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INTRODUCTION

Creative industries & Innovation policy

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This special issue of *Innovation: Management, Policy & Practice* (also released as a book: ISBN 978-1-921348-31-0) will explore some empirical and analytic connections between creative industries and innovation policy. Seven papers are presented. The first four are empirical, providing analysis of large and/or detailed data sets on creative industries businesses and occupations to discern their contribution to innovation. The next three papers focus on comparative and historical policy analysis, connecting creative industries policy (broadly considered, including media, arts and cultural policy) and innovation policy. To introduce this special issue I want to review the arguments connecting the statistical, conceptual and policy neologism of 'creative industries' to: (1) the elements of a national innovation system; and (2) to innovation policy. In approaching this connection, two overarching issues arise.

The first relates to the rise of the creative industries. What are they, what special significance do they have, if any, and furthermore, why now? Much of the answer turns on several ongoing apparent transformations in the technological and industrial composition of modern economies. This is the rise of the 'post-industrial society' (Bell 1973) and the 'knowledge-based economy' (OECD 1996), the systematic growth of the service sector, the rise of what Richard Florida (2002) calls the 'creative class', and so forth. And amidst this we also have the rise of the 'creative industries', an industrial re-classification first introduced by the UK government's Department of Culture, Media and Sport (DCMS 1998). These trends all point in the same direction of a shifting knowledge-base of modern economies. In this view more and greater value issues from businesses and markets in the media, arts, cultural and experience industries. Recent decades have witnessed a period of global structural change in economic systems marked by the sustained rise of the creative industries as a source of employment, exports and value added (DCMS 2006). Proponents of 'creative industries' argue that this rise in *economic significance* should map to a rise in *policy significance*. Despite economists lining up to declaim this *non sequitur*, the issue has gathered a considerable policy traction, as many regions and nations seek to develop a 'creative industries strategy' and to build 'creative industries policy'.

A second issue follows, because it is then argued that this creative industries policy should not represent a scaled-up version of extant arts, cultural or media policy, with its implicit welfare-theoretic foundations (see e.g. Peacock 2006), but is beginning to be seen as an underdeveloped element of *services innovation* in the context of the broader debate about successive generations of innovation policy (Rothwell 1994; Metcalfe & Miles 2000; Dodsgon et al. 2005; Cunningham et al. 2005). And while still a minority position, there is growing recognition that this implies a

policy approach based on the 'Schumpeterian' or 'evolutionary economic' approach of *innovation policy* (Pelikan & Wegner 2003; Witt 2003; Cunningham 2009). What is seemingly occurring, then, is a reformation of industry policy as innovation policy (Morrison & Potts 2008) allied with a reconstruction of a new industrial grouping – creative industries – toward a modified conception of the innovation process.

What, then, is the basis of this alleged connection between creative industries and innovation policy? There are many studies on innovation processes within the creative industries. For example, Castañer and Campos (2002), drawing on the theory of organizational innovation, examined the role of micro and organizational variables in the process of artistic innovation. Handke (2006, 2007) analyses innovation surveys to identify the factors contributing to innovation in the media industries, an approach also pursued by Tether (2003), who explicitly seeks comparison of innovation performance with other sectors. Recognising the particular characteristics of services innovation, Miles and Green (2008) seek to elicit the extent of 'hidden innovation' (i.e. not-R&D-based innovation measures) in the creative industries. Such studies address the question of how the creative industries sector may require a distinct internal account of its own organizational and industrial innovation processes, an interest much spurred by the recent growth of this sector. But the rise of creative industries in itself, as with the rise of any industrial sector, has no logical connection to innovation systems or policy *per se*. This is because there are many factors that can explain such relative growth without ever invoking innovation, as for example with rising levels of household wealth, or growing markets for arts, culture and media (e.g. Cowen 2002). Instead, any innovation connection must be explicitly made in terms of hypothesised mechanisms that are empirically demonstrated.

Stated most baldly, the connection would be this: creative industries, like science and technology, also produce *outputs* which are *inputs* into the innovation process. The creative industries are innovative, as above, but so are all other industries, so there is nothing special about that claim. But not all industries produce goods and services that are inputs into innovation processes. However, the standard DCMS definition of creative industries does not explicitly draw this connection, instead emphasising creativity as an input and intellectual property as an output, a view that implicitly presumes that the value of the creative industries is ultimately in *consumption* of these *creative outputs*. This model is implicitly followed, for example, by Andari et al. (2007).

A different approach, closely affiliated with a suite of recently commissioned work by the UK's National Endowment for Science, Technology and the Arts (NESTA), and the ARC Centre for Creative Industries and Innovation (CCI) in Australia (see also QUT et al. 2003), among others, has sought to emphasise the value of the creative industries explicitly in terms of its role in the innovation process. For example, Bakhshi et al. (2008) have examined the innovation contribution of firms in creative industries to firms in the wider economy, a theme further developed in Bakhshi and McVittie's contribution (2009) in this special issue. Potts et al. (2008b) have proposed a new model of 'social network markets' as a model of creative industries involved in the process by which consumers adopt novel goods and services (Hartley 2009). Potts (forthcoming) outlines a model of creative industries over an innovation trajectory – which consists of the origination, adoption and retention of a new idea or technology – in which the creative industries provide distinct 'creative innovation services' in each of these three phases. This is discussed further below. There are other proposed mechanisms, for example in 'soft innovation' (Stoneman 2007) and in relation to the efficacy of new digital and media technologies in facilitating 'open innovation' (Shirky 2008; Leadbeater 2008).

The purpose of innovation policy is to promote and facilitate the efficacy of the 'innovation system' and of a nation's innovation process (Edquist 2001). But are creative industries legitimately part of this argument, i.e. part of the innovation system? The purpose of convening this special issue of *Innovation: Management, Policy & Practice* (ISSN 1447-9338) was to examine the empirical veracity, theoretical consistency and institutional reality of this alleged connection between creative industries and innovation policy. It is important, thus, to recognise that the connection between creative industries and innovation remains an analytic and policy *hypothesis*. As such, it can be subjected to empirical investigation and analytic examination, which is precisely what the papers in this special issue seek to do.

Connecting creative industries to innovation policy

First, let us dispense with a common fallacy: namely that the rise of the service sector, say, or the creative industries is *because* these sectors are more productive or innovative than the other sectors that are growing less slowly. In fact, from a general equilibrium perspective precisely the opposite conclusion should be drawn. For a *given* aggregate level of output, the *relative rise* of a sector only comes about because of productivity gains in *other* sectors. These gains, the outcome of successful innovation processes, lead to the production of the same level of output with *fewer inputs*, freeing resources to be bid to other uses. This is often difficult to observe in the short run, because of the foregrounding of the initial disruption, not the underlying economy made. But over longer periods the innovation and productivity-driven release of scarce resources to other uses is the single central fact about the effectiveness of innovation in a market economy (e.g. Baumol 2002; Beinhocker 2006). Greater productivity frees resources, *enabling other sectors to grow*. This manifests (via changes in relative prices) as growth in demand in the service sector for example, or in creative industries.

Still, this argument is based on an economics of scarce *resources*, not of scarce *ideas*. For almost 20 years now it has been common in sociology to refer to the growing 'culturalization' or 'aestheticization' of economic life (e.g. Lash & Urry 1994; Lloyd 2006). This process may be recognised as an instantiation of progress in which human life, in the language of economics, 'experiences utility gains' not only by increased technology, *ceteris paribus*, but also by increased cultural experience. This is a 'progress' that manifests beyond improvements in technical efficiency, but by the growth of cultural content and embedding (Mitchell et al. 2003; Postrell 2003; Andersson & Andersson 2006). This is the production of the same material output, but with greater cultural content or meaning, and thus economic value. Interestingly, this premise (for it is not yet a measure) argues that economic growth driven by new technologies and greater productivities, i.e. secular progress, can be just as much a cultural as a physical-material process, in that these new 'technologies' can be socio-cultural as well as physico-technical (Nelson & Sampat 2001). This growing culturalization, as a series of innovation trajectories, is one of several proximate causes of the rise of the creative industries. Yet arguments pivoting on the growth of 'cultural capital' or on improvements in 'social technologies' have rarely been part of innovation systems theory or innovation policy, reflecting a long-standing bias in which innovation is viewed as an exclusive outcome of advances in science, engineering and technology.

A different line of argument connecting creative industries and innovation policy concerns the extent of *market failure*, and in particular the difficulty of establishing a meaningful analogue of research and development (the standard innovation policy market failure) in the creative industries. R&D is central to innovation policy because it is the critical investment in the origination phase of the innovation process, which thus provides the central justification for public investment (the end product of public policy develop-

ment) on innovation grounds. But because it is both uncertain in outcome and potentially adoptable (i.e. non-rivalrous) it will be undersupplied in competitive market conditions, opening a clear opportunity for 'Pareto improvements' by increased public spending on R&D. This is a core mechanism of modern innovation policy.

Yet R&D has a very different meaning in the creative industries – as made very clear in the Davis, Creutzberg and Arthurs paper (2009) in this special issue – in effect constituting a normal business model, not an exceptional (i.e. un-incentivised) activity. A common strategy in innovation policy is to designate some industrial processes 'pre-commercial'. The very phrase signals a domain of opportunities better organized through public investment rather than a market context. The implied logic is that, if left to the market, equilibrium supply would be sub-optimally low. Many technologies and associated industries are alleged to have this property, which is why they may benefit from 'innovation policy' in the form of publicly funded R&D support. But not the creative industries, for these R&D phases will often be routinely carried out over an extended value-chain in large media organizations, for example, both in-house and for-profit. Innovation occurs not in spite of the system of incentives, but as a normal aspect of business operations and strategy. And because it happens in this way, activity which might otherwise be classified as R&D is not so classified in these industries. The creative industries regularly do the sorts of things (creating and introducing novelty) and work in the sorts of ways (project based, open networks; see Caves 2000) as recognised by innovation scholars and recommended by business consultants. Two questions immediately arise. First, whether the creative industries analogue of R&D, as the investment that creates the technical opportunities that creates the economic opportunities, is properly also an aspect of the public good, to be facilitated through innovation policy. Second, whether this private innovation solution may be a market solution for content aggregating firms, such as News Corp. or Google for example, but less so for smaller enterprises in the creative industries. Both of these questions are addressed here, and by several papers.

A key instance is the conception of the 'enabling technology' model of the creative industries–innovation connection. The creative industries in this view provide services that are important *enablers* of innovation. This commonly occurs by production of intermediate 'creative' inputs to other sectors. This occurs in many ways as the creative industries provide services that furnish the *creative capital* or supply the *creative workers* that are inputs into the innovation process. There is a tendency to couch this perspective in terms of 'creative clusters' or 'creative quarters', emphasising the urban geography and endogenous growth dimension that connects clusters to innovation (Currid 2007). Such approaches tend to argue that there exist creative or innovative spaces or places, or that creative potential is 'situated' in networks and institutions (see Potts et al. 2008a). However, the broader point is simple recognition that the innovation process, at heart, involves people coming together to do new things, and the technologies and institutions of that 'coming together' are very much part of the innovation process proper. As John Hartley (2009: 50) ventures to explain:

'It can even be argued that 'creative industries' are the empirical form taken by innovation in advanced knowledge based economies, in which case their importance, like that of the media – exceeds their scale as a sector of the economy. It extends their role as a general *enabling social technology*. This would place *creative innovation* with other enabling social technologies like law, science and markets.'

Creative innovation industries

The creative industries are part of the service sector. Yet unlike routine services based on known technologies and extant institutional structures (e.g. health, transport, insurance) – and often as outgrowths of primary and secondary sector

operations – the creative industries are by definition involved in the process of *new* value creation, because their business opportunities and value-added derives from the very existence of novelty and innovation in other sectors – to which they provide various innovation services – many of which are business-to-business, rather than direct to consumer markets (Bahkshi et al. 2008). The creative industries do not just supply creativity (for creativity is everywhere), rather they process creativity. As an extension of 'arts and culture' this process-focused 'innovation services' view may perhaps seem odd. But running through the list of creative industries – e.g. architecture, advertising, fashion, design, interface software, publishing, and so on – we may immediately appreciate that none properly exists in a closed or static world. In a world without innovation: architecture collapses to drafting; advertising to packaging; fashion to wasteful signaling; design to engineering efficiency, and so on. These industries would still exist in a world without innovation, but enfeebled and drab. Rather, the greatest mass of value creation possibilities of the creative industries arises because they solve problems, in a market-economy context, created by technological or socio-cultural change, thus further driving such endogenous change. The creative industries, under this hypothesis, are most active – i.e. create greatest value and extend furthest into other sectors – when the economy is evolving. The *raison d'etre* of creative industries thus derives from processing innovation in the social and cultural context. In doing so they are of course heavy users of new communication technology, contributing to its increasing demand. This 'evolutionary service' or 'creative innovation service' (Potts and Morrison 2009a) has value proportional to the broader rate of economic evolution.

By this argument, the creative industries provide 'creative innovation services' over an 'innovation trajectory'. An innovation trajectory has three broad phases associated with the origination, adoption and retention of the novel idea (Dopfer & Potts 2008). The creative industries are involved in all three phases (Potts 2007, Potts forthcoming).

First, the *origination* phase is the realm of the creative industries in providing the service of creativity. The obvious process here is the literal and poetic meaning of creativity, usually advanced as the major added-value of this sector. Yet this may well be the smallest contribution of these industries. Rather, their value may be more indirect, relating instead to the development of *innovation technologies* (e.g. Dodgson et al. 2005). These are, for example, the platforms of gaming co-opted for commercial use, or the new social communication technologies adapted for commercial value (Burgess & Green 2009). Where science and technology are unambiguously of value in the origination phase, the creative industries also add value in developing resources of creativity generation through provision of 'origination services' (Hartley 2009: ch 1).

The *adoption* phase of innovation is, perhaps, the most important domain of creative industries contribution. All new ideas enter a social world. To succeed, they must be adopted by many people. The determinants of adoption do not always come down to successful engineering; sometimes, indeed as the rule rather than the exception, attention and persuasion matters (Lanham 2006). The creative industries provide knowledge and mechanisms to facilitate this process, and in myriad ways. Significant gaps can arise between what is optimal and what actually gets adopted. Part of this difference will be attributable to behavioural innovation effects (Potts & Morrison 2009b) and part to 'social network market' effects (Potts et al. 2008b). In both cases, creative industries add value to the innovation process by overcoming and amplifying these effects. The creative industries supply 'adoption and adaptation services' of the ways and means by which new markets and applications of new ideas are developed. This occurs in the context of 'choice under novelty', in experimentation with the possibilities of new technologies, and with the emergence of new institutions.

The *retention* phase of innovation is when an idea becomes embedded for ongoing use, a process also known as habituation, normalization, institutionalization. This is a further service creative industries provide, and again in multiple ways: for example, in respect of the construction and normalization of new *identities* associated with the particular innovation (Herrmann-Pillath, forthcoming). It is worth noting that economic theory widely assumes this process to be costless, e.g. it never features in growth or development models. Yet it is a significant investment for individuals, organizations and networks, the differential consequence of which shapes the knowledge-base and institutions of a nation. Again, the value of such 'retention services' depends upon the extent to which this process is demanded.

The creative industries are properly part of the innovation system not by any shoe-horning into a science–technology matrix (e.g. to measure their innovative contribution in terms of patents). Rather, it is because of their crucial role in the socio-cultural process of adoption and retention of new ideas (Earl & Potts 2004). Obviously, creative industries produce art and culture and sometimes entertainment. Less obvious, however, is that they also produce the dynamic service of *re-coordination* of the socio-cultural and economic order to the ongoing growth of knowledge process. It is this latter aspect – this input into the innovation process – that properly connects creative industries to the arguments of innovation systems and policy.

An overview of papers

The first four papers in this special issue are empirical analyses of medium to large data sets, as well as a smaller survey calibrating a new benchmarking model. The first is a specially commissioned population survey (in Austria) of creative industries firms and their innovation performance; the second uses national input–output data plus the EU's fourth community innovation survey to isolate the properties and effect of creative industries firms; the third analyses population level UK data on creative industries and occupations; and the fourth presents the results of a survey on innovation clusters in Ontario's media industries. Each offers additional evidence, additional 'mapping' as it were, from recently constructed and analyzed creative industries data from which innovation policy review, critique, analysis and further development might incorporate and build upon.

The first paper – by Kathrin Müller, Christian Rammer and Johannes Trüby (2009) – reports analysis of a commissioned telephone survey of over 2000 commercial creative industries businesses in Austria. They use this large but targeted sample on the creative characteristics and innovation performance of creative industries firms to examine the effect they have on industrial innovation in the wider Austrian economy. This is a key question – it goes to the heart of the nature of the connection between creative industries and the innovation process – namely do creative industries businesses interact with the innovation process, and if so how?

The Müller, Rammer and Trüby paper (2009) is an exemplar of the 'mapping' model carried to the logical next step: namely beyond mapping 'economic significance', we then seek to map 'innovation significance'. They found that creative industries are among the most innovative sectors in the Austrian economy, and also that they supported innovation as lead users of new technologies. Müller, Rammer and Trüby (2009) construct an econometric model to explain the determinants of innovative activities in creative firms. They find that the creative industries contribute innovative goods and services into the wider economy, as well as functioning as a lead sector in demanding and experimentally using new technologies. This empirically robust paper is thus also a good model of the next generation mapping of creative industries into innovation systems.

Next is an empirical paper by Hasan Bakhshi, of the UK's National Endowment for Science

Technology and the Arts, and Eric McVittie of Experian, a consultancy (2009). They also examine the mechanisms by which the creative industries may support innovation in the wider economy. They do so first through use of input–output analysis to explore the contribution of creative industries enterprises to knowledge transfer over forward and backward supply-chain linkages. They then examine this effect using data from the Fourth Community Innovation Survey. They too find significant evidence of an important role played by creative industries business in B2B knowledge transfer and innovation processes. This paper goes to the heart of the creative industries–innovation connection by further unpacking the relation between the activities and value-added by creative industries firms and the innovation process in the broader economy. This paper is thus an exemplar of the sort of rigorous statistical and empirical work that is properly involved in the study of creative industries contributions to innovation systems. By examining the specific mechanisms by which creative industries produce innovation, it makes a useful contribution to both creative industries theory and innovation policy practice.

Our third empirical paper is by Stuart Cunningham and Peter Higgs (2009) of the Centre for Creative Industries and Innovation at Queensland University of Technology, who seek to develop the concept of 'creative economy' by reporting on a recent creative industries mapping document that integrated both industrial and occupational measures of the creative economy. They call this model the 'creative trident', which is a way of viewing the creative industries in terms of both industrial and occupational spaces simultaneously, providing measures of both the non-creative component of creative industries, and the creative components of all other 'non-creative' industries. This is important because it provides further statistical depth to creative industries mapping documents, and also because it helps us to better understand how creativity and innovation interact across the entire economy by cross-checking our background assumptions about the creative content embedded in the wider economy. Cunningham and Higgs' findings give weight to the role of creative outputs and creative labour (or occupations) as an 'enabling input' that is similar to the effect of ICT. Such an approach also opens up a potentially rich field of qualitative research in which case study evidence may be used to put narrative 'flesh' on the statistical 'bones' of 'enabling input' (e.g. Pagan et al. 2009). They 'argue that policymakers should move beyond sector-specific, output-oriented, approaches. Stronger cross-industry linkages (for example, through design services) and knowledge transfer through embedded creatives mean that the creative industries are potentially more involved in the innovation systems than has previously been recognised.' This is interesting not only because of the important data it re-presents (Higgs et al. 2008), but also because of the new insights this offers as a 'human capital' based model of innovation and creative industries policy.

Our fourth paper – by Charles Davis of Ryerson University in Canada, along with Tijs Creutzberg and David Arthurs (2009) – seeks to apply a formal innovation cluster benchmarking framework to the creative industry context of Ontario's screen-based media industries. The paper begins with a useful overview of the Toronto media cluster – a $2 billion sector – and introduces the National Research Council (NRC) of Canada's generic cluster model, which is adapted in this paper to study the screen-based media industries. A telephone survey followed up with qualitative interviews was used to populate the indicators in the cluster analysis. Davis et al. (2009) found strong evidence of intense cluster interactions between firms, indeed more-so than any other cluster previously studied using the NRC model. Their findings point to the need to discriminate between creative and technology-based clusters,

as they differ significantly over several key dimensions. Building on these findings, Davis et al. (2009) then examine the implications of this for cluster-based innovation policy in terms of product and process innovations, externalities, trans-local interactions, labour effects, and the relevance of general policy frameworks for the innovation cluster approach. They find that 'creative clusters are much more deeply embedded in the social environment and political economy – both at the local and national levels – than technology clusters' thus further reinforcing the findings of the above three papers in the extent to which creative industries innovation processes have significant effect on innovation processes in other sectors, and furthermore that this occurs through multiple channels and mechanisms.

The next three papers in this special issue are even more regionally themed and policy oriented. While the first four papers sought to provide measures of the impact of creative enterprises, outputs and jobs on a nation's innovation system, as well as the wider economy, the second three seek to critically review the policy context of the cultural and creative industries and its connection to innovation policy.

Using an analysis of policy documents and frameworks Luke Jaaniste, an artist and research fellow in Creative Industries at Queensland University of Technology, examines the role of the creative sector in the innovation process (2009). Building on Haseman and Jaaniste (2008), this paper focuses on the relation and tensions between cultural and creative industries policy and science and technology policy, all in a broader context of the latter forming the predominant basis of innovation policy. Jaaniste (2009) undertakes a useful exercise in mapping out the many ways in which the creative sector has been said to fit into the innovation process, i.e. mapping the arguments in the policy and research literature. In so doing, this paper outlines a new research program for the further integration of the creative sector into innovation studies.

Next Ben Eltham of the Centre for Policy Development, an Australian think-tank, examines how 'Australian cultural policy-makers have begun to pay more attention to the theories and practice of innovation policy' (2009). He finds that connections between these policy domains nevertheless remain disjointed and inconsistent. In considering the domains of arts and cultural funding, intellectual property policy, and broadcast media policy, Eltham (2009) finds that many aspects have perverse incentives on innovation. Eltham's analysis (2009) makes a strong case that current cultural policy is often disconnected, both operationally and in principle, from an innovation policy. His reasoned remarks explore the proper boundary of what creative industries policy ought to be in relation to innovation policy, while also plainly recognising the challenges of doing so.

Our final paper, by June Gwee (2009) of the Centre for Governance and Leadership at Singapore's Civil Service College is a case study of Singapore's creative industries cluster, which is a successful example of the modern integration of cultural policy, economic policy, and innovation policy, all in a creative industries framework. Gwee (2009) carefully explains the deep historical origins and economic context of the creative industries innovation policy, including recent developments and outcomes. This makes for a fascinating insight into the co-evolutionary development of creative industries and innovation policy; one that started long before there was creative industries and innovation policy. This has, of course, subsequently leveraged on latter discussions and theories in these areas. Singapore's experience here offers a useful guide for other region's experiments in connecting creative industries and innovation policy.

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