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Socialising Creativity: Entrepreneurship and Innovation in the Creative Industries

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Introduction

Accounts of the growth and development of the creative industries have increasingly emphasised the social nature of their typical forms of entrepreneurship and innovation. This not only distinguishes them from other industrial sectors, but locates them theoretically and conceptually within wider notions of the 'associational economy' (Cooke and Morgan 1999). This emphasis is made in a wide range of academic literatures, reflecting a growing interest in relationality and sociality: in for example, entrepreneurship studies (the role of social interaction in the formation of trust and the management of risk), in management and organisational studies (the role of social interaction in constructing knowledge/learning organisations), in regional studies (the role of proximity and clustering in the promotion of innovation) and in social geography (the role of social interaction in constructions of place and locale). The practical consequence of this insight can be readily detected in the wealth of creative industries business support initiatives that are based on it, for example, networking activities, web-resources based on social networking principles, mentoring and leadership development initiatives and contract brokerage which in turn are a product of a tendency, especially apparent in UK policy discourse, to locate the creative industries within the national innovation system as a resource capable of delivering competitive advantage (Work Foundation and NESTA 2007; DCMS 2008). Analysis has, however, moved beyond the systems approach to examine the specifically social conditions necessary for the promotion of creativity and innovation.

This chapter is concerned with the ways in which creativity, and its complex relationship to innovation, has been incorporated into accounts of how the creative

industries work as *socialised* economic activities. The chapter locates these developments within a broader trend to apply social constructivist epistemological principles to accounts of organisational development and professional practice. The chapter begins by examining the strengths and weaknesses of such an approach as it might apply to the creative industries, arguing that the intense social reflexivity present in these accounts leaves them open to the charge of paradoxically underplaying the role of creativity. The chapter then explores contemporary developments in knowledge exchange research with a view to offering an alternative theoretical account of the role of sociality and reflexivity in the development of the creative industries. The potential advantages of this approach are then explored and the chapter concludes by outlining some of its practical consequences for further research and explanation.

The creative industries and the associational economy

The last twenty years has seen an explosion of interest in the socio-economic potential of symbolic production and consumption. Initially announced under the term *cultural industries*, then *creative industries* and increasingly now under the terms *cultural economy* and *creative economy*, this interest has been global in scope: in the United Kingdom (Pratt and Jeffcutt 2009), North America (Florida 2002, Markusen and King 2003, Currid 2007a), Australasia (Hartley 2005, Cunningham 2004), China (Keane 2007, Kong and O'Connor 2009) and mainland Europe (KEA 2006). For the purposes of this chapter the term creative industries will be used throughout and is taken to refer to those activities of symbolic production, the reproduction of which is dependent on the public valorisation of products, be that in a market place as exchange-value, or, as valorised aesthetic judgments within a civic milieu (Hesmondhalgh 2008, Throsby 2008). Research in this rapidly growing field is inter-disciplinary in nature and covers topics as diverse as entrepreneurship (Henry 2007), innovation (Cunningham 2005) creativity and

spatiality (Scott 1999, Pratt 2000), organisational and market structures (Potts et al 2008), the means and mode of symbolic production (Pratt 2004) and labour market and work patterns (Banks 2006, Gill and Pratt 2008). Although stemming from a wide range of disciplinary bases, this literature shares a common theoretical claim on the explanatory power of the idea of sociality (Lash and Urry 1992; Scott 1999; Kong, 2005).

In general terms, theoretical perspectives that place a central emphasis on sociality typically do so in opposition to varieties of methodological individualism which typically stress the explanatory role of rationally calculating individuals behind social phenomena. Perspectives that place sociality at the heart of their explanations tend to regard social phenomena as the products of the seemingly human predisposition towards interaction – and that there is something importantly constitutive about those interactions. This emphasis on the associative dynamics of the creative industries can be seen in a wide range of contributions and forms of analysis. For example, claims that the creative industries are highly dependent upon lively ecologies of tacit knowledge (Grabher 2002 & 2004); or, that they are especially sensitive to the particularities of place (Drake 2003) or that they challenge the dominant models of linear innovation and knowledge exchange (Crossick 2006), all draw on analyses that foreground the role of association.

The study of entrepreneurship has developed rapidly in the last few years, expanding way beyond the boundaries of business and management studies (Casson 2010). Clearly stimulated by the pressing needs of economies in transition (post-industrial economies seeking new sources of economic activity and heavily industrialised societies seeking sustainable economic activities), theoretical advances have moved ahead within a context of practical application. Innovation studies as an inter-disciplinary field has also moved forward at an urgent rate taking on board social interactivity (Rothwell 1992 and 1994; Dodgson, Gann and Salter 2005), openness (Chesborough, Vanaverbeke and West 2008) and disruption (Christenson 2007; Christenson and Raynor 2003) in the

formulation of new generations of innovation theorising. Once a comparatively obscure corner of economics and management studies, it has become a major intellectual player – again, closely linked to the real world need for models, paradigms and ideas that can be operationalised either in pursuit of national or regional innovation-based competitive strategies, or, as increasingly the case, internationally significant innovations capable of addressing such global challenges as climate change, security and development.

The study of entrepreneurship in the creative industries has also developed rapidly from a comparative standing start (Caves 2000; Howkins 2001; Rae 2005; Bilton 2007 and 2010, Henry 2007). However, when it comes to innovation, it was only five years ago when one leading writer on the creative industries was able to say: "The creative industries *don't as a rule figure* in R and D and innovation strategies. But they should" (Cunningham 2005, 293). That situation is changing rapidly but not without raising contentious issues. Oakley, Sperry, Pratt and Bakhshi (2008), have opened an important debate about the innovatory capacity of graduates in one of the first studies to link human resource development (in this case higher education) to innovation in the creative industries. And in another contribution on the problematic relationship of artistic practice to innovation, Oakley (2009) has questioned the asocial assumptions that underpin the various attempts to harness the creative industries to the innovation agenda including the Cox Review of Creativity in Business (HM Treasury 2005) and the McMaster Review of the future of the arts funding system (DCMS 2008b). Removing society from innovation makes matters easier to deal with from a policy point of view, but as the sociality perspective would argue, it would also remove innovation from society.

This chapter examines the ways in which sociality has been incorporated into research on the creative industries. In particular it points to the ways in which focusing on the associative character of the creative industries helps to develop non-reductive accounts of their specificity. However, the emphasis on the roles respectively of tacit

knowledge, social milieu and cultural embeddedness tends to point analyses of entrepreneurship and innovation in the creative industries towards social constructivist explanations in which a deep methodological distrust of individual agency is predominant. This distrust is especially difficult to reconcile with ideas about creativity – unless creativity is regarded as a social property (as implied in some versions) and operative in the kinds of ways that might be encompassed by Becker's idea of the 'art-world' (Becker 1984) in which association and membership is bound by a particular 'epistemic culture' (Knorr-Cetina 1999) or resides within a particular 'community of practice' (Wenger, 1998). The argument of the chapter is that the positive emphasis placed upon the associative dynamics of the creative industries as a way of avoiding either reductive individualism or reductive economism has led analysis to favour an over-socialised account at the expense of understanding the dynamics of creativity. It will argue that a socio-cognitive account of creativity complements the associative account of innovation in the creative industries without introducing either individual or economic reductionism.

The structure of the chapter and the detail of its argument proceed as follows. The next section presents a critical overview of the ways in which the specialist research on the creative industries has mobilised the concepts of social interaction and sociality in accounting for entrepreneurship and innovation. That is followed by a section that assesses the limits of these analyses, showing the ways in which they leave important questions about creativity unanswered. That is followed in turn by a section which contains the argument that possible solutions to these problems might be offered by an approach that combines a number of elements: an expanded account of the relevant forms and types of knowledge operative within the creative industries; a socially interactive model of the formation of innovation traditions and, a socio-cognitive account of knowledge exchange as a catalyst for innovation. Each of these ideas and their

respective significance is explained first in turn and then in combination. Whilst the purpose of this chapter is primarily one of theoretical development, it concludes by discussing some of the very practical challenges that may benefit from this theoretical work.

Socialising creativity

The forms of sociality through which the creative industries are reflexively constructed and articulated have been addressed explicitly in the literatures of cultural sociology, cultural geography and regional studies. Kong (2005, 62), building on the work of Scott (1999, 2000) offers a very clear typology of the ways in which sociality and creative production interact. Sociality provides the content and subject matter of symbolic production. Second, symbolic production is social production – we might say with Becker that symbolic production is part of an art-world. Thirdly, symbolic production requires interpersonal norms and values to render it communicable. And, fourthly, symbolic production relies on feedback mechanisms between producers and consumers. This emphasis on the role of social interaction in the creative industries has most recently been worked up into a fully-fledged theoretical account of the creative industries under the rubric of 'social network market' analysis (Potts *et al*, 2008). The emphasis on how the behaviour of the individual subject is reciprocally both *constitutive of* and *constituted by* the behaviour of others (cultural choices, practices, communicated acts of judgment, etc.) in an informational economy, places this analysis clearly within a social constructivist model.

The strengths and weaknesses of this kind of approach are illustrated in the following short reviews of some of the key contributions on two typical topics: sociality and networks and sociality and place.

Sociality and networks

Perhaps the most obvious way in which social interaction is seen as critical to the way the creative industries work is in the seeking, cementing, developing and exploitation of business relationships. Using ideas either directly inspired by or traceable to the work by Mark Granovetter (1972, 1985) in economic sociology in the 1970s and 1980s, the creative industries have been described as a 'transaction-rich' sector (Wilson and Stokes 2005; Julier 2006), one in which the reproduction of activity is dependent on the constant seeking out of opportunities, prospects and new clients. The enlargement of ones own contacts by networking – the building and subsequent exploitation of the strength of weak ties (Granovetter 1973, 1985) – expands the realm of possibilities and ensures a constant churn of market intelligence, potential collaborators and opportunities. The specific nature of business risk in the creative industries is reflective both of the high level of medium, small and micro-scale enterprise working, but also the existence of a small number of transnational corporations, particularly in media and media-related sectors that have a disproportionate ability to control the market-place, not only for products and services, but also contract and work opportunities. It is also a sector in which there is also a high degree of gate keeping – by large industry players, industry bodies, funding bodies, etc – and in which opinion making and breaking by critics and audiences is absolutely central. The constant leveraging of significant opinion, keeping 'irons in the fire' and being alert to new possibilities is a central part of how risk in an intrinsically high-risk industrial sector is managed. Transaction intensive trading through social interaction is one of the ways in which trust between economic agents is engendered (Banks, et al, 2000, Bilton 1999) and through which creative activities can be sustained and replicated.

However, this emphasis on the networked nature of the creative industries can become circular. These models, developed to address the formation of common

practices and epistemic repertoires in a range of professional settings, whilst having a range of advantages, are limited in two important and critical ways when applied to the creative industries. Whilst they are effective at explaining the normalisation of changes within a professional community – expressed as received wisdom, good practice, etc., they are much weaker at explaining the originating innovation and the causes of innovation. This limitation originates from the way that these particular models, in over-socialising creativity and the sources of creativity, distance knowledge development and appropriation from the processes of human cognition. In a piece that resonates with this argument Thompson, Jones and Warhurst (2007) argue that dominant accounts of the creative industries evacuate the space between conception – the development of new symbolic products – and their consumption, leaving a number of important considerations – the organisation of work, management processes, employment relationships – for example, unexamined. This chapter argues that in emphasising the epistemic efficacy of community, the model also evacuates the space in which human cognition and creativity play a critical role.

The second limitation stems from the tendency in epistemic culture and community of practice models to divine professional cultural significance in any form of social interaction, however prosaic or incidental. Whilst this can expose these models to charges of triviality, more importantly, in collapsing the socio-ontological distinction between the interactivity and relationality necessary for social reproduction, they seriously compromise the ability of analysis to account for persistence and change in a given social phenomenon. Paradoxically, as we shall see from the next discussion, given the emphasis these accounts place on the role of tacit knowledge, the absence of relationality – the precondition for tacit efficacy – coupled with an aversion to the cognitive, undermine any effective account of tacit knowledge.

Social interaction and place

The second area in which analysts have identified a particularly important role for social interaction is in the association of creative production with place. Central to this is the notion that the relationship of individuals to each other is mediated by place – a definite sense of spatiality and its extension, and vice versa, individuals relate to place via their social relationships, most readily felt in the tacit knowledge that is shared between inhabitants of the same networks. How one feels about a place – a city or town, district, neighbourhood or quarter for example, – is an essential component of the creative identity one needs in the currency of the creative market-place. How that is manifested is described in the literature in a number of different ways, but they all point to the same central idea – that is, that place and creativity are mutually energising. This has been expressed in a number of ways including the idea of creative cities (Landry and Bianchini 1996); occupied by a creative class of socially interactive professionals (Florida 2002); the idea of the creative milieu (Tornqvist 2004) and most commonly now the sense of a 'scene' or 'buzz'. Whilst these ideas can seem ephemeral to a point beyond analytical coherence (Markusen 2003), what underpins them is the sense that a transaction intense industry thrives on the constant turnover and circulation of information, opinion, rumour, gossip, in key social arenas of interaction: events, parties, launches, first nights, premiers, exhibitions, gossip columns, internet sites and blogs.

However, this insight has developed beyond what could be described as a way of doing business to becoming the business in its own right (a further instantiation of Thompson, Jones and Warhurst's critical observations). In a series of papers and a book-length contribution, Elizabeth Currid (2007a, 2007b, 2007c) describes how the creative production of New York has become an extension of the intense networking activities that characterise the creative industries there, the art and fashion markets in particular. In this context, business efficacy is seen less as the realisation of a business

idea, but as the product of immersion in a particular 'scene', with its own characteristic 'buzz'. The attractions of this type of argument are clear. From a policy-makers point of view such arguments offer positive affirmations of local creativity – possibly attracting more to the locale by creating an attractive sense of identity and its related visibility. In a paper that is sympathetic to the forms of analysis offered by arguments about 'buzz', Asheim, Coenen and Vang (2007) argue that this emphasis on such evanescent activities should not however, over-shadow important consideration about the knowledge-base that underpins the development of an industry in a given place. 'Buzz' may be an important way in which short-term market knowledge (contract opportunities, professional reputations, 'inside knowledge') is circulated and acted upon, but it doesn't necessarily explain how or why a particular industry develops in a given location, or provide any sense of how it may develop over time. The importance of the particular nature of the knowledge-base underpinning particular kinds of industry becomes important in a later part of the chapter.

The emphasis placed on sociality, especially that concerned with intense social interaction, can provide a rich insight into the habitus of the creative entrepreneur and creative practitioner (Banks et al 2000), but stepping back from the immediacy of those activities, it is difficult to see how it can account for the development of creativity in a given context. The next section will argue, drawing on Asheim, Coenan and Vang's argument that this requires an understanding of the knowledge-base from which creative industries activities draw, and further, the forms of knowledge exchange which realise that creativity.

Sociality, creativity and innovation: a critique

Whilst the critical literature on the creative industries has readily advocated the role of social interaction in the production and reproduction of the creative industries, it has two

conspicuous problems relating to the locus and nature of creative agency. First, it is difficult not to conclude that the concept of social interaction has undergone extensive dilution, in which even the most fleeting or temporary interaction becomes invested with significance. It is not too difficult to see how a mass of interactions could induce a sense of the importance of interaction *per se*. It is then not too difficult to make the jump to the idea that it is interactivity itself that motivates creativity, thereby diminishing the role of agency within the creative process. Secondly, this emphasis on social interactivity points towards the kinds of social constructivist epistemologies that have become dominant in organisational and professional studies, and which, arguably can now be seen routinely at work in studies of the creative industries. Within these models – the notions of epistemic culture (Knorr-Cetina 1999) and community of practice (Wenger 1998) come specially to mind, but also within the recently developed social network market approach (Potts et al 2008) innovative agency can be vested in the norms and practices of an interacting community, with such norms and practices becoming the heritable habitus of its members. Again creative agency is assumed by the social. The emphasis these models have on the social construction of professionally relevant knowledge places constraints on accounting for innovation in the creative industries, arguably, at best marginalising it to the periphery of analysis where it can be dealt with either as a psychological or aesthetic given, or at worst, evacuating the concept altogether. These models also tend to privilege the idea of the professional community as a consensus-seeking community, possibly even one subject to some degree of closure, thus creating little space for innovation based on open-ness or even the considerably less predictable effects of disruption.

Does this mean therefore, that if creativity is to be acknowledged we have to fall back on older ideas about creative individuality? This has certainly been argued as a consequence of at least one particular definition of the creative industries that has been

in widespread use. Garnham (2005) observed that the particular definition adopted by the UK Department of Culture, Media and Sport with its emphasis on individual skill and talent couldn't help but reinforce old-fashioned ideas about the relationship between artistic agency and subjectivity, in effect, in the terms of this chapter, placing creativity itself beyond the realms of investigable innovation. It appears therefore that, to the extent that we wish to maintain the idea of creativity as a socialised acquisition, we appear to be forced into surrendering creativity to the reflexes of symbolic economy of meaning making (Lash and Urry 1993; Hesmondhalgh 2008). On the other hand, should we wish to maintain some meaningful sense of individual creative agency, we appear to be condemned to the narrow and one-dimensional view of creative subjectivity (Garnham 2005).

There is a challenge therefore to account for creative agency within the creative industries without falling into old-fashioned dualistic analysis: that is creativity being seen as either a uniquely social or uniquely individual acquisition. There is however, a contemporary literature – allied closely to both innovation and organisational studies that may offer a useful way through this challenge. Contemporary innovation and organisational studies have increasingly focused their attentions on knowledge transfer as a social process. The process of knowledge transfer, it is argued, is a key process enabling variously innovation, organisational adaptability, efficiency, the circulation of market knowledge, and so forth. Central purposes in this literature are the exploration of the interactive dynamics of knowledge production; the mediating role of social interaction; the integrative role of knowledge exchange, and, the social processes by which new knowledge is embedded and subsequently challenged and transcended.

To that extent it can be easily assimilated to the social constructivist accounts as an explanation of the mechanisms of knowledge circulation processes in the reproduction of organisational and professional cultures. And indeed, this is how it is often seen, with

practical initiatives being designed to assure the most efficient circulation of knowledge within an organisation or professional community. This has been seen most recently, for example in efforts to promote knowledge circulation between universities and potential users of knowledge in industry, government and the third sector.

However, recent critiques within the knowledge transfer literature show a growing dis-satisfaction with social constructivist accounts and a re-focussing on knowledge, the conditions of its production and its circulation. The next section explores a range of this literature and considers the potential for developing an account of creativity and innovation in the creative industries that can maintain the insight developed in the sociality literature, but without relinquishing the efficacy of creativity to sociality *per se*.

Sociality, creativity, innovation and knowledge

At a meta-level this debate centres on one of the seminal problematics of social science - how to provide an integrated account of the relationship between micro-interactivity and macro-structural efficacy without falling into either dualism and/or determinism. Epistemic culture and community of practice models presume a consensus-seeking community and therefore deals with this problem by arguing that the operative agency is, in effect, the community itself. The creative industries superficially exhibit such tendencies, but the core activity is driven by a non-trivial sense of novelty. The very nature of the activity constantly threatens the integrity and stability of the community, even, as the pervasive sharing of digital music files illustrates, to the point of threatening the community as a whole. The challenge then is how to account effectively for creativity and innovation in the creative industries in a way that can allow for the integrative role of social interaction without reproducing the limitations of the social constructivist model.

The argument of this section is constructed from three insights each of which will be explained in turn before assembling them into a putative account of innovation in the creative industries. The first is Asheim *et al's* (2007) insight that sociality matters because of the particular type of knowledge-base that underpins innovation in the creative industries. This in turn calls for an approach that is capable of combining the cognitive – knowledge - and the social – the context of its creation and application. Recent trends in the knowledge transfer literature have returned to the importance of making this connection. Here the section draws on the work of Nightingale in the 1990s and the idea of the 'innovation tradition' as a way of mediating the macro and micro perspectives. Nightingale's approach reinforces the role of cognition which is a point taken up by Ringberg and Reihlen's work from 2008, these can be combined in a putative socio-cognitive account of the knowledge exchange process as a knowledge-constituting process.

Asheim et al (2007) point to the essential but differential role of sociality in a range of industries. However, they develop this insight by offering the view that sociality plays different sorts of roles, to differing degrees according to the specific epistemological character of the knowledge that underpins different industrial sectors. Their account differentiates the 'symbolic' knowledge base of for example, the creative industries from the 'scientific' knowledge-base of, say the life-science industries, or the 'analytical' knowledge-base of the engineering industries. As they, following Brink et al (2004) explain: "A 'knowledge base' refers to the area of knowledge itself as well as its embodiment in techniques and organisation" (Asheim et al 2007, 660). This idea neatly captures the sense of how knowledge can be thought of both as a body in itself, but as also subject to necessary processes of embodiment – which are evidenced both in technique and in organisation – both of which in turn are socially mediated. Their argument concerning the specific character of the knowledge bases thought to operate

in different industrial sectors is not important for the argument here (although some readers might question the extent to which their characterisation of the symbolic knowledge base is accurate). However, what is important is the implication of their analysis.

Innovation studies, as an inter-disciplinary field of inquiry has sought to re-consider the relationship of tacit knowledge to innovation processes by developing an integrated account of their cognitively embodied and socially embedded nature. Such an account of creativity and innovation has a number of distinct advantages over its social constructivist rival. Where the latter posits creativity as an immanent quality of social interaction, the former can account for it as both individually developed acquisition – through practice, learning, skills development – in other words through processes of disciplined embodiment, and, in the formation of organisational knowledge as a heritable and transmissible social acquisition. There are important and well-recognised consequences, epistemological, explanatory, ethical and political at stake in the development of such an account. At one level they provide an important counter-weight to current time-space compressing, weightless (ie, immaterial) accounts of creativity, at another, they restore creativity to its proper place at the conjunction of human agency, social structure and their spatial extension. The growing interest in craft and skill, in path-dependent technological choices, and in, the apparent 'stickiness' of creative talent to place can all be cited here as examples of the ways in which accounts of creativity and innovation in the creative industries can benefit from such analysis. However, we need to be able to see how the cognitive and social dimensions can be brought together. A possible route into this is through a critique of the linear positivist model, a critique that has been mounted robustly in recent years.

In a paper published in 1998, Nightingale noted how the positivist, linear model of innovation was wholly inadequate to the task of dealing with the complexities of actual innovation. He demonstrates how, confined to a highly simplified information system approach, the linear model based on the radical separation of knowledge production activities from application or development can only deal with the sociological fact of path dependency or 'stickiness' as either market failure or informational inadequacy. Current attempts to promote the development of the creative industries tend to make the same assumption in their reliance on information and network dissemination initiatives. To deal with the complex, iterative nature of innovation Nightingale proposed a model based on three insights. The first and critical one for our exploration is the restoration of the humanly cognitive to the account of creativity. Cognition in this context rests on the existence of a pre-learned human capacity to recognise patterns. Pattern recognition and transference can be subsequently developed and refined through cognitive development, socialisation and education. Such pattern recognition can also be borne by social networks as that knowledge which is tacitly understood and accepted (cf Asheim et al 2007 for a similar account). The second element regards knowledge as the social practice of mapping and codifying patterns. A wide range of accounts of cultural knowledge – structuralist and ethnographic accounts come to mind most readily – point to the basic model of pattern recognition and its ability to be communicated. The third element rests on a specific account of technology as a function-driven endeavour, that is, the functions of technology are not intrinsic to the particular apparatus of technology but are implicit in the tacit knowledge base – ie, pattern recognition processes – by which solutions to one sort of problem are transferred and translated to another. This is the basis for innovatory potential.

The distinction between knowledge and technology is important for understanding why it is incredibly difficult to trace the direct relationship between for example, specific

scientific endeavours and technological development. There may be indirect and multi-plex relationships but these are difficult to describe, impossible to predict and largely beyond meaningful quantification. If we are to account for innovation we need to develop our understanding of the ways in which tacit knowledge from practice and reflection are both embodied in the cognitive processes of individuals, but which also crucially form the basis of what Nightingale describes as innovation traditions. Such traditions provide the localised repertoire of tacit knowledge accumulated within a given social and spatial context and within which individuals develop their own creative repertoires.

Such interactivity presents a question about the precise mechanisms by which this is effected. The concept of knowledge exchange has been developed over a period of some thirty years or so to account for the means by which tacit knowledge is both accumulated socially and rendered accessible individually. Nightingale's distinction between cognitively embodied knowledge and socially embedded knowledge can be elaborated further by drawing upon the work of Ringberg and Rheilen (2008) who concentrate on the forms of knowledge exchange and their outcomes. They argue that current understandings of knowledge transfer are too closely wedded to a perspective of knowledge as categorical information. This perspective is evident for example in accounts of knowledge transfer such as that offered by the Organisation for Economic Cooperation and Development in its Frascati Manual (OECD 2002). In this model knowledge is seen as the product of verified basic research (verified, that is, through for example peer review processes). Such knowledge is turned into information (through publication) and is then subsequently circulated. Knowledge transfer is then seen as the specific means by which such codified and categorical knowledge is transferred between different domains, for example, between a university research laboratory and an industrial application. The matter of how knowledge is transferred between domains can

then be attributed to the routine norms and rules that obtain within the epistemic culture of a given community of practice.

Ringberg and Reihlen argue that this model leads to two specific limitations in traditional understandings of knowledge transfer. Firstly, it unnecessarily restricts what counts as knowledge within the innovation process. In its place Ringberg and Reihlen offer a spectrum of possible forms of knowledge that vary according to their respective degree of categoricalness and reflexivity. This greatly expands the range of forms of knowledge that might be considered here, including tacit knowledge. Secondly, it overestimates the role of environmental feedback in the protocols that govern the interpretation and application of knowledge. This observation is based on their specific account of the combination of cultural (ie., public) and private models that regulate the conversion of information into meaningful knowledge – that is knowledge with a specific efficacy in a given situation. Ringberg and Reihlen posit three arguments in the development of what they call a socio-cognitive account of knowledge transfer. The first, and highly redolent of Nightingale's account, is the view that social constructivist accounts of knowledge fail to take adequate account of both the private and cultural models by which individuals de-code the data of their sense-experiences. Such de-coding is always provisional with varying degrees of tentativeness ranging from the categorical (i.e., knowledge which is largely taken for granted, assumed) to the reflective (i.e., knowledge that is open). Therefore knowledge exchange is primarily not to be thought of as the transmission of ready-made codified knowledge but is primarily a site of provisionality in which the cognitive feedback of environment plays a key but not over-determining role.

When social interaction is brought into their account of the knowledge transfer process, four possible outcomes are suggested. They illustrate this by mapping possible outcomes onto axes oriented from north to south, high social interactivity to low social

interactivity, and from west to east, reflective thinking to categorical thinking. Four types of knowledge outcome can be identified. The upper-left quadrant combines high social interactivity with a high degree of cognitive reflection, resulting in a high degree of what they describe as knowledge negotiation. This type of model assumes a high degree of interactivity between different private and cultural models where social agents are engaged in a high degree of negotiation. It is typical of the types of knowledge exchange required *between* different social and professional groups, for example, where collaboration is being conducted on an inter-disciplinary or multi-disciplinary basis. The upper-right quadrant combines a high degree of social interactivity with what for the time being constitutes seemingly settled categorical knowledge. This is typical of the knowledge processes most closely associated with for example the community of practice model. Outcomes are more or less scripted by the shared and assumed categories that operate within a particular community. Such forms of knowledge transfer may bind one community together, but they are equally likely to inhibit exchange between different social and professional groups (one might want to consider the academic community here). The lower-left quadrant combines both low social interactivity with categorical knowledge resulting in a category of knowledge exchange that Ringberg and Rheilen describe as stereotypical knowledge, that is knowledge which has become routinised and requires little negotiation – knowledge which is not untypical of large bureaucracies in which low social interactivity coupled with an unreflective approach to knowledge results in little knowledge development. The fourth quadrant, at lower-right combines both a high degree of reflection, i.e., intense reflection on private and cultural models with low social interactivity. This produces forms of knowledge that step outside of those that are currently socially sanctioned and maybe that which challenges accepted wisdom.

How might this apply to processes of innovation in the creative industries? By focussing on private and cultural models of interpretation, the model restores the processes of individual cognition to the process of innovation itself. It allows analysis to break out of the idea of innovation in the creative industries as simply the re-cycling of an existing cultural repertoire. However by cross-referencing degrees of cognition – from the reflective to the categorical – with degrees of social interaction it not only provides a framework for a much more nuanced account of creativity but also points out the limitations of a uni-dimensional account of sociality. This lends theoretical support to Nightingale's idea of the 'innovation tradition' (Nightingale 1998) as the enduring context within which knowledge is created, embodied and absorbed into the repertoire of tacit knowledge.

One implication of the kind of conclusion offered by Ringberg and Reihlens argument is that innovation processes cannot be attributed either to the working out of a wholly social logic of innovation (innovation as a structural feature of social processes), or, that they can be seen as the product of an individual innovating subject. The social dynamics of innovation are mediated by processes of cognition; conversely, the processes of cognition are mediated by the operative cultural models of a given context. Innovation processes can therefore be said to be situated acts, combining both cognition and context – the basis for the formation of 'innovation traditions'. Once this is admitted, the 'ideal typical' innovation process offered in for example, the Frascati model becomes at best an unusual exception. As Nightingale (1998) compellingly argues, the ideal type is defeated by the many common empirically observed discontinuities between knowledge and innovation (Nightingale 1998,691):

> Reading the broad sweep of history backwards, from the present to the past, it is common to find a link from technology to previous science. The historical extent of these links is an empirical matter. What is not clear is why when we turn and look from the present into the future the linear model falls apart, as it fails to explain how today's science can be turned into tomorrow's technology. The notion that the output of science is information that can be directly applied to produce technology cannot explain many of the key features of innovation such as, the importance of tacit knowledge, why so much science is

> done in industry, why so much technology seems to be produced without much input from science, why in many instances the technology comes first and the science that can explain it comes later, why technical production is so localised, and why different industries have very different 'scientific' requirements.

Much of what Nightingale says also applies to the creative industries. Why is it that some forms of cultural knowledge are taken up within the creative industries and others not? Why is it that the creative industries appear to relate to centres of knowledge production such as Universities only indirectly? Why do creative industries businesses tend to cluster in some places and not others?

Conclusions and applications

It is commonly made observation that the creative industries are emblematic of the growth of both the economic significance of symbolic production and of its extension into other spheres of economy and society. Research has rightly abjured the asocial approach to the creative industries often presented in public policy and which becomes replicated in the kinds of initiatives that are designed to support it, ie., an emphasis on mechanistic approaches to interaction and information rather than an understanding of the role of knowledge, its formation through innovation traditions and its embodiment in the work of individuals and organisations. However, as this chapter has argued this can be corrected by taking a critical view of the knowledge exchange process, restoring cognition to our interpretation of creativity and then beginning the process of understanding how the different forms of knowledge are worked out in the real day to day worlds of the creative industries.

So what can we use this for? There are two real purposes here – one relating to research and one relating to the business of devising intelligent business support mechanisms, but, as the analysis of this chapter implies, these two things need to work together. In research terms, the model offered here potentially allows an opportunity to

break out of the circular account of the creative industries in which creativity is seen as very little more than the mobilisation, re-presentation and re-cycling of existing symbolic products. The re-introduction of cognition into the picture helps to tie creativity back to socially situated individuals as creative agents. The innovation tradition concept allows research to investigate the specific conditions that account for why the creative industries develop in the particular ways that they do, and, in the particular places that they do. The application of Ringberg and Rheilen's account of knowledge transfer processes similarly offers the opportunity for research to examine the specific character of the knowledge-base drawn upon by the creative industries and compare that with the knowledge used in other industries. This might then open up interesting research questions about, for example, the relationship of the creative industries to higher education.

The development of this research area could potentially have important consequences for how the creative industries are fostered and developed. At the present time, business support initiatives have focused disproportionately on association without considering how new ideas are generated or how the resources for ideas-generation should be managed or directed. If sociality was an effective antidote to reductivism in theories of the creative industries, a clearer understanding of the sources of innovation will be an effective antidote to simplistic and circular understandings of how the creative industries actually develop.

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