when it was John Howkins, Chairman of Tornado Productions Ltd, a London-based web casting company, used it as the title for a book he subtitled 'The Creative Economy: How People Make Money From Ideas' (2001). Howkins who is deputy chairman of the British Screen Advisory Council and a Governor of the London Film School has acted as an advisor to many new media companies such as Time Warner, Sky TV and IBM and well as world governments. His line of thinking focuses on 'intellectual property' which he asserts is worth over \$2.2 trillion annually. As he is fond of saying 'IP is the currency of the new economy' and by 'new economy', he says, he doesn't mean the new network Internet economy but the 'creative economy'. He defines the creative economy not simply in terms of the concepts creativity, culture, heritage, knowledge, information, innovation or in terms of the economic activities arts, architecture, craft, design, fashion, music, performing arts, publishing, etc., but rather more broadly as 'An economy where a person's ideas, not land or capital, are the most important input and output (not IP).' He uses this broad definition because he understands that 'All creativity – arts, sciences, whatever – involves using the brain's same physiological processes, the synapses fizz and splutter and make connections – or not – in the same way.' And he goes on to say:

It all depends on the individual's capacity to dream, wander, think, challenge, disagree, invent.

It expresses diversity, which is the source of culture (without diversity, there is no culture).

In simplistic terms Howkins suggests that everyone can be creative: one doesn't need land, or capital, or exams—creativity is open to all and requires nothing. Referring to Schumpeter he says: 'Entrepreneurship in

America is now routinized'. And he underscores the difference between innovation and creativity: where 'creativity is personal and subjective, innovation is group-led, competitive and objective. Creativity can lead to innovation. Innovation seldom leads to creativity.'

Interestingly, Howkins argues that the Western paradigm of creativity is based on the idea that it is the preserve of a few talented people (artists and inventors) and a smaller number of investors. He argues against this model and for a new model of IP (intellectual property)

we need a new paradigm for IP based on the public's demand for knowledge. We need to create the right conditions for creativity, enlarging the public domain, increasing access to books, culture and R&D, resisting the impulse to privatize facts and ideas, and embracing a more democratic (my word) and non-western (his word) view of creativity to flourish by fitting the IP law to the country rather than the other way around. He refers to the Brazil/Argentine Proposal at WIPO in September 2004 where IP rights are related to the goal of maximizing public welfare.

Howkins's account of the creative economy follows a long line of development that emerges from different literatures: the 'creative destruction' of Schumpeter and his account of entrepreneurialism; the Austrian school's methodological individualism and subjective theory of value evidence in Hayek's economics of knowledge and Fritz Machlup's study of knowledge distribution in the US economy; Daniel Bell's *The Coming of Post-industrial Society* (1972); Peter Drucker's focus on the knowledge worker and knowledge management strategies; the Third Wave 'technological revolution studies' popularized by Alvin Toffler; Jean-François Lyotard's (1984) insistence that the leading sciences and technologies are significantly all language-based; Gary Becker's human capital theory; Paul Romer's endogenous growth theory; the OECD's policy prescription for the knowledge-based economy and the World Bank's 'Knowledge for Development' and 'Education for the Knowledge Economy'; the 'new economy' readings of the 1990s; Robert Putnam's social capital studies; Danny Quah's the digital economy; and so on. It would take a long time to chart these readings and developments and their intersections across the fields of economics of knowledge and information, social epistemology, sociology of knowledge, sociology of postindustrialism, knowledge management, education neuroscience and research on 'communities of practice'. In quick succession there has been a series of substitutions that describe economic and social structural transformation of advanced economics: postindustrial economy; information economy; sign economy; symbolic economy; digital economy; Internet economy; knowledge economy; creative economy.

The emphasis on the notion of the creative economy has become currency since 2000 with Howkin's book and Richard Florida's (2002) *The Rise of the Creative Class*. Florida's work draws on Howkins arguing 'Human creativity is the ultimate economic resource' (p. xiii). He indicates that *Business Week* first introduced the concept in August 2000 which was followed by Howkins' book and his own a year later. By creative economy Florida focuses on its institutions: new systems for technological creativity and entrepreneurship; new models for making things (including the creative factory and modular manufacturing); and the final element of the creative economy which he talks about as the social milieu, an ecosystem within which creativity takes root. He also analyses creativity as an economic force in history and the emergence of the creative class, following the ideas of Drucker and Machlup.

Entrepreneurship is a hot topic and one that has been undergoing a theoretical revolution in recent years especially under the impetus of nationally supported studies of innovation systems and enterprise society more generally. First, there have been studies that want to reclaim the space of entrepreneurship in society such as the special issue of *Entrepreneurship & Regional Development* devoted to this topic. The editors Chris Steyaert and Jerome Katz (2004) formulate three underlying propositions for this reclamation: first, 'entrepreneurship takes place in multiple sites and spaces' such as 'neighbourhoods', 'communities' or 'circles'; second, 'these spaces are political spaces that can be constituted through a variety of discourses

overcoming the sole economic definition of the societal contexts that impacts and is impacted by entrepreneurship. A geography of entrepreneurship is always a geopolitics'; and, third,

entrepreneurship is a matter of everyday activities rather than actions of elitist groups of entrepreneurs. The spatial production of entrepreneurship through socio-cultural processes in such sites as neighbourhoods, communities or circles is effected through everyday activities, and brings entrepreneurship out of its selective and selected circle of entrepreneurs and entrepreneurial companies into a focus upon social processes in the broadest sense (p. 180).

Their call is to consider entrepreneurship as a societal rather than a purely economic activity. They document the move to consider a notion of public entrepreneurship which embodies a more innovative and citizen-oriented focus, and new ethnic models, therapeutic communities, artists and artisans who embraced the social concept. They go to the literature to demonstrate how entrepreneurship is now visible in a multitude of different sites: the health sector, the informal sector of the Third World, ecology and sustainability, nongovernmental development organizations, civic entrepreneurship, education and universities, art and culture, cities, social enterprises, social innovative businesses and social entrepreneurship. Their emphasis on a spatial analysis provides a contextualization that questions current conceptions and especially front-stages of entrepreneurship to emphasize the multidimensionality of entrepreneurship and a geopolitics of the everydayness of entrepreneurship. This work has been led by Steyaert (1998, 2000, 2002) in a range of recent papers.

Steyaert himself makes reference to the ground breaking work by Spinosa, Flores and Dreyfus (1997) in their book *Disclosing New Worlds: Entrepreneurship, Democratic Action, and the Cultivation of Solidarity* which calls for no less than a recovery of a way of being that has always characterized human life at its best. In summary they argue that human beings are at their best when they are intensely involved in changing the taken-for-granted, everyday practices in some domain of their culture--that is, when they are making history which refers to changes in the way we understand and deal with ourselves. They identify entrepreneurship, democratic action, and the creation of solidarity as the three major arenas in which people make history, and they focus on three prime methods of history-making--reconfiguration, cross-appropriation, and articulation. As they elaborate their argument in the Introduction

We write in support of entrepreneurial practices within capitalist market economies, of citizens' action groups in modern representative democracies, and of the culture figures who cultivate solidarity among diverse peoples in modern nations. Indeed, we think that these practices are so important to human life that most of the everyday, conventional aspects of capitalist market economies and modern democratic republics necessary to support them must be preserved. Yet frequently entrepreneurs, citizens in action groups, and culture figures seem to be locked in venomous dispute. This suggests that the skillful way of being human that brings entrepreneurship, citizen action, and solidarity cultivation together is being lost. This book is an attempt to retrieve sensitivity to this skillful way of being. Our main goal is to show how entrepreneurial practices, the practices of virtuous citizens, and the practices of solidarity cultivation are ultimately grounded in and integrated by a crucial skill that human beings in the West have had for at least 2500 years (pp. 1-2).

Entrepreneurship fundamentally means changing meaning and practices. It does not refer to satisfying consumer's needs or a market; rather it means creating the product together with the market as when Kodak created the camera *and* photography. This conception anchored in phenomenology involves *engagement* and is the very antithesis of detached observation, analysis or reflection. Thus authentic being does not amount simply to being a consumer or prosumer but rather is about disclosing new worlds and new spaces by engaging with the web of practices, meanings and identities that is now called 'communities of practice' in terms of one's situatedness characterized by a certain style that coordinates and integrates practices.

This ontological analysis is so far from traditional neoliberal accounts of entrepreneurial activity or of the ‘enterprise society’ that has now made its way into the public realm and into educational policy. I have argued that a ‘new prudentialism’ in education rests on the concept of the entrepreneurial self that ‘responsibilizes’ the self to make welfare choices based on an actuarial rationality as a form of social security that insures the individual against risk. This represents a new welfare regime – one that is no longer focused on the rights of the citizen, but that is based on the model of the citizen-consumer who makes investments in the self at critical points in the life cycle (Peters, 2005).

Both Howkins’ and Florida’s books are academic bestsellers and have become new business and community manifestos.² They are consciously shaped as best sellers written in accessible language and making use of all the soft jargon of business-speak and soft management psychology. I do not want to fault these two books because despite academic criticisms they do break new ground and even in view of their Anglo-American centrisms there are important lessons to developing countries as well as academics and universities. In order to offset their glosses let me attempt to give a little depth by reference to two sets of ideas that are central to the creative economy, both from economists: Schumpeter on the entrepreneur and Romer on endogenous growth and the primacy of ideas. Following these two brief sketches I will then focus on the new paradigm of cultural production, before turning finally to ‘academic entrepreneurship’ and the promise already inherent within institutions of higher education.

Schumpeter, *Unternehmergeist* and the Changing Appraisal of ‘Entrepreneurship’

First, Joseph Schumpeter (1883-1950, an Austrian economist and political scientist who escaping the Nazis taught at Harvard from 1932 to 1950,³ and became famous for his analysis of business cycles the economic development which he theorized in terms of waves and cycles (Kondratieff [54 years], Kuznets [18 years], Juglar [9 years] and Kitchin [about 4 years]) that integrated innovations, cycles, and development. Schumpeter provided an account of the entrepreneur and the role and significance of the entrepreneur who through innovation led to gales of ‘creative destruction’ making old ideas, technologies and skills obsolete which was the source of continuous progress and improvements in the standard of living. He used the German term *Unternehmergeist* meaning spirit of entrepreneurship, although English publication adopted the French word.

The word derives from the work of Richard Cantillon (1697-1734) who used the term in his one surviving work *Essai sur la nature du commerce en general*⁴ published in 1755 and the term was used by John Stuart Mill before falling into disuse until the late nineteenth century. As Mark Casson (2002) explains the simplifying assumption of perfect information in mathematics modeling leaves no room for the risk-taking entrepreneur. Cantillon’s original formulation emphasized that the entrepreneur was a specialist in taking on risk because he could ‘insure’ workers by buying their products against the consumer market and price fluctuations. He writes:

According to Schumpeter, the entrepreneur is someone who carries out ‘new combinations’ by such things as introducing new products or processes, identifying new export markets or sources of supply, or creating new types of organization. Schumpeter presented an heroic vision of the entrepreneur as someone motivated by the ‘dream and the will to found a private kingdom’; the ‘will to conquer: the impulse to fight, to prove oneself superior to others’; and the ‘joy of creating.’

As Casson suggests Schumpeter’s analysis was concerned with ‘big level’ entrepreneurial activity that led to the building of the railroads, the birth of chemical industries and the exploitation of the colonies but ignored the ‘low level’ activity carried out by small firms. Also the Austrian approach tended to isolate the

entrepreneur from the firm. Casson's own approach definition of the entrepreneur is of an individual who is able to make judicious decisions about coordinating scarce resources.

Within the knowledge economy with an emphasis on symbolic manipulation and extended chains of sign value, often as digital goods, the notion of the entrepreneur takes on different forms and different roles. The most important difference is the shift away from focusing on the lone entrepreneur to talking about entrepreneurship that takes place as team-work and other forms of collaboration embedded within networks and systems. The highlighting of entrepreneurship enables a shift away from the romantic figure of the lone and heroic individual who is willing to take risks (actually a figure of Romanticism in the strict sense) to entrepreneurship as the model for a society or as a set of infrastructural conditions enabling creativity. Thus Charles Leadbeater and Kate Oakley (2001: 21) suggest that knowledge entrepreneurship is a structured activity, 'not a flash of individual genius', that builds in six stages: create, sense, package, mobilize, act and exit. They argue that the basic unit of entrepreneurship is not the individual but teams or partnerships that provide tight networks in distinctive industry clusters such as new technologies, science-based clusters, and new media. They suggest:

It would be a mistake to over state the impact public policies can have on entrepreneurship and innovation. The most powerful forces driving entrepreneurship are:

- technological change and knowledge creation, which open opportunities for entrepreneurs to develop new products, services and organisations
- cultural change, which will make it more acceptable to take risks, work for yourself and start a business
- economic changes which will make working for large corporations less appealing and working for yourself more rewarding
- the willingness of financial markets and investors to sanction risk taking (p. 81).

In terms of policy Leadbeater and Oakley (2001) turn toward a more systematic public approach that involves the creation of knowledge banks and knowledge hubs, restructured IP and patent office, building up the supply-side of entrepreneurship through a renewed focus on basic, higher and business education with greater emphasis on attracting talent to Britain, and mobilizing resources to encourage clustering with appropriate venture capital opportunities.

Romer, New Growth Theory and the Primacy of Ideas

Paul Romer, the Stanford economist, makes the case that *ideas* are the primary catalyst for economic growth. New ideas generate growth by reorganizing physical resources (natural, human, capital) in more efficient and productive ways. As he writes in *The Concise Encyclopedia of Economics*,

Increasingly, emphasis is shifting to the notion that it is ideas, not objects, that poor countries lack. The knowledge needed to provide citizens of the poorest countries with a vastly improved standard of living already exists in the advanced countries. If a poor nation invests in education and does not destroy the incentives for its citizens to acquire ideas from the rest of the world, it can rapidly take advantage of the publicly available part of the worldwide stock of knowledge. If, in addition, it offers incentives for privately held ideas to be put to use within its borders—for example, by protecting foreign patents, copyrights, and licenses, by permitting direct investment by foreign firms, by protecting property rights, and by avoiding heavy regulation and high marginal tax rates—its citizens can soon work in state-of-the-art productive activities (Romer, 2007).

The advanced and leading economies cannot stay ahead simply by adopting ideas developed elsewhere. They must devise ways of producing new ideas at home. As he suggests:

Perhaps the most important ideas of all are meta-ideas. These are ideas about how to support the production and transmission of other ideas. The British invented patents and copyrights in the seventeenth century. North Americans invented the modern research university and the agricultural extension service in the nineteenth century, and peer-reviewed competitive grants for basic research in the twentieth century. The challenge now facing all of the industrialized countries is to invent new institutions that encourage a higher level of applied, commercially relevant research and development in the private sector (Romer, 2007).

This non-technical overview might seem obvious but up until very recently economics was caught up in the spell of scarcity and diminishing returns. Under Romer the discipline has been transformed. As one of the chief architects of New (or Endogenous) Growth Theory⁵ Romer has demonstrated how technology (conceived broadly as better ways of doing things) contributes to economic growth and he argues that process of technological discovery is supported by a unique set of institutions which are particularly productive when they are tightly coupled with the market. By ‘institutions’ Romer means rules or conventions about how things are done and he talks about the relationship between ‘science’ and the ‘market’ that are very different kinds of institution especially in their treatment of property rights. The deep question concerns the design and development of institutions.

Romer’s work and, in particular, one technical paper written by Romer in 1990 has been immortalized by David Warsh’s highly acclaimed *Knowledge and the Wealth of Nations*. He begins the Preface with the words ‘This book tells the story of a single paper in economics—the events leading up to its publication in 1990’ and he goes on to write ‘Between 1979 and 1994 a remarkable exchange unfolded among economists in hard-to-read technical journals concerning economic growth’ based around the emerging literature that became known as ‘new growth theory’. In the Introduction he provides the dramatic turn of events that occurred when Romer published his paper

Yet it was not until October 1990 when a thirty-six-year-old University of Chicago economist named Paul Romer published a mathematical model of economic growth in a mainstream journal that the economics of knowledge at last came into focus, after more than two centuries of informal and uneasy presence in the background. The title of the paper was at once deceptively simple and intimidating: ‘Endogenous Technological Change’ (p. xv).

...

The first paragraph contained a sentence that was initially more puzzling than not: “The distinguishing feature of...technology as an input is that it is neither a conventional good nor a public good; it is a nonrival, partially excludable good....” (p. xvi).

And thereupon hangs a tale. For that particular sentence, written more than fifteen years ago and still not widely understood, initiated a far-reaching conceptual rearrangement in economics. It did so by augmenting the familiar distinction between “public” goods, supplied by governments, and “private” goods, supplied by market participants, with a second opposition, between “rival” and “nonrival” goods—between goods whose corporeality makes possible their absolute possession and limited sharing (an -ice-cream cone, a house, a job, a Treasury bond) and goods whose essence can be written down and stored in a computer as a string of bits and shared equally by many persons at the same time practically without limit (a holy book, a language, the calculus, the principles of design of a bicycle). Inevitably, most goods must

consist of at least a little of each. In between these extremes lie myriad interesting possibilities (p. xvi).

Warsh, a journalist who covered economics for *The Boston Globe* for over twenty years and the author of the reader-supported online weekly www.economicprincipals.com provides the finale of his Introduction thus

For the significance of ‘Endogenous Technological Change’ becomes clear as soon as soon as the paper’s key equations are translated into everyday language. Romer’s 1990 paper divided up the economic world along lines different from earlier ones. Overnight for those who were involved in actually making the intellectual revolution, more slowly for all the rest of us, the traditional “factors of production” were redefined. The fundamental categories of economic analysis ceased to be, as they had been for two hundred years, land, labor, and capital. This most elementary classification was supplanted by people, ideas, and things. People, ideas, and things. This phrase isn’t in the textbooks yet. It isn’t widespread in the literature. But once the economics of knowledge was recognized as differing in crucial respects (nonrival, partially excludable goods!) from the traditional economics of people (human beings with all their know-how, skills, and strengths) and things (traditional forms of capital, from natural resources to stocks and bonds), the matter was settled. The field had changed. The familiar principle of scarcity had been augmented by the important principle of abundance (p. xxii).

Warsh’s book is a delight. It enlivens the ‘dismal science’ and gives it a readability seldom found within all but popular account of economic discoveries and theories. Romer’s actual paper begins with this abstract:

Growth in this model is driven by technological change that arises from intentional investment decisions made by profit-maximizing agents. The distinguishing feature of the technology as an input is that it is neither a conventional good nor a public good; it is a nonrival, partially excludable good. Because of the nonconvexity introduced by a nonrival good, price-taking competition cannot be supported. Instead, the equilibrium is one with monopolistic competition. The main conclusions are that the stock of human capital determines the rate of growth, that too little human capital is devoted to research in equilibrium, that integration into world markets will increase growth rates, and that having a large population is not sufficient to generate growth (p. S71).

Romer begins the paper locating the problem very clearly and effectively through an example that demonstrates the primacy of ideas:

Output per hour worked in the United States today is 10 times as valuable as output per hour worked 100 years ago (Maddison 1982). In the 1950s, economists attributed almost all the change in output per hour worked to technological change (Abramovitz 1956; Kendrick 1956; Solow 1957). Subsequent analysis raised our estimates of the importance of increases in the effective labor force and the effective stock of capital in generating growth in output per worker (Jorgenson, Gollop, and Fraumeni 1987), but technological change has surely been important as well. The raw materials that we use have not changed, but as a result of trial and error, experimentation, refinement, and scientific investigation, the instructions that we follow for combining raw materials have become vastly more sophisticated. One hundred years ago, all we could do to get visual stimulation from iron oxide was to use it as a pigment. Now we put it on plastic tape and use it to make videocassette recordings (pp. S71-2).

He lays out the paper in terms of an argument based on three premises; first, ‘technological change-improvement in the instructions for mixing together raw materials-lies at the heart of economic growth’; second, ‘technological change arises in large part because of intentional actions taken by people who respond

to market incentives'; and, third, 'instructions for working with raw materials are inherently different from other economic goods' (p. S 73). The third premise is the most fundamental and he comments:

Once the cost of creating a new set of instructions has been incurred, the instructions can be used over and over again at no additional cost. Developing new and better instructions is equivalent to incurring a fixed cost. This property is taken to be the defining characteristic of technology (p. S73).

In the rest of the paper Romer develops this model describing, first, how 'incurs fixed design or research and development costs when it creates a new good' and recovers the cost 'by selling the new good for a price that is higher than its constant cost of production' (p. S73). This section includes work on rivalry, excludability and nonconvexities. The next sections 'describes the functional forms that are used to describe the preferences and the technology for the model', 'offers a brief intuitive description of a balanced growth equilibrium for the model', 'formally characterizes the equilibrium', 'describes the welfare properties of the equilibrium' and finally 'discusses the connection implied by the model between trade, research, and growth' (S73).

The paper, as Warsh rightly point out has become a classic. New growth theory became the underlying theory for the OECD's (1996) account of the knowledge economy in the mid-nineties and widely accepted by other development agencies including the World Bank. New growth theory then is one of the underlying theories that provide a technical explanation for the primacy of ideas and how, as Warsh puts it so well, the economics of knowledge has substituted 'people, ideas, and things' for 'land, labor and capital'—the traditional factors of production. I have discussed these ideas and their implications for education at length in my book with Tina Besley entitled *Building Knowledge Cultures: Education and development in the Age of Knowledge Capitalism* (Peters & Besley, 2006) and more recently in *Knowledge Economy, Development and the Future of Higher Education* (Peters, 2007).

We can now return to the concept of the 'creative economy' to see it in a new light and to appreciate the link between it, the primacy of ideas and a more embedded and social perspective of entrepreneurship. It also enables a clear view of how education at all levels is central to the creative economy especially in the combine senses that Howkins, Florida and Leadbeater give to the development of entrepreneurship within networks that make use of the new information and communication technologies. Educational institutions are *the* primary knowledge institutions that provide the conditions for the transmission and development of new ideas. While Howkins takes a radical view and extends the notion of the creative knowledge to the sciences and the arts, indeed to the 'production of ideas', it is worth noting that there is a more commonly restricted definition that focuses on the creative industries surrounding the development of new media including Web2 platforms and technologies. Estimates vary but generally Leadbeater and others suggest that the 'creative industries' are growing at twice the rate of the rest of the economy.

These understandings begin to reprofile accounts about the role of the arts, humanities and the social sciences within the creative economy moving discussion and analysis away from a single focus on STEM and the hard sciences. Increasingly, it seems the arts, humanities and the social sciences have a crucial role to play in the generation of new ideas even if it is still not clear what paths should be taken in the redesign of institutional environments to capitalize on ideas and move from creativity per se to systems of innovation. On this question—the design of 'creative institutions'-- we are still at an early stage. Clearly, such creative institutions deviated from industrial models and from industrial work patterns. For instance, when Berglind Ásgeirsdóttir, OECD Deputy Secretary-General summed up 'OECD work on knowledge and the knowledge economy' for the OECD/NSF Conference on "Advancing knowledge and the knowledge economy" in 2005 he advanced four conclusions: Good "economic fundamentals" are important for stimulating the knowledge economy; The development of the knowledge economy is dependent on four main "pillars": innovation, new technologies, human capital and enterprise dynamics; Globalisation is a pervasive factor that affects all the

four pillars of the knowledge economy; and, finally, new social, organisational innovations, and knowledge management practices as well as social capital have to be developed to deepen the benefits of the knowledge economy. It is the last conclusion that concerns us here and it is the one that we know least about; perhaps, the one that is least susceptible to quantification and measurement. Here's what Ásgeirsdóttir says about this question:

The “softer” social and organisational changes are in many cases very important for the development of the knowledge economy. Investments in ICTs or R&D without the management and organisational structures in enterprises that enable productive use of knowledge workers are less productive. These include teamwork, flatter management structures, and stronger employee involvement and they often entail a greater degree of responsibility of individual workers regarding the content of their work. The adoption of work practices and the presence of labor-management institutions tend to facilitate take-up of new technology.

Organisations are increasingly paying attention to their systems of knowledge management to ensure that they are capturing, sharing and using productive knowledge within their organisation to enhance their learning performance. Joint work by Statistics Canada and OECD on knowledge management indicates that knowledge management practices in companies seem to have a far from negligible effect on innovation and other aspects of corporate performance. A survey on knowledge management practices in French companies has shown that whatever the company's size, industry or R&D effort, firms innovate more extensively and file more patents, if they set up knowledge management policies.

Social capital in the form of networking and trust can help realise innovative environments such as Silicon Valley. Trust-based relations facilitate co-operation and are essential for good economic performance and innovation. Trust reduces transaction costs and improves the flow of information, and thus has direct economic effects as well as indirect and wider outcomes. It aids innovation by improving communication flows and the diffusion of knowledge, within and between organisations. The knowledge economy cannot simply be characterised by higher “knowledge intensity” as for example more highly skilled people in the labour force. **Increasingly countries will have to think about how education promotes effective participation in communities of knowledge; and this will include social and moral competences as well as technical ones** (emphasis in the original).

I provide the extensive quotation because this excerpt from his speech highlights something very profound about the knowledge/creative economy. First, clearly it is not possible to encourage ‘creativity’ and innovation in an organizational environment which itself is rigid, heavily hierarchical, and run on top-down management lines. Second, the question of organizational or institutional design is a critical and central aspect of knowledge management practices—that is, how does one design or create open institutional environments that are networked and based on norms of collaboration, reciprocity, trust, interactivity, and sharing. Third, as Ásgeirsdóttir points out so well, the question is a question of education, ‘participation in communities of knowledge’, that includes *social* and *moral* competencies as well as technical ones. Let's encapsulate this insight by saying the creative (and knowledge) economy is unquestionably also an ethical economy—it involves the *cultivation of norms* as part of its own underlying social infrastructure. First, in part, also this question should turn analysis away from the focus on the firm toward a better understanding of knowledge institutions, particularly universities but also research institutes, libraries, museums and galleries, as the primary ideas institutions. Second, in part, the question demands an analysis of networked environments and the new social and cultural ecologies that are emerging within liberal societies at the interface between existing institutions with their norms and values and the transforming capacities of new

technologies. We can gain some purchase on this issue by considering what Yochai Benkler (2006) has called the new paradigm of social production. I prefer the term 'cultural production' for reasons that I outlined in my book with Tina Besley (Peters & Besley, 2006, see especially the section of 'cultural knowledge economy').

The New Paradigm of Cultural Production

Benkler is a professor of law at New York University who had been working in the area of free digital information environments, new social ecologies and the emergence of the intellectual commons for a number of years. His account of how social production transforms markets and freedom, the subtitle of his new book *The Wealth of Networks* (Benkler, 2006) is the most sophisticated theory of the changing liberal political economy. He begins with the assertion that

Information, knowledge, and culture are central to human freedom and human development. How they are produced and exchanged in our society critically affects the way we see the state of the world as it is and might be; who decides these questions; and how we, as societies and polities, come to understand what can and ought to be done (p. 1).

And he indicates that the change brought about by the networked information environment is a deep structural transformation that alters 'very foundations of how liberal markets and liberal democracies have coevolved for almost two centuries' (p. 1). This is a grand claim. These changes, he hypothesizes, permanently alter the way we create and exchange information and construct knowledge and culture. In particular, these changes 'have increased the role of nonmarket and nonproprietary production, both by individuals alone and by cooperative efforts in a wide range of loosely or tightly woven collaborations' (p. 2) thereby creating new freedoms, as he argues,

As a platform for better democratic participation; as a medium to foster a more critical and self-reflective culture; and, in an increasingly information dependent global economy, as a mechanism to achieve improvements in human development everywhere.

But these developments also threaten the old industrial order and pose new legal and ethical issues creating new struggles over the 'institutional ecology of the digital environment' (p. 2). This is the point that we must acknowledge and absorb in relation to design of new institutions, organizations and environments and it is a point, or better a set of arguments about the very constitution of liberal societies in the networked information economy. That is, the rules governing broad areas of telecommunication, copyright and international trade are a set of emerging conventions and norms that can help or hinder the creative economy. The attempt to harness the creative economy and to govern it in terms of a set of laws and values that developed with industrial capitalism goes right to the heart of 'the political values central to a liberal society'. Benkler (2006) describes how decentralized individual action now defines the networked information economy allowing 'an increasing role for nonmarket production in the information and cultural production sector' (p. 3). He argues that this shift

means that these new patterns of production—nonmarket and radically decentralized— will emerge, if permitted, at the core, rather than the periphery of the most advanced economies. It promises to enable social production and exchange to play a much larger role, alongside property- and marketbased production, than they ever have in modern democracies (p. 3).

And he goes further to argue

The removal of the physical constraints on effective information production has made human creativity and the economics of information itself the core structuring facts in the new networked information economy.

Commons-based peer production, it seems, provides a vital new and emergent model that allows for large-scale cooperative endeavors that have expanded beyond open source software platforms ‘into every domain of information and cultural production’ (p. 5).

Benkler arguments are both detailed and complex running across the spectrum of an analysis of the networked information economy including the economics of social production and peer production, through the political economy of property and commons focusing on the new relationship between autonomy, the law and information, the networked public sphere, and policies of freedom and the moment of transformation. I shall now delve into these arguments here. My point really is to illustrate how the discussion of institutional design especially for universities and other knowledge institutions needs to acknowledge the emerging liberal political economy of commons-based peer production which arguably has always had a central role to play in the production of knowledge within the academy.

Academic Entrepreneurship and the Creative Economy

It does not take much initiative now to assemble the pieces of the jig saw in terms of the argument presented in this paper progressively demonstrated through the interconnections between a notion of social entrepreneurship embedded in social networks, the new cultural model of cultural production and the creative economy. The problem is that neoliberal policy making in general has not approached entrepreneurship with much sensitivity for acknowledging the essential differences between the industrial economy and the new networked information economy. Neoliberal political theory and policy insists on the hypothesis and revitalization of *homo economicus* with its controlling and simplifying assumptions of individuality, rationality and self-interest which prevents the recognition of network assumptions, the significance of social capital functions and the notion of how entrepreneurship operates within the new networked environment. *Homo Economicus* versus *homo academicus*: we might say in a theoretical shorthand that the former misunderstands the later—it cannot understand the notion of power nor encapsulate notions of cultural capital, cultural reproduction or academic *habitus* in Bourdieu’s vocabulary. As Berglund and Holmgren (2006) argue the focus on entrepreneurialism in the realm of education seems to be stuck in the functionalist paradigm. As they comment: ‘The fact that all theory is based upon some sort of philosophical assumptions regarding ontology, epistemology and the nature of the human being has not (yet) been received with an extensive discussion in mainstream entrepreneurship research’ (p. 3). They indicate that interest in entrepreneurship education has focused on the ‘university level with an emphasis on business-creation and business start-up and development’ (p. 4) where universities are regarded as ‘engines of economic growth’. They maintain that entrepreneurship is becoming institutionalized and they provide a useful review and critique of entrepreneurship education in the Nordic context focusing on Sweden.

Florida et al (2006) have examined the university and the creative economy noting,

Most who have commented on the university’s role in the economy believe the key lies in increasing its ability to transfer research to industry, generate new inventions and patents, and spin-off its technology in the form of startup companies. As such, there has been a movement in the U.S. and around the world to make universities ‘engines of innovation,’ and to enhance their ability to commercialize their research. Universities have largely bought into this view, both because it makes their work more economically relevant and as a way to bolster their budgets. Unfortunately, not only does this view oversell the immediately commercial function of the university; it also misses the deeper and more fundamental contributions made by the university to innovation, the larger economy, and society as a whole (p. 1).

Analyzing all metropolitan regions in the US they examine the role of the university in terms of technology, talent and tolerance, suggesting that the role of the university encompasses much more than the simple

generation of technology and that ‘In order to be an effective contributor to regional creativity, innovation and economic growth, the university must be integrated into the region’s broader creative ecosystem’ (p. 35). This realization is not a bad start for understanding academic entrepreneurship but it only goes part of the way to recognizing how functional and instrumental accounts of entrepreneurship based on outdated notions of *homo economicus* prevent an understanding of the new policy realities, of the changed social conditions of the networked university, and of the constraining organizational forms of the industrial university that treats it in the same way as the firm or a factory. We need to creatively revisit ‘creativity’, its historical conceptions and their philosophical underpinnings, as well as becoming more self-aware and critical of academic practices *per se* and the extent to which some institutional practices encourage and harness talent in individuals and in communities while others constrain or prevent it entirely.

Notes

- 1 All references are to Howkin’s (2005) seminar ‘the Creative economy: Knowledge-driven Economic Growth’ delivered at the Asia-Pacific Creative Communities: A Strategy for the 21st Century at http://www.unescobkk.org/fileadmin/user_upload/culture/Cultural_Industries/presentations/Session_Two_-_John_Howkins.pdf
- 2 See, for instance, The Memphis Manifesto at <http://www.creativeclass.org/acrobat/manifesto.pdf> that outlines ten principles of creativity: 1. Cultivate and reward creativity; 2. Invest in the creative ecosystem; 3. Embrace diversity; 4. Nurture the creatives; 5. Value risk-taking; 6. Be authentic; 7. Invest in and build on quality of place; 8. Remove barriers to creativity; 9. Take responsibility for change; 10. Ensure that every person, especially children, has the right to creativity (the condensed form).
- 3 Paul Samuelson, James Tobin, Robert L. Heilbroner, Abram Bergson and Lloyd A Metzler were among his students and Paul Sweezy and John Kenneth Galbraith were among his colleagues.
- 4 For the English version see <http://socserv2.socsci.mcmaster.ca/~econ/ugcm/3ll3/cantillon/essay1.txt>.
- 5 Endogenous growth means growth within a system normally the national economy and it arises to account for the spectacular growth that resulted by the traditional industrial economy over the last one hundred years. Technological growth seemed to provide a reasonable explanation. Romer (1990: S71) demonstrates that the output per hour worked in the US is ten times more valuable than it was a hundred years ago. Most of the growth is to be accounted for by technological change and development and other reasons such as human capital are themselves arguably the product of new education technologies.

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