

Creative universities and their creative city-regions

James Powell

Abstract: *Salford University led and coordinated a thematic network known as C⁵U, which involved a consortium of seven European universities. This was part of a European University Association (EUA)/Socrates programme of work known as 'Creativity in Higher Education'. The aim was to understand how universities were increasingly seeking to be creative in their relationships with their cities and regions. The consortium identified how universities had contributed to, and benefited from, the creativity of their city-region for socially inclusive wealth creation. Success occurs when both the university and their partners have a high commitment to working together through creative leadership, and through the implementation of 'virtuous knowledge sharing' – a two-way, deep and iterative discussion, rather than the traditional one-way technology transfer typical in university reach-out. As a result of their deliberations, the C⁵U partners have suggested a new model for those engaged universities wishing to embrace their creative city-regions to the full – styled as 'Universities for Modern Renaissance'. The characteristics of such universities are discussed in some detail in the paper.*

Keywords: *creativity; modern renaissance; knowledge-sharing; quality enhancement; C⁵U*

Eng Ing Professor James Powell, OBE, DSc, is Pro-Vice-Chancellor for Enterprise and Regional Affairs, University of Salford, Executive Group, Room 107, The Old Fire Station, Salford, Greater Manchester M5 4WT, UK. Tel: +44 161 295 5464. Fax: +44 161 295 3862. E-mail: j.a.powell@salford.ac.uk. This paper is written on the basis of studies by Creative 5 Universities (C⁵U).

As part of its membership activities, in 2007 the European University Association (EUA) launched a project entitled 'Creativity in Higher Education' with support from the European Commission in the framework of the Socrates Programme. In this context, Salford University led and coordinated one of four EUA programmes of work with a consortium of seven European Universities known as C⁵U. The other six institutions involved were: the Central European University, Budapest; the Warsaw University of Technology; the University of Stavanger; Istanbul Technical University; the Central Saint Martins College of Art and Design, London; and Luhansk Taras

Schevcehko National Pedagogical University, Ukraine. The consortium agreed to explore how creativity was defined and improved with respect to universities' relationships with their creative cities and regions. This theme was proposed by the EUA in the belief that, by and large, knowledge production is concentrated in cities and that most knowledge-creative regions are anchored around a city and its environs.

The literature review carried out by C⁵U indicated that the study should focus on the following key aspects of university creativity: each university's ethos; the role of its talented staff; its governance structures; and its creative relationship with its city-region – in short the

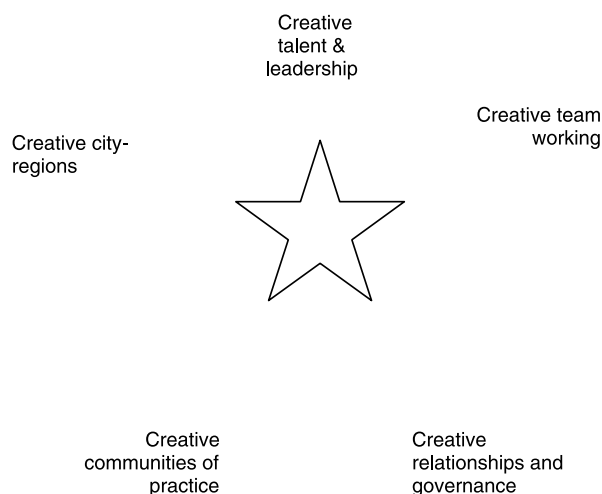


Figure 1. Key aspects of the Constellation of Creative 5 Universities.

universities’ creative leadership, creative team working and governance for co-production. These key aspects are also shown slightly differently as five headings in Figure 1 and are discussed at length later. They were also used in simplified form to name our consortium ‘C⁵U’ and as the basis for our logo. The headings relate to the *five aspects of creative universities*: (i) the differently talented *creative academic leaders*, working in (ii) *creative academic teams*, wishing to develop (iii) *creative, open and flexible relationships for co-production* from universities showing enterprising, flexible and supportive governance with (iv) *creative communities of professional enterprising practice* in their (v) *creative city-regions*.

The ‘coincidence of purpose’ of the members of the C⁵U consortium was clear from the start of the exploration. They quickly understood the needs and demands of all relevant university parties and their external stakeholders and, as a result, generic recommendations soon clearly revealed themselves. The consortium also easily agreed its methodology, working practices, scope and structure and the content of the institutional reports which each partner was to develop, with associated case studies, and which were to form the coherent base for the consortium’s recommendations. This paper is an extract from the fuller report (see <http://www.ae.salford.ac.uk/JamesPowell/forum/information.php>). It also presents the key findings and offers a tentative theory on how to develop and improve the relationships between universities and their city-regions.

Further context for the study

Many, especially and including the EUA, believe that knowledge production is city-based (see, for example,

Florida, 2005; Gertler and Vinodrai, 2004). ‘Creative industries tend to cluster in large cities and regions that offer a variety of economic opportunities, a stimulating environment and amenities for different lifestyles’ (Wu, 2005). In the development of its overarching project, the EUA concluded that ‘regions that are creative are also anchored around a city’ – for example, Silicon Valley and San Francisco. The EUA further wished to understand the ways in which HEIs could gain a good understanding of such creative environments; the types of structures and processes needed to monitor the external environment constructively and the types of activities and practices which foster better university links with this external outreach environment. Finally, it wanted to understand what kind of public policies were needed to foster creativity in the city-regional context and the *role of universities in driving the necessary constructive agendas in achieving success in the global knowledge economy*.¹

Project objectives

In order to provide a firm basis for its more theoretical considerations, the C⁵U consortium agreed to develop its project aims by sharing the *best practices* in creativity of each partner university with respect to the university’s creative relationships with its creative city-region. C⁵U wanted to know precisely:

- how universities promoted creativity and sustainable communities; how the city-region’s cultural and creative environment affected its local university; how universities helped to embed creativity in disadvantaged and disenfranchised groups;
- how universities dealt with aspects of socially inclusive wealth creation; and
- the factors that promoted or hindered creativity outreach to business and the community.

C⁵U used in-depth case material to develop a theory on which better relationships between universities and the creative city-regions could be built.

Project methodology

The C⁵U approach was simply to collate and review as broad a range of case materials as time would permit showing best practice relationships between C⁵U creative universities and their creative city-regions. The consortium found that *context* and *capability* were key factors in this respect. The central part of the methodology was best practice case material developed by each partner, to a fair degree of detail, against a

thematic template agreed by all in the partnership. These cases (not shown here due to space constraints) were edited, evaluated and validated collectively using the interactive capability of the consortium's Website. This process revealed compelling and exemplary cases that showed the creativity and distinctiveness of each university partner. Five or six such short case studies were undertaken by each institutional review to show the nature, breadth and scale of the university's offerings in creative outreach to its city-region. These case write-ups give a broad-brush summary of key projects, including information on initial motivation, relevant processes and internal and external impacts.

Also, one in-depth case study was developed by each C⁵U partner, giving a comprehensive understanding of the cost-effectiveness of a major example of the university's best practice. C⁵U's final comprehensive report reveals why the approach of each partner university was particularly creative, and what had led each institution to help its creative city-region in the way it had chosen.²

Early explorations of the cases quickly revealed the main attributes in creating high quality and cost-effective higher academic enterprise.³ In this respect, 'one size did not fit all'. It was therefore agreed that C⁵U's ambition would be to portray 'excellence in the creative diversity' of university outreach to the city-region's businesses and broader community. The consortium also elicited some generic findings, which are summarized in the next section.

Early findings

Discussion on the meaning of creativity has approached the topic from a range of perspectives. Typically, however, creativity is associated with the attributes of an individual. In the present context, it was important to go beyond the individual and to look, ideally, at creativity in whole academic organizations or at the very least as a large part of their relationships with their city-regions. This became complex when it became apparent that the concept of a city-region itself had a different meaning to each of the consortium's partners. Rather than fudge this issue, or find weasel words to circumvent it, the consortium accepted that the study should reflect the diversity in the kinds of creativity each member university had shown and in the kinds of partnerships formed. Unique solutions were required to cope with unique, complex and often uncertain problems in a creative way, and the universities in the consortium had each been enterprising in very different ways to achieve their successful outreach. The key findings from C⁵U's early explorations are set out below.

Summation of the creativity star

The five aspects of the creativity star portrayed in Figure 1, and developed through our theoretical explorations, were seen as critical in the portfolio of cases studied by the consortium. As a result, five areas of exploration were used to develop criteria against which to evaluate the quality of all creative university relationships with creative city-regions. Furthermore, an important overarching characteristic, linked closely to the creativity star in the context of the city-region, was the ability of a university to redefine its own role, its own limits and its own character. Mature universities have the capacity of defining and redefining the city-region itself and their relationship with it as they play their part in developing success and sustainability. The consortium further believes that it is equally important to inculcate creativity in areas where it was not presently considered – as in more commercially-driven developments.

Bearing all this in mind, the result of the consortium's deliberations on necessary and sufficient definitions for the five key elements is presented below, starting with the underlying requirement for talented and creative individuals to be developed in universities.

Creative talent and leadership. By the nature of their career development and their chosen ways of working, academics have the creative talent and imaginative potential necessary to enable successful and sustainable joint enterprise for the knowledge economy. These skills and capabilities are based on in-depth research explorations in their disciplines and their willingness to act with independence of mind – testing new conjectures thoroughly and undertaking formative evaluation until the conjectures are either confirmed or refuted. However, in the context of engagement with external stakeholders, many academics need to 'reposition' their evidence and reasoning so that their foresight, advice or service can enable realistic change and thus be meaningful to others.

Furthermore, the corporate and strategic leaders of universities have also had to become more enterprising and creative with regard to outreach and specifically with regard to how they allow their staff to share knowledge creatively with the businesses and the community in their city-regions. Senior academics clearly have to establish an appropriate vision, with enabling implementation, to permit higher academic enterprise in any creative city-region and beyond. Creative project teams also have to have creative leadership. Similarly, the team leaders of individual academic engagement projects need to be able to evaluate the status of the project at any given time, to

ascertain how well it is progressing and what could be improved.

University Partnership for Benchmarking Enterprise and associated Technologies (UPBEAT), led by Salford University

The original focus of UPBEAT was to develop an open and flexible governance approach which would support Salford University academics in building the necessary capability to improve their creative partnering with local business and the community. It is based on the notion that academics must learn new skills if they are to have a sustainable impact in the 'real world' of their city-region. Extensive R&D revealed the need to develop four underlying human characteristics in this respect: foresight-enabling skill, focused individual performance, social networking intelligence and academic business acumen. The success of the approach led eleven European universities to work together in a growing common city of practice to improve local enterprise team working and relationships with their own city-regions. Supported by the Higher Education Funding Council of England, UPBEAT is now working with a further 20 universities to develop academic talent and creative leadership to drive improved higher academic enterprise in the UK. See <http://www.upbeat.eu.com/>.

Creative team-working. Most higher academic enterprise projects, especially those occurring in the global knowledge economy, can now be solved only by creative teams, rather than individuals. And these teams need to work with the right strategic partnerships, in a transdisciplinary way, so that they can respond to real-world problems and needs. Universities must therefore enhance the team-working skills of its academics, so that they work effectively with others in pursuit of common goals. In the past, many university projects have been run by a lone academic or researcher, but for today's real-world problems there must be some degree of networking, and preferably support at a higher level, if universities are to provide a good product or service. The response to this requirement may take the form of a project team whose members work and develop together, improving their team-working as well as their cross-functional skills, and/or it may be necessary to access additional skills outside the institution.

Creative relationships and governance. Crucial to the development of high-quality academic engagement with external partners are the governance structures adopted by a university. These should be designed to enable academics and support staff to become more effective, enterprising and creative in their outreach to business

What kinds of teams can lead to creative relationships between universities and their city-regions?

- *Teams that work together in selected higher academic enterprise projects which all partners feel to be worthwhile, delivering superior value to their clients, sponsors and/or the marketplace.*
- *Teams with key members who can contribute to ongoing aspects of the design, analysis, synthesis, implementation, operation and, where appropriate, cultural change of any new product or process.*
- *Teams that will maintain competitiveness by offering ever-increasing value for money.*
- *Teams that either make sound and predictable margins for commercial developments and 'balance the books financially' or yield other rewards in terms of socially-inclusive wealth creation for community enterprises.*
- *Teams that grow together.*
- *Teams that can mobilize resources to suit demand.*

and the wider community. Creative relationships can thrive only if university personnel believe that they can be sufficiently daring in trying out the new without blame, or in the way they are allowed to express their innovativeness. A critical factor is the extent to which the university's governance structure allows them to engage with external stakeholder partners quickly, easily and effectively. The key is to work towards co-creation, discussed later, in which the imagination and reason of academics becomes further empowered through appropriate knowledge sharing with business and community partners.

Creative communities of practice. University academics need to develop 'communities of new professional practice' in close cooperation with their external partners. This will mean that they will have to think in a more business-like way – not so that they become like business people themselves but so they can have a realistic and meaningful conversation within their evolving enterprise partners. Primarily, they need to understand how to identify a *demand* from an external partner, potential customer or client group. After identifying a justifiable need, they then have to understand how to satisfy the project and client demands in a cost-effective way. In this context, the financial side of a project is critical, because many university outreach projects have to be self-funded in the long term and normally receive only pump priming for an early stage. This we call 'academic business acumen' – often a skill that does not come naturally to academics, but one that they need to acquire if they are to be realistic in the development of their enterprise. Thus academics, in any enterprise partnership, need to

adopt more business-like principles to allow for a real return on the investment of their time.

What Business-like Enterprise Principles are needed for a real return on the investment of academic effort?

These were defined by such questions as:

- *How does a project demonstrate it is based on sensible business principles? (Even community enterprise has to 'wash its face' financially in the context of higher academic enterprise.)*
- *Is there a problem worthy of a higher academic enterprise development, and what are the primary motivations for university action?*
- *Can scientific interest and the desire to respond to real-world needs and demands both be satisfied at the same time?*
- *How has demand, as well as need, been identified?*
- *Or can a demand be created? (Clearly, for a community enterprise the demand for a service must be sustainable, as for any other enterprise.)*
- *What new products and services are being provided to meet demand and how can academic expertise enable the further development of such products and services?*

Creative city-regions. It is not only the academic community that needs to be creative in its outreach leadership and governance. The city-region has to permit, support and encourage creative change and, ideally, act as a driver for it. This relates to the panoply of processes affecting the university, including local policies, funding arrangements and support mechanisms, which need to be oriented towards constructive and creative change. The city-region also has to work closely with its local university or universities so that appropriate agendas for future working are agreed collaboratively and so that co-creation can occur between the institutions and appropriate external partners.

Creative city-regions, according to the C⁵U consortium, are those that strive continuously to remake themselves 'fit for purpose' in the global knowledge economy, so sustaining a wealth-creating future for all their citizens by tapping into the leading-edge creativity of their universities. Such progressive city-regions provide appropriate creative leadership by developing appropriate policies, governance structures and implementation procedures that empower citizens and organizations to act as creative teams. In a harmonious environment for work, rest and play, everyone can act creatively for the benefit of all. Typically, such city-regions have recognized the need to involve universities, not only as suppliers but also to help set foresight agendas to keep everyone at the leading edge

of knowledge, thereby enabling the city-region to flourish.

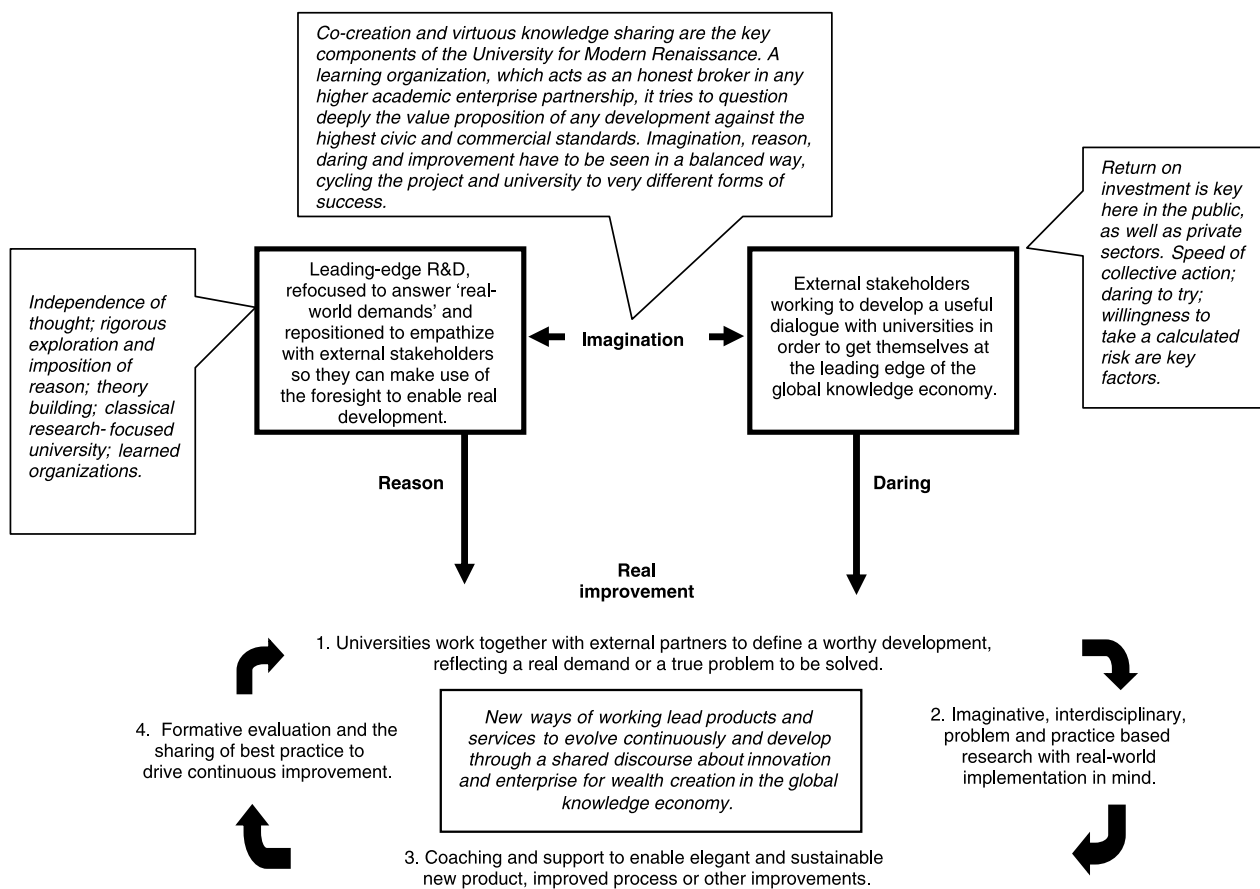
Summary of a Best Practice Case.

The creation of the University of Stavanger (UiS) is a good example of how a city-region can participate in creating a higher education institution and involve it in the development of a creative city-region. UiS was Norway's fifth university and was established in close collaboration with the city and the region. Local public and private institutions and enterprises needed skilled labour and high-level research to create economic, social and cultural value. The regional members of parliament played an important role in changing the national policy on higher education, making it possible for HEIs to be accredited as universities. The city and the region gave substantial financial support to help build UiS, especially with regard to the development of research programmes and centres and establishing doctoral training programmes. UiS offers many study programmes and carries out a number of research projects in close collaboration with its city-region. Members of the external community participate in university steering or reference committees and in monitoring the quality of research projects and programmes.

Co-creation and virtuous knowledge sharing

Co-creation and virtuous knowledge sharing form a *critical* basis for improving relations between creative universities and the businesses and communities in their creative city-regions. All institutional reports by the consortium's members have highlighted the importance, for successful and creative higher academic enterprise, of two-way, iterative relationships and the development of a joint university-business/community enterprise. Such an approach leads to the co-creation of new developments by the university in close partnership with its external partners and *vice versa*.

At present, with respect to the growing relationships between universities and city-regional businesses or communities, there is a great deal of emphasis on the conventional transfer of scientific inventions and discoveries into hard technology and product innovation. This transfer is clearly aimed at improving wealth creation (spin-outs, etc) and enhancing business competitiveness as part of the growth of the knowledge economy. These are laudable aims and are quite rightly being addressed by all the partners. But the expertise of other than the scientific, engineering and technological disciplines – other aspects of university creativity and innovation – are also very relevant to the economy and society. With this in mind, the consortium questioned whether co-creation with external stakeholders and



4. Formative evaluation and the sharing of best practice to drive continuous improvement.

3. Coaching and support to enable elegant and sustainable new product, improved process or other improvements.

Figure 2. Virtuous knowledge sharing cycle.

virtuous knowledge sharing were processes that could truly enable universities to play a more effective role in the context of higher academic enterprise.

In light of its analysis, the consortium tentatively proposes a new paradigm for co-creation which reflects the contribution of higher education to the economy and society. The paradigm is based on two principal arguments, both founded on the best practices emerging from the member universities' relationships with their own creative city-regions. According to the first argument, the potential contribution that universities can make is much more wide-ranging and far-reaching than is currently acknowledged in European outreach policies, funding instruments and support practices. The second and more important argument is that knowledge production is a sharing process. The insights of academics combined with those of practitioners will lead to knowledge sharing and a knowledge interchange that will bring mutual benefits. This perspective recognizes the obligation of higher education to the broader society, and takes into account the fact that knowledge is created in many social and economic practices outside HEIs.

There is, therefore, a new paradigm of understanding and action that governments could champion and that their policies reflect. *Engagement with society in general*, not knowledge transfer, should be the paradigm of higher academic enterprise. 'Engagement with society' implies a genuine interchange while 'knowledge transfer' implies a one-way movement of knowledge from academe to business and the other professional worlds. It is through genuine and sustained engagement with all its external partners that a university can make its own contribution to knowledge production. It follows that the production and transfer of knowledge should be seen as iterative rather than linear processes, and that practical and theoretical knowledge are subsets of 'knowledge' as a whole. This can be best understood through what Powell refers to as the 'virtuous knowledge sharing cycle' (Powell, 2003), illustrated as Figure 2.

The starting point for any workable co-creating relationship between a university and its external partners is the strengths that each side brings to the relationship. Traditionally, higher education provides

the space and independence to ‘think the unthinkable’, to test ideas rigorously, to turn imagination into sustainable theory. Sometimes these aspects of university life are portrayed as ivory tower thinking, but they provide essential critical distance. On the other hand, time is crucial in business, industry and the community; they already have the motivation to be daring and they need to confirm the possible rather than agonize over the unlikely – the ‘quick and dirty’ approach. However, both sides now need each other to develop innovative and cost-effective technologies, products and processes. In the global knowledge economy, co-creation is indispensable to sustainable success.

C⁵U’s findings, together with those of a complementary study by the UPBEAT consortia, indicate that successful higher academic enterprise occurs mainly through co-creation, in which new paths, technologies, solutions, products or services are supplied to satisfy real client/user needs and are then properly applied to meet real business demands. This usually means that the university is providing a wide range of support and coaching, with similar reverse coaching by the eventual end client, sponsor, user or customer. As the Council for Industry and Higher Education (2004) says, ‘this is what creates and sustains economic and social growth’.

The current C⁵U partners believe that other institutions which embrace the above approach will have no difficulty in accepting the values and knowledge found in the C⁵U institutions – and this applies even to other types of higher education institutions offering only vocational and professional education. ‘Knowledge sharing’ should be a key process with respect to the validation of university programmes with professional bodies, sectoral bodies, employers’ organizations, etc. The same could be said about research. The distinction, therefore, is not between research institutions and teaching institutions but between engaged institutions and unengaged institutions.

‘Universities for Modern Renaissance’

During their discussions, the C⁵U partners suggested a new model for engaged universities wishing to fully embrace their creative city-regions – styled as ‘Universities for Modern Renaissance’. The following were identified as important guiding questions in helping the partners clarify and define this new model:

- How can universities best understand that third-stream income is more than just another source

of income and realize the idea of creative outreach to business and community in their city-regions?

- Should some universities focus on higher academic enterprise rather than, or as well as, simply being classical or pedagogical institutions?
- Should universities stop limiting themselves to the traditional role of pursuing basic research, long-term blue sky research, teaching and learning, and seek more medium-term relevance to business and society?
- Moreover, should universities not show that there is complementarity between business relevance and basic research?

An affirmative discussion of these questions by the C⁵U partners led to the formulation of the new model for the role of the university. This model requires more than an opening up of the university to the idea of innovation and a contribution to knowledge production and intellectual property creation. It demands a reaching out to a wider set of actors in the public interest of mutual development in the global knowledge economy. C⁵U believes that all ‘enterprising universities’ that wish to engage properly in the global knowledge economy should help to create a *modern renaissance for our city-regions*. A major focus of the consortium’s work was therefore to examine whether the guiding principles behind the ‘Universities for Modern Renaissance’ model could be defined and justified for all those universities that seek creative engagement with their creative city-regions. Table 1 presents the basic arguments in support of these issues in comparison with what occurred in the old Renaissance. In the view of C⁵U, the University for Modern Renaissance (UMR) is, and should continue to be, animated by a deep belief that theory can be made relevant for practice and that practice is relevant for theory. Its pursuit of knowledge is thus characterized by a combining of the reflective distance necessary for finding new paths with a quest to engage in dialogue with the world and identify and solve current and future problems through enhanced understanding and systematization. The UMR shares with the Renaissance itself a belief that human possibilities stretch far beyond their current realization and seeks to explore ways in which knowledge can help to realize human potential more fully for the good of all. It is thus not just an institution of reflective scholarship but also a social actor, since it seeks new solutions and practices in response to social, political and economic inadequacies.

Quality in creativity

In her seminal work on how the social environment can influence the level and frequency of creative behaviour,

Table 1. Essential characteristics of the old and new Renaissances.

The Classical Renaissance

Individualized elitism, with the institution of the university not at the centre of the revival (the concept of the university was still being developed, but tended to concentrate on religion and humanities).

Small part of society involved (growing, but aspiring to grow further).

Inspirational.

Natural sciences are not centrally important (they decline after an early rise in the 13th century and before their resurgence in the 17th century. However, Da Vinci begins to ask new questions.

Concept of 'knowledge' refers to a common canonical body of knowledge, common sources, the dream of a commonly-held world view. This combines with the growing importance of trade and the resulting knowledge transmission.

In Europe one religion is reviewed, adapted and upheld as the ultimate reference frame – a single cultural, intellectual and religious order which highlights the relationship between man and God.

Individual polymaths across arts, science and letters.

The individual as the central motor of innovation and the heart of creativity.

The dream of human potential is far greater than its realization.

The idea of a new relevance for classical knowledge, as the human values and concepts of antiquity are applied to 15th and 16th century urban society.

A new thrust of theory into practice, the will to link theoretical scholarship with urban (political and economic) practice.

The rise of creative arts.

Rise of engineering, innovation important for urban economic and social welfare.

New heightened status of scholar or artist (eating at the table of nobility).

The beginning of a necessary understanding and the need to portray properly the relationship between human endeavour, the planet, and art and design.

Business and entrepreneurship sponsoring high art and design.

Funded by wealthy families and religious orders.

The realization that the earth is spherical and rotates around the sun.

The New Renaissance

Socially inclusive agendas, in which the university has become a central actor and initiator of knowledge society activities. Collective elitism, in which universities are seen to have a real role in engaging with business and the community for the common good.

Large part of society to be engaged, aspiring to reach as many individuals as possible in the knowledge society.

Aspirational.

Natural sciences are of critical importance and have high visibility, strongly linked to social, environmental, economic and artistic social prowess.

Diversified sources of information (defying the creation of a common body of knowledge), so that systematizing knowledge becomes increasingly difficult and growing specialization creates different knowledge cultures and 'niches' – mass customization. *Systemic* awareness for all (that is, understanding one's own position in the system).

A modernist culture which respects the dignity of difference: living with the irreducible differences between religions, cultures and ideologies. A covenant of collective development through global conversation with a focus on human nature, technical activity and necessary solutions.

Pluralism – the liberation of knowledge production, including but going beyond institutions. Liberation of the individual, rebirth in ownership, living with diversity. Specialists work together across disciplinary boundaries.

Talented individuals co-create in teams as central motors of innovation and the heart of creativity.

The dream of human potential begins to be within the scope of what is realizable.

The idea of a new relevance for all formal university knowledge, which increases its scope by closer working relationships with business and the community – new discourse and frames of reference.

A new thrust of theory into practice, the will to link scientific theories with urban (political and economic) practice.

Enhancement of quality and scope of creative arts?

Rise of the importance of innovation importance for urban economic and social welfare, proliferation/embedding of engineering know-how in all domains of daily life.

New status of the knowledge worker (university professors, researchers, experts).

Sustainability, being a good environmental, social and economic citizen, current generation seen as guardians of the world's natural resources for the good of future generations.

The role of economic growth (the 'Third Way') is to drive beneficial development for all.

Multiple funding from state and private sources.

The realization that humans can disrupt weather patterns and that the earth is a self-correcting organism that eliminates species which negatively affect life on the planet.

Teresa Amabile (1983) attempts to supplement the traditional focus on the individual in creativity research with organizational factors that allow individuals to maximize their creative potential. In a componential model of creativity she distinguishes three broad organizational factors:

- *Organizational encouragement of creativity.* This relates to a basic orientation of the organization towards innovation and organizational support for creativity and innovation.
- *Resources.* Resources can play an important role not only in terms of practical limitations but also with respect to inspiring belief in the intrinsic value of the projects undertaken.
- *Management practices.* This refers to the granting of freedom or autonomy in the conduct of work, the provision of challenging work, and the clear specification of overall strategic goals.

These organizational factors are indicative of the extent to which formative and properly supportive systems can serve to help creative processes, with respect both to individuals' intrinsic motivations and to the workings of groups and whole organizations. This approach goes against the way 'quality' has typically been handled in the past in university developments, with the tendency to define it in terms of 'adherence to specification'. This is the classical 'zero defects' idea which, in the 1960s, came to mean 'fitness for purpose' – a more deterministic notion. At first, this was further seen to mean fitness in or for the function, and later as contribution to the process. Today, some university quality systems have moved beyond the limitations imposed by such conventional quality assurance and towards quality development and quality enhancement. These enhancement systems do not focus only on 'adherence to specification' and 'fitness for purpose', but also take into account more recent ideas of what constitutes quality, such as the ability to achieve purpose or mission when the purpose varies between different stakeholders, between different environments, and with time. In this relativist approach, quality may consist of a multitude of aspects, the number and relative importance of which vary according to place, time and viewpoint.

Following this development in the conception of quality itself, quality systems must change from pure assurance to more complex systems, in which quality assurance is still taken into account but quality development and quality enhancement are equally or even more important. In short, quality systems to support creativity in universities need to move from 'checking' procedures, which confirm whether or not agreed outputs, outcome, standards and levels of

activity have been reached, to formative evaluations in which those developing creative higher academic enterprise are continuously challenging themselves to be more creative and effective in how they work and in stage-managing innovations into the world of practice. This should be a continuously developing challenge both for project leaders and for their creative teams.

Conceptual framework

To build on these discussions and provide greater contextual support for the above arguments, C⁵U conducted a comprehensive literature survey on the topic of creativity. Its findings are summarized below.

Definition of key concepts

Creativity is the mental process by which new ideas, concepts, theories and processes are developed. Ideas become concrete through a discovery or finding – the invention – and evolve into innovations when they are implemented and have a measurable social or economic impact (see, for example, Branscomb and Auerswald, 2002).

The starting assumption of this project was that creativity is enhanced by specific institutional and environmental preconditions. The literature on creativity reveals that these preconditions include the following (see, for example, Tepper, 2004; Wu, 2005):

- team work and collaborative circles which are reconfigured over time;
- cross-cultural exchange grounded in social and cultural diversity;
- transdisciplinary and interdisciplinary approaches;
- the availability of time and resources (including funding, effective resource management structures and processes);
- a risk-taking culture that tolerates and even encourages failure;
- appropriate public policy (see, for example, funding, infrastructure and legal frameworks); and
- a social and economic environment characterized by a well-educated population and a density of interactions across a wide range of specialized 'knowledge workers'.

The creative and innovative organization enhances these characteristics through specific processes and structures at different levels and in different spheres. The different levels include the institutional leadership and the individuals and groups that compose it. The different spheres are: the internal organization, or the institutional structures and cultures, and the external environment, including the stakeholders and the general socio-economic environment as well as the financial and

legal preconditions that promote or discourage creativity, innovation and invention.

External environment

According to Richard Florida (2004, 2005), the key to creativity lies in a formula that includes three 'T's: technology, talent and tolerance. If this assumption is correct, then HEIs are central to a region's creative capital since they supply at least two (talent and tolerance) if not all of the three Ts. These preconditions, however, are not sufficient. Legal frameworks, banking structures, the availability of venture capital, and so on, are also essential for bringing products to market.

Partnerships with stakeholders

HEIs affect their external environment as much as the external environment affects the operation of HEIs. A dense, creative regional cluster combined with sustained dialogue between HEIs and external stakeholders will boost HEIs' creativity and ensure that innovations respond to stakeholders' needs (see, for example, Rabinow, 1999, pp 24–26; Scott, 2000; Wu, 2005).

Structure, individuals, groups and leaders

Burton Clark (2004) stresses that, to sustain change, HEIs must rely in the first instance on administrative staff (who tend to be less change-averse than academic staff), intertwine academic and administrative staff at all levels, ensure that change becomes a collective phenomenon across all work groups, and promote a shared understanding that academic values are the foundation of all activities, whether academic or managerial. Further, in terms of staffing, there are three levels relevant to creativity within an institution: the individual, the group and leadership.

Obviously, creativity is linked to creative individuals, but it also results from interaction among individuals. The organizational structure of an HEI can enhance or impede creativity, depending on how it organizes and reorganizes its teams and units and the extent to which group members are encouraged to work together and seek new partners.

Leadership has a special role to play in enhancing creativity by developing a supportive work environment and a culture of creativity. It is the special duty of leadership to provide optimal conditions by hiring creative staff members and inspiring them, creating an open work environment and supportive structures, promoting a culture of creativity and initiating contacts with stakeholders and the community.

Leaders can promote such a strategy by communicating clearly the institution's intent, and developing clear incentive and reward systems, as well as administrative support and financial risk

management. Leaders also need to model the behaviour they wish to promote. They can assist in bringing together creative individuals and groups and in facilitating and promoting creative work.

Culture

Developing the appropriate infrastructure is essential to the promotion of creativity, but these efforts may be laid to waste if the culture of the organization is not changed (Birley, 2002). The culture of an organization affects the creativity of its members. In particular, a culture that encourages risk-taking and accepts failure will encourage its members to be creative and innovative (see, for example, Markoff, 2005; Walcott 2002).

Further context for the study of creative cities and regions

Many, especially and including the EUA, believe that knowledge production is city-based (see, for example, Florida, 2004, 2005; Gertler and Vinodrai, 2004).

'Creative industries tend to cluster in large cities and regions that offer a variety of economic opportunities, a stimulating environment and amenities for different lifestyles,' argues Wu (2005). In its development of the overall project discussed in this paper, the EUA concluded that 'regions that are creative are also anchored around a city', and so it established this thematic network to examine best practices in two areas:

- The missions of higher education, including the creation of social and intellectual environments that are open to dialogue and debate about creative wealth creation and that are also accessible to many different social groups. How can HEIs gain a good understanding of the nature of these environments? What types of structures and processes are needed to monitor the external environment? What types of activities and practices will foster better links with the external environment?
- The urban and regional policy initiatives that engender and empower constructive development, which can be identified through an analysis of the role of municipal government in: education; developing financial support systems for innovation; and offering good services with respect to infrastructure (such as energy and telecommunications), planning, building permits and public administration.

The EUA wanted to understand what kind of public policy was needed to foster creativity and what was the role of universities in driving the necessary agendas to achieve success in the global knowledge economy. It therefore also initiated three other complementary thematic networks to obtain a rounded view of creativity

in higher education. The focus of each of these networks is summarized below.

Creative Partnerships: HEIs and External Stakeholders.

This network focused on the ways in which HEIs could improve their creative potential and innovative output by involving stakeholder groups in the creative development process of products and services. It explored the development of creative lifelong learning provision, research partnerships with industry and the impact of cultural activities on the creativity of local communities. The literature on creativity in the business world identifies partnership with customers and external stakeholders as an important characteristic of creative and innovative business organizations. Sustained dialogue with end users helps these organizations to improve their products and services by adjusting them to the needs and desires of their customers and creating innovative products and services. This network explored the development of creative lifelong learning provision, research partnerships with industry and the impact of cultural activities on the creativity of local communities as well as how to promote core academic values.

Creative Learners: Innovation in Teaching and Learning. This network investigated how creativity could be fostered through the teaching process, by focusing on two core assumptions:

- Effective teaching is determined by the engagement of learners. If learning is seen as a 'joint proposition' between teachers and learners (Davis and Murrell, 1993, p 5), what are the best practices in encouraging students' engagement in educational activities in and outside the classroom? Key factors include the availability and quality of academic staff and learning resources, specific curricula and assessment practices that encourage creativity, and extra-curricular activities and events that promote engagement in the HEI community (Coates, 2005).
- Effective teaching also includes the development of creative thinking skills, problem solving ability and behaviour that encourages 'out-of-the-box' thinking. Such approaches develop curiosity, risk-taking, tolerance for ambiguity and openness and promote the application of both imagination and judgement throughout the process of problem identification and solution finding. What are the best practices in developing these skills? In particular, is there value in including research training in undergraduate education and, if so, how should this be done?

Creative HEIs: Structures and Leadership. This network focused on the internal environment of HEIs

and the factors that boost creativity, particularly with regard to those issues that bear directly on academic enterprise, such as internal structures, leadership and group dynamics. This theme suggests that creativity is not just a function of a suitable work environment and creative people. Leadership can help or hinder the creative work of employees. The network discussed how HEI leaders could promote creativity and develop a creative culture in their institution:

- Leaders can establish a culture that encourages imagination. Such leaders need to demonstrate an attitude that encourages creative thinking and allows for creative problem solving. They also need to create conditions that will motivate others to follow suit. Which leadership styles support the creative potential of employees? How do HEI leaders support a culture of creativity?
- How can leaders set structures for creative work groups? How can an HEI develop and implement an innovation strategy? For example, what are the requirements in terms of internal and external communication and the collection and analysis of institutional and environmental data?

This present network has also considered possibilities for structural change in HEIs which could improve their creative and innovative potential. Furthermore, it is identifying good practices in sustaining a creative work environment, including how HEI leaders can promote creativity and develop a creative culture in their institutions.

Conclusion

We believe that the C⁵U findings on creative higher academic enterprise with respect to outreach to creative city-regions provides universities with generic models and approaches for working differently and more appropriately. Readers are encouraged to consult the fuller report of the consortium.⁴

The generic models of best practice – 'virtuous knowledge sharing' and the Universities for Modern Renaissance – are not new and were not invented by C⁵U, but they are important to the consortium members because they have tried to 'recuperate' relevant models, to make them explicit, and to explain them in the specific context of creative universities working creatively with their creative city-regions. The findings are based on the real-world experience of the member universities, and of others involved in the creativity discussion. Thus Universities for Modern Renaissance share a core set of values which inspire and direct their actions. This core is what is 'new', and it determines a new characterization of certain universities. It also

determines a new attitude to the actual activities undertaken in those institutions. Universities for Modern Renaissance are breaking away from the prevailing models of higher education. This break from tradition consists in the explicit, programmatic integration of the pursuit of academic excellence with engagement with the outside environment. That engagement is not a by-product of 'real academic work', but rather inspires and nurtures all the university's activities, both traditional and non-traditional. In the age of globalization and the knowledge society, Universities for Modern Renaissance agree that they need to act in new ways to enable socially inclusive wealth co-creation. 'Renaissance' is the appropriate word here because, like the Classical Renaissance, this model of the creative university places the human being at the centre of an active and liberating culture.

Notes

¹This comment is italicized because it was perceived by C⁵U as the most important point in the EUA terms of reference. The importance of the context of a particular example of best practice will mean that it will not necessarily be directly transferable into another context.

²These findings and the summary cases, which also include all aspects of technology/knowledge transfer, knowledge exchange or 'virtuous knowledge sharing' as we prefer to call it, are shown on our Website (www.ae.salford.ac.uk/JamesPowell/forum/information.php).

³'Higher academic enterprise' was the term chosen by C⁵U to represent all outreach activities of universities to their creative city-regions that seek to design, develop, implement and evaluate successful externally facing 'academic opportunities beyond means currently employed or available to the highest academic standard possible reflecting the mission of the university'; the terms 'outreach' or 'reach out' were felt to be too one-way and therefore limiting.

⁴See www.ae.salford.ac.uk/james-powell/resources/uploads/File/Absolutely%20Final%20C5U%20Report.pdf.

References

- Amabile, T. (1983), *The Social Psychology of Creativity*, Springer, New York.
- American Assembly (2004), *The Creative Campus: the Training, Sustaining and Presenting of the Performing Arts in American Higher Education*, Report of the 104th American Assembly, The American Assembly, New York, www.americanassembly.org.
- Barblan, A. (2005), 'Pôles européens de la connaissance: l'université, un lieu pour le développement de régions de la connaissance', speech given at the Université d'été de la Délégation à l'aménagement du territoire (DATAR), Lille, August.
- Birley, S. (2002), 'Universities, academics, and spinout companies: lessons learned from Imperial', *International Journal of Entrepreneurship Education*, Vol 1, No 1, pp 133–153.
- Branscomb, L.M., and Auerswald, P.E. (2002), *Between Invention and Innovation: an Analysis of Funding for Early-Stage Technology Development*, report prepared for the Economic Assessment Office, Advanced Technology Programme, National Institute of Standards and Technology, Gaithersburg, MD.
- Clark, B.R. (2004), *Sustaining Change in Universities: Continuities in Case Studies and Concepts*, Open University Press, Milton Keynes.
- Coates, H. (2005), 'The value of student engagement for higher education quality', *Quality in Higher Education*, Vol 11, No 1, pp 25–36.
- Council for Industry and Higher Education (2004), *Higher Education and the Public Good*, CIHE, SRHE and St George's House Windsor, London.
- Davis, T.M., and Murrell, P.H. (1993), 'Turning teaching into learning: the role of student responsibility in the college experience', *ERIC Clearinghouse on Higher Education*, Washington, DC.
- De Barandère, L. (2002), *Le management des idées: de la créativité à l'innovation*, Dunand, Paris.
- De Vulpian, A. (2004), *À l'écoute des gens ordinaires: comment ils transforment le monde*, Dunod, Paris.
- EUA (2004), *Developing Joint Masters Programmes for Europe: Results of the EUA Joint Masters Project*, European University Association, Brussels, www.eua.be.
- EUA (2005), *Developing an Internal Quality Culture in European Universities: Report on the Quality Culture Project 2003–2003*, European University Association, Brussels, www.eua.be.
- EUA (2005), *Doctoral Programmes for the European Knowledge Society: Final Report*, European University Association, Brussels, www.eua.be.
- Florida, R. (2004), *The Rise of the Creative Class and How It Is Transforming Work, Leisure Community and Everyday Life*, Basic Books, New York.
- Florida, R. (2005), *The Flight of the Creative Class*, HarperCollins, New York.
- Florida, R., and Tingali, I. (2004), *Europe in the Creative Age*, Demos, London.
- Gertler, M.S., and Vinodrai, T. (2004), 'Anchors of creativity: how do public universities create competitive and cohesive communities?', paper presented at Conference on 'Building Excellence: Graduate Education and Research', Toronto, Ontario, 4 December.
- Gibbons, M. (2005), 'Choice and responsibility: innovation in a new context', *Higher Education Management and Policy*, Vol 17, No 1, pp 9–21.
- Goddard, J. (2005), 'Institutional management and engagement with the knowledge society', *Higher Education Management and Policy*, Vol 17, No 1, pp 23–44.
- Hofmann, S. (2005), *10 Years On: Lessons Learned from the Institutional Evaluation Programme*, European University Association, Brussels, www.eua.be.
- Mamou, Y. (2005), 'Pôles de compétitivité: l'exemple américain', *Le Monde*, 6 November.
- Markoff, J. (2005), *What The Doormouse Said: How the 60s Counterculture Shaped the Personal Computer Industry*, Viking Penguin, New York.
- McCarthy, K.F., et al (2005), 'Gifts of the Muse', <http://www.wallacefoundation.org/WF/KnowledgeCenter/KnowledgeTopics/ArtsParticipation/GiftsOfTheMuse.htm>.
- Morin, E. (1999), *Relier les connaissances: le défi du XXI^e siècle*, Seuil, Paris.
- Morin, E. (2000), *Les sept savoirs nécessaires à l'éducation du futur*, Seuil, Paris.
- Pinchot, G., 1985, *Intrapreneuring*, Harper and Row, New York.
- Pinel, J.-P. (2002), 'Malaise dans la transmission: l'université au défi des mutations culturelles contemporaines', *Connexions*, No 78, pp 11–30.
- Powell, J.A. (2003), *UPBEATH – University Partnership for Benchmarking Enterprise and Associated Technologies*, University of Salford Press, Salford.
- Rabinow, P. (1999), *French DNA*, University of Chicago Press, Chicago, IL.
- Reichert, S., and Tauch, C. (2005), *Trends IV: European Universities Implementing Bologna*, European University Association, Brussels, www.eua.be.

- Scott, A.J. (2000), *The Cultural Economy of Cities: Essays on the Geography of Image-Producing Industries*, Sage, London.
- Tepper, S.J. (2004), 'The creative campus: who's No 1?', *Chronicle of Higher Education*, 1 October.
- Walcott, S. (2002), 'Analyzing an innovative environment: San Diego as a bioscience beachhead', *Economic Development Quarterly*, Vol 16, No 2, pp 99–114.
- Weber, L., and Duderstadt, J.J., eds (2004), *Reinventing the Research University*, Economica, London, Paris and Geneva.
- Wedgwood, M. (2003), 'Making engagement work in practice', *The Idea of Engagement: Universities in Society*, Association of Commonwealth Universities, London.
- Wu, W. (2005), 'Dynamic cities and Creative Clusters', World Bank Policy Research Working Paper 3509, World Bank, New York.
- Zemsky, R., Wegner, G.R., and Massy, W.F. (2005), 'Today's colleges must be market smart and mission centered', *Chronicle of Higher Education*, 15 July.