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## Community Engagement as Social Innovation

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# Community engagement as Social Innovation

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## Community Engagement as Social Innovation<sup>1</sup>

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The world needs more social innovation – and so all who aspire to solve the world’s most vexing problems...must shed old patterns of isolation, paternalism, and antagonism and strive to understand, embrace, and leverage cross-sector dynamics to find new ways of creating social value. (Phills Jr, 2008, 43)

### The Changing Global Discourse

In 1992, Francis Fukyama reflected in *The End of History and the Last Man* on the transformative events signified by the collapse of the Berlin Wall. He argued that

What we may be witnessing is not just the end of the Cold War, or the passing of a particular period of post-war history, but the end of history as such: that is, the end point of mankind's ideological evolution and the universalization of Western liberal democracy as the final form of human government.

Although he disputes this interpretation, Fukyama’s (2007) arguments were widely construed as a defense of unregulated market capitalism and American strategic hegemony. Coupled with rampant global economic growth during what became known as the ‘naughties’, there was an almost universal adoption of the view that the cyclical nature of ‘boom and bust’ was now at an end. But that was before September 2008, and the collapse of Lehman Bros. As Eric Hobsbawm has recently stated, ‘the belief that the market will always regulate itself and will help the economy produce socially optimal results or even maximum growth...is as extreme [as the view of]...a totally state-run planned economy in the Soviet systems. Both rightly failed.’ Today Keynesianism is enjoying a rebirth as the pendulum swings, and calls to nationalise the ‘commanding heights of the economy’ are coming not just from the Left.

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Higher education is not immune from this ideological battle. Much has been written about the marketisation of higher education, the need to adopt/adapt commercial business practices to public sector organisations, and the student as consumer or client. Robert Birnbaum's book, *Management Fads in Higher Education*, poked fun at the distinction between management innovation as a 'truly good idea' and a fashion. Discussing the differences between business and higher education, Birnbaum (2000, 215) quoted the view: 'if we could just run our universities as General Motors is managed, most of our educational problems would vanish'. Today this adage may have a different meaning.

There is no doubt it has suited higher education to argue that academic research or knowledge production is critical to economic growth because this has underwritten substantial hikes in public expenditure. Today higher education tops many government policy agendas, and is considered a vital element of the productive economy rather than social expenditure. Yet regardless of governance structure, more demands are being placed on higher education. In return for increased financial support, governments want more accountability regarding student learning; in return for more funding, governments want more income-generation; in return for greater support for research, governments want to identify 'winners'; and in return for valuing HE's contribution to society, governments want measurable outputs.

Has higher education become a victim of its own propaganda? Three different examples:

The rising popularity and obsession with global rankings of universities and the establishment of world-class universities are having positive and perverse effects. They appear to provide a simple way to gauge the talent-catching and knowledge-producing capacity of higher education, and assess value-for-money, especially important in difficult economic circumstances. But, we know that measuring the wrong things can produce distortions – as people react to that which is rewarded/valued. Even in relation to scientific research, rankings can do great damage. They value some disciplines and research more than other work, and distort the focus of research towards that which is more predictable and easily measured. Yet, many HE leaders are as culpable as their policy colleagues in basing their ambitions and strategies on global rankings.

Similarly, the concept that higher education is the 'engine' of the economy rather than an integral part of the education-research-innovation eco-system has reinforced a linear or fordist model of science-push innovation. This has led to the idea that reductions in public funding of higher education could be compensated by commercialization, patents and licensing. But as Mowery et al. (2001) demonstrates only seven US universities had a net return from patenting (that is offsetting the costs incurred in preparing and getting patents), over 90% of the returns were linked to a handful of patents (less than five for most universities) and nearly all these patents were in human life sciences (linked to the pharmaceutical industry). Moreover, as the OECD (2008, 102-103) argues, too much emphasis on IPR may be contrary to public policy because it raises the cost of knowledge to users. The focus should be enabling greater knowledge diffusion through open science.

A recent Irish government announcement is another illustration of the tendency for *magic bullet* solutions. Trinity College Dublin (TCD) and University College Dublin (UCD), the two 'highest ranked' Irish universities, will develop an 'innovation corridor'. They plan to create 300 new businesses and 30,000 jobs, based on an investment of €650m from government, industry and private funding. Using MIT as an exemplar, the proposed €650m will be over 10 years, whereas MIT invested €485m

in 2008 alone. It averages 20-25 HPSU per year. This means that the Irish initiative aims to create 25% more start-ups than MIT with approximately 13% of the investment (Jordan, 2009).

Can the new global economic reality provide the opportunity to move away from hyperbole, and provide the opportunity to reassert a sustainable relationship between higher education and the wider community? In a growing number of countries and regions, higher education, in partnership with city government, business and civic organizations, has formed new social organisations in the realization that successful cities and mega-regions are 'focal points of innovation and creativity' (OKC, 2009). Many cities have now openly embraced the concept of building a 'creative alliance' between specialized clusters of higher education and research institutes interacting with enterprise and civil society, exchanging ideas and personnel, as the best way to attract and retain talent and investment. Rather than cities seeing higher education simply as employers and the latter viewing cities as mere locations, there is a growing realization of mutual benefit and added value.

This paper argues that community engagement – a vital component of HE's third mission – can be a sustainable force of innovation, and provide a model of 'research engagement with society and public engagement with research' (Mulder, 2009).

### **Social Innovation and New Knowledge Production**

For most of the 20<sup>th</sup> century up to today, innovation has been associated with science, engineering and technology despite the fact that many well-known innovations occur through changes in business processes, e.g. Google, UPS, Virgin and Apple. An important exception is made by the creative and cultural industries which have managed in recent years to demonstrate a close connection between themselves and innovation in the wider economy. Heretofore, when the humanities, creative arts and social sciences have been included in R&D budgets it is usually as 'last minute concessions to dogged lobbying' (Cunningham, 2004) but with significantly less funding. NESTA, the UK's National Endowment for Science, Technology and the Arts – along with similar organizations in other countries – has played an important role in providing evidence that innovation performance is strongest for industries with the highest spending on creative industry products as a percentage of their output. Richard Florida (2002) has built on these ideas to argue that cities which embrace the creative and cultural industries are much more likely to attract and retain high-skilled high-spending talent, with all the spin-offs that such a population seeks and demands. But in addition to the specific illustration of the economic effect of spend on creative products and services, the compelling argument and evidence has helped open up a much broader debate on innovation and how change happens in society and the economy.

Michael Mumford defines social innovation as 'the generation and implementation of new ideas about how people should organize interpersonal activities, or social interactions, to meet one or more common goals' (2002, 253). While S&T innovation has tended to be located within the market economy, social innovation takes place in daily life, in social relationships and behaviour and in the home and is, therefore, not trapped by any standard measures of economic activity. In recent decades, there has been a growing focus not just on new products but on new services, ways of organizing ourselves, society and work, and through new social movements. For example, whereas the principle of production has traditionally been oriented towards increasing capacity, rising

consumer consciousness has helped re-orient the supply and distribution chain to respond to real-time consumer demand (e.g. H&M fashion). The role of the consumer has changed dramatically from a passive to an active player, not only navigating but even shaping the product line and the services (e.g. Google, LEGO). Organizations that fail to embrace this new paradigm are forced to compete unsuccessfully on price – losing out to cheaper labour markets in Eastern Europe and Asia. Those left standing ‘have recognized that it is their capacity to provide bespoke services – with products being reconceptualised as part of a service – and above all their capacity to innovate on which their future depends’ (Murray et al, n.d., 4).

Another distinguishing characteristic and objective is that social innovation aims to create social value for the wider community rather than for personal profit. According to Phillips Jr. *et al* (2008, 39), social innovation is ‘truly social only if the balance is tilted toward social value – benefits to the public or to society as a whole – rather than private value – gains for entrepreneurs, investors, and ordinary (not disadvantaged) consumers’. Examples range from the establishment of the International Monetary Fund or the United Nations, the establishment of the Boy Scouts, open source software or the introduction of flexible working schedules and maternity/paternity leave. Drawing on Benjamin Franklin’s legacy, Mumford (2002) describes how minor modifications within social organization can exert a decisive influence. Initiatives as diverse as a subscription library, the police force and fire department, paper currency, paving and lighting, a hospital and the University of Pennsylvania are all examples of ‘acting on and manipulating function role relationships, restructuring these relationships to achieve new goals or to allow old goals to be met more efficiently.’

The Fair Trade movement is a more recent example. It has grown exponentially from a moral rebuke of free trade into a world-wide movement and organization certifying, labeling, distributing and selling a wide range of products, e.g. coffee, chocolate, bananas, cotton and other products. Its dynamic reconstruction of the value chain links peasant farmers with consumers in a determined effort to ensure fair prices to the producers, protect against child labour, create international certification and ensure sustainable agriculture. The real success of Fair Trade has been to transform it from a fringe activity to a brand that cities and towns themselves have sought to embrace and highlight as a demonstration of ethical values – in the belief/realization that this is important for its own citizenry and tourists. Corporate social responsibility fulfils a similar role; companies like the Body Shop, Ben and Jerry’s and Patagonia have ‘regarded their businesses both as a vehicle to make money and as a means to improve society’ (Vogel, 2005, 28) – albeit others might cynically argue CSR has proven to be a good marketing tool.

These different initiatives illustrate Charles Ledbetter’s contention that ‘production for the masses is being replaced by production by the masses’. In his book, *We-think*, Ledbetter (2009, xxi) described how this new social and organizational landscape is also altering the way in which ideas are diffused:

Scientific research is becoming ever more a question of organizing a vast number of pebbles. Young scientists especially in emerging fields like bioinformatics draw on hundreds of data banks; use electronic lab notebooks to record and then share their results daily, often through blogs and wikis; work in multi-disciplinary teams threaded around the world organized by social networks; they publish their results, including open source versions of the software used in their experiments and their raw data, in open access online journals.

This description mirrors what Gibbons *et al* have been saying about the new production of knowledge.

The progression from simple to complex – from disciplinary to inter/multi-disciplinary – knowledge, has been reflected in the emergence of new disciplines, methodologies and ways of thinking, transforming knowledge economies and the way in which knowledge is actually created. Whereas traditional knowledge production, often referred to as Mode 1, was disciplinary or ‘curiosity-oriented’ usually conducted by individuals in secluded/semi-secluded environment, ‘socially robust’ or Mode 2 knowledge is created within an expanded context of being useful. No longer confined to the university, it is interdisciplinary and conducted in active engagement and collaboration with society – the wider community, civil society, industry, and the region (Gibbons *et al*, 1994). Mode 1 research achieves accountability and quality control through the peer-review process, while Mode 2 achieves accountability and quality control through social accountability and reflexivity. Mode 2 moves the site of problem formation, investigation, discovery and resolution into the public realm or ‘agora’. The ‘agora is the space in which societal and scientific problems are framed and defined, and where “solutions” are negotiated. It is the space, par excellence, for the production of socially robust knowledge’ (Gibbons, 2002, 59).

This transformation of knowledge production from something directed by individual academics to an activity directed by external agencies mirrors the transformation in the state’s role – but not its authority – from provider to regulator, and from sole to partial financier of knowledge. There are now alternative and competitive sources of knowledge production – toppling the privilege of the ‘ivory tower’. Arguably, knowledge has become democratized in the sense that more people are aware of the issues and are social actors in the application of knowledge. In other words, knowledge has ‘ceased to be something standing outside society, a goal to be pursued by a community of scholars dedicated to the truth, but is shaped by many social actors under the conditions of the essential contestability of truth’(Delanty, 2001, 105).

It is within this context that there is a growing understanding that the world’s ‘grand challenges’ require collaborative solutions and inter-locking innovation systems. They are not bound by borders and disciplines, but require bi-lateral, inter-regional and global networks to tackle.

Interdisciplinary thinking is rapidly becoming an integral feature of research as a result of four powerful ‘drivers’: the inherent complexity of nature and society, the desire to explore problems and questions that are not confined to a single discipline, the need to solve societal problems, and the power of new technologies (CFIR, 2004, 2)

Grand challenge problems are of economic and social importance, and include: Environment/Climate, Energy, Human health and healthcare delivery, Food, Water, Security, and Urban infrastructure.

Mode 2 research shares many of the characteristics of social innovation – the former being a form of the latter. Both require a unique approach to problem-defining and problem-solving involving shifting roles and relationships between the various partners, who most effectively come together from different sectors and experiences as partners rather than adversaries. ‘In principle, many people accept the trend of dissolving sector boundaries; in practice, however, they continue to toil in silos’ (Phills Jr, 2008, 42).



## **‘Think & Do’<sup>2</sup> Networks**

Higher education has, for a number of decades, especially in the US, been involved in the movement for civic engagement. Recent initiatives include thematically linked learning communities, community-based research, collaborative projects, service-learning, mentored internships, reflective experiential learning and study abroad – with a focus on drawing meaning and understanding from direct experience, critiquing theory in light of this practice, and then evaluating practice in light of the new knowledge. Campus Compact<sup>3</sup> is a network of over 1100 HEIs – no longer just in the US – which seek to bridge the town and gown divide.

The concept being promoted in this paper takes this initiative to another level, building on the triple helix mode of innovation. It involves the establishment of ‘Think & Do’ fora which bring together actors from civil society, the state and state agencies, and higher education to mobilize and harness knowledge, talent and investment in order to address a diverse range of problems and need through co-ordinated action. Rather, sustained, embedded and reciprocal engagement is defined as learning beyond the campus walls, discovery which is useful beyond the academic community and service that directly benefits the public. Two developments from Ireland, both in their early stages, suggest how social innovation can inject a new way of thinking about ‘let[ting] knowledge serve the city’.<sup>4</sup>

In 2008, the **Dublin Creative Alliance** was formed as collaboration between four Dublin region Local Authorities, four Higher Education Institutions, State Agencies, Business and the Not-for-Profit sector, and championed by Dublin City Council (DCC). Recognizing the benefit in maximizing collective capacity beyond individual capability, the Creative Alliance is premised on the understanding that as economic activity has gone global, cities now compete on global terrain for talent and investment. Thus the Creative Alliance aims to help identify, discuss, recommend, distribute and implement solutions in response to the challenges that Dublin faces as an International Competitive City Region. Its aims are:

1. A committed leadership with a unified vision and a critical mass of influence.
2. A clear vision of the unique strengths and future potential of the city.
3. An excellent 3rd and 4th level sector that is internationally competitive.
4. A City Region that is supportive of innovation and enterprise through education, business, and civic leadership.
5. A strong accessible information, communications and transport network.
6. An open, merit-based, tolerant and inclusive society that promotes well-being
7. The delivery of projects in support of agreed objectives

The concept builds upon and is linked to similar initiatives being developed under the World Class Cities Partnership Initiative, the Open Cities Initiatives, and the OECD Higher Education in Cities and

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<sup>2</sup> Northeastern University World Class Cities Partnership, (n.d.) ‘Global Impact on a Local level’ presentation’. See also <http://www.policyschool.neu.edu/news/index.php?nid=114&navyear=2009>

<sup>3</sup> <http://www.compact.org/>

<sup>4</sup> Vision of Portland State University, US

Regions project. It shares some characteristics of the classic triple-helix model but goes beyond technology transfer or ‘tri-lateral initiatives for knowledge-based economic development’ (Etzkowitz and Leydesdorff, 2000) to create a new boundary organization to solve civic challenges as the diagram below illustrates.

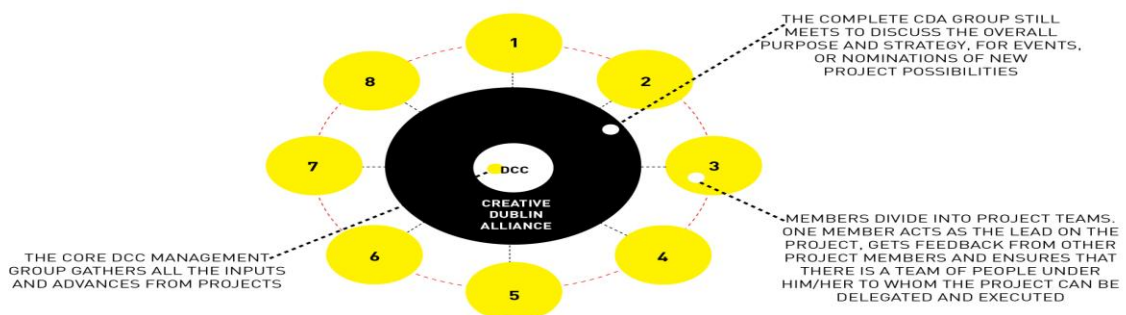
### Rethinking The Triple Helix



Underpinning the strategy is a recognition that mutual benefits derive from a multi-dimensional, collaborative and distributive model to problem solving.

We believe that by unifying resources, working on projects that solve our City Region challenges and delivering on these projects, that we can place Dublin as a creative and influential International City Region.

The organisational model for identifying, developing and implementing initiatives is depicted by the following diagram. The numbered circles are aligned to 7 of the projects thus far identified (see below):



Thus far, the Creative Alliance has selected a number core projects which involve all partners in various permutations and include:

1. *Innovation Dublin*: Public events showcasing innovation and creativity in Dublin<sup>5</sup>;
2. *Economic Action Plan* for the Dublin City Region that includes City Indicators to benchmark Dublin's performance internationally prioritising the actions agreed in the plan;
3. *Public Identity*: To build a distributed citizenship model that would get Dubliners passionate about contributing to their city via discussion forums, events, web presence, and project initiatives;
4. *Branding Dublin*: To develop a branding strategy for Dublin as an internationally competitive and creative city so as to attract investment and talent;
5. *Network Mapping*: To identify the formal and informal cross-agency/cross-sectoral alliances and linkages that exist across key players in Dublin in order to capture existing and potential knowledge networks and information flows and benefits that accrue as well as weaknesses or gaps in participation or the networks;
6. *UniverCities*: An alignment of the teaching and research programmes of universities with the challenges of managing and planning for the future of the City;
7. *Institute for the Twentyfirst Century* will be an Institute for post-graduate learning focused on design innovation and inter-professional collaboration to identify solutions to the challenges facing the city.

Another example is being developed by the Dublin Institute of Technology in association with Dublin City Council (DCC) and the Health Services Executive (HSE). Together they have formed a non-traditional partnership to develop an **Environmental Health Sciences Institute (EHSI)**. Usually collaborative partnerships involve several HEIs as the core cluster, which then liaise with stakeholder groups which operate in an outer circle of influence. EHSI is different in so far as the core is the triangular partnership between an academic institution, the largest local authority in Ireland (DCC) and the national organization responsible for providing health and personal social services for everyone living in Ireland (HSE). The proposal aims to co-locate scientists, technologists, social scientists, city planners, policy-makers and public health/environmental health professionals to form an interdisciplinary, collaborative research platform in order to:

1. Inform environmental health policy, planning, decision making;
2. Develop practical solutions to environmental health problems;
3. Study the impact on the health of vulnerable populations and facilitate investments to reduce the burden of chronic disease and injuries.

Rather than simply being members of stakeholder or focus groups, city and health professionals will actively participate in scoping and setting the research road-map and as end-users, through involvement of city residents, to test and validate the applicability of the analysis and the 'solutions'. EHSI will exploit the academic-professional interface, and facilitate researcher mobility, DCC/HSE staff development and re-training, technological development, outreach and knowledge transfer

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<sup>5</sup> See <http://www.innovationdublin.ie>.

activities. The following diagram places users, researchers, practitioners/professionals, and policymakers at the centre of the research road-mapping process.



This inter-institutional, non-traditional collaboration is a model for the integration of policy makers, researchers and practitioners. It aims to drive more public engagement with research and research engagement with society in such a way as to enable the uptake of research questions from the city and health authorities into the research agenda of the academic partners, and to improve civil society’s access to and uptake of research findings. By involving the two key stakeholder groups – the city council on behalf of the citizens and the health service – directly in the process, EHSI aims to create a new form of science communication, one in which the end-user and civil society are active participants rather than passive consumers.

### Community Engagement as Social Innovation

John Voelcker (2006, 44) says ‘it takes more than a fancy new gadget to make life better’. That’s why the examples above suggest how the principles of social innovation can help transform the way in which higher education interacts with its stakeholders and the wider community through the formation of new boundary-crossing organizations. Drawing upon Mumford’s (2002) account,

- Social innovation may occur when people, particularly people with somewhat atypical backgrounds, build structured institutions to secure informal, naturally occurring relationships of value;
- Social innovation is underpinned by networks of community, enterprise and elite support;
- Social innovation may not require complete solutions but rather timely, more limited solutions that address key issues while laying an organizational foundation for more long-term efforts;
- Social innovation may, at times, lay a foundation for subsequent technical advances;

- Social innovation requires marshalling, and effective management of, financial resources;
- Social innovation often involves a willingness to consider new ways of structuring long-standing social relationships;
- Social innovation may, at times, involve a redefinition of roles and role relationships to address the equity concerns of various parties; and
- Social innovation may be self-reinforcing and highly iterative, requiring committed engagement by all the stakeholders.

These characteristics are present, in different degrees, in both the Creative Alliance Initiative and the proposed Environmental Health Sciences Institute: they aim to overcome the diffusion of skills and experience amongst key actors and across different sectors, the lack of involvement of end-users or the community in framing both the agenda and the solutions, and the 'neglect of the needs of deprived [or vulnerable] groups within urban society' (Moulaert, 2009, 15). Rather than seeing innovation as the result of a discovery process that is commercialized, it is viewed as a complex iterative process involving an array of stakeholders and (end)users – from the private/public sector and/or wider civil society – coupled with feedback loops and market linkages. This approach challenges the traditional linear model, which tends to view the user as a passive rather than active participant.

Success in both initiatives depends on the extent to which innovation occurs in the social relations between the organisations, as well as transforming the way in which needs are identified, road-mapped and problem-solved. Identifying the requisite mechanisms to reconcile tensions between institutional and collaborative loyalties, which are often not in conflict when all is going well but may be challenged when difficulties arise, is important. The organisational, management and governance practices and processes are critical in building true communication channels between the stakeholder groups, including the wider community. This requires people who can think outside-the-box, and whose contribution to new knowledge ill-fits the type of metrics promulgated by global rankings. Thus, another essential element, vital in the audit culture in which we live, is to find appropriate indicators to measure, assess and reward community engagement, creativity and social innovation in order to incentivise the academy and other professionals, assuage investor-confidence and inform the public. This is critical because a major handicap for faculty engaging in new forms of knowledge production is that tenure/promotion and prestige still rewards Mode 1 outputs. If we truly embrace Boyer's (1990) four scholarships, this would not be an issue.

While 'service' has been one of the three pillars of higher education (the other two being education/teaching and research), these initiatives push the envelope of community engagement beyond volunteerism and campus compacts to embed the principals of social innovation to rethink the relationship between higher education and its community. Social innovation principles have the potential to transform our understanding of knowledge transfer beyond the traditional HE-industry partnership, science parks and economic clusters. While social innovation is generally viewed as a process occurring within the community, what is proposed here is not a magic bullet but a new way of configuring higher education's relationship with its stakeholders. New thinking and effective boundary-crossing organisations are vital, especially in tough times.

## References

- Birnbaum, Robert (2000) *Management Fads in Higher Education. Where They Come From. What They Do. Why They Fail*. San Francisco: Jossey-Bass Inc. Publishers.
- Boyer, Ernest L. (1990) *Scholarship Reconsidered. Priorities of the Professoriate*. Princeton: The Carnegie Foundation for the Advancement of Teaching.
- (CFIR) Committee on Facilitating Interdisciplinary Research, (2004) *Facilitating Interdisciplinary Research*, National Academy of Sciences, National Academy of Engineering, Institute of Medicine. Retrieved 31 July 2009, from [http://books.nap.edu/openbook.php?record\\_id=11153&page=2](http://books.nap.edu/openbook.php?record_id=11153&page=2)
- Cunningham, Stuart (2004) 'The Humanities, Creative Arts and the Innovation Agenda', in Brad Haseman, Sue-Anne Wallace and Rod Wissler (Eds), *Innovation in Australian Arts, Media and Design: Fresh Challenges for the Tertiary Sector*. Flaxton: Post Pressed.
- Delanty, Gerard (2001) *Challenging Knowledge. The University in the Knowledge Society*. Buckingham: The Society for Research in Higher Education and Open University Press.
- Etzkowitz, Henry and Loet Leydesdorff (2000) 'The Dynamics of Innovation: From National Systems and "Mode 2" To a Triple Helix of University-Industry-Government Relations', Retrieved 16 May 2009 from: <http://users.fmg.uva.nl/lleydesdorff/rp2000/>.
- Florida, Richard (2002) *The Rise of the Creative Class*, New York: Basic Books.
- Fukuyama, Francis (2007) 'The history at the end of history', *The Guardian*. Retrieved 3 May 2009, from <http://www.guardian.co.uk/commentisfree/2007/apr/03/thehistoryattheendofhist>
- Gibbons, Michael, Camille Limoges, Helga Nowotny, Simon Schwartzman, Peter Scott and Martin Trow (1994) *The new production of knowledge*. London: Sage.
- Gibbons, Michael (2002) 'Engagement as a Core Value in a Mode 2 Society', in Svava Bjarnason and Patrick Coldstream (Eds.), *The Idea of Engagement. Universities in Society*. Association of Commonwealth Universities. London: Association of Commonwealth Universities. pp48-70.
- Hobsbawm, Eric quoted by Alastair Bruce (2008) 'Global financial crisis is the "end of the era" for capitalism', *MSN Money*, November 7. Retrieved 3 May 2009, from <http://money.uk.msn.com/investing/articles/morecommentary/article.aspx?cp-documentid=10465208>
- Jordan, Declan (April 2009) 'Research – Opinion', *Innovation*, p10.
- Leadbeater, Charles (2009) *We-Think. Mass innovation, not mass production*. London: Profile Books.
- Moulaert, Frank (2009) 'Social Innovation: Institutionally Embedded, Territorially (Re)Produced', in Diana MacCallum, Frank Moulaert, Jean Hillier and Serena Vicari Haddock (Eds.), *Social Innovation and Territorial Development*. Farnham: Ashgate Publishing Ltd, pp11-24.
- Mowery, D.C, Nelson, R., Sampat, B.V. and Ziedonis, A.A. (2001) 'The growth of patenting and licencing by US universities: an assessment of the effects of the Bayh–Dole Act of 1980', *Research Policy*, 30: 70–119.
- Mumford, Michael D. (2002) 'Social Innovation: Ten Cases from Benjamin Franklin', *Creativity Research Journal*, 14:2,253-266.
- Murray, Robin, Geoff Mulgan and Julie Caulier-Grice (n.d.) 'How to Innovate: The tools for social innovation', Draft, NESTA, pp1-41.
- (OKC) Office of Knowledge Capital (2009) *Melbourne: Australia's Knowledge Capital*. Presentation to The Dublin Creative Alliance, April.

Mulder, Henk and Steinhaus, Norbert (2009) *Public Engagement with Research and Research Engagement with Society (PERARES)* research funding proposal, FP7, unpublished.

Phills Jr., James A., Kriss Deiglmeier and Dale T. Miller (Fall 2008) 'Rediscovering Social Innovation', *Stanford Social Innovation Review*, pp34-43.

Santiago, Paulo, Karine Tremblay, Ester Basri and Elena Arnal (2008) *Tertiary Education for the Knowledge Society*, vol.2, Paris: OECD.

Voelcker, John (2006) 'Creating Social Change. 10 Innovative Technologies', *Stanford Social Innovation Review*, Summer, pp44-53.

Vogel, David (2005) *The Market for Virtue: The Potential and Limits of Corporate Social Responsibility*, Washington D.C.: Brookings Institution Press.