

Toward a new cultural economics of innovation

Jason Potts

School of Economics, Finance & Marketing, RMIT University, Australia. jason.potts@rmit.edu.au

John Hartley

Centre for Culture and Technology, Humanities Faculty, Curtin University, Australia; and School of Journalism Media and Cultural Studies, Cardiff University, Wales.

Abstract.

We propose a new approach to cultural economics that builds from a synthesis of cultural studies and evolutionary economics. This project – called *Cultural Science* (Hartley and Potts 2014) – is centred about the study of how culture produces novelty and newness. We formulate a model in which culture makes groups, and groups make knowledge: new knowledge occurs as the boundaries of groups change; and as individuals inhabit more groups ('demes per person'). This extends cultural economics to connect with innovation economics as a cultural explanation of newness. We outline the arguments of this approach, and the implications for a new research program for cultural economics.

JEL: Z11, Z13

Keywords: cultural economics, innovation, demes, cultural science

1 What is culture for?

Currently, there are two distinct meanings of the economics of culture. The first is the application of microeconomic analysis to the problem of efficient cultural production and consumption. This is cultural economics. The second is how culture, as socially learned preferences and knowledge, affects economic behaviour and outcomes. This is the cultural foundations of economics. The purpose of this paper is to add a third meaning, which is culture as a source of newness and innovation in economic

systems. We call this ‘cultural science’ (Hartley and Potts 2014) and argue that this is a new research frontier for cultural economics.

Let us unpack the established usages in order to appreciate the departure point of this third meaning – a new cultural science or innovation-based conception of the economics of culture.

The first meaning of the economics of culture is broadly associated with the *Journal of Cultural Economics* and *JEL* code Z11 – the economics of arts and literature. Representative figures are David Throsby, Bruno Frey and Ruth Towse, and the seminal work is Baumol and Bowen (1966). This is a branch of applied microeconomics concerned with the production and consumption of cultural goods and services (Throsby 1995), the formation of cultural preferences, the stock of cultural capital, the institutions of cultural markets, and the measure of the cultural economy. Proponents argue that cultural policy should be guided by this approach to economics of culture.¹

The second meaning of the economics of culture is associated with evolutionary game theory and institutional economics in relation to how culturally acquired social norms affect economic action, particularly in relation to cooperation, trust, identity, preference endogeneity, and ‘cultural capital’ (Jones 2006). Here, culture is anthropologically defined to mean socially learned behaviour (within the economic context). This falls broadly within the foundations of microeconomics within the *JEL* code Z13 – economic anthropology and economic sociology. Representative modern figures are Herbert Gintis, Samuel Bowles, Avner Greif, Eric Jones, and Deirdre McCloskey, among others, and the seminal figures include Thorstein Veblen, Herbert Simon, Kenneth Boulding, and Tibor Scitovsky. Proponents argue that economic theory should be guided by these understandings of (evolved) human behavior and culture.

We suggest combining these two meanings through an evolutionary lens. Cultural production and consumption is part of all human societies and therefore economies. Culture is clearly a human evolutionary adaptation (Bowles and Gintis 2011, Boyd 2009, Henrich 2008). But an adaptation for what function? What’s the

¹ A recent permutation is to view not culture per se but a regional or industrial conception of the cultural economy as a mechanism affecting other socio-economic phenomena. This is exemplified in the model of cultural and creative industries as a driver of regional development (Florida 2002, Currid 2007), innovation (Bakhshi et al 2008, Potts 2009, 2011), or economic growth (DCSM 2001).

use of culture, such that it is evolutionary advantageous, stable and flexible – a ‘poised’ system (Kauffman 1991)?

A common answer is that culture is an efficient mechanism to carry knowledge and facilitate in-group coordination and cooperation (Boyd and Richerson 2005, Pagel 2012). In the ‘extended phenotype’ argument (Dawkins 1982), culture carries useful information that is replicated through ‘social learning’ (Mesoudi 2011) and evolves through the differential survival of carriers. This approach explains why economic agents have cultural preferences and underpins the treatment of culture as a quasi-public good.

But a different answer, the one we develop in this paper, is that culture is a mechanism to make new knowledge (and not just differentially to replicate existing knowledge). Culture is a mechanism of novelty and variety generation for bounded communities. Furthermore, culture is not something that differentiates groups – as if groups already exist independent of culture. Rather, in our theory, the adaptive function of culture is to make groups. The adaptive function of groups is to carry knowledge – we call this the externalism hypothesis, (Hartley and Potts 2014: ch 2). In our model: culture makes groups and groups make knowledge. Under evolutionary competition, groups clash at boundaries, testing knowledge and redrawing those boundaries. The result, from the perspective of any particular group, is new knowledge, revealed by a shifted boundary. In this way, cultural dynamics create innovation.

Furthermore, individuals may occupy or inhabit more than one group. It is our conjecture that the number of groups per person has increased many-fold over the *longue durée*, following the adoption of new ‘knowledge technologies’ (see section 5.5 below), such that new knowledge (and also conflictual difference) may be generated via boundary shifting among different groups ‘within’ the same person. It is here that individuals re-enter the analytical picture, not as choice-theoretic rational agents but as meaning-makers in multiple culture-made groups and as intermediaries – including entrepreneurs and translators – between such groups.

This differs fundamentally from the standard production function approach in innovation economics in which new ideas are produced by increasing investment in inputs, enabling greater search through recombinatorial space (Lucas 1986, Jones 1995, Weitzman 1998). There are no groups or culture in that model, just investments. Instead, our cultural model of innovation is a discovery model of innovation with

respect to a particular group. By redrawing the boundaries of a group, an idea that was previously outside (incommensurate) comes inside (and can be integrated, used) thus increasing the effective idea-space. This suggests a different model of how culture relates to economic change than the standard neoclassical and new institutional approach of identifying properties within culture itself (Weber 1930, North 1990, Jones 2006).

Our approach thereby is closer to an economic sociology of innovation based on the formation of and conflict between groups (Stark 2009, Vedres and Stark 2010). We construct an analytic framework that is based about semiotics (Lotman 1990; 2009), cultural studies, evolutionary anthropology and evolutionary economics to arrive at a model of the relation between culture and economic dynamics that turns not on increasing cultural investment, but rather on changing cultural boundaries. The upshot, we think, is a new avenue for cultural economics through a new mechanism connecting cultural dynamics to economic dynamics. Symmetrically, this also offers a new avenue for innovation economics by indicating a new cultural mechanism behind the growth of knowledge process.

We proceed as follows. First we explain our new theory of how culture works. This is the theory of ‘demic concentration’ from Hartley and Potts (2014). The significance of this idea is that it corresponds to the extant theory of demic diffusion (Cavalli-Sforza 2000). Next we review theories of innovation in economics, pointing up how they ignore groups and their formation, which is to say the dynamic value of cultural mechanisms. We fill this gap with our new cultural theory on ‘the use of culture in society’ – which is an obvious riff on Hayek’s famous paper on the value of distributed knowledge. We conceive of culture as a group-making form of evolving knowledge. We conclude with a raft of implications for the research program of cultural economics that follow from these arguments. In sum, the value of culture can be derived from the value of innovation.

2 How culture works

2.1 Culture makes groups: the concept of a deme

As indicated, there are two current meanings of culture in relation to economics. One meaning refers to a class of human endeavor (e.g. culture as arts & literature, high-culture/low-culture, cultural industries, the cultural economy). The other meaning refers to the suite of shared beliefs and knowledge acquired through social learning. Raymond Williams (1958, 1960, 1977) sought to unify these approaches to found the discipline of ‘cultural studies’ with the reconciliation that ‘culture is ordinary’; our purpose is similar here toward the creation of a ‘cultural science’ where we will reframe this as ‘innovation is ordinary’.

The first meaning – cultural economics – refers to the study of the economic organization of the production and consumption of culture. The second meaning – anthropology and sociology – refers to culture as socially-acquired and socially-carried ‘knowledge capital’. In both conceptions the individuals, organizations, societies and economies alike all in effect pre-exist as groups, such that the production and consumption of culture, or learning and use of culture, is something that these extant groups then do. Groups, in the standard view, are composed of agents who make cultural choices and engage in cultural actions.

In our view, however, culture is what makes these groups into groups in the first place. Culture isn’t something that groups do; rather groups are something that culture does. Following Bowles and Gintis (2011), Nowak (2011), Pagel (2012), Stoelhorst and Richerson (2013), Wilson et al (2013), among others, we claim this is a consistent evolutionary perspective that is expressed in the framework of multi-level selection and the model of the evolutionary niche of *H. sapiens* as a pro-social groupish animal. We cooperate, voluntarily, more than any other life form (Nowak 2011). *H. Sapiens* is a language-using, high-trusting, instinctively cooperative animal and, to a first approximation, this is why we have culture. Culture is the mechanism we use to form groups, and these groups (in-groups, that distinguish from out-groups) are the sites of cooperation and knowledge making.

We call a culture-made group a *deme*. We use the term deme in both the biological sense (inter-breeding group that shares genes) and the political sense (*demos*, inter-voting group that shares citizenship rights and responsibilities) but apply this in a cultural and anthropological sense to refer a group that shares knowledge and ideas, such as a language group (Pagel 2012). A deme is a knowledge-making and knowledge-using (Dopfer 2004) cooperative group that culture built.

Demes are an evolutionary product. Evolved human nature is both *altruistic* (pro-social) and *parochial* (adversarially groupish) (Bowles and Gintis 2011; Pagel 2012). We cooperate within a social group, but can be vicious to outgroups. Tajfel (1970) demonstrated this in a series of disturbing experiments on the concept of the ‘minimal group paradigm’ as the point at which discrimination (or demic effectiveness, in our language) emerges. In other words, our groupishness is also groupish: we make ingroups and outgroups or universal-adversarial ‘we’-groups (a *deme*) against ‘they’-groups – and thus cultural growth implies group growth, which implies that social and cultural dynamics work along the boundaries of groups.

Culture, then, is the evolutionary mechanism by which we achieve group-based cooperative pay-offs (Masoudi 2011). ‘High’ culture – say J.S. Bach or Shakespeare – may well be the flower of human achievement; but ‘ordinary culture’ (Williams 1959) holds together everyone in a deme, however large, in tightly coordinated groups of trust and identity through shared meaning-making. A group is the effective range of communication over the full gamut of choices over ‘information, utterance and understanding’ (Luhmann 1991: 254). Culture in other words, is something that occurs at the level of communicating groups and systems, not individuals.

Ideas and knowledge are ‘culturally situated’ in the sense that we acquire ideas preferentially from our *deme*: from within our language, our social references, our (extended) family: from within our ‘we-group’ and against ‘they groups’. This groupishness explains ‘*universal-adversarialism*’: within a ‘we’-group all knowledge is knowable and universally accessible; but it is opposed to the knowledge of ‘they’-groups (Hartley 1992).

In social science, groups tend to be defined by function and interests (class in sociology, or interest group, coalitions or organisations in economics, Frijters and Foster 2012). But in our framework, a group is defined by its span of integrative or ‘cultural’ knowledge: groups – as demes – can be cities, bands, nations, or languages. It is ‘we’ knowledge that is identified with a deme, as distinct from individual or abstract knowledge that does not have specific demic origin.

2.2 Demic concentration

Innovation occurs as a cultural process when ideas are integrated into the ‘we’-group as its boundary lines are redrawn to include ideas that were previously part of a ‘they-group’. This mechanism is different from the standard economic model of innovation – namely, the production function approach, where increased output comes from increased input or improved ‘technology’. Instead, newness and innovation occur by an evolutionary semiotic process of group-dynamics we call ‘*demic concentration*’.

Demic concentration is the formation of such a bounded group; *cf. demic diffusion* (Cavalli-Sforza 2000) where the knowledge moves across groups through individual migration. In essence, the boundaries of a ‘knowledge-group’ change and this boundary changing is innovation. This is not something unique to firms, but occurs as both a producer and consumer process. The upshot is that this becomes a further account of what the cultural economy does: it is not just a story of consumption utility (i.e. the cultural industries) – it is also an account of novelty creation through the mechanism of demic concentration.

This implies a distinction between the set of all ideas, and the *effective set* of ideas. An idea is learnable and usable if it exists within the deme-set of an individual, which is equivalent to saying that it is *meaningful*. The growth of knowledge refers to the expansion of this effective set of ideas, and at the core of the cultural model of innovation is that this expansion process can be described through the mechanism of demic concentration. This is the evolution of meaningfulness.

2.3 How culture makes demes: stories and children

Culture is an adaptation that enables humans to make groups, especially among non-kin, thus of strangers, who must nevertheless trust each other (Seabright 2010). The selective advantage of groups can be many, but the generalized form considered here is that groups make knowledge. For this to be true, knowledge must be partially or wholly *externalized* (that is, be composed of linked ‘artifacts and mentifacts’, Huxley 1955). A deme, conceived as a culturally-made group, is an autopoietic communicative system of externalized knowledge (Luhmann 1986). It is worth noting (with Pagel 2012), that just as genes survive the creatures (bodies) that carry them, so demes outlive individual knowing subjects – culture, sociality, communication and knowledge survive their creators and users. Knowledge remains cultural, not individual, and may eventually become abstracted or de-situated even from the

context of a given demic belonging, to embark on an independent career, carried by language, institutional practice, or extra-somatic technology such as writing.

There are multiple mechanisms by which culture makes demes and perhaps the oldest of which is through *stories* (Booker 2004, Boyd 2009). The economics of stories has been developed in the context of the rhetoric of economics, which is both an account of how stories work as part of economic explanation (McCloskey 1985, Klamer et al 1988, Morgan 2010) and also on the extent to which economic activity can be classified as part of the rhetorical arts of persuasion (McCloskey and Klamer 1995). McCloskey (2010) argues that the moral virtues of the bourgeois story explain the rise of industrial capitalism in the west. So storytelling is important to economics, and it is economically important.

Another line by which stories enter economics is through the work on identity (Akerlof and Kranton 2000) in which the agent's self-image in connection with the prescriptions **P** associated with a social category **C** becomes an argument in the utility function. In our model, **P** is constructed through stories told about the deme **C**. Stories are a group-forming semiosis that connects back to an individual in the form of Akerlof and Kranton's concept of identity.

Stories bind individuals to groups, but they also bind individuals to the purposes of those groups, which can then be exploited by leaders in the service of, for example, nation-building (war journalism about national character) or employee loyalty and effort (stories of corporate culture). Demes are created by culture, especially storytelling, which in turn constitutes both politics and economics (Hartley and Potts 2014: chapter 3).

Stories create meaningful selves and citizens, and therefore demic communities, but so too do children as they remake culture anew (Konner 2010) through a process that Csibra and Gergely (2011) call 'natural pedagogy'. An example is regional accent, which by definition is the product of children as they learn to speak. Current fieldwork in linguistics also suggests that children are active creators of new languages (e.g. the work of Felicity Meakins and Carmel O'Shannessey among Gurindji people in Northern Australia).

2.4 Demes make newness: defection, waste and conflict

Culture is commonly viewed as a repository of past knowledge, artifacts and ways of being that have value because they constitute collective identity and heritage, which is to say as a form of cultural capital (Throsby 1999). But the view we suggest here is of culture as productive in the present as a mechanism for producing novelty and newness. The purpose of culture is not (only) to carry the past, but (also) to invent the future: the semiotic or cultural system – the ‘semiosphere’ (Lotman 1990) – must be stable enough to use, flexible enough to adapt and generative along its interconnecting edges. There are several interrelated mechanisms by which culture creates newness and novelty.

In this model, culture creates demes and demes carry and coordinate knowledge as interacting semiospheres. This is the externalist model of knowledge carried over multiple minds. This is also the basis for economic specialization and the growth of knowledge that that entails (Popper 1968). But it doesn’t address the question of where new ideas come from, other than to suppose through recombination of emergent specialized parts into new wholes (Romer 1990, Weitzman 1998). The problem with the recombination model, however, is that it abstracts from incommensurability in language and ideas and assumes that the entire combinatorial space is open for rational exploration, as if one were searching through a combinatorial space of molecules. But culture doesn’t seem to work like that. Not all ideas are meaningful all people, and culture seems in significant part tacit. Instead culture has boundaries (Pagel 2012), within which ideas are fluid and fungible and about which we use the concept of demic concentration. But ideas in other demes may not translate or cross into the base deme, rendering that combinatorial prospect null. For that integration to happen, the boundaries of the demes have to change.

Such boundary changes will not necessarily appear as creative innovation. More likely, they will look like systemic clash and conflict – what Hartley and Potts (2014: ch 4) call *malvosine* (‘bad neighbour’). Malvosine is perhaps the fundamental problem in the study of the evolution of sociality and the main barrier to large-scale cooperative emergent social orders. Gintis (2012) conjectures that its origin is due to the same ancestral technologies for hunting large prey were also effective against human rivals. In consequence, coercive force had to give way to hegemonic persuasion. Counter-intuitively, ingroup competitive violence produced the *communicative arts* of ‘strong reciprocity’ – persuasion, logic, analysis, politics, big

brains, language – in short, culture. Technologically equipped culture, founded on lethal weapons, did not lead to destruction but to the growth of knowledge.

In evolutionary social theory, ‘malviosine’ is the altruism or free-rider problem, as a limit to cooperation with ever-larger numbers of agents. Game theory predicts that cooperation is only stable in small groups with complete information and monitoring (Olsen 1965). Beyond this scale, cooperation unravels as cooperative groups are targeted for invasion by uncooperative ‘defectors’. Cooperation in repeated games can be sustained through reputational mechanisms (Fehr and Fischbacher 2003), but this is not predicted to survive to global-scale context. As we move through larger aggregations of social groups, the problem of bad neighbours – whether through defection or conflict – becomes a larger and more complex issue.

Bad neighbours have different knowledge. That is why they are different groups. Equivalently, good neighbours have similar or relatable knowledge: their group is self-knowing and its knowledge is shared. That is how cooperation is possible; knowledge among members is interoperable. But different knowledge (‘out-knowledge’ as it were) is also valuable, in that it is a source of innovation and spur to adaptation for ingroups. But when different knowledge exists in external groups, it is not available in a way that can be easily accessed or used. Indeed, it is something that tends to be repelled, in the language of immunology, as a ‘foreign body’; and it may be strongly protected by the outgroup. A major potential source of novelty and innovation is new ideas from other groups, but cultural groupishness makes them difficult to acquire. In this way the clash of demic systems is productive of newness, meaningfulness and the successful reproduction of culture.

The cultural regeneration mechanism of demic concentration through we-group/they-group conflict is an inherently wasteful process because the selection mechanism for the production of newness isn’t efficiency but rather is proximity and meaningfulness. Cultural reproduction is enormously semiotically wasteful in the same way biological reproduction is wasteful of genetic information. Billions of gametes are produced for every zygote, and millions of utterances issue from each person each year. Such waste is the mechanism by which proximity is achieved, and proximity is the mechanism by which valuable novelty is created.

Scale is part of how this mechanism works, providing ever more ‘they-groups’ against which to be in tension and conflict. Globalization is an example of this, not as a ‘growth of the market’ dynamic (Cowen 2002), but furnishing more edges and

angles against which to test ideas (Vedres and Stark 2010). Moreover, the outcomes of these conflicts and tests, which can appear as conquest and extinction from the perspective of a defeated group, are not necessarily so from the perspective of the surviving ideas, which may now be adapted into a larger deme, to which they appear as novel ideas.

3 Theories of creativity, novelty and innovation

To advance a cultural science theory of innovation we need to elucidate how it differs from the standard accounts of variety, creativity and innovation in other sciences.

The most general account is that of innovation as the product of some mechanism of variety generation. This is for example the mutation or recombination mechanisms in biological evolution that are generalized as any operator that generates search of a space of possible solutions (e.g. a fitness landscape) such that it may then be coupled to a post-hoc selection or differential replication mechanism. The innovator (as a variety introducing agency) as a form of ‘search operator’ is a building block of evolutionary biology and has a homologous expression in modern economics once coupled to a production function driving that search (Lucas 1988, Romer 1990, Jones 1995, Arthur 2009). As a monotonic function, the greater the resources devoted to search, the greater the variety, ideas, or innovation that will be ‘produced’.

The search model of variety generation in biology and economic growth theory has a corollary in psychology and cultural economics in the consciousness (Boden 1990) or genius (Simonton 1999, Galenson 2006) model of creativity as the source of socio-cultural variety. Here there is a distribution of creativity over individuals in a society and the problem is variously to discover or harness them, or to furnish the environmental conditions under which they will flourish.

After the classical theory of randomness as search in a space, and the modern theory of novelty as individual creativity in an institutional environment, comes the postmodern conception of novelty as demic newness. This view of novelty and innovation as *newness* is a different concept from novelty in the previous models (as variety or creativity). Newness here is hard and unloved (Stark 2009), and comes from an outworking of tensions, frictions, dissonance, ambiguity and problems that eventually reveal new possibilities or opportunities to be seized and exploited to create or extract value.

Cultural sources of newness (Hutter et al 2010) refers to cultural valuation processes and constellations of cultural interactions that generate the necessary frictions, tensions and dissonance, usually across overlapping value propositions, or *meanings*, such that a deme identifies newness in the opportunity created and identifies worth in the value that can be resolved. This process may not even look or feel creative and innovative. As a site of tension, complexity and bricolage it will likely be discordant, uncomfortable, problematic, challenging and unresolved – intuitively *wrong*. It is a cultural space in which alertness to opportunities to resolve such tensions can be a source of advance (Kirzner 1973) and a place where surprise is expected (Shackle 1972): the place of the entrepreneur, novelty bundler, translator, cultural intermediary, and artist as go-between.

This is an environment in which experimentation works as a discovery method, and where the act of play – of trying things out in an unstructured way – may be effective. It is also an environment with benefits to heterogeneity, proximity, mixing and scale – cosmopolitan urban environments of the city, in other words, where ideas can run into each other, where accidental connections can take place, where opportunities are created and recognised. Social networks and novelty bundling markets (Potts 2011) are cultural constellations that put ideas together in ways that create tensions and stresses that need to be resolved and in so doing create spaces and environments in which opportunities are revealed. This is how a deme produces innovation.

4 The use of culture in society

Culture is plainly a mechanism for carrying past knowledge, identity and meaning, and therefore a societal form of capital and wealth. The basic model of culture that runs through anthropology, sociology and cultural economics, and forms the standard approach to cultural policy is that there is a socially defined ‘we’ that seeks to protect and reproduce that stock of cultural capital and wealth. But culture is also a mechanism for the production of newness and the growth of knowledge. Not only that, but culture is a mechanism for the production of newness from sources that cannot be identified in advance, but which may arise at any point throughout and among social and semiotic systems, in a dynamic process where newness includes new sources and systems of knowledge as well as new content. Culture is thus not

only a mechanism to maintain and reproduce past knowledge (culturally embodied, or socially learned), but also a mechanism for the production of new knowledge.

This ‘cultural science’ approach derives from a theme arising out of cultural studies – the study of ordinary culture in the Raymond Williams (1958, ‘culture is ordinary’) sense – of culture as productive, and specifically, as productive of novelty. Culture makes groups, groups make knowledge, and new ideas (contributions to knowledge) occur as the tensioned and conflicted boundary of a group changes. Newness and novelty are not the production of an idea, using factor inputs (the production function for ideas), but the reformation of a group boundary such that an idea becomes meaningful. This is the evolutionary model of cultural dynamics through the mechanisms of demic concentration.

Culture, under particular conditions, is productive of newness as part of the growth-of-knowledge process. Cultural science is the study of the growth of externalised knowledge through this complex-system, evolutionary semiotic mechanism whereby culture produces groups within which ideas are meaningful and groups produce newness and knowledge. This is a wasteful and conflict-shaped process, but ultimately it describes a mechanism by which knowledge grows both in scale and distribution: more knowledge for more people.

It is useful to think of this not only as a new approach to *cultural studies*, with a focus on the agency of cultural dynamics, rather than the politics of cultural capital, but also as a new approach to the *economics of culture*, with a focus on culture as productive (a mechanism of newness and innovation), rather than culture as consumption (a segment of markets and industry). The use of culture in society is here less about the reproduction and consumption of cultural capital, and more about the production of novelty. In this sense, the model of culture as through the mechanism of demic concentration is actually a rival theory, not to the anthropological, sociological or political-economy models of culture, but more accurately a competitor with the economic production function or investment model of innovation.

At the core of this ‘new economics of culture’ and ‘new evolutionary cultural studies’, both of which we gather under the rubric of cultural science, is a theory of the use of culture in society in which culture is understood as a newness-making mechanism. We do not claim that this is the only function of culture. It is a ‘poised system’ where adaptive stability emerges from tension between ‘order’ (the past) and ‘chaos’ (the future) (Kauffman 1991). Contending functions are cumulatively and

variously co-present – not always in ‘poise’. Nevertheless, it is impossible to understand culture without grasping its future-facing creative productivity. Thus, we seek to redirect emphasis in the study of culture toward this functional role in the production of newness and innovation. In studies of households, firms, and entire economies analysis tends to be defined in terms of a production function and efficiency, such that each unit is defined as producing a particular thing. Increases in output or gains in efficiency will come from more inputs, better technologies or more effective organisation. The implication is that this same input-output model of production also applies to novelty and innovation. Newness, in other words, is just another good. However, this is not what our cultural science approach argues. The production of newness, novelty and innovation has another class of explanation in externalised demic concentration.

5 A New Cultural Economics?

The cultural science approach sketched here suggests the possibility of a new research program for cultural economics along (at least) the following dimensions.

5.1 Culture is ordinary, and so too is innovation

The study of culture before cultural studies (Williams 1958) shared a similarity to modern studies of innovation in that it reflexively construed it as a study of something exceptional, rare and of the utmost value. Raymond Williams took on this extant high-culture focus and folded it into the anthropological model of lived culture to arrive at his sense of ‘culture is ordinary, and in every society and in every mind’. The same argument can be made for innovation.

At the core of this is the study of the processes by which (1) cultural mechanisms form groups (demes) and then (2) the processes by which the boundaries of demes shift, resulting in novelty and innovation. The study of the process by which culture makes groups is something that has been overlooked in both evolutionary economics and economic sociology, where culture is treated as an argument in the costs of coordination. In cultural economics, culture is an economic good that is produced and consumed, and thus may be evaluated in terms of utility, efficiency and social welfare. But our approach suggests a further valuation of culture in terms of its *productivity* in generating demes and their conversion into new ideas.

In the standard economic model, innovation is neither abundant nor ordinary, but the valuable and scarce product of investment of resources (time, money, capital) as shaped by high-powered incentives (tax credits, intellectual property, profits). But a cultural economics of innovation suggests a different model in which innovation (or, more correctly) new ideas and newness is ordinary in the sense that it is widely distributed (or externalised across subpopulations) and a product of demic (knowledge-making group) concentration and tensioned interaction. The productivity of culture can be evaluated by the ordinary or perhaps ‘natural’ rate of innovation it generates.

5.2 Cultural organizations, markets & institutions

The study of cultural organizations, markets and institutions is central to standard cultural economics because of the various special properties of cultural goods and services due to their symbolic content, uniqueness, preference endogeneity, uncertainty of value, and so on (Caves 2000). The economic question is – given these special properties, what adaptations would we expect to observe in organizations and institutions? And from there we’re on the look out for various market failures and opportunities for social welfare enhancing interventions.

But the cultural science perspective on cultural organizations and institutions is closer to Wallis and North (1986) on transactions costs as a fraction of GDP, or better yet McCloskey and Klamer (1995) on persuasion and rhetoric as a fraction of economic activity. What fraction of cultural activity is about group or deme making? We’re not sure, but we expect it is significantly above zero.

Our approach also emphasises that the cultural aspect of markets (including of cultural markets) is not focused on coordination efficiency (i.e. transaction cost lowering trust, Greif 1994) but rather on the creation of processes for dealing with the uncertainty that novelty creates. Examples are ‘social network markets’ (Potts et al 2008), which are markets in which agents use the choices of other agents over new or unfamiliar goods as an input into their own choices, and ‘novelty bundling markets’ (Potts 2012), which are the creation of market institutions to bundle known experience goods with unfamiliar new goods to facilitate search and discovery from continual flows of newness.

5.3 Dynamic or evolutionary cultural value

Cultural economics contributes to the analysis of cultural value, which is normally differentiated from market or economic value (i.e. exchange value) by the addition of non-market considerations, including cultural capital (Throsby 1999). Cultural economics has traditionally taken as a significant part of its research mandate to use economic analysis to arrive at a corrected value of culture.

The evolutionary cultural economics approach (Potts 2011) and the cultural science approach sketched here (Hartley and Potts 2014) endeavour to arrive at a dynamic valuation approach of culture, which is to value culture from the perspective of its contribution to change and innovation. This is, to be clear, not an alternative valuation model, but an additional valuation model. Culture has static and dynamic value. The cultural science approach focuses entirely on dynamic value, and intersects with the static valuation approach only where it potentially crowds it out. To this end there are two research questions: (1) what is the (methodology by which we study the) dynamic value of culture?; and (2) how does dynamic value complement or substitute for static value?

The dynamic valuation approach we suggest seeks to value culture by its productive efficacy in making groups or demes and thereby in terms of the knowledge they generate. Culture is valued for its micro-productivity in a way that is closer to the differential value of institutions. The question naturally arises then on the estimate of the productivity of different cultural forms in demic concentration.

The implication is a missing concept in dynamic cultural value. Culture is productive because group formation carries ideas and group interaction generates new ideas. Because new ideas have economic value, so too do specific cultural group dynamics. This suggests a new valuation mechanism for cultural economics based about the imputed value of groups as a product of cultural mechanisms (e.g. story-telling, viz Hartley and Potts 2014: ch 3). An application is the economics of culturally created space, and specifically cultural clusters (Cooke and Lazzarotti 2008), cultural quarters (Roodhouse 2010), or the cultural economics of cities (Currid 2007, Hartley et al 2012) understood as generative mechanisms.

5.4 Enterprise

The model of newness as emergent along the edges and boundaries of incommensurate or untranslatable systems, be they semiotic like languages or socio-cultural like demes, offers a new locus for investigating entrepreneurship, which takes seriously the ‘between-taking’ sense inherent in the original French word. Our model does not substitute individuals out of the equation in favour of demic groups, but instead we expand the function of the enterprising individual agent, be that a natural person, an organization or even, as Charles Leadbeater (2014: 141) argues, a ‘creative community with a cause’, to include those who cross demic boundaries and bring new ideas into new uses for communities where they have not operated previously.

Such entrepreneurs may be chiefly economic agents, or they may be artists, translators, even invaders, pirates and Trickster-thieves, but the process is the same: newness is generated from the clash of difference, and ‘value’ accrues to those who can ride the wave of such disruptive forces, to bring new knowledge to whole groups.

5.5 Cultural policy

A further research implication of the cultural science approach is that the aims of cultural policy might be reconsidered. Conventionally, cultural policy is based on a welfare model of cultural capital. It seeks to protect against risk of loss: to correct market failures, and to support ‘good’ culture. Cultural studies, in turn, tends to frame cultural policy as a battleground for personal-political and socio-economic agenda.

But from the perspective of cultural science, things look somewhat different. Specifically, cultural policy might reconsider its aims, and its addressee. It might not necessarily be centred about the state protection of cultural forms for the sake of the preservation of a rich multicultural ecology, or as a policy-warranted collective action correction (within a nominally ‘capitalist’ system) to a manifest market failure in the production of culture. Rather, cultural policy might be re-considered instead as a ‘soft-power’ version of innovation policy.

The logic of this is that cultural policy shapes demic formation, which effects cultural tensions, which affects innovation. This plays out spatially, as in regional clusters or cities as above, but also institutionally, as in the economic value of cultural openness (Cowen 2002). Openness is a central principle of cultural productivity. An effective cultural system is an adaptation to an open environment. Openness implies the tolerance of conflict and tension; indeed, an active search for it, inviting it, and

then managing it as a mechanism of knowledge-testing, variety creation, and opportunity discovery (Stark 2009, Potts 2012). In these models harmony and consensus is not always an unalloyed good because it limits the ability to test and regenerate knowledge and to discover newness. As a research program, our model suggests that cultural policy might be more valuably constructed less as a preservation model that seeks to protect precious things and far more as an experimental model that seeks to trial prospects.

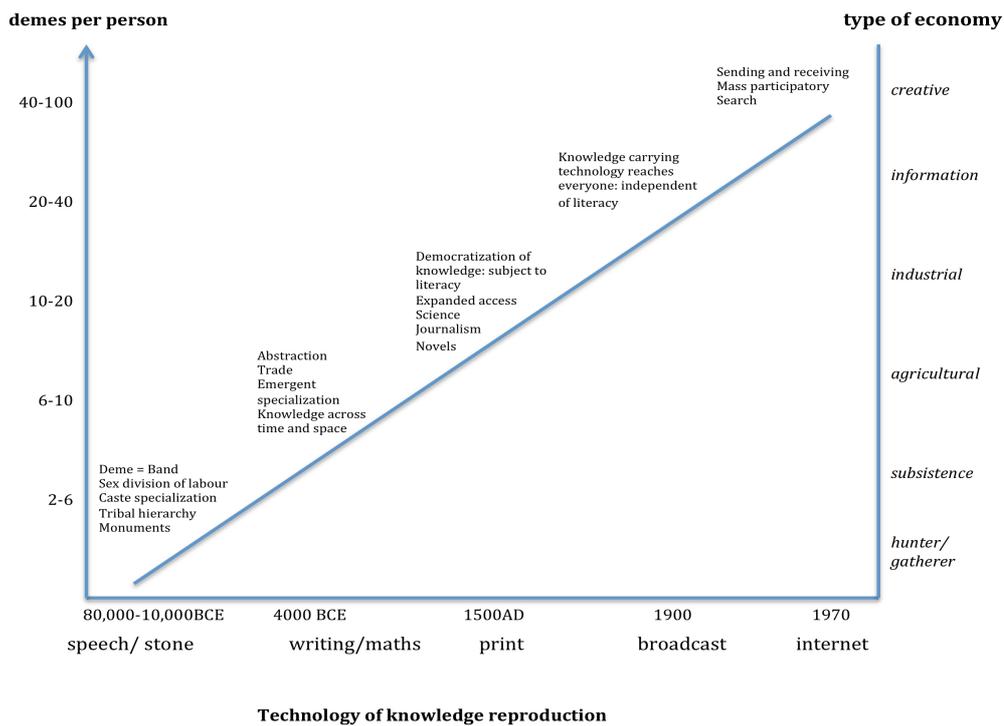
5.6 The natural history of demic concentration

A particular research question posed by our model concerns the long run ‘natural history’ of demic concentration insofar as this maps to the evolution of cultural technologies and economic transformations. We understand reproduction of knowledge technologies in the McLuhan (1962) sense of the transition from a ‘stone-age’ oral culture (stone monuments, song/ceremony/art), to a written culture (hand-writing with symbols, including mathematics), to a print culture (Gutenberg, the novel, journalism, science), and then beyond to broadcast culture (TV, radio, film, one to many), and now to digital culture (internet, many to many). Through this process human society has moved from hunter-gatherer economy (oral) to an agricultural economy (written) to an industrial economy (print) to an information economy (broadcast) and now to a creative economy (internet).

For economic growth to occur, knowledge has to be reproduced with growth: added newness as fuel to adaptation. This is standard economic growth theory. Furthermore, that correlation exists: as the technology of knowledge reproduction has evolved (from oral to written to print to broadcast to digital), so has the type of economy (from hunter-gatherer to subsistence/agriculture to industrial to information to creative). The question is – can demic concentration dynamics explain this?

An intriguing hypothesis our model suggests is that demes-per-person has been systematically increasing (Figure 1). As knowledge reproduction technology has evolved, the mechanism by which this has translated into economic evolution is because these new technologies have not just made knowledge reproduction and communications technologies more efficient (i.e. lowering the cost of knowledge reproduction, which is obviously occurring), but also that the number of demes each person can access has increased (explosively, Lotman 2012). By the theory of demic

concentration, this increases the rate at which new ideas emerge. This argument is elaborated in Hartley and Potts (2014: ch 10) but our point here is to suggest simply that this presents a new avenue of research into the long-run (evolutionary) consequences of transformational cultural technologies operating through the mechanism of group formation and demic concentration. We might frame this as a cliometrics of cultural economics.



6 Conclusion

Cultural science suggests a new approach to cultural economics as a source of newness and innovation in economic systems. The purpose of cultural science is to provide an analytic framework for a general reconceptualization of the theory of culture – in the original cultural studies ‘ordinary uses’ sense – as focused not on its political aspect but rather its evolutionary significance as a generator of newness and innovation. The central idea is the theory of what we call ‘demic concentration’, which is an account of how culture builds groups, and how groups build knowledge, and then how innovation is a consequence of these demic cultural dynamics. We

suggest that a new research program for cultural economics can be constructed from this model.

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