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Think Tank Aesthetics: The Art Of Economic Dematerialisation

"Knowledge is the DNA of the economy" Anon

INTRODUCTION

As seen in Chapter Three, the *aesthetic dematerialisation* of the 1960s ushered in a wide-scale shift in the ideology of creative labour. Under the general rubric of postmodernism, a new model of creative labour, based on semiotics and network theory, took root well beyond the confines of the art world. This chapter examines the centrality of a generalised networked creativity to the *dematerialised economy,* and the tendency of theorists of that economy, to envisage the ideal economic subject as *creative.* As suggested at the end of Chapter Three, despite the emergence of the semiotic/network model, the old rhetorical model of creative labour has never been fully displaced. The coexistence and interplay of the two models, therefore remains a central and defining characteristic – of both contemporary art practice and the dematerialised economy. The structuring dynamics created by the co-existence of these two, competing, ideologies of creative labour is central to the operation of the dematerialised or 'knowledge' economy.[1]

As suggested in Chapter Three, the importance of the semiotic/network theory of creative labour to contemporary economic theory can be accounted for by tracing the progress of the model in academic arenas over the last twenty years. However, such an account does not explain *why* a new theory of creative labour proved necessary for contemporary economists and political theorists. *Why* such aesthetic theorisations took

[1] There is a tendency to regard the terms dematerialised economy and knowledge economy as interchangeable. While the terms refer to the same economy, the latter term refers more clearly to a set of beliefs about the economy that, arguably, constitute an ideology. (The term 'ideology' is used in this chapter to refer to a set of theoretical propositions that have become reified into a belief system. While 'theory' suggests a way of understanding a given set of conditions, 'ideology' suggests that theory is

root in economic and political theory is the subject of the introductory sections of this chapter, which lay out the historical and theoretical factors that constitute the *concept* of the 'knowledge economy'. The chapter argues that the knowledge economy is most fruitfully viewed, not simply as an 'historical occurrence', but as an 'event in theory'. The introductory sections of the chapter therefore consider theoretical *events* – such as the 'aestheticisation of everyday life', McLuhan's conceptualisations of commodity culture and the re-emergence of Joseph Schumpeter's concept of 'creative destruction' – which contribute towards a 'cultural turn' in the economic theory of recent years. This chapter considers also, the extent to which this process can be considered as a process of *economic aestheticisation*, or as Rick Szostak has termed it, "econ-art".[2]

The main body of the chapter contends that a central feature of the knowledge economy is a tendency to view the subject as *creative*, with a special value placed on subjects that can be characterised as *creative destructive.* This part of the chapter is divided into two sections, or case studies, in the literature of the knowledge economy – one drawn from economic and political theory and one from cultural criticism. The case studies outline a common ideology relating to the knowledge economy operating in both economic and cultural fields.

A twofold process is at work in the theory of the knowledge economy. The increasing economic reliance on forms of intellectual property has bought about a renewed stress on the *ontology of creative labour* in both business literature, and economic and political theory. On a practical level, business and managerial theories have attempted to disinter principles of 'creative labour' represented in intellectual property law, and sought ways to maximise the production of such labour. On a broader ideological level, economic and political theory has tended to present such creative labour as an *ideal organising principle* of the dematerialised economy as a whole. What could be regarded as simple self-interest at the level of business, fits comfortably with a long,

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tied to the identity of the person using it. Any supplementary information that contradicts the established theory is therefore disavowed and repressed.)

[2] As cited in the title and throughout Szostak's text, *Econ-Art: Divorcing Art from Science in Modern Economics*, op. cit. Rick Szostak is Prof. of Economics, University of Alberta, Canada.

though contested, tendency (in economic and political theory) to see aesthetics as a key tool in economic and political management.[3] A central feature of the knowledge economy then is the folding together of attempts to maximise the *production of creative labour* with a more general tendency to *view the economy in aesthetic terms.*

This twofold process is evident in the case studies undertaken in this chapter. The economic and political theory of Charles Leadbeater indicates the growth of what can be termed '*think tank aesthetics'*. *Living on Thin Air* demonstrates the interplay between these dual forms of economic aestheticisation and lays out the other common themes of the knowledge economy ideology. Of particular interest of course, is the tendency to view the subject as, at all points creative. However, Leadbeater's text is also important for the way in which he *pairs* the divisions other theorists have made between *tacit* and *explicit* knowledge *cultures* on one hand, and between *incremental* and *radical* knowledge *production,* on the other. The avant gardist tropes of Leadbeater's aestheticised economy significantly reshape what is understood by '*radical'* politics – substituting *creative,* for political, radicalism. The 'cultural turn' of the knowledge economy is further explored in discussion of Philip Fisher's *Still the New World*. Fisher's literary criticism demonstrates the way key concepts of knowledge economy have penetrated recent cultural criticism. Ostensibly, a study of the American literary cannon, the framework of Fisher's book is rooted in the contention that the 'American personality' is creative-destructive, or 'avant gardist', in character and hence entirely co-extensive with the requirements of a dematerialised, creative-destructive knowledge economy.

The chapter ends with a consideration of the concept of the creative-destructive subject played out in the case of *Moore v The Regents of the University of California.* The case is important for a number of reasons – the struggle over intellectual property rights, the differentiation between tacit and explicit knowledge, the privileging of the radical innovation and the creative-destructive subject. But, it is interesting also, for the ways in which rhetorical and semiotic modes of creative labour are in play with

[3] The tendency in political theory could be said to go back at least as far as Machiavelli.

respect to the rights of the subject. The case demonstrates the legal ascendancy of the ideal subject of the knowledge economy – creative in general, creative-destructive or avant gardist in particular.

IDENTIFYING THE KNOWLEDGE ECONOMY: BETWEEN MATERIAL HISTORY AND AESTHETIC PROCESS

Every theorisation of the knowledge economy agrees that the historical development of western economies can be divided into three distinctive phases. The *first* phase can be defined by the relation of economics and politics to the control of land. The *second* phase shifted the locus of power towards the control of the resources of industrial production. The *third* phase, over the last twenty years or so, has witnessed a further shift, from controlling the materials of production to controlling the *concept of production* [4] - or as Luis Suarez-Villa argues, "the reproduction of capital as the most important social and economic function, with the reproduction of inventive creativity".[5]

[4] For an example of this periodisation see Seth Schulman's account in Appendix B. Schulman (*Owning The Future*, Houghton Mifflin, New York, 1999) cites Alvin Tofler as the immediate origin of the periodisation. Christopher May (*The Information Society*, Polity Press, 2002) concurs, suggesting that Tofler was drawing on both Schumpeter and Kondrietiev.)

[5] See Suarez-Villa, op. cit., p. 4. By "inventive creativity", Suarez-Villa means here, scientific/ technological invention and innovation. Pushing the differentiation of the old and new economies further, he suggests that a *creativity gap* (as opposed to a straightforward wealth gap) is increasingly apparent: "Whereas the cleavage between the haves and the have-nots under industrial capitalism was based on the ownership of capital and material resources, under Technocapitalism that cleavage is more likely to be between societies that possess inventive creativity and new technological knowledge and those that do not." Ibid., p. 4. It is not entirely clear what the difference between capital and 'inventive creativity' actually is. Inventive creativity is used by Suarez-Villa as a synonym for new technology. The owner of capital equipment (technology) is obviously the owner of capital. The only substantive difference between the new economy and the old, is the way technology is understood – i.e. it connotes not just capital equipment, but *incorporeal* capital assets, such as techniques of production, assets held as intellectual property, the skills of key personnel etc. To suggest therefore, that the reproduction of capital is over and that we are now in the age of the reproduction of creative invention, is simple sophistry.

Another way of expressing the periodisation from feudalism, to industrialism, to the modern 'Knowledge Economy', is to say that the central organising principle of the (Western) economic history has moved from land to material object, and from material object to incorporeal concept. Expressed in terms of the legal regimes of property, the periodisation suggests a shift from 'real' property (land) to 'movable' property (objects) to 'intellectual' property (concepts). [6] Given that the periodisation can be expressed in terms of the '*objects*' of property, it can equally well be expressed as a development of 'ideal' figures of political and economic *subjectivity* represented by such property regimes. In this way it is possible to very broadly suggest that certain forms of labour correlate to the prevalence of particular property forms. Seen thus the first two phases suggest that labour is largely *physical* in character and that the shift to the third phase indicates a moves towards labour that is largely *'mental'* in character. In other words, it is possible to see the periodisation as representing a shift in the 'ideal' subject of economic and political organisation from landowner/agricultural worker, to capitalist/factory worker, to author/reader or artist/viewer.[7] The general periodisation of the knowledge economy suggests in other words that aesthetic subjectivity will perform the central tasks of such a 'cultural' economy.

Reading the shift in the third phase – the move towards intellectual property regimes – as a 'cultural turn' could be regarded as somewhat misleading. Such a reading takes little account of the aspects of intellectual property law (such as patents) that represent forms of creative labour which are not primarily *aesthetic* in character. While a phase of economic dematerialisation predicated on the exploitation of intellectual property law suggests that labour resources will be 'creative', or mental in character, not all intellectual labours can be regarded as *aesthetic*. However, as suggested in the introduction, a central feature of economic dematerialisation is a tendency to not only concentrate on the principles of creative labour represented within intellectual property laws, but also to set such 'ideal subjects' within a broader *aestheticisation* of

[6] Viewing intellectual property as 'the property laws protecting *concepts*' is a highly generic interpretation.
It must be noted that patent protects inventions while copyright protects expressions; loosely these may be bracketed together, but it must be noted that, for example, copyright does not protect ideas as such.

the economy. Therefore reading the dematerialised economy, as a 'cultural turn' is only *partly* a reference to the labour forms inherent in intellectual property laws. The cultural turn is established only when the tendency toward aestheticisation in economic theory is taken into account.[8]

Most economic analysis of the knowledge economy is reluctant to identify itself as 'cultural' in character. Economic dematerialisation is most usually presented as the natural corollary of material factors that have impinged on 'real' economies. The historical narratives sketched out do, of course, represent historical events – however this is not to say that such events fully *determine* current conditions. As suggested in the introduction, the knowledge economy is more an *event in economic theory* and political rhetoric than a *description* of current conditions stemming from a deterministic historical process. The commonly cited historical events may have made a re-conceptualisation of the economies of western countries necessary, but they cannot be said to fully determine the *shape* of the re-conceptualisation. Before moving on to analyse the theoretical factors that have contributed towards the growth of the *concept* of the knowledge economy therefore, it is necessary to briefly account for those historical factors often seen as the 'motors' which generated economic dematerialisation.

THE KNOWLEDGE ECONOMY AS MATERIAL HISTORY

A general consensus exists as to the origin of the knowledge economy, placing it firmly in the context of the current phase of economic globalisation. The abandonment of the Bretton Woods agreement, degrading of exchange controls, the oil crisis of

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[7] Charles Leadbeater makes these final pairings explicit in his description of the knowledge economy.
[8] The three-phase structure, in which the knowledge economy is typically projected, is itself an example of such aestheticising. The dialectical structure, adapted from the tropes of Hegelian/Marxist history, suggests a vision of history as intelligible and graspable *as an image*. Given that the dialectic is itself a

1973/4 oil crisis, deregulation of the financial markets and the subsequent age of 'hot', rapidly circulating, globalised capital are most commonly cited as the origin of both the dematerialisation of industrial economies and the development of the information or knowledge economy. The flight of capital in search of cheap, deregulated labour created structural problems for older industrialised economies. The restructuring of such economies over the last thirty years or so has tended to make good the loss of manufacturing base by concentrating on the development of service-orientated industries.

However, significant technological developments have also brought about the growth of new industries, the most significant of which – the computing/software and biotech sectors – are heavily dependent on intellectual property law as a mechanism to facilitate investment and secure the exploitation of research. The earliest legal cases involving the successful patenting of living organisms is Chakrabarty in 1971. The earliest legal cases debating the viability of copyright in software codes date from1982/3. By the mid 1980's, most western countries had either handed down court precedents allowing software to be copyrighted or passed specific legislation to provide protection. As the new information/knowledge-rich industries have become increasingly important there have been regular attempts to deepen, expand and enforce the worldwide system of intellectual property law. Since 1989, and largely due to economic and political pressure from the US and the EU, the Berne Convention has been developed into WIPO and in more hard-line form, the transition from GATT to the WTO has bought about the sub-treaty TRIPs.[9]

These economic developments have been labelled differently over the last thirty years. The acceleration of computing power from the early 80s to the early 90s was often descriptively tagged 'the information revolution' or the 'information economy'. In the

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literary trope, it is perhaps not surprising to find that its re-emergence in contemporary economic theory actually culminates in a 'cultural phase'.

[9] WIPO: World Intellectual Property Organisation. GATT: General Agreement on Tariffs and Trade. WTO: World Trade Organisation. TRIPS: Trade Related Aspects of Intellectual Property Rights. TRIPS has proved to be the more draconian treaty, since under the auspices of the WTO, it has

mid 1990s a more comprehensive term, the 'weightless' or 'dematerialised' economy came into use, indicating that a more fundamental economic reshaping was afoot. The notion of an economy dematerialising towards the point of weightlessness was based on the observation that an increasing amount of the added value of consumer products consisted of the folding of information into the objects of consumption.[10] As Diane Coyle pointed out her the book *The Weightless World*, the thirty wealthiest countries have a GDP twenty times greater than a hundred years ago but the tonnage of the things produced has remained exactly the same.[11] In part, this is because economic output has changed in character – a shift towards making objects lighter and smaller – transistors rather than vacuum tubes, fibre-optic cables rather than copper wire, plastics rather than metals. But such technological advances have occurred at the same time as the economies of old, industrialised economies have moved towards high-tech service industries such as banking, media, software and biotechnology.

The most recent expression, the 'knowledge economy', is a portmanteau term that covers the conceptual ground of the older terms, but also attempts to go further by pointing toward the factors that *generate* information and weightlessness. As suggested above, the term, and the periodisation it implies, indicates a reconceptualisation of the terms by which the economy is understood. The development of the *concept* of a knowledge economy indicates that something more fundamental is afoot than simple weightlessness. The free flow of capital has facilitated a migration of industrial production to the geographic sites of cheap, deregulated labour. Against this background, there has been an increasing tendency to stake the viability of older industrial economies on conceptual, rather than physical labour. For the theorist of the knowledge economy therefore, the *production of ideas* has taken on great urgency. For such economists, 'the recipe' has become a vital metaphor, since it represents creative labour, or knowledge that has been fixed in a

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encouraged developed states further enforce reluctant developing states into property harmonisation, by permitting various kinds of trade sanctions to be operated against countries that refuse to comply.

[10] The premise of this observation is, obviously, not new. In a sense, margins are simply information disparities between seller and consumer. However, what *was* new about the observation was the connection it forged with information theory and in particular, with semiotic theory.

tangible form and thus become tradable as a commodity. In such a formulation, the secret of economic and political supremacy lies not in the cooking of metaphorical meals (industrial production), but in the creation of 'recipes', (the industrialised production of concepts) which effectively control a material industrial production that has passed to 'client' nations.[12] Conceptual, rather than physical labour then, has become the economy's most valued tool and the privileged paradigm of economic subjectivity. One result has been an explosion of literature on creativity in management and economic theory. The *ontology of creativity* – what constitutes invention and originality and how their production can be increased, rationalised and made more efficient – has become the central question for the new economy.

THE KNOWLEDGE ECONOMY AS A CULTURAL TURN IN ECONOMIC THEORY

As suggested above, it is misleading to see the knowledge economy as the natural corollary of historical events – the latter of which, are usually cited as *the* factors leading to its emergence. The knowledge economy is more accurately assessed as a 'cultural turn', an event in the history of theorising the economy, a re-conceptualisation of the economy. To understand the knowledge economy then, the recent history of theory is as important as the recent history of geopolitical events themselves.

As Chapter Three suggested, the 'cultural turn' of the knowledge economy is in part rooted in the historical and theoretical relationship between the *aesthetic dematerialisation* in the art world of the 1960s and the *economic dematerialisation* of

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[11] Coyle, op. cit. credits Alan Greenspan (the Head of the US Federal Reserve) with the original observation.

[12] The identity of the knowledge economy can only be sustained in relation to a 'material' economy operating elsewhere. The knowledge economy is therefore heavily reliant on operating a foreign policy that can sufficiently maintain its identity. These issues will be given more detailed attention in Chapter Five.

the last ten to fifteen years. A re-evaluation of intellectual property, and the models of creative labour represented within such laws, underpins *both* moments of dematerialisation. The aesthetic dematerialisation of the 1960s resulted from the agency of particular avant-garde artists, and their attempt to renegotiate the envelope of the creative subject. This was achieved by shifting emphasis away from physical labour and towards mental, or conceptual labour, as represented in intellectual property law. The position of the dematerialised economy of the 1990s and early 21st century is in some senses an inversion of that process. The sunrise industries of the dematerialised economy are highly dependant on the mechanisms of intellectual property law, leading corporations and governments to create policies aimed at encouraging the production, and effective management of, the creative labour central to such laws. The current interest of corporations and governments in the creative subject then, is a decisively top-down affair in comparison to the egalitarian ideals of aesthetic dematerialisation. Put most simply the moment of *aesthetic dematerialisation* was a subject-led movement for 'creative freedom'. In contrast, *economic dematerialisation* is the recognition of the importance of mental or creative labour as a crucial capital asset of the modern economy. *Economic dematerialisation*, in other words, is the *imposition* of mental/creative labour as the ideal mode of subjectivity for a contemporary workforce.

In spite of the apparent differences between these two modes, aesthetic dematerialisation (as suggested in Chapter Three) nevertheless played a crucial role in the establishment and legitimisation of the semiotic/network ideology that now dominates the management of creative labour in the knowledge economy. The shift from an ideology of creative labour based on rhetoric, to one based on semiotics/networks, in part contributed towards the notion of an aestheticised economy. To some extent, such a shift implies a move away from a largely *individualist* ideology of creativity towards one that is, superficially at least, more

collective in character.[13] However, the aestheticisation of the economy cannot simply be explained as the spreading of a new ideology of creativity. The tendency to aestheticise has itself something of a tradition in economic theory – one that needs to be touched upon before turning attention to the specific case studies below. What is unique in the knowledge economy is the *confluence* of such aestheticising theories with the emergence of a dematerialised economy – which is heavily dependant on forms of property that are clearly correlative with the notion of creative, mental labour.

THE IMAGE OF THE ECONOMY: ECONOMY AS DESIGN

A good example of the confluence between an overall sense of aesthetic design in the economy (on a macro level), and intellectual property (on a micro level), can be found in Paul Romer's economic theory based on 'the recipe'. [14] Romer suggests that every economy consists of three primary resources – people, physical things (machines and raw materials) and rules. The rules or "*recipes*" are in effect different ways of combining people and things together. While the basic elements of an economy – people and materials – remain unchanged, what develops historically is the design or "recipe".

This image of the economy is more complex than, at first sight, it might appear to be. On one level Romer's view is imagistic. For example, his notion of disparate parts being brought into conceptual focus as a whole by a set of 'rules', recalls the central principles of the *rhetorical model of composition*. However, the 'recipe' thus formed can act as both a macro and a micro model of the economy. It can suggest both an historical *phase*, an *era* of economic production – or, when used as a micro description

[13] There is nothing new in the notion of a more generalised concept of creativity per se. As we shall see later, the generalisation was at work in the departure of Modernism from Romanticism. Economists such as Schumpeter observed the change in innovation theory as far back as the 1940s.

[14] Paul Romer is Prof. of Economics, Stanford University. The concept of the 'recipe' is in wide circulation. Leadbeater cites an article Romer wrote for *Worth* magazine as the origin of the notion, however. See Leadbeater, op. cit., p. 34.

of the innovation process, as a simile for mental labour solidified into a unit of intellectual property.

In the article in *Worth* magazine Romer puts it thus:

> We used to use iron oxide to make cave paintings and now we put it on floppy disks. The point is that the raw material we have to work with has been the same for all of human history. So when you think about economic growth the only place it can come from is finding better recipes for rearranging the fixed amount of stuff we have around us.[15]

On the one hand, Romer's 'recipe' is knowledge, as expressed in a fixed or 'explicit' form. That is to say, when written down, the recipe is recognisable as intellectual property. Put another way, the recipe is a metaphor for the way an author draws words together in a sentence, bringing an expression into copyright; or for the way a corporation consolidates the knowledge of a new production process by seeking a patent. On the other hand, when used in a macro sense, the recipe places the entire economy within a historical continuum of such creative innovations – from the designs of cave paintings to that of floppy disks – in other words, all of history consists in the forward drive of creative innovation.

One result of such a teleology is that innovation (and by implication modern intellectual property) is placed within an historical continuum that appears '*natural'*.[16] The idea that a history is the result of a single evolutionary process is not new of course. The notion of history being driven by the dialectical unfolding of new forms of economic production was as central to Marxist accounts of history, as the 'dialectic of ideas' was to Hegel's.[17] In a sense theorisations of the knowledge economy

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[15] Ibid., p. 34.
[16] Ibid., p.34. One gets the strong feeling that Romer imagines the ancient cave painters as deficient in one vital economic mechanism – a viable and enforceable system of intellectual property rights that would secure the efficient exploitation of their inventiveness!
[17] In his review of *Living on Thin Air* for the *London Review of Books*, Nick Cohen criticises Charles Leadbeater for exactly such "sharp accents of Marxist teleology (…) History is moving down the

themselves stand in dialectic relation to dialectical accounts of history. Where Marx replaced the 'idea' as the motor of history with 'production', theorists of the knowledge economy have simply replaced production with the 'production of ideas'.

In sum, the idea of a 'grand design' in economic theory is not unusual. What is unusual about theorisations such as Romer's however, is the degree of intensification of the issue of aesthetics, on both a micro and macro scale, and the tendency to roll both together in a 'unified field' – the knowledge economy – that rolls in a 'natural' and dialectical fashion.

CRITIQUING THE AESTHETIC APPROACH

Despite the current popularity of such aestheticising tendencies the critique of such a position is well developed. The debate about the relationship between economic models and the world they purport to represent is as old as modern economic theory. In a lengthy analysis of the problem, Rick Szostak gives the sobriquet of 'Econ-artist' to the economist whose work has drifted far from the 'real' into an aesthetic realm – one populated by models that bear little relation to the actual economy they purport to represent.

Aestheticisation, Szostak suggests, is a problem that has dogged economic theory throughout the 20th century and may even be endemic to economics as a 'literary form'. Most problems however occur when economists fail to admit to the aesthetic condition of economics.[18] Most economic theory involves a distortion of the real economy as the available facts are squeezed into a coherent and plausible image. The

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tracks; questioning the inevitable is pointless." See Nick Cohen, 'There is No Alternative to Becoming Leadbeater' in *London Review of Books*, vol. 21, October 28, 1999, p.. (There is of course a longer history to the idea that creativity, and in particular the concept of design, offers the key to understanding the relationship between the subject and the world. As was demonstrated in Chapter Two, the art theory of the Counter Reformation – and in particular, that of Zuccaro – regarded the human faculty of 'Disegno' as a subsidiary faculty of the 'divine creation'.)

[18] Szostak's book is mainly dedicated to establishing connections between economic models and forms of visual art such as cubism and surrealism.

work of the econ-artist says Szostak "must involve the transformation of the world we actually live in into one of superior aesthetic form."[19] The general perception that economics is a 'science' often obscures the distinctions between economic models[20] and the 'real' economy, distorting its understanding and effective management. Technological or 'scientific' approaches to economics that are stripped of the tendency to aestheticise and rhetoricise, often come off badly against 'econ-art' – particularly when forced to compete for the attention of policy-makers and other academics. Messy empirical data and specifically situated explanations of economic behaviour are never quite as convincing as grand models that possess a rhetorical 'elegance'. In the absence of objective criteria or evidence by which to judge one theory against another, relevance frequently looses out to beauty,[21] since politicians tend to be persuaded by those theories with the most convincing rhetoric. Judgement on vital economic issues is therefore frequently decided on aesthetic grounds, with an appeal to beauty and elegance.[22] Szostak argues that some economists have been acutely aware of the aesthetic condition and have made cunning use of it.[23] However there are insidious aspects to such 'aestheticised utopias'. They seduce the reader into believing that the order they represent is *natural* and in some circumstances, become 'excuses for the horrors of economic life'.[24]

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[19] Szostak, op. cit., p. 8.
[20] Such models are usually devised as teaching aids, or as simple rhetorical devices aimed at persuading an audience. On occasion however, they fall into the envelope of political ideology.
[21] Szostak, op. cit., p. 12.
[22] In addition to the tendency to make the facts fit a desirable image, a more fundamental aesthetic sense is also in play. The desire to bring the appearance of order to unpredictable and often incomprehensible situations, is particularly noticeable in the use of mathematical modelling. Szostak suggests that the reader recognises the inherent logic and beauty of such models. A coherent, logical and convincingly accurate modelling of one small aspect of the economy lends its authority to larger, less coherent modelling, since it establishes a belief that *beauty equates to accuracy* per se. Models (such as that of perfect competition where all consumers are rational), possess perfect information and behave in a predictable fashion. But, in fact, they have also to discount and suppress swathes of information that complicates, confuses or contradicts the model. In the real economy, economically 'rational' behaviour faces numerous non-economic constraints that are beyond the accounting of even the most sophisticated modelling.
[23] Here, Szostak cites John Maynard Keynes, as a prime example of an economist who "consciously appealed to the aesthetic sensibility of his audience." See Szostak, op. cit., p. 11. Given Keynes' connections with the Bloomsbury group, this should come as no surprise.
[24] Ibid., p. 44. Szostak even goes as far as suggesting that a fear of such aestheticised order motivated some aspects of the Chicago School's theoretical stance. Leading members such as Henry Simon, found in the free market, a bulwark against the aesthetic and rhetoricising tendencies of the likes of Keynes. Simon suggests Szostak, was "like Keynes himself only too conscious of the justification the

There are, in short, serious and well-recognised problems in imposing a sense of harmonious 'design' on economic theory and the economy itself. The rhetorical desire for persuasive elegance and beauty often gives a false sense of order and harmony to the chaotic world that the economist describes. The belief in the order of such design can lead to a politics of exclusion – one where that which contradicts the model, is ignored or repressed in favour of the superficial coherence of the model.[25] By the same token, 'design' can be read as implying that a natural and unchallengeable order underpins a fractured, chaotic and unpredictable reality. It almost goes without saying that theories of the knowledge economy – such as that laid out above by Paul Romer – imply not only a good deal of aestheticising in terms of rhetoric, but also a strong sense of historical inevitability that derives from that aestheticising.

ELEMENTS LEADING TOWARDS THE CONTEMPORARY RE-EMERGENCE OF AN AESTHETICISED ECONOMY

FROM RHETORIC TO SEMIOTIC/NETWORK CREATIVITY

Given the existence of a strong tradition *critical* of aestheticising models of the economy, it is perhaps surprising to see the latter again rising in popularity. There is therefore a need to account for more recent theoretical influences responsible for the revival of aestheticising traditions, which during the 20th century have continued to rear up sporadically.

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latter's theories could provide to totalitarian regimes." Ibid., pp. 48-9. Walter Benjamin's famous objection to fascism's aestheticisation of politics at the end of 'The Work of Art in the Age of its Mechanical Reproduction' suggests similar problems. On the one hand, aestheticisation can be read literally in terms of the spectacle of Spear's state architecture and the organisation of set piece rallies like Nuremberg. On the other hand, the aestheticisation of politics suggests a 'grand design', which must repress heterogeneity in order to maintain its balance and coherence. See Hannah Arendt, ed., *Illuminations*, trans. Harry Zohn, Fontana, 1973, pp. 211-244.

[25] This was once the standard criticism of the centrally planned economies of the old Soviet Bloc but it stands equally well as a criticism of current theories of the knowledge economy.

One reason has already been suggested. The pervasive shift from the rhetorical model of creative labour towards the semiotic/network model suggests a generalisation of creative production. Superficially at least, the rhetorical model tended to imagine the creative subject as an individual, rights-creating subject.[26] Again superficially, the semiotic/network model suggests that a presumed border between 'art and life' has simply dissolved and that the creative act has become de-individualised and de-subjectivised, dispersed and collectivised. In other words, the breakdown of discrete categories and borders associated with post-modernist art and architecture, has led to the bleeding of art into the broader social realm. In an influential essay of the early 1990s, Mike Featherstone linked the breakdown of category, (an occurrence that was central to post modernist theorisations of fine art production), to Baudrillard's theorisations of consumption as produced in the late 1960s and early 1970s.[27]

CLOSING THE ART/LIFE DIVIDE: TOWARDS THE AESTHETICISATION OF EVERYDAY LIFE?

Featherstone's conceptualisation of the "aestheticisation of everyday life" forms part of a broader study that reflects the widely held observation that contemporary economic and social organisation is most accurately viewed through the prism of consumption, rather than production.[28] As a consequence, Featherstone's view of the art/life debate is partial – emphasising in particular, the role of aesthetics in the construction of consumption.

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[26] It must be remembered however, that this caricature is a little misleading – the rhetoric model never did and does not now discourage collaborative labour.

[27] Mike Featherstone's *Consumer Culture and Post Modernism,* Sage, London, 1991. (See especially, chapter entitled 'The Aestheticisation of Everyday Life', pp. 65-94.) In a sense, the connection between that moment in the art world and Baudrillard's critique of consumption should not be surprising given Baudrillard's early career as Situationist 'poet'. Featherstone's essay is cited in Heather Hopfl's caustic analysis of post-modern managerial aesthetics. See Stephen Linstead and Heather Hopfl, eds., *The Aesthetics of Organisation,* Sage, London, 2000. In particular, see Höpfl's contribution, 'The Aesthetics of Reticence: Collections and Recollections', pp.93-110.

[28] Featherstone, op. cit., p. 65.

Featherstone suggests three contexts in which the 'aestheticisation of everyday life' can be traced. *Firstly*, he suggests, it can be found in the breakdown of the boundaries between art and life – a theme present in Dada and Surrealism, but one which only reaches fruition in the art world of the 1960s in attempts to de-auraticise art[29]. *Secondly*, it is found in attempts to turn life into art – a theme he locates in the figure of the flaneur – moving from Baudelaire's dandy (who makes his very existence, a work of art) to Wilde's aesthete, the Bloomsbury group, and onwards up to Foucault. The *third* context is that of the saturation of the everyday with signs.[30] In Featherstone's analysis, the historical era of the post modern is co-extensive with the notion of the "aestheticisation of everyday life", and the "figural semiotics" of consumption[31] – a consumption whose 'origin' can be located in the growth of an urban middle class in mid 19th century.

Featherstone begins his narrative with the development of an anti-formalist art in the 1960s – which he argues, creates the conditions for a re-assessment of commodity production, enacted as - semiology of commodities.[32] This history of recent theory then, moves from the reassessment of the art/life divide and the commodity form of the art object, towards a re-inscription of the commodity per se. Since consumption provides the framework of the discussion, the breakdown of the art/life divide reads as a bleeding of art's boundaries, a spilling of art into the everyday, or at least a spilling of aesthetics into the *theory* of the everyday.

This is, of course, not the only way to view the art/life relationship. As suggested in Chapter Three, for artists in the 1960s, breaching the boundaries was a way of escaping the *productive* straightjacket of Greenbergian Modernism. On that view, dedifferentiating the borders of art and life involved the loss of art's specific

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[29] Featherstone's discussion is brief and therefore omits an account of the origins of the concept of the art/life divide in Feuerbach's critique.
[30] The genealogy laid out here is from Lukacs, Frankfurt and Benjamin to Lefebvre, Baudrillard and Jameson.
[31] Featherstone here draws on Scott Lash (adapting Lyotard) and his definition of the post-modern as 'figural' in character. See Featherstone, op. cit., p. 69.
[32] Interestingly, the line here follows Baudrillard's own development from Situationist 'poet' to sociologist of the economy.

autonomy, as it came increasingly to resemble other forms of visual communication.[33] Featherstone is of course not concerned with the liberation of art from the stultifying effects of formalism, but with the recognition that aesthetics has much to offer an analysis of the everyday. One result of this approach is that his discussion of the art/life relationship is not concerned with aspects of the discourse, which suggest that the de-differentiating of art and life might play a significant part in overcoming the alienation of productive labour.[34]

The large amount of work synthesised by Featherstone suggests that this view of the art/life divide as an 'aestheticisation of the everyday', is relatively widespread within the field of cultural studies. As suggested in Chapter Three, the shift from rhetorical to semiotic/network theories of creative labour is not confined to art theory and has come to represent a large-scale shift in the prevailing ideology of creative *labour* held across a number of academic disciplines. Featherstone's work suggests then, that this view is supplemented by a theoretical view of *consumption* based on the de-differentiation of art and life.[35] In sum then, it is reasonable to suggest that the aestheticisation inherent in theories of the knowledge economy may reflect a more widely held position in post modernist cultural studies as to the aesthetic condition of contemporary social experience. However there are other factors that must be accounted for.

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[33] There is an ever-closer synergy between advertising techniques and art (see for example the work of Holzer and Kruger), that attempts to deconstruct and re-construct such operations. One might look here also to the enticing refusal by Wolfgang Tilmans to make any differentiation between his work as fashion photographer, artist and gay porn photographer.

[34] In this sense, he also misses the opportunity to make the most of parallels between the Feuerbachian notion of alienation,(as the inculcation of a false consciousness caused by an errant and dishonest art of the Prussian state) and the contemporary role of the 'figural' in maintaining political and cultural order.

[35] The failure of a meaningful de-differentiation at the level of labour is, however, spectacularly noticeable. Similarly, the dissolving of formalist aesthetic categories in the contemporary art world has been muted in its effect. The new creative freedoms of the 1960s have become today's orthodoxies, and

MCLUHANISATION

Nowhere in Featherstone's account of the 'aestheticisation of the everyday', is there any mention of Marshall McLuhan. The overall effect of McLuhan's legacy is difficult to quantify. In the 1960s and 70s he enjoyed immense media coverage as a guru figure. Terms he invented – 'the global village', or the 'medium is the message' – have entered into general usage. Yet, towards the end of his life, McLuhan's work became increasingly vilified and discredited. Despite academic rejection of much of his writing, he has however, remained an important (if often un-cited) influence on thinking about the information age.[36]

Given the central role that Baudrillard's writing plays in Featherstone's account of aestheticisation[37], it is important to point up his relationship with McLuhan.

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despite the merging of aesthetic techniques with the world of advertising, at a sociological level, the art world remains a distinct and exclusive heterotopia.

[36] A central irony of McLuhan's legacy is the frequent conflict between those who have taken up advice he dished out as a management consultant, and those who have taken up the radicalism of his earlier work. McLuhan's early work, *The Mechanical Bride* and *The Gutenberg Galaxy*, have a radical political edge that has much to commend it to the anti-copyright movement. Arguably, McLuhan's work may even be the *origin* of much of the literary debate about authorship and copyright – rather than the frequently citated works of Barthes and Foucault. The latter are not nearly as overt in their political critique of authorship as McLuhan managed to be in the early 1950s. McLuhan's objection to the 'book culture', that developed from the invention of printing, was based on the notion that it atomised and privatised knowledge that had traditionally been communally held in an oral form. In short, the *book* brought about the *author* – who individualised common knowledge and parcelled it up in to packets of private property. Such a 'privatisation of knowledge' is obviously underpinned by concepts of copyright, though I have yet to find direct mention of intellectual property anywhere in McLuhan's writing. See here McLuhan's *The Gutenberg Galaxy: The making of Typographic Man*, Routledge and Paul Kegan, 1962, and, *The Mechanical Bride: Folklore of Industrial Man*, Routledge and Paul Kegan,1967. See also Jonathan Miller, *McLuhan*, Fontana and Collins, London, 1971. A good example of McLuhan's influence can be found in Jeremy Rifkin's *The Biotech Century: Harnessing The Gene And Remaking The World*, Penguin, New York, 1998. See especially, Rifkin's uncritical acceptance of McLuhan's assertions Rifkin, op. cit., p. 178. Some of McLuhan's later work on the return to 'oralism' inherent in the concept of the 'Global Village' can be seen as a direct continuation of his earlier criticism of the economic and political ideology of authorship. However, running counter to such notions, are McLuhan's re-conceptualisations of industrial products and his work on the corporate lecture circuit that did so much to make multinational corporations aware of the strategic importance of the intellectual property component of their balance sheets. The most obvious site of tension between contenders for the inheritance of McLuhan's work is in the debate over *online* intellectual property. Here, the inheritors of his early work, and 'oralist' line, come up against the inheritors of his later approach to asset management.

[37] As suggested earlier, the influence of Featherstone and Baudrillard is also present in Hopfl and Linstead's *The Aesthetics of Organisation.*

Baudrillard's important works, 'The System of Objects' and 'Consumer Society',[38] are indebted to McLuhan[39] – a debt that is only made explicit in his later offerings.[40] The theoretical development that Baudrillard is often credited with – the application of an analysis of visual culture to that of economic and political culture – occurs earlier in McLuhan's published work of the 1950s.

In his preface to *The Mechanical Bride* (1951), Marshall McLuhan positioned his project in the following way

> Ever since Buckhardt saw that the meaning of Machiavelli's method was to turn the state into a work of art by the rational manipulation of power, it has been an open possibility to apply the method of art analysis to the critical evaluation of society. That is attempted here. The western world, dedicated since the sixteenth century to the increase and solidification of the power of the state, has developed an artistic unity of effect, which makes artistic criticism of that effect quite feasible.[41]

The early writing of McLuhan recognised a deep-seated aestheticisation at work in political theory and attempted to analyse the kind of image-orientated economy that such aestheticisation produced. McLuhan was deeply suspicious of the "aesthetics of power", and explicitly recognised the opportunity for repression such political and economic concepts suggested. He suggests in the preface that "Visual symbols have been employed in an effort to paralyse the mind", and goes on to suggest that, "it is

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[38] See Jean Baudrillard, 'The System of Objects', 1968, and 'Consumer Society', 1970, in *Jean Baudrillard: Collected Writings*, ed., Mark Poster, Polity, Cambridge, 1988, pp. 10-28 and pp.28-56, respectively.

[39] This early work is most frequently (and correctly) regarded as a logical development of Roland Barthes application of semiology to the analysis of visual culture.

[40] See especially, opening section of the chapter 'Requiem for the Media' in *For a Critique of the Political Economy of the Sign*, trans. Charles Levin, Telos, St Louis, 1981, pp. 164-184.

[41] McLuhan, *Mechanical Bride*, op. cit., pp. (v)- (vi). First published, New York, 1951.First published, UK, 1967. It is worth pointing out that McLuhan's early work, though not widely discussed in the 1950s, predates the seminal application of semiology to the analysis of visual culture in Roland Barthes' *Mythologies*, 1956. It also predates the development of theories of 'the spectacle' in the 1960s.

observable that the more illusion and falsehood needed to maintain any given state of affairs, the more tyranny is needed to maintain the illusion and falsehood".[42]

Despite becoming a somewhat discredited figure, McLuhan's move from Professor of English Literature to 'corporate theorist' of the 'information society' makes him a crucial figure in the development of the 'cultural turn' in economics. While his general mode of analysis remained fairly constant over the years, the political radicalism of his early writing dissipated as his career increasingly became that of lecturer and private advisor to large corporations.[43]

His importance to the 'cultural turn' lays in the fact that in later books, (e.g. *Understanding Media*) and in his work as corporate lecturer, McLuhan evangelised for changes to traditional industries that were *conceptual* rather than material in nature. The beginnings of his reconceptualisation leading to the notion of the knowledge economy, can be seen in the famous essay 'The Medium is the Message'[44]. Here, McLuhan suggests that the light bulb can be best seen as a *medium*, rather than as a *physical* unit of industrial production. A nighttime game of baseball, or a hospital operation, are, he argues, made possible by artificial light and can therefore be conceived as "in some way, the *content* of electric light." Moving from aesthetic analysis to economic pedagogy, he then suggests that:

> It is only today that industries have become aware of the various kinds of business in which they are engaged. When IBM discovered that it was not in the business of making office equipment or business machines, but that it was in the business of processing information, then it began to navigate with clear

[42] McLuhan, *The Mechanical Bride*, op. cit., p. (v).
[43] The toning down of the overtly political sentiments of his early work has never really been explained. In his deconstruction of McLuhan in the early 1970s, Jonathan Millar suggested that an affiliation to some form of socialism can be found in all McLuhan's writing. He does not however attempt a deep analysis of McLuhan's position on Marxism, or attempt to square his socialism with his role of corporate advisor. See Miller, op. cit. The reasons for the change are uncertain, however it is possible that stagnation in McLuhan's academic career and serious illness in later life simply encouraged him to 'take the money'.
[44] 'The Medium is the Message' can be found in Marshall McLuhan's *Understanding Media: the Extensions of Man*, Routledge, London, 1964.

> vision. The General Electric Company makes a considerable portion of its profits from electric light bulbs and lighting systems. It has not yet discovered that, quite as much as AT&T, it is in the business of moving information.[45]

Of course, McLuhan's observation that disparities of information are crucial to the creation of profit, cannot be said to be original. However, he nevertheless drew dramatic attention to the large amounts of weightless information in the products of modern industrial economies. So much so, that viewing the economy in terms of straightforward material production of heavy industry was becoming, even in the late 1960s, increasingly anachronistic. McLuhan's writing developed over the course of fifteen years in a startling way transforming his role–from *critic* of the aesthetic economy, into being its most vociferous campaigner. In the analysis of the early 1950s, the aesthetics of power, and its material 'effect' in the 'aesthetic economy' of consumption, is a site of critical, political contention. By the mid 1960s – as the tenor of the 'The Medium is the Message' makes clear – McLuhan has become an active proselytiser for a revolution in the way the economy was *conceptualised* that is aestheticising in character.

There are, in other words, two McLuhans. The *early* McLuhan recognises an implicit connection between the aesthetics of political power and the aestheticisation of the economy. The *later* work positions him as one of the first theorists of the 'weightless economy'. An *anti-formalism* was central to both positions, insofar as he refused the central tenet of high modernism – i.e. that a separation must be maintained between the realms of 'art' and 'life'. However, the *consequences* that stemmed from such a position were very different. For the early McLuhan, the *aestheticisation of everyday life* was an effect of a 400-year-old political technology ushered in by Machiavelli in the 16th century. The aesthetic economy was therefore repressive and the critic's job was to unmask its operations. For the later McLuhan the aestheticisation, or 'informisation', of commodities became a vital insight into industrial production that would 'revolutionise' the organisation of companies and the way corporations

[45] Ibid., p. 9.

regarded the commodity. Despite the lack of citation in academic work, McLuhan is a crucial figure in any account of the theoretical developments leading to the *concept* of the knowledge economy. McLuhan's own life exemplifies the shift from critical theory to think-tank aesthetics that is so noticeable in contemporary economic theory. His connection to the cultural turn however is best understood as 'soft', consisting in informal understandings, a feel for the in formation age, something akin to a folk memory of the information age.

THE IDEOLOGY OF CREATIVE DESTRUCTION

Contemporary Re-Emergence

The factors laid out above – the spread of the semiotic/network model of creative labour, the aestheticisation of everyday life, the semiotics of consumption, the informisation of material culture – create a fertile ground from which a concept such as the knowledge economy might grow. It is strange then that when turning to theorisations of the knowledge economy produced by economists, the theoretical argument so much in evidence in critical theory and cultural studies barely rates a mention.[46] However, the lack of citation means little, since textual analysis yields a wealth of evidence pointing towards aestheticisation.

Charles Leadbeater's *Living on Thin Air* provides one of the best attempts to create a theoretical genealogy of economic theory relating to the knowledge economy citating *only* economists. Leadbeater's genealogy focuses its attention on two specific traditions economic theory – economists that have historically placed an emphasis on *knowledge management* and economists who have concentrated on the *creation of knowledge* and in particular *the role of the entrepreneur*.

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[46] There are of course two possible explanations. Firstly, interdisciplinary approaches are actually still quite rare on the ground. Secondly, 'real' economists – even those of the knowledge economy – often attach little academic importance to the 'cultural studies' approach.

In the group of 'knowledge management' theorists, Leadbeater cites the importance of Alfred Marshall, who, as far back as the 1920s, suggested that knowledge was the most powerful engine of economic production. Leadbeater also cites Edith Penrose, for her suggestion that the most valuable resource in any firm was its "distinctive stock of knowledge and experience".[47] Penrose's theme was later taken up by Richard Nelson and Sidney Winter who refined the approach, arguing that knowledge is an aspect of a firm's 'memory'.[48] Leadbeater's own contribution to the teleology is to argue for a shift from concentration on the *management* of knowledge toward a concentration on how it is *created.*

When turning his attention to the latter issue – the creation of knowledge – his sense of aesthetics is clearly in evidence. In this genealogy, the creation of knowledge is positioned as co-extensive with the role of the entrepreneur and Leadbeater sticks entirely with those who have theorised the role.[49] Leadbeater puts aside definitions given by Adam Smith, Keynes, Mill and Alfred Marshall which all, in one way or another, describe the entrepreneur as either a supplier or manager of capital and labour. The heroes Leadbeater chooses to recall tell a particular narrative about entrepreneurship and knowledge.

Jean Baptiste Say's concept of the entrepreneur as an 'agent of change' is citated[50] and its influence on Leon Walras noted. Walras pushed the envelope of Say's ideas further suggesting the role of the entrepreneur was to bring together and *compose* the complementary assets of skills, labour and capital. Moving further down in the genealogy, Leadbeater places Frank Knight's claim – made in the early 1920s – that the role of entrepreneur was to decide what need to be done and how it was to be achieved, without necessarily being *certain* how the future would pan out. The entrepreneur here is a figure takes risks on the future while lesser souls merely

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[47] Leadbeater, op. cit., pp. 67-70.
[48] In such a context, memory was defined as that which could be located in the routines and procedures of a firm.
[49] Op. cit., pp. 98-101.
[50] Say's 'entrepreneur' effectively shifts resources from sectors of low-productivity (such as agriculture) to areas of high productivity such as manufacturing. Ibid., p. 99.

entrench themselves in the already known. Knight's entrepreneur says Leadbeater is a 'masters of precognition' who is confident enough to work out the emerging shape of new markets and industries and 'confident enough to back their judgement.'[51] The final figures in the genealogy are Israel Kirzer and Joseph Schumpeter. Israel Kirzner's entrepreneur has moved far from the supplier and manager of capital and labour model. For Kirzner the entrepreneur is a figure that thrives on 'the creative art of discovery and learning'. The most significant figure in the genealogy however is Joseph Schumpeter and his concept of *'creative destruction'* – the entrepreneur that destroys the old so that he might build the *modern* in its place.

The most crucial aspect of this genealogy is the way Leadbeater makes it appear that there is a 'natural' development in the theory of the entrepreneur, from the crude manager to a more creative figure with foresight and guts, towards an 'ideal' incarnation – the fully aestheticised, self reflexive, creative/destructive figure suggested by Kirzer and Schumpeter. The genealogy laid out by Leadbeater is highly selective and utterly teleological. There is no reason why a recounting of the production of knowledge in business should be so heavily focussed on the entrepreneur.[52] Nor is there any particularly good reason why the entrepreneur should increasingly come to resemble the figure of the avant gardist artist! The story of knowledge production Leadbeater wishes to tell has particular characteristics in other words. Knowledge production is dependant upon a particular kind of economic agent – the entrepreneur – a risk taking, creative/destructive figure, who operates as much out of sheer exhilaration of creative endeavour as out of economic rationality. The primary figure of knowledge production in other words is aesthetic generally, and modernist-avant-gardist in particular.

Leadbeater's teleology guides the reader softly towards a recognition that there is a 'natural' sympathy between 'knowledge creation' and a figure of entrepreneurship that

[51] Ibid., p. 100.
[52] To give Leadbeater his dues, elsewhere in his book, he does give some credence to the notion that knowledge production may not be entirely focussed in one figure in head office. Running contrary to

is aesthetic in character. Even where there is no direct citation of social theory relating to aestheticisation therefore the aestheticisation of the contemporary economy nevertheless makes itself felt.[53]

Schumpeter's concept of *creative destruction* plays a leading role in Leadbeater's account of the knowledge economy and in many other theorisations of the knowledge economy.[54] The frequent recurrence of Schumpeter's theme in contemporary theory requires some explanation.

Evolutionary Economics

A notable aspect of both the knowledge economy and theorisations of globalisation in general is the reliance on 'evolutionary' approaches to the economy. Schumpeter is one of the earliest theorists of such an approach and his influence is evident in a number of theorisations of the knowledge economy.[55] The evolutionary approach to the firm places learning, knowledge creation and innovation at the centre of analysis. In doing so, it is recognised that the firm is in a constant state of evolution and not a static entity. In such theories, the firm is conceived of as an organic unit capable of learning, devising and retaining knowledge about productive practices. Seen thus a firm is never able to act on the fully 'rational' basis put forward in neo-classical economic theory. In evolutionary economics, the firm is a temporal entity, devised

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these sections however, is the continual incantation that it is high time that we all became more like the creative, risk-taking entrepreneur.

[53] A more detailed analysis of why Leadbeater's vision of the knowledge economy is so aestheticised, occurs later in this chapter.

[54] See for example, Richard Foster and Sarah Kaplan, *Creative Destruction: From Built-to-Last to Built-to-Perform*, F.T., Prentice Hall and Pearson Education, Edinburgh, 2001. See also, Cooke and Morgan, op. cit., pp. 10-12, 15-16, 33, 41, 194-6, 198. Also, Philip Fisher *Still the New World: American Literature in a Culture of Creative Destruction*, Harvard University Press, London, 1999, p. 13; Richard Oliver *The Coming Biotech Age* P40. Kevin Kelly, *New Rules For The New Economy* p 86; Dag Björkegren *The Culture Business: Management Strategies of the Arts-Related Business*, Routledge, London, 1996; Luis Suarez-Villa, op.cit., p. 175 and Bryson and Daniels op. cit., p. 74.

[55] Cooke and Morgan cite Schumpeter as the 'father' of evolutionary economics. In particular they point to his influence on Nelson and Winter's 'seminal' theory of the firm. See Richard Nelson and Sidney Winter, *An Evolutionary Theory of Economic Change*, Harvard University Press, Cambridge Massachusetts, 1982.

under the conditions of history, and as such at no time fully resolved to itself. Firms are, by their nature, in a constant state of flux. Therefore, there is never a point at which they possess the kind of 'perfect information' that would enable them to make entirely logical and rational decisions. As temporal entities, subject to the history, firms only ever possess asymmetries of information and are thus never entirely rationally and predictable in their operation.[56]

The Ideology of Schumpeter's History

Schumpeter's is the first attempt at such an evolutionary theory. In the short but crucial chapter in his late work *Capitalism, Socialism and Democracy* (1943) Schumpeter lays out what has become his most influential idea – the concept of *'creative destruction.'* The topic of creativity and innovation, and its role as the engine of history, comes into the chapter on creative destruction in an almost incidental way as part of a more lengthy and complex critique of the neo-classical concept of price competition. Defining 'competition' *entirely* through the rational operations of price, suggests Schumpeter, is erroneous. Competition is far more complex and the application of price mechanism models simply dissembles that complexity. The competitiveness, and ultimately the efficiency, of a company can only be measured when the company is situated in a social and historical context. Schumpeter therefore dismisses attempts to measure the worth of a company on the usual short-term indicators of success and suggests rather that the company is seen as part of broader 'evolutionary' processes of society.

The view expressed by Schumpeter has itself to be situated within the theories of history that were dominant at the time he was writing. The view of history as dialectical, he freely admits in the text, is adapted from Marxism. Schumpeter however brings a decisively 'cultural' feel to the notion – it might even be termed a

[56] For a discussion of the model developed from Nelson and Winter, see Cooke and Morgan, op. cit., pp. 13-17.

'cultural turn'.[57] History, in Schumpeter's view, is driven not by the high political dialectic of ideas, nor by the dialectic struggle of economic determinism, but by a *dialectic of creativity.* The broad historical movement in which competition between firms is enacted is therefore driven by the forces of invention and the onward thrust of innovation. Productive forces per se are not the engine that drives history, such forces are themselves primarily driven by human invention and innovation.[58]

Capitalism, in other words, is a 'method of economic change' that can never be regarded as static, its evolutionary nature cannot be satisfactorily explained by reference to social factors such as wars, revolutions, population flows and shifts of capital. The 'fundamental impulse' Schumpeter asserts, is innovation – *new* forms of consumer goods, *new* kinds of production, *new* transportation systems, *new* markets and *new* forms of industrial organisation.[59]

In such a schema history itself is driven by 'incessant revolutionary' changes to the 'productive apparatus' that unfold 'through decades or centuries'. Industries mutate in an organic manner that 'revolutionises the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one.'[60] Schumpeter sums up this process as definitive of capitalism itself. The process of Creative Destruction is *the*

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[57] Interestingly Schumpeter's early work on the creative entrepreneur was published in the same year, (1911) as Henri Bergson's *Creative Evolution*. An exposition on this milieu is beyond the scope of the current study, but may stand further investigation. See Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell, Dover, New York, 1988.

[58] Suarez-Villa's suggestion, that Technocapitalism (the knowledge economy) consists of a development leading from "the reproduction of capital" towards "the reproduction of inventive creativity" is therefore not without precedent. Suarez-Villa, op. cit., p. 4.

[59] The full passage reads as follows: "Capitalism, then, is by nature a form or method of economic change and not only ever is but never can be stationary. And this evolutionary character of the capitalist process is not merely due to the fact that economic life goes on in a social and natural environment which changes and by its change alters the data of economic action; this fact is important and these changes (wars, revolutions and so on) often condition industrial change, but they are not its prime movers. Nor is this evolutionary character due to a quasi-automatic increase in population and capital or to the vagaries of monetary systems of which exactly the same thing holds true. The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers' goods, the new methods of production or transportation, the new markets, and new forms of industrial organisation that capitalist enterprise creates."
See Joseph Schumpeter, *Capitalism, Socialism and Democracy*, Routledge, London, 1994 (first published, 1943), pp. 82-83.

[60] Ibid., p. 83.

'essential fact about capitalism'. It is, he asserts, 'what capitalism consists in and what every capitalist concern has got to live in.'[61] In other words individual companies can only be realistically appraised within context of 'the perennial gale of creative destruction', they themselves create.[62] Similarly capitalism as a whole cannot be understood simply in terms of the administration of a set of currently existing structures, the 'relevant question' Schumpeter says, is 'how it creates and destroys them.'

For Schumpeter then, the economy it is *not* driven by production per se but by *the production of ideas about production.* Another way of expressing this is to say that while competition is central to driving the economy, competitive advantage is not secured by *price* competition but by innovation or *quality* competition.[63] In the contemporary parlance of the knowledge economy, Schumpeter's concept can be expressed by saying that competition is best secured by creativity that is '*radical'* in character as opposed to the creativity – engendered by price competition – that is '*incremental'* in character.[64]

The Ideology of Schumpeter's Creative Theory

Given the re-emergence of Schumpeter's theory of creative destruction in theories of the knowledge economy it is important to provide some historical context for his views. Unsurprisingly most historical work on Schumpeter has tended to set his economics within the 'big ideas' of his generation – the conflict between Capitalism

[61] Ibid., p. 83.
[62] Ibid., p. 84.
[63] See Schumpeter op. cit., p.84, and Cooke and Morgan, op. cit., pp. 10-17.
[64] Although Schumpeter does not express himself in terms of 'radical' and 'incremental', the concept is central to his view of competition. In more recent theorisations of the knowledge economy, such expressions have become commonplace. However, it is worth pointing out that the main difference between Schumpeter's economics and its contemporary incarnation rests on the issue of intellectual property. Schumpeter's innovation competition suggests only that creativity will lead to short term market advantages, not the concretisation of those advantages into units of intellectual property.

and Communism, the role of liberal democracy etc.[65] However, given the central role granted to creativity in his economic model it is also necessary to pin down Schumpeter's own 'ideology of creativity' with an historical context. It is often suggested that, in terms of innovation theory, that there are two Schumpeter's.[66] The early Schumpeter presaged the role of individual entrepreneurs in the process of innovation, while the later Schumpeter moved towards a more 'socialised' view of invention/innovation.[67]

Schumpeter's early work theorising the role of entrepreneurship – *The Theory of Economic Development*[68] – is strongly orientated towards individualism. The agent of invention, innovation and change in the economy is portrayed in a noticeably Romantic idiom. The entrepreneur of Schumpeter's early years is a heroic, charismatic figure, with great vision and will, which are dedicated to breaking up routines and conventions. The success of such figures depends on an 'intuition' that allows them to see what others cannot and gives them the courage to act on impulse. Schumpeter specifically states that "no account of the principles" by which this creative figure operates can be given. [69] He further suggests that the 'mental freedom' of the

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[65] See for example, Richard Swedberg's introduction to *Capitalism, Socialism and Democracy,* Schumpeter, op. cit. Perhaps, given Schumpeter's concern to navigate the waters between Communism and Capitalism, his re-emergence in 'Third Way' economic theory should come as no surprise. As far as setting a context for Schumpeter beyond such political and historical concerns, Swedberg makes some interesting connections between Schumpeter's personal life and the development of his work. Rick Szostak suggests also, that a good deal of Schumpeter's inconsistency can be put down to his attempt to meld aesthetic and scientific approaches to economic theory together and that Schumpeter's depressive personality played some role in his inability to fully resolve such conflicts. See Szostak, op. cit.

[66] See Cooke and Morgan, op. cit. Leadbeater makes a similar point, but then muddies the water by making generalisations drawn from both periods of his writing.

[67] For further discussion, see Cooke and Morgan, op. cit. It is worth noting that Schumpeter believed that, even in the teens of the 20th century, creativity was becoming increasingly socialised due to the growth of corporate capitalism. By the time of writing *Capitalism, Socialism and Democracy*, in the 1940s, Schumpeter regarded that socialisation as a 'good thing'. Corporate control was responsible for the rise in living standards over the preceding fifty years. However, corporatisation meant that the character of capitalism was changing – history was moving away from capitalism and eventually, it would become the victim of its own success. This is a variant on the theme that capitalism has within it the seeds of its own destruction.

[68] First published, 1911. First published in English, 1934.

[69] Schumpeter quoted in Cooke and Morgan, op. cit., p. 11. There is an obvious analogy here with the notion of genius as a figure who works beyond the rule.

entrepreneur, 'presupposes a great surplus force over the everyday demand and is something peculiar and by nature rare.'[70]

The trope utilised here to outline the ideal character of the entrepreneur is clearly a close relative of the genius figure of 19th century Romanticism. It is a figure however that, even in this early phase of his thinking, Schumpeter views as giving way to a new model of creative labour that is more 'social', or collective, in orientation.[71] The growth of corporations meant an increasing bureaucratisation of the innovation process. In such organisations, trained specialists took on the creative role once held by the heroic entrepreneur of old. While believing the development from creative entrepreneur to corporate R&D team was a part of the general evolution of capitalism, it is interesting to note that he laments the loss of 'romance' incurred and specifically describes the development as leading away from the old 'flash of genius'[72].

Given the general framework of creative theory suggested by his writing, it is important to examine the cultural background in which the changing role of creative subject in Schumpeter's writing is embedded. *The Theory of Economic Development* is a product of early European Modernism. In terms of creative theory, it replicates many of the uncertainties and commonplaces of the period. Economic change results from the activities of a tiny minority of forceful, creative individualists from whom the

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[70] Quoted in Cooke and Morgan, op. cit., p. 11. The full passage reads as follows. "Here the success of everything depends on intuition, the capacity of seeing things in a way which afterwards proves to be true, even thought it cannot be established at the moment, and of grasping the essential fact, discarding the unessential, even though one can give no account of the principles by which this is done…In the breast of one who wishes to do something new, the forces of habit rise up and bear witness against the embryonic project. A new and another kind of effort of will is therefore necessary in order to wrest, amidst the work and care of the daily round, scope and time for conceiving and working out the new combination… This mental freedom presupposes a great surplus force over the everyday demand and is something peculiar and by nature rare".

[71] By "social", Schumpeter simply means that which is not individualist. He has in mind here, the teams of specialists bought together in corporate R&D departments. For Schumpeter, the shift from creative entrepreneur to corporate creativity was a part of the general evolution of capitalism.

[72] "The romance of earlier commercial adventure is rapidly wearing away, because so many things can be strictly calculated that had of old to be visualised in a flash of genius." Quoted in Cooke and Morgan, op. cit., p. 11. (It is worth reiterating that this observation and lament is now approaching its centenary.) Cooke and Morgan also note that even in later work, Schumpeter tends to prioritise the work of invention over the broader process of innovation. This view is now generally regarded as dated. Most contemporary theory rejects such linear thinking and stresses the multidirectional interplay between all levels of production and consumption.

rest of the economy will eventually draw its character – a view that is entirely consonant with the notion of Romantic genius that still operated in some parts of the early modernist avant gardes. The development of a socialised creativity within the research and development departments of corporations is not without parallel in the cultural sphere of the time either. One of the crucial developments of the early modernist avant gardes is the disaggregation of the concept of Romantic genius and its generalisation within the concept of the 'movement'. [73]

Another way of putting this is to say that the collectivity of 'the movement' takes on the identity and creative ticks of the individual creative subject of Romantic theory. The subject space of Romantic genius led aesthetic and social development – creating in fits and starts, such a figure was unconcerned with the judgements of the public thought. The 'cost' of such prodigious talent was melancholia. An outstanding ability set the genius figure apart from society, leaving them misunderstood, isolated and depressed. The curse of being above the mass and ahead of one's time meant that the genius myth frequently ended in the squandering and dissipation of talents. Within early Modernism, the characteristics of such a figure are de-individualised, disaggregated and spread across a collectivity of greater and minor players within the concept of a 'movement'. The 'movement', rather than the individual, became the radical pushing the boundaries forward. Where the figure of genius created hermetically, with characteristic disregard for the audience, the movement created as individuals but with communication with other members of the group a defining priority – the movement, not the individual, spluttered into view in a bright burst of creativity before its internal contradictions led it towards dissolution. The 'cost' of creativity, its melancholia, became not the sickness of an individual mind but the social alienation of the movement. Despite de-centring the cult of the individualist,

[73] In his 1968 essay, 'The Concept of a Movement', Renato Poggioli positions the 'movement' as if it were an individual subject on the psychoanalyst's couch. For example, his concept of 'antagonism' is specifically related to Oedipal father and son relationships. Similarly, his concept of 'agonism' – the internal fractures that bring about self-destruction of the movement – is a fairly direct relative of the melancholic aspects of the genius model. See Renato Poggioli, *Theory of the Avant Garde*, trans. Gerald Fitzgerald, Harvard University Press, London, 1968, pp. 16-40.

Romantic, melancholic, genius, the concept itself was never entirely eradicated.[74] It was always possible to reconstitute a representative, or 'ideal', figure from such a network and actualise the ideal in a real person. In other words, a Picasso could always be extracted from the networked inventiveness of Cubism, a Pollock or a Rothko from the New York School.[75]

Within the general evolutionary scheme of economic history laid out by Schumpeter human creativity is cast in the leading role. In Schumpeter's own work between 1911 and 1943, the way such creativity is conceived undergoes considerable change. The early view of the entrepreneur as creative dynamo of the economy is deeply indebted to the creative ideologies of Romanticism. Schumpeter's later work, in which socialised corporate creativity plays the role of dynamo, can be regarded as Schumpeter's own shift into Modernism. It is unclear whether the shift in view is driven by a theoretical reassessment of his earlier position or by a conflict between the earlier theory and 'reality' as he experienced it after his move to America, or whether historical conditions themselves necessitated the shift in position.[76] Whatever the actual position, it is important to recognise that Schumpeter's view coheres remarkably well with the general view of the creative subject at work in the early modernist avant gardes.

The development in Schumpeter's work from Romanticism to Modernism, from individual to collective explanations of creative production, is however never entirely

[74] It is interesting to note that the Saint-Simonian notion of avant-gardism had its origin in the moment of Romanticism. The avant gardist position, whether expressed through individualism or through the collectivity of the 'movement', has always maintained an element of the 'Hero' of Greek myth.
[75]Though the avant garde 'movement' was a 'collective' arrangement in the sense described, the creative network was not viewed as a means of overcoming the unitary individualism of the rhetorical model of creative production. It was only in the 1960s, for the reasons described in Chapter Three, that creative networks were consciously employed as a means of overcoming the 'authorial' mode of production and consumption. Though Modernist avant gardes had collective characteristics and ambitions, this did not amount to a *ideology* of networked production. (For a discussion of the continual and rather haphazard re-emergence of the genius figure in 20th century art historical method, see Eric Fernie's introduction to *Art History and its Methods: A Critical Anthology*, Phaidon, London 1996. For a discussion of the early modernist notion of 'creativity' as present in the general population (as opposed to the 'academic/traditional' concept of talent), see Thierry de Duve's contribution to the conference *The Artist and the Academy: Issues in Fine Art Education and the Wider Cultural Context*, eds., Nicholas de Ville and Stephen Foster, John Hansard Gallery, Southampton, 1994.

clear-cut.[77] Despite the move towards a more socialised view of creativity elements of the individualist model remain. Much in the way that elements of the genius/melancholic figure remained within the concept of an avant gardist movement, elements of the individualist genius/melancholic model remain in Schumpeter's later work.

The concept of creative destruction in the late work, and upon which Schumpeter's relevance to the post modern economy is based, is the central example of this blurred vision. The avant gardist movement was infused with residual elements of the genius model, its collective creative principles regularly imploding, just as the mythic Romantic figure ended frequently in personal destruction. The model of creative destruction in Schumpeter's later work is similarly drawn from the individualist model but *applied to collective production*.[78] The notion of creative destruction is essentially a remapping of the genius/melancholic on to the collective production of the economy at large – an attempt to grasp the collectivity of production in all its detail in one simple trope – the metaphor of personhood. In this model the economy is given an *identity* and *pathology*.[79] The cost of genius was dysfunction and loss. The cost of the

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[76] Schumpeter clearly thought that the economic world, empirically observed, had changed.

[77] Cooke and Morgan note that, even in his later work, Schumpeter tends to prioritise the work of *invention* over the broader process of *innovation* – or put colloquially, that of the individual over the collective and the genius, over the network.

[78] More subtly put, one might say that, in Modernism, the figure of the genius/melancholic is atomised and then expanded as a metaphor with which to grasp the new conditions of the avant gardist movement - conditions which may not be regarded as collective. However, in Schumpeter's economics, by comparison, that which is *obviously* collective, is grasped by a metaphor that is individualist in character – the notion of individual genius or of self-destructive genius, which he terms creative destruction.

[79] The construction of Romantic genius is a striking example of the *imposition* of the identity of otherness. It is not that the psychological aspects of the genius/melancholic are natural or elective, so much as it is that they are *imposed* on the individual as a specific form of subjecthood, with a specific social role in mind. Writers inspired by Foucault, (e.g. Bennett, Featherstone and others) concentrate largely on the social control of 18th and 19th century populations – through the substitution of 'unruly' pastimes (e.g. country fairs) with more 'disciplined' sites of 'spectacle' (e.g. the museum, art gallery and shopping mall). Little attention however, has been paid to the Romantic figure of melancholic genius in contemporary contexts. On a superficial level the pathologising and medicalising of artists who were frequently social radicals, is entirely in line with such a social process. On a more plausible level, it is not hard to see that the subject-space of genius/melancholic is a screen on which outrageous desires and fears can be projected and played out. In context of the broader project of creating 'disciplined' populations for emerging nation states, the genius/melancholic provided a marker-figure of social deviance and retribution, a role that in contemporary society is occupied by the celebrity. Such subjects provide a site of atavistic role-play. On the one hand, the genius-celebrity is expected to push

benefits of a truly 'creative' economy was the destruction of pre-existing orders; capitalism consisted entirely in that loss, the fact of that bargain according to Schumpeter. [80]

The fact that the concept of creative destruction, so central in Schumpeter's later writing, draws on the Romantic myth of the genius/melancholic is surprising given that, as far back as 1911, he believed that the era of creative individualism – represented by the entrepreneur – was already giving way to a socialised, corporate creativity. However, the accommodation Schumpeter made between elements of Modernist and Romantic creative ideology is entirely in keeping with the general confusion of such theories within early Modernism. In both art and economic theory, Romanticism was not so much overruled so much as diffused in to new modes of operation. [81]

One vital aspect of the mythology of the genius/melancholic that is drawn over into the Modernist phase of creativity is its medicalisation of the creative function. The notion of the genius/melancholic suggests a 'pathology of creativity'[82]. The labour of genius in Romantic theory is not only fraught with personal costs to the subject, but those costs are understood in relation to an identifiable *disease*. As with all diseases, the subject cannot be said to be *consciously* in control of the symptoms, and is therefore never entirely culpable for their actions. The aesthetic at the heart of creative

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the limit of the social envelope, and on the other, it is demanded that they pay the customary price. For the genius, the cost is madness, in comparison with that of melancholia, for the post-modern celebrity (or a spell in 'The Priory').

[80] In an interesting deconstruction of the contemporary uses of post-modernist aesthetics in managerial theory, Heather Höpfl defines melancholy and loss as aspects to the dislocation of the self in corporate organisations. See Linstead and Höpfl, op. cit. In particular, see here Höpfl's own essay, op. cit., pp. 93-110.

[81] It is arguable as to whether Romanticism has ever really gone away. Every art school is still infused with (untaught) elements of its theory. In a sense, Romantic ideology plays out its life as a vernacular concept of creative production and subject-spaces.

[82] Szostak suggests that Schumpeter's own depressive personality may have had some role in his characterisation of the economy as creative/destructive. He suggests further, that a tension was present in Schumpeter's writing between elements of 'science' and 'art', and that such a tension led to the chronic depression which dogged Schumpeter throughout his life. In this way, Szostak proposes that Schumpeter's desire for certainty was compromised by the "tentativeness of the science that underpinned his economics". Szostak, op. cit., p. 19.

destruction moves therefore with the inevitability of a disease that is beyond the conscious control of individual agents.

Taken as a whole then, creative destruction functions as description of the motor of an evolutionary history in which *all* economic activity is inscribed.[83] The creative destructive model buries the cost side of economic development beneath the gloss of aesthetic achievement. In such a figure, history moves organically, beyond the literal control of the individual subjects that are charged with creative production. Subjects in such an aesthetic model may drive the motor but they are in turn swept along and driven by its collective thrust. In other words the pathology of the genius/melancholic, when read as the creative/destructive economy, lends a sense of helplessness to the economic process. The affliction of melancholia has its parallel in the affliction of destruction. The *subject*, whether that of Romantic theory or the personated economy, is not consciously in control of 'their' actions, the 'gift' of genius or socialised creativity comes with the necessary strings attached. The loss represented by destruction is not only 'reasonable', given the benefits of creativity, it is *inevitable*, part of an 'organic' and therefore natural process.[84]

In this bipartite model, creativity is clearly represented as 'good', destruction and loss as a price worth paying. The transcendental position of creativity as good-in-itself is one repeated frequently in contemporary theories of the knowledge economy. As outlined above, Suarez-Villa replaces the well-worn dictum that capitalism's aim is to reproduce capital with the notion that the most important economic, *and social*, aim is

[83] It is interesting to note that *Capitalism, Socialism and Democracy* was first published ten years before Duchamp's 'The Creative Act' of 1954. Both figures are embedded in the moment of modernism, but recovered by the post modern. The production cycle of innovation that Schumpeter describes, has much in common with the 'temporal network' outlined by Duchamp in 'The Creative Act', (as discussed above, in chapter Three). The historical scope of the network, its temporality, is beyond the grasp and influence of the subject. for Schumpeter, measuring the economic success of a company, is as problematic as assessing the artwork is for Duchamp– and for the same reasons.

[84] It is interesting to speculate on just how far a specifically German Romanticism is at work in Schumpeter's view of creativity. (Schumpeter was born in Austria and spent the early part of his academic career there before moving to America.) The destructive/cathartic notion is endemic in German myth. Taken in this way, there is a certain irony in creative destruction being taken up as the paradigm of a specifically *American* condition– as we shall see below, in the study of Fisher's work.

'the reproduction of inventive creativity'.[85] The idea that *all* social *aims* can be codified in such a way is not Schumpeter's[86] however it is increasingly common in the writing of those who have taken up the baton of creative destruction. In the case studies that follow the figure of creative destruction is never far from the surface. Like Suarez-Villa, Charles Leadbeater positions creativity as the central *aim* of social and political activity, rather than as a subsidiary factor of such activity. It is with Leadbeater then that we will start the case studies of the knowledge economy.

THE KNOWLEDGE ECONOMY AS AESTHETIC IDEOLOGY: CASE STUDIES IN ECONOMIC THEORY, POLITICAL RHETORIC AND CULTURAL CRITICISM

THE KNOWLEDGE ECONOMY AS ECONOMIC THEORY: CHARLES LEADBEATER'S *LIVING ON THIN AIR*.

The Aim of Society

The idea that creativity be regarded as the central *aim* of social and political activity is emphasised in Charles Leadbeater account of the knowledge economy. Leadbeater's

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Leadbeater sets the dynamism of creative destructive (or in his terminology "radical") economies, such as that of Silicon Valley, against the plodding (tacit) culture of the German economic model.

[85] It is worth reiterating again, the point made in Footnote 2. The difference between capital and 'inventive creativity' is unclear. Inventive creativity is used by Suarez-Villa as a synonym for 'new technology'. The owner of capital equipment (technology) is obviously the owner of capital. The only substantive difference between the new economy and the old, is the way technology is understood to mean not just capital equipment but incorporeal capital assets (e.g. techniques of production, assets held as intellectual property, the skills of key personnel etc.). To suggest therefore, that the *reproduction of capital* is over and that we are now in the age of the *reproduction of creative invention* is simple sophistry. Leadbeater's analysis follows this familiar pattern.

[86] Schumpeter's primary concern is with social systems to be sure. However, business is his business. To view all social systems through the prism of business, or, in the case of the knowledge economy, to

input to the theorising of the knowledge economy is one of a number of possible theorisations could be taken as subject for analysis. As has already been suggested, the knowledge economy is best viewed as an event in economic theory (and the policies such theory engenders) rather than as the inevitable result of historical processes. Analysing Leadbeater's principle text on the subject therefore gives us clues as to the shape of such a theoretical narrative has taken in recent years. Leadbeater's text is particularly useful since it synthesises the work of many others in to a digestible pattern that has had demonstrable effects on political rhetoric and public policy in the United Kingdom.[87]

As far as the 'aim' of society is concerned, Leadbeater echoes Suarez-Villa and many others. Towards the close of his opening chapter, he defines the goals of politics and the 'destination' of his economic vision.

> The goal of politics in the 21st century should be to create societies which maximise knowledge, the well-spring of economic growth and democratic self governance. Markets and communities, companies and social institutions should be devoted to that 'larger goal'. Finance and social capital should be harnessed to the goal of advancing and spreading knowledge.[88]

As with Suarez-Villa's dictum that we have moved form the reproduction of capital to the 'reproduction of creative invention', knowledge – which for Leadbeater is an interchangeable term – is placed as the ultimate *aim* of social policy. Like all evolutionary economics, the argument has about it a certain circularity. The aim of politics, social institutions, markets and companies is to create knowledge, because knowledge is the well spring of economic growth and democracy, so therefore the aim

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view all business as creative, might however, be seen as a particularly post-Thatcherite/ Reganite strategy.

[87] The dust cover for *Living on Thin Air* advertises glowing endorsements from both Tony Blair and Peter Mandleson (in the days of the first Blair administration when Mandleson was seen as a key figure). Blair suggests the book raises "critical questions for Britain's future". Mandleson goes further suggesting that, "the book sets out the agenda for the next Blair administration". True to form, the book itself reads more like a political manifesto or 'reader' in management studies, than a book on economic theory. Since being published in 1999, many of the policy devices have become governmental policy.

of politics, social institutions, markets and companies is . . . and so on. Knowledge here is a very elastic term, elastic enough to sustain such circularity. However, in describing knowledge as the 'larger goal' Leadbeater stresses the central organisational role it plays in the distinctly circular description of the economy he puts forward. The chapter closes thus:

> Knowledge is our most precious resource: we should organise *society* to maximise its creation and use. Our aim should not be a Third Way to balance the demands of the market against those of the community. Our aim should be to harness the power of markets and community to the more fundamental goal of creating and spreading knowledge.[89]

This final sentence is a more frank explication of the framework within which the debate then proceeds. The utopian narrative put forward here has a definite shape. It is not unlike that of an Archimedes screw, a circular description of the creation of knowledge that draws us ever onwards and upwards, spewing us towards utopia. Knowledge is not simply the central hub of an economic model, it is *the ultimate destination* to which capital and labour, markets and communities must *dedicate* themselves.[90] Rather than pursuing a straightforward utilitarian argument and placing knowledge at the service of community and markets, Leadbeater stakes out a strongly *idealist* position. In this reading the knowledge economy is represented as a shift from the *utilisation of knowledge* (in diverse ways) towards the idea that diverse social institutions and processes be dedicated to an abstract notion – the *creation of*

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[88] Leadbeater, op.cit., p. 16.
[89] Ibid., p. 17. The final line of the chapter reads, "How we do that, is what this book is about". It is worth noting, that it is this passage that Rosabeth Moss Kanter (Ha rvard Business School) takes up, in her comment on the dust jacket – i.e. that "Leadbeater offers a vision of the "Fourth Way".
[90] The *idealist* notion at work in Leadbeater's theory here has interesting parallels with Counter Reformation theory as covered in Chapter Two. Leadbeater stretches the concept of 'knowledge' so that it serves as both a *foundational origin* and a *fundamental goal* of the economy. This circularity recalls that of Zuccaro's concept of 'disegno' where the human ability to create flows from the divine design that underpins the universe, and human creative activity in turn serves the greater design.

knowledge – which is placed above all other possible considerations. Put most simply, the purpose of society is to serve the creativity that creates knowledge.[91]

There is a good deal of aestheticising in such an idealist position. The shape given to society as a whole organises, one might say *composes*, diverse social and economic elements into a singular purpose. (Despite forays into a semiotic/network analysis of creative labour in later chapters, the compositional tropes of the rhetorical mode are never far below the surface of Leadbeater's writing.) A specific role is assigned to the social realm to which it should conform; that role is to play a part in creation, to serve a creation that is ultimately greater than itself.[92]

As suggested in the introduction, the idealist position staked out by theories of the knowledge economy derives from a two-pronged process that is clearly evident in Leadbeater's analysis. On one hand, aestheticisation is in play, a sense of design and harmony pervades many theorisations of the knowledge economy. On the other hand, weightlessness is not simply a theory. The massive growth in the utilisation of intellectual property law since the 1970s has made copyright products the largest export sector of the United States. Intellectual property laws are repositories of creative concepts – such as 'invention' and 'originality' – the maximisation of which has become vital to companies, corporations and policy makers.[93] The stress on creativity and the creation of knowledge in theories of the knowledge economy can therefore be traced to the conflation of creative/aesthetic concepts at play in intellectual property laws with the more generalised tendency of economists to aestheticise. The circularity of Leadbeater's theorisation, the tendency to find creativity everywhere and to see such activity within the framework of an image, has to be seen as the result of the conflation of such a two-pronged process.

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[91] It would be cynical to suggest that in such an analysis, the productive results always lay beyond us in some moment yet to come.

[92] In many places, Leadbeater strays into what one would have to call 'metaphysical' tropes.

[93] There is no room here to account for the directionality of flows between political and economic rhetoric, and the material situation within an historical framework. It must be remembered that the increased use of intellectual property leads to increases in its theorisation. Increases in its theorisation inevitably lead to increases in its utilisation. Rhetoric has the habit of becoming policy and policy has

The Knowledge Economy as an Aesthetic Economy of Readers and Writers

One pertinent example of Leadbeater's aestheticising tendencies is his use of the concepts of 'tacit' and 'explicit' knowledge.[94] Leadbeater's discussion of the concepts displays both his understanding of the importance of intellectual property to the new economy and his aestheticising stance, since the form of intellectual property evoked by his discussion is that of literary copyright.

Tacit knowledge is defined by Leadbeater as the kind of knowledge an apprentice learns from a master - it is often "robust, intuitive, habitual and reflexive."[95] Such knowledge is passed on as if by osmosis, and is thus hardly ever written down and codified. Explicit knowledge on the other hand is articulated in 'hard form', written in books or presented as mathematical formulae. Explicit knowledge is therefore more movable and repeatable, shifting from one context to another. Explicit knowledge, with its nomadic tendencies, is less 'rich' than tacit knowledge but makes a better economic asset. Tacit knowledge only becomes valuable when it enters a form that allows it to communicate with a large audience. Tacit knowledge must therefore be translated into a 'transferable form' in order to be exchangeable. In other words to be traded it must be turned into explicit knowledge.[96] In other words there is a distinction between knowledge that is *ownable,* and protected by distinct legal regimes, and knowledge that is, in the main, not.[97] A central aim of the policy makers and players

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the habit of hyperbolising activities it views as useful or successful. The relationship between the two strands of creative thought is therefore infinitely complex, and multidirectional.

[94] These terms are given general currency in management theory and contemporary economic theory. Garry Hammel is often credited with their popularisation however.

[95] Leadbeater, op. cit., p. 28.

[96] The distinction between 'tacit' and 'explicit' knowledge appears to have some root in the Platonic distinction between speech and writing. There are also some interesting resonances here, with the distinctions made between oral and written cultures in McLuhan's writing, and in the work of his collaborator Harold Innes. See especially, Harold Innes, *Empire and Communications*, Clarendon, Oxford, 1950. One of McLuhan's central contentions was that the 'privatisation of knowledge' engendered by the advent of printing was giving way to more amorphous forms of knowledge created by the 'oral' nature of electronic media. There is a sense in which his global village, bound by the collective earshot of the media, is a bastion of tacit knowledge. (The idea of course is unsustainable since intellectual property law applies as much to broadcast form as to printed material.)

[97] I say 'in the main', because some very explicit forms of tacit knowledge are protected by laws protecting 'trade-secret' – the most significant example of which, is the secret formula that goes into Coca Cola. More generally, the division between tacit and explicit knowledge mirrors earlier divisions

of the knowledge economy is the translation of tacit knowledge into a *fixed and tangible form* - it must in short, become property. The fixing of knowledge as an asset is however only half of the process. Utilising that knowledge involves turning it again into tacit form. Leadbeater expresses this in the following way:

> Explicit knowledge, conveyed as information has to be brought back to life as personal knowledge. This internalisation often makes knowledge tacit once more. A recipe is just information; to bring it to life, the cook has to interpret and internalise it by making his own judgements.[98]

Via the process of interpreting, explicit knowledge is once more turned into tacit knowledge. A more direct way of explaining the entire process is to say that the economy here is represented in *literary form*. Tacit knowledge is translated into explicit form, that is it is written up and made in to personal (intellectual) property, then traded, and finally reconstituted as tacit knowledge by the process of *reading*.[99] Leadbeater's own description of the process serves equally well as a description of reading.

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between the kinds of 'soft' 'intellectual properties' held within the guilds and bottegas, and the more tangible, 'hard' forms of intellectual property, which developed in the wake of the Venetian privilege system. Tacit knowledge is itself a form of 'intellectual property' is so far as it is an asymmetry of information. The central difference between tacit and explicit knowledge in this sense, is between knowledge that is 'owned' – insofar as it is enmeshed in certain social sites and processes – and knowledge that is *legally possessed* and transferable as property.

[98] Leadbeater, op. cit., p. 29.

[99] It is interesting to compare the transitions from 'tacit' to 'explicit' knowledge, with arguments formulated in the 18th century to justify the existence of intellectual property in books. As Martha Woodmansee has pointed out, the twenty-year debate over the establishment of literary property in Germany resolved itself around the issue of *form*. Fichte supplied an argument that disaggregated the property of the book into three parts, the physical, the material and the form. The physical ink and paper, along with the material and literary content, passes to the buyer of the book. In so far as a reader can appropriate ideas from the book by the effort of reading, ideas expressed in the text are the common property of the author and reader. The process of reading invokes a shift in the 'form' which ideas take. The *form* in which the author expresses themselves, belongs to them in perpetuity – "no-one can appropriate this (the author's) thought without thereby altering their form". Fichte, quoted in Woodmansee, op. cit., p. 52.

> Knowledge cannot be transferred; in can only be enacted, through a process of understanding, through which people interpret information and make judgements on the basis of it.[100]

The aestheticising tendency and its relation to intellectual property is made even more overtly when Leadbeater moves on to discuss the process with reference to Paul Romer's metaphor of the 'recipe' discussed earlier.[101]

> A recipe has to be interrogated to be understood. This changes the character of consumption in a knowledge economy. We have been brought up with a physical, sensual notion of consumption inherited from agriculture and manufacturing. We are used to thinking that when we consumer something it becomes ours, we take it into ourselves, we eat it up, like a piece of chocolate cake. Consumption is the pleasure of possessing something. Yet when we consume knowledge - recipe for example - we do not possess it. The recipe remains Delia Smith's; indeed that is why we use it. By buying her book we have bought a right to use the recipes within it. Ownership of the recipe is in effect shared between Delia and the millions of users. Consumption of the recipe is a joint activity. This is not so much consumption so muchas reproduction or replication. The knowledge in the recipe is not extinguished when it is used; it is spread. The more knowledge-intensive products become, the more consumers will have to be involved in completing their production, to tailor the product to their needs. Consumption of knowledge-intensive products is not just joint and shared but additive as well: the consumers can add to the products qualities. This is one of the most important ways that software producers can learn about whether their products work; they give them to consumers to try them out and to develop them further. In a knowledge driven economy, consuming will become more a relationship than an act; trade will be more like replication that exchange; *consumption will often involve reproduction*, with the consumer as the last worker on the

[100] Leadbeater, op. cit., p. 29.

> production live; exchange will involve money, but knowledge and information will flow both ways as well. Successful companies will engage the intelligence of their consumers to improve their products.[102] [My italics]

Suarez-Villa's notion of 'the reproduction of inventive creativity' is given a new twist. The consumer here is caught in the act of 'reproducing inventive creativity'. In other words, the knowledge economy is an intellectual property economy, in which we are all 'readers'. However, the reader here is of a very specific kind. The *duty* of the consumer is not only to consume but also to consume in a *creative* manner. If production in the economy is aesthetic, the role of the subject is not simply that of reader or viewer. For Leadbeater such consumptive activity also has a re*productive* role. The reader here is an economic Barthesian, an infinite creative resource, actively performing the meaning of the text in the act of reading, with the proviso that the economic fruits of such tacit creative activity are returned to the explicit *owner* of the intellectual property that has 'inspired' that activity.[103]

The important point about this characterisation of economic relations is that aesthetics is at work both in terms of consumption and production. There remains however a great asymmetry between tacit creativity, the 'secondary authoring', 're-authoring', or 'collaborative authoring' of the consumer – which receives no recognition in copyright law – and the explicit creativity represented by the product that is read. Nevertheless the passage clearly indicates the aestheticising ideal at work; the identity of the economic and political subject in the knowledge economy is in other words broadly *authorial* in character. If tacit knowledge is the resource from which explicit knowledge (or property) is drawn, then it is necessary to ensure that one encourages the continual production and replenishment of tacit knowledge resources - all activity of the economic and political subject must be effectively monitored and where

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[101] As discussed above. See also, Leadbeater, ibid., pp. 29-30.
[102] Ibid., pp. 32-3.
[103] In a sense, Leadbeater's view is a money-spinning variant on Richard Stallman's rhetoric of the free software movement. Leadbeater does not discuss asymmetrical economics in his view of the process. Neither does he examine specific financial arrangements, or the complex legal ramifications of such creative interactivity.

necessary, mined; social policy must in effect be dedicated toward such an end. In short, in Leadbeater's knowledge economy, creativity is the *duty* of the ideal citizen.

The Economy as Subject: The Networked Economic Body

Practically speaking the idea that the 'ideal subject' of the knowledge economy is creative has its roots in the increased prevalence of intellectual property as a method of calculating, holding and exchanging assets. However, the idea of the creative economic and political subject is reinforced by Leadbeater's aestheticising tendencies and his attempt to picture the entire *economy as a creative subject*. As suggested earlier, the idea of viewing the economy as creative/aesthetic subject is not particular to theories of the knowledge economy. Schumpeter's creative/destructive economy is one such early example of an aesthetic/evolutionary approach and his influence is evident throughout Leadbeater's book.[104] As suggested above, the concept of creative destruction is both a personation of the economy and a personation that rests on a model creative subject. Leadbeater's description of the knowledge economy is similarly a personation of the economy. However, where Schumpeter straddled the borders of Romanticism and Modernism, Leadbeater's personation straddles the borders of Modernism and Postmodernism. Leadbeater's economic body is in other words an amalgam of rhetorical and semiotic/network models of creative labour.

Taken at face value Leadbeater's conceptualisation of the economy is entirely in line with the prevailing ideology of creativity. In his analysis, creative labour is

[104] For example, Leadbeater's ideal entrepreneur, though a composite figure is clearly indebted to Schumpeter's work on the entrepreneur. Leadbeater's entrepreneur is an agent of change, a figure who creatively composes elements of production, who decides what is to be done while gambling that the future his actions help create will provide their ultimate justification. He is also a figure that destroys the old in order to build the modern, and that indulges in creative acts of learning and discovery. Such a figure possessed an intrinsic sense of achievement, autonomy and the "joy of creation." Leadbeater recounts Schumpeter's contribution in the following way: "For Schumpeter, the entrepreneur had to do more than manage risks. He had to be a leader, with the intuition to do the right things without analysis the situation; the power to create something new, and the power to overcome scepticism and hostility from his surroundings. Entrepreneurs were in part motivated by an intrinsic

unencumbered by the rhetoric of individual genius or idealised notions of originality. Knowledge creation he suggests 'is a collective endeavour… rarely the act of an individual genius'.[105] In a chapter devoted to the networked economy he suggests big breakthroughs in science only emerge from complex social relationships (between individuals and departments, departments and universities, university and partnerships with business etc.) Such extended networks, spread across many laboratories in many countries, work in 'trusting collaboration'.[106] Such collaboration is a key factor to the economy both on a micro scale within firms and on a macro scale across the global economy between firms and their consumers.[107] The networks of production conjured up by Leadbeater slavishly follow the prevailing ideology of creative labour. His assertion, that innovation occurs not so much *within* firms as 'within the learning networks that exist between them', is clearly ideological. No specific empirical data is provided to prove the pervasiveness of such activity and no account offered for the nitty gritty problem of how property rights stemming from such networks are allocated. However, such a view is entirely in keeping with the notion of networks as *semiotic* in character. The dictum, that meaning is not found in words but in the relational play *between* words, is revitalised in economic form with the idea that innovation is not found *in* firms but in the play of relations *between* them.

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sense of achievement: solving a puzzle, being independent, the joy of creation, the satisfaction of coming out on top". Leadbeater, op. cit., p. 100.

[105] Ibid., p. 74.

[106] Particular discussion in Leadbeater, op. cit., pp. 131-138.

[107] Leadbeater is drawing here on the work of Walter Powell (Prof. of Sociology, University of Arizona) and also Manuel Castells, op. cit. The importance of such networks must not be over-determined, Leadbeater cautions: the most successful firms of the future will be "networked and integrated" – they will not network themselves to the extent that they become either short term, or totally virtual entities. See Leadbeater's discussion of the "E-Lance Economy", suggested by Thomas W Malone and Robert Laubacher at the MIT. (Their description of short terms virtual companies recalls the *compagnie* and *commenda* relationships of early Renaissance 'capitalism'.) See Leadbeater, op. cit., pp. 134-135. Leadbeater talks up the need for social cohesion, mutual trust and co-operation as a vital part of such innovation networks. When, towards the end of the book, he turns his attention to social policy, his main concern seems to be to ensure that the Knowledge Economy does not fragment the social body so much that it chokes off the source of creativity provided by 'networks'. "Innovation emerges from collaborative networks . . . Networks are sets of relationships between independent producers, they cannot prosper unless they have a fund of social capital to call upon - mutual trust, reciprocity, co-operative self help. Networks can be enabled by technology but they are held together by social ties." Ibid., p. 137. Leadbeater has a rather over optimistic view of trust. There is growing evidence that employees reaction to the knowledge economy is to hoard and keep secret from their employers as much tacit knowledge as possible as a hedge against redundancy. See British Psychology Society Report in *The Guardian*, July 2000.

Body as Metaphor

Despite the homage to the ideology of the network/semiotic model, Leadbeater's view of the creative subject on a micro scale, and the personated subject of the economy on a macro scale, is also indebted to the motif of creative destruction drawn from Schumpeter. Both views of the creative subject are in play in a short chapter in which he draws an analogy between the economy and the body as the site upon which knowledge is situated[108]. The model of the body allows him to suggest that creative intelligence is networked but that networks operate on the basis of a hierarchy that privileges 'radical' innovation over a more slow paced 'incremental' innovation. Radical innovation in this analysis is the direct inheritor of Schumpeter's creative destruction.

In a chapter called 'If Organisations were Brains', Leadbeater sets out to explore the management of creative labour by pursuing an analogy between the brain and the firm. Human intelligence he suggests is not only housed within the brain but also distributed about the body in the form of habit and reflexes. Further than that, it is embedded in the words and tools we use and in our constructed environment. Intelligence in short, is *networked* through the body and its environment: such 'distribution' he suggests, 'is the key to human intelligence'.[109] Humans then have a highly efficient 'division of intellectual labour', we have an ability to distribute, store and retrieve intelligence embedded in words tools or the environment leaving 'the brain free to take on more sophisticated tasks: speculating, choosing, deciding, analysing, learning.'[110]

This dualistic model of intelligence parallels his model of 'tacit' versus 'explicit' knowledge. Leadbeater puts both models to use in describing the ideal firm of the knowledge economy which combines both kinds of intelligence/creativity. The ideal firm, like the human body, has a centralising organ that specialises in some forms of creative thought – the brain here is analogised to the management suite – and a

[108] See Chapter ,: 'If Organisations Were Brains', ibid.
[109] Ibid., p. 88.
[110] Ibid., p. 88.

network through which its creativity and knowledge is put to use. The 'total intelligence' of a company is located across the whole network of body and brain. Leadbeater recognises that much of the creative labour actually occurs far away from head office, within the stored experience, knowledge and creative input of non-managerial staff. Such knowledge creation is clearly of tacit kind. Too strong a centralised control of the firm may blind it to the knowledge and creativity distributed within its own network of production. The ideal company therefore, though it is collaborative and networked must also possess a subtle hierarchical division of labour. Leadbeater says this:

> A system of distributed intelligence allows the brain to get on with the tasks it is good at: sophisticated intellectual activities such as interrogating our intentions, making bets about the future, testing assumptions we rely upon, designing entirely new ways of behaving. The brain freed from the humdrum task of information processing, can focus on more complex tasks: creating plans, conceptual frameworks, and classifications. Our distributed intelligence engages in incremental innovation and adoption to the environment, allowing the brain to pursue more radical and risky innovation. Humans are especially intelligent because they have evolved a potent intellectual division of labour, combining networked and centralised forms of intelligence.[111]

The division of labour within the networked body falls between a slow, incremental creativity based on tacit or distributed knowledge - in Leadbeater's metaphor the activity of the body – and centralised, higher order creativity that pursues 'radical and risky innovation.' The latter form of creative labour is clearly *explicit* in character. In other words, it is the form of creative labour that is translated into intellectual property. In this metaphor then it is the brain, the management suite, that possesses the rights to creative labour of *the whole body*. To underline this point, at the end of the chapter he says this:

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[111] Ibid., p. 91.

> The most impressive acts of learning are those we complete in our heads, when we work out what to do without having to test it in practice. Imagine having to work out the best route from your home to a shop by trying out each route in turn. Learning through imagination involves working this out in one's head in advance. Brains excel at this kind of creative learning; fingers and toes do not. This is where tacit knowledge . . . is next to useless; more formal, analytical and speculative techniques are required.[112]

The crucial radical and risky part of creativity then is not networked in origin, though it may require networking and ultimately turning into tacit knowledge to become economically useful.[113] The most important kind of creativity, that which has the most privileged place in his analysis, is headwork, pure intellectual labour, it requires 'imagination' and 'creative learning' and it is primarily '*speculative'* in character[114]. This kind of creativity occurs at the centre of the ideal firm within the management suite or within the brain. In order to become economically useful, it must enter a network and meet up and exchange creatively with other kinds of knowledge, it needs in other words to become tacit again.

Within the metaphor of the *economy as creative body* therefore, there exists a hierarchy. Mental labour, of an imaginative and speculative character, radiates outwards to be met by the less privileged creativity (or tacit intelligence) of the reader or viewer. Within the firm then the movement of knowledge involves the appropriation of tacit knowledge, its translation in to explicit knowledge or property. It is through the agency of superior 'radical' innovation of the management suite that knowledge is rendered as a tradable asset. The character of the management suite, the

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[112] Ibid., p. 91.

[113] Leadbeater recognises that "good ideas come from particular people", but that to be useful they have to be "spread across a company". Ibid.,. p. 71.

[114] The privilege given speculative thinking here is interesting. Obviously, Leadbeater is taking about business thinking, the gamble on the future. Such modes of operation are of course also tied to aesthetic concerns. The early intellectual property laws for printed images grew up to protect a market that was *speculative* in character, as opposed to the more usual commission/patronage market for paintings and sculptures in 16th century Venice. Avant gardism itself was built upon the 'freedom' from state control offered by the 19th century speculative art market. In a sense, avant gardism – whatever its political inclinations – shares the sense of speculation on the future that drives entrepreneurship.

mental functions of the economic body, becomes clearer here. Counter to the generalised insistence he places upon the 'collaborative' nature of networks of innovation, the benefits that flow from such networks are heavily centralised. The collaborative aspect of production is akin to the collaboration between an author, his/her text, and the reader.[115] In other words, no property rights accrue to the readership part of the creative cycle. The collaborative 'networks of creativity' Leadbeater describes are in fact 'networks of production and consumption'. As far as production is concerned, there is little differentiation between the 'performative creativity' of the knowledge consumer or knowledge worker, both represent a vital source of new tacit knowledge, which can be exploited by those creating explicit knowledge, it is the latter group who have the privileged relation in this system.

Despite the intricate symbiosis of the different forms of knowledge it represents, *networked creative labour* should not be confused with any form of egalitarian belief. Everyone is creative in the networked leviathan but some are more creative than others. While consuming creatively (producing tacit knowledge) is rendered as a duty, it is the higher, more centralised form of creative intelligence (the producer of explicit knowledge) that turns creative labour into a right to property. The hierarchy here is important. The alignment between tacit intelligence and slow, incremental innovation in Leadbeater's body metaphor suggests that radical and risky innovation is the *natural* partner to explicit intelligence. The implication is that radical and risky innovation is at the heart of the process that creates explicit knowledge, the kind of knowledge that is represented by intellectual property law. To put this most simply, the kind of creative labour privileged in Leadbeater's knowledge economy is radical and risky innovation, the fastest and most nimble mode of creativity, always be jumping ahead of the slow, incremental plod of the (creative) reader or viewer. It is a mode of creativity that is most simply characterised as *avant-gardist.*

[115] Or of course the artist, his/her work, and the viewer.

The Creative-Destructive Network Model

The asymmetries of Leadbeater's networked economic body are rooted in his desire to fuse together two models of creative labour drawn from different art historical epochs. The notional egalitarianism of the network/semiotic model of creative labour is tempered by the avant gardism of Schumpeter's model of creative destruction.[116] The *radical* innovation that Leadbeater sets such store by is imbued with an avant gardist flavour, numerous of examples of which litter his text.

As suggested above, Schumpeter's model of creative destruction, like the early modernist avant-gardes, sits at the cross roads of Romanticism and Modernism. Though Schumpeter recognised that invention increasingly occurred within the 'socialised' environments of R&D departments, the trope he used to encapsulate such processes was that of the genius/melancholic. The avant-garde movement, though similarly socialised, displayed the creative ticks of the genius/melancholic. The contours of the creative/destructive economy correspond well with those of the avant gardist movement. Leadbeater's privileging of *radical innovation* therefore derives its intensity from the *avant gardist* thrust of Schumpeter's *creative/destructive* economy.

A good example of the avant gardism inherent in radical innovation can be found in Leadbeater's discussion of the differences between radical and incremental innovation with respect to the creative cultures of Japanese and American firms. Japanese firms are heavily dependant on tacit knowledge, the habits and rules of thumb that subsist within organisational structures. Such an approach to innovation tends to produce slow, incremental advances that merely refine and improve existing products. In the late 1980s, American companies attempted to grasp back the technological ascendancy by developing a more radical approach to innovation. The radical innovation pursued was entirely creative/destructive in character, in which every firm aimed to 'make obsolete its previous generation of goods'[117]. The economic edge of such radical

[116] It is worth reiterating that the semiotic/network model as it emerged in the art world of the 1960s was aligned to the end of avant gardism.
[117] Leadbeater, op. cit., p. 77.

innovation lays in its cathartic destructiveness.[118] The way Leadbeater presents this historical development recalls the separation between 'traditionalists' and avant-gardists in late 19th and early 20th centuries in visual art. The eye of the academician looked backwards towards the models of classical antiquity, a slow process of refinement of contemporary work might bring it to the classical standard or even eventually surpass it. The avant-gardist stance by contrast did not to attempt to equal or improve on past but rather sought to transgress its models.[119] The avant gardist experimented with eyes upon the future, taking risks, gambling that the future created by such experimental work would ultimately provide a framework, which legitimated and made intelligible their work.[120] The 'untethered gestures' of the avant gardist, gesticulated towards the future, which could not, at the time they were made, be legitimised by recourse to existing models.[121] Leadbeater's description of radical innovation is a natural partner to such a view of progress and creative labour. The high failure rates of radical innovation are entirely in line with the risk strategy of avant gardism. The idea that a firm should aim to make its own products obsolete could also be regarded as axiomatic of the Modernist avant gardes approach to creative production.

The hierarchy between radical and incremental innovation that Leadbeater evokes is crucial to his definition of the knowledge economy. The battle-lines that are demarcated by the terms shape his discussion on all topics; from the theory of the firm to industrial policy, from theories of civic responsibility to social policy, Leadbeater places a strong and unwavering emphasis on 'radicalism'. It is crucial to recognise that

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[118] Ibid., p. 77. Leadbeater gives Hewlett Packard's approach to R&D, as a particular example of this kind of creative model.

[119] Though a caricature itself, it is, nonetheless an important one, because it stood as the axiomatic ground for much modernist practice.

[120] Such an understanding is prefigured in Wordsworth's 'Essay Supplementary to the Preface' in *Miscellaneous Poems* of 1815, in which he says that "Every author, as far as he is great and at the same time, original, has had the task of creating the taste by which he is to be enjoyed." Quoted in Woodmansee, op. cit., p. 117.

[121] The term "untethered gestures" is drawn from O' Doherty's *Inside the White Cube* – in a section where O' Doherty examines the problem of being an inheritor of an "avant-gardist tradition". O' Doherty's examination of the issue has more recently been taken up by Hal Foster in his essay now forming the first chapter of ***The Return of the Real***. Depending on where it is printed, the essay is called, either 'Who's Afraid of the Neo Avant Garde?' or, 'What's Neo About the Neo Avant Garde?'

radicalism for Leadbeater has its origin in creative theory rather than in the well-worn political sense of the term. The cultural nature of radicalism in Leadbeater's lexicon is best demonstrated by his division between 'knowledge radicals' and 'knowledge conservatives'.

> Knowledge radicals stand for open societies prepared to engage in the diversity and experimentation that goes with radical knowledge creation. Politicians who embrace innovation and change will stand squarely in the Enlightenment tradition which puts reason and ideas at the heart of politics. Knowledge conservatives will take a much more cautious, risk-laden view of progress. Conservatives value tried and tested old knowledge and prefer a slower rate of innovation. The knowledge conservatives will come in different stripes: communitarians, new environmental romantics, authoritarian populists or, simply, traditional conservatives. Conservatives will argue that knowledge should be controlled, restrained or suppressed for the sake of some greater good, like tradition or the environment or a sense of community.[122]

The difference between knowledge radicals and knowledge conservatives has nothing to do with political radicalism, 'Conservatives' in the old political sense, occupy the same space as old-style heavy industrialists, nationalists, teachers, doctors, environmental activists, anti-GM activists and anti-globalisation activists. Conservatism is defined as *that which stands against radical innovation* – an entirely aesthetic and avant gardist formulation.[123]

Concluding Leadbeater

To sum up then, the economy Leadbeater describes is an economy predicated on an expanded sense of the importance of intellectual property and its associated creative

[122] Op. cit., p. 230.

concepts. The aestheticising tendency in his writing draws out metaphors that correlate very closely with the creative tropes of such laws. When viewing the economy as a body, the 'subject' in play is a creative one. The economic leviathan is sub-divided into faculties that relate to the intelligence of the mind and the intelligence of the body. A privileged relation exists between the labours of the mind and those of the body, which is represented as hierarchy between incremental and *radical* innovation. The image of the economy as a creative subject is, in effect, a composite of two competing creative models, one of which harks back to early Modernist avant gardism, and the other which is post modernist in character. The balance struck between the creative/destructive model of Schumpetarian economics, and the contemporary network/semiotic model of creative labour, severely limits the egalitarian potential of the latter.[124]

THE KNOWLEDGE ECONOMY AS CULTURAL CRITICISM: PHILIP FISHER'S *STILL THE NEW WORLD*

The radical aesthetic turn observable in the economic sphere is also observable in the cultural sphere. Philip French's study of 19th and 20th century American literature *Still the New World: American Literature in a Culture of Creative Destruction*[125] is one of the most coherent attempts to bring the ideology of the knowledge economy into the cultural sphere. Ostensibly a study of the literature of Emerson, Twain, Melville and James, the ideological content is made clear in the opening chapters on abstraction and democracy. Literary works are set within a framework that purports to reveal the

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[123] It is worth mentioning here that current and previous Labour administrations, which have attacked the "forces of conservatism", are rooted in this demarcation of creativity.

[124] Interestingly, where Leadbeater's theoretical position has turned into political rhetoric, it is presented as a division between those who stand for 'radical innovation', and those 'of whatever political ideology' who don't. The political division is, in other words, predicated on aesthetic creative ideology. This division was made explicit in Tony Blair's, Leadbeater-inspired speech to the Labour Party Conference, 25 September, 1999. For a short analysis of the speech, see Appendix C.

[125] See Philip Fisher op. cit. At the time of publishing, Fisher was Felice Crowl Reid Professor of English and American Literature, Harvard University.

'nature' of the American character. The works of 'culture' discussed are firmly situated within an economic history driven decisively by technological innovation. The essential character of American literature, he contends, 'took its leading signals in an entirely new way from economic life rather than from religious or traditional, past-centred cultural foundations.'[126] Schumpeter's model of creative destruction provides the central figure of Fisher's analysis, bedding the creative labour of writers and poets within the creative labour of engineers and industrialists.[127] The ultimate point Fisher wishes to make is that the 'American personality' is creative in character and specifically creative destructive in inclination, a facility that he relates positively to the familiar lines of the American dream.[128] Fisher's narrative therefore tells the reader rather more about his methodology than about the literature under discussion.

The American Personality: The Creative Destructive Subject

Fisher uses the division between tacit and explicit knowledge that informs Leadbeater's economic analysis and turns it to discussion of the historic character of the United States.[129] The 'thickly rooted, tacit culture' has never been a part of the American experience he suggests.[130] The culture of the United States has, from the very beginning, preferred a minimal social space to "the thick detail of culture" passed from generation to generation so typical of the fault lines of 'old' European culture. The United States developed a number of devices to secure a national identity that could not be based on ethnic homogeneity or the economic and social determinates of geography. A written Constitution substituted for the depth of *tradition* abandoned by

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[126] Ibid., p. 28.
[127] Take for example, this passage from his introduction: "With the onset of a richly inventive modern technology that presumed destructive restlessness, along with an economy that was committed to giving free rein to that destructive restlessness, the possibility opened up that in American culture the initial, unfinished newness would define the terms of a more permanent newness guaranteed by the one genuine permanent revolution, that of competitive technological capitalism." Fisher, op. cit. p. 3.
[128] One of the fascinations of Fisher's book is its mixture of quite plausible technological determinism and a ridiculously syrupy nationalism.
[129] It must be remembered that a major claim of Leadbeater's, is that the United States is strong on explicit knowledge and weak on tacit knowledge. In contrast, German and Japanese companies are used as examples of strong, tacit knowledge cultures.

generation on generation of immigrants. Rather than the tacit culture of shared stories, songs, dances, ceremonies the constitution guaranteed the absence of tradition and of culture, 'in the anthropologist's sense of the word'. To have a Constitution, says Fisher, is "to be able to say good riddance to culture".[131] The Constitution set out in *explicit* form, the 'minimal limits for whatever new world, new practices we may in the future choose to create'. The pairing here of tradition as tacit knowledge – "the warehouse of old recipes for living and thinking" – plays up the radical creative character of the Constitution.

The constitution however is partnered by another form of 'explicit knowledge' which substitutes for the absence of tradition and culture – that of the entertainment industry. British English, shorn of its tacit geographical and cultural groundings, became the language of the American immigrant, a second language, a mere 'vehicle of communication' rather than a pattern of speech deeply embedded in tradition and culture. Alternative forms of communication to the minimal shared language-space of the polyglot emerged in the early 20th century with the advent of cinema and later television.[132] The 'thin' explicit culture produced a strong visual culture that was in principle able to 'talk' to the complex ethnicities that made up the social space of American society.[133] Commerce rather than tradition, culture or language then, is the glue that holds American culture together. The essential sameness required for nationhood is 'secured not by ideology, religion language, or culture, but by the box of Kellogg's Corn Flakes on the kitchen table, Sesame Street on the television screen at 4:30, the package of Marlboro cigarettes in the shirt pocket, and the same ten songs on every car radio on a certain summer day everywhere in America.'[134] Another way of expressing this view is to say that the *tacit* natures of 'old' cultures are substituted in

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[130] Fisher, op. cit., p. 27.
[131] Ibid., p. 41.
[132] Fisher suggests that the impossibility of producing a 'shared rich language' in the US made the production of a shared social space, on the model of nation building in Germany, very impractical. The failure of language results in the silent hero/heroine of American novels and film, which is in turn an articulation of the awkward language skills, or 'language embarrassment', of an immigrant culture.
[133] One reason for the international success of American cultural products, he suggests, is that they are already designed to overcome the cultural and ethnic differences inherent in the domestic market.
[134] Op. cit., p. 47.

the 'American' model by *explicit*, or commodified, products that in turn are consumed for the *aesthetic qualities* that build a sense of identity and belonging. In Fisher's model of subjecthood, all human creativity is defined in economic terms.

Given the crucial importance of creative endeavour to national identity, Fisher also seeks a way to define the specific *character* of the 'American' creative act. This is achieved in a manner that places him firmly within the envelope of knowledge economy theory. As indicated by the discussion on identity, American identity is identified in opposition to the notion of tacit, (old, European) culture. The implication is that the explicit nature of American culture will therefore be 'radical' in character. And so in Fishers analysis it is. As with Leadbeater, the pairing of incremental innovation with tacit knowledge cultures, and of radical innovation with explicit knowledge cultures, is followed through in Fisher's analysis. As with Leadbeater's economic analysis, *radical innovation* is for Fisher entirely coextensive with the rhetoric of *creative destruction*.

Imagining into Wealth: Tom Sawyer, the American Persona and the Knowledge Economy

Fisher's book begins with an analysis of a famous scene from Tom Sawyer. Tom's attitude to the task set by Aunt Sally – the whitewashing of her fence – is turned by Fisher into a parable for the American economic imagination. Through his wit, Tom turns a boring chore into a game, engaging the labours of friends and passers by to do 'his' work. The usual interpretation of the scene, the sly intelligence of a trickster manipulating friends and strangers, is turned on its head. Fisher suggests that Tom, in fact, does not escape work. The presence of his imagination is required to keep the others at the work face. Tom has in Fisher's words become 'a manager, a salesman, a negotiator, and a supervisor… this requires him to work hard all day and to bring a wide range of talents and knowledge into play.'[135]

[135] Ibid., p. 8. Aunt Sally, or 'the employer', is of course "satisfied beyond her wildest dreams".

For Fisher, Tom's fence is a parable of the 'economics of imagination', of assets 'imagined into wealth,' and by extension of the contemporary knowledge economy.[136] For Fisher imagination is a distinctly unlimited resource, a resource that has *no* physical limitations. To illustrate the point, he offers the reader a choice of philosophical parables of American economic development; Mark Twain's Tom on one hand, and Frederick Jackson Turner's 'frontier hypothesis' on the other.[137] With its warnings of exhausted natural resources, Fisher sees the Turner hypothesis as an example of 'limited-resource capitalism', an economic paradigm that has its natural partner in contemporary concerns about unfettered consumption and the consequential degradation of the environment.[138] In contrast, Tom's fence painting stands for the imaginative faculty, the ability to continually re-imagine and re-draw the determinate economic parameters of American society, effectively escaping the censure of diminishing material resources.

Fisher's view of the economic imagination as a resource entirely 'unlimited' by material constraints provides clues as to the 'origin' of his view of imagination. Imagination, in an aesthetic sense is always confronted by some form of material constraint or limitation. Expression always acts through the agency of a medium, at some point therefore an engagement with material relations is simply unavoidable.[139] However there is an area of creative theory that is routinely in the habit of describing its 'subject' in terms of the infinite. Descriptions and defences of intellectual property law routinely make the claim that patents and copyrights represent resources that are *theoretically* inexhaustible. Theoretically 'intellectual objects' are 'nonexclusive', in other words they are not consumed by use and can be accessed simultaneously by an infinite number of people. The possession or use of an intellectual object does not

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[136] Though not politically explicit, 'Tom's fence' is clearly a metaphor for a knowledge economy in which the creative, cultural imagination of the west exploits labour in underdeveloped countries.
[137] A contemporary of Twain, Turner claimed that the historic 'western frontier' provided a safety valve to the economic and social pressures of the already settled east. The closing of the frontier (around 1890-1910) symbolised the exhaustion of limited natural resources – the pressure valve that the west had provided. A corresponding shift in the American character was therefore inevitable.
[138] Fisher's position is distinctly unsympathetic to such a 'pessimistic' view.
[139] It would be pedantic to summon up an idealistic 'oral' culture in order to provide an exception to this generality.

prevent others from possessing or using the 'object'. Communication costs aside, the marginal cost of producing extra goods is, theoretically, zero.[140] In his description of the knowledge economy Charles Leadbeater analogises the relationship between the 'old' economy and the knowledge economy as the difference between the consuming chocolate cake and consuming the recipe for chocolate cake, the latter being, in effect, a non-rival good.[141] In the old economy if I eat the all the cake, you will be prevented from eating it. In the new economy, my use of the recipe does not explicitly *prevent* you from doing likewise. In a loose theoretical sense this is true, however, it omits to mention that the intellectual property rights that circumscribe the recipe severely restrict its 'legitimate' uses. It also omits to mention that the rights themselves require, even in the first instance, an 'expression in a fixed and tangible form'. In other words, the communication requires paper and ink. The consumer may not consume chocolate cake but that is not to say that consuming recipes is entirely without limit from the material world. Fisher's view of limitless then draws not on any aesthetic experience of imagination, but rather on a shorthand and entirely *theoretical* view of intellectual property that is very much in vogue in the imagery of the knowledge economy.

For Fisher, Tom's fence painting exemplifies a specifically contemporary view of the creative act. The ability to continually re-imagine and re-draw the parameters of a given situation is 'without material limit'. In Fisher's analysis, it stands in direct opposition to the material limit. Echoing the rhetoric of contemporary economic theory, such re-imagining and re-drawing of parameters is 'common to both poetry and industry', suggests Fisher. But, more than that, such imaginative re-invention is characteristic of the American personality.[142] De Tocqueville's description of early

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[140] For a discussion of these aspects of intellectual property, see Edwin C. Hettinger, 'Justifying Intellectual Property' in *Intellectual Property: Moral, Legal And International Dilemmas*, ed., Adam D Moore, Rowman and Littlefield, Oxford, 1997.

[141] Leadbeater, op. cit., p. 29.

[142] Fisher uses the imagery of Emerson's early essay 'Circles' and the more post-modern language of 'the frame' to describe this process. The world as-it-is is encountered as a circle neatly arranged with all parts *composed* tightly together. In other words, the world encountered is under the imaginative spell of earlier generations of thought – the "sediment of thousands of years of different imaginations", Fisher op. cit., p. 16. The fixed and perfect nature of the circle at first sight leaves little room for intervention from the newly arrived. In Emerson's image, the new arrival then makes a new and larger circle – an

19th western settlers, he suggests, attests to the capacity for personal reinvention of the immigrant/settler.[143] But, more fundamentally, reinvention is built into the American persona by the incessant *re-framing of experience* created by technological development. In Fisher's imagery trains rust in obsolescence, canals are filled in with dirt, wharves and roads are grassed over, the pony express is buried by the telegraph, the telegraph by telephones, the telephone by cellular phones, computers and the Internet – each new technology has the capacity to reframe experience. Schumpeter's 'perennial gale of creative destruction' is called on as the image with which to grasp this essential social condition. The principle of creative destruction, Fishers suggests, is even written into the law of the United States in the 19th century.[144]

The Law of Creative Destruction

Fisher calls the Charles River Bridge Case 'one of the classic turning points in the creation of a legal framework for society of permanent newness'.[145] The case concerned improvements to the crossing of the Charles River between Boston and Charlestown. The river ferry was a monopoly operated under the grant of a government licence. When a new bridge was built, the courts recognised the ferry owners right to compensation and a part of the tolls from the new bridge was granted in recompense to the owners of the old ferry licence. Forty years later, a new bridge was created alongside the old. In 1837, a ruling of the Supreme Court liquidated the payments to the old ferry operator and gave no compensation to the stockholders of the first bridge. The case is important because it created a legal precedent that placed the 'general good' stemming form a new technology over existing property rights that

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invention that surrounds and dissolves what initially appeared to be fixed and complete. Likewise, in Fishers account, 'Circles' becomes a natural partner to 'frame-theory', as it was derived by contemporary US art critics from Derrida's *The Truth in Painting*, with its famous image of the "passe partout". See Jacques Derrida, *The Truth in Painting*, University of Chicago Press, London, 1987, pp. 1-15.

[143] The implication here is that, uprooted from strong tacit culture, you can represent yourself as anything you choose.

[144] Fisher here draws on Stanley Kutler's *Privilege and Creative Destruction: The Charles River Bridge Case*, John Hopkins University Press, Baltimore, 1971.

[145] Fisher, op. cit., p. 21.

might be said to stand in the way of such 'advances'. The case represents for Fisher the moment in which creative destruction was built into the law of the United States and the 'American mentality'.

With creative destruction thus hard wired into the American mentality, Fisher proceeds to find imaginative connections between the experience of the immigrant/settler and the inventive gale of technological creative destruction. A natural empathy exists between the two; just as the immigrant must cope with geographic and cultural dislocation, so every citizen must cope with the economic and cultural dislocation created by the gale of creative destruction. The characteristic 'thinness' of American personality lays in the inability of one generation to pass anything much on to its children. Whereas tacit cultures suggest depth, 'thick' knowledge passed on from generation to generation, the uprooted immigrant culture of the United States suggested knowledge made anew for each generation. As Fisher puts it 'the consequence of an ever new culture of objects and systems is identical to that of an ever new body of citizens with their strangeness. Both cases require that one element of citizenship is constant adaptation to a new world on the part of both immigrants themselves and the former immigrants now called natives'.[146] In other words, strong linkages to past 'tradition' are identical with strong linkages between generations; both are 'inimical to a society of invention, enterprise, and immigration with its bias towards the next-on world.'[147]

In the cultural field itself the consequence of the creative destructive society is a tendency towards an 'aesthetics of abstraction'. Fisher's earlier work *Making and Effacing Art*, followed a well established line in contemporary art criticism, suggesting that the de-contextualising effects of museums, their ability to cut their objects of display from their originary social and cultural functions, results in a 'minimal' or 'thin' identity for such works. Abstract Expressionist painting, self consciously designed for an ultimate destination within the museum, wore such 'abstraction' on its

[146] Fisher, op. cit., p. 48.
[147] Ibid., p. 29.

sleeve.[148] Fisher suggests that the reader draw comparisons between the art object and the immigrant, both are decontextualised from the fabric of tradition, from religious, civic and familial cultural locations, it is possible in short to talk of both 'abstracted artworks' and 'abstracted persons'.

The Knowledge Economy as Kulturkampf

The economic message from Fisher, buried in a book that is ostensibly dedicated to literary analysis, is perfectly clear. The ideal economic and 'cultural' subject is aesthetic and creative in character. It is an ideal synonymous for Fisher with the American character. More pointedly, it is a subject that is creative/destructive in temperament, a natural avant gardist to whom abstraction, cultural, economic and social, is a way of life. It is an analysis of the American subject that is acceded to in Charles Leadbeater's economic analysis of the knowledge economy. Leadbeater sets his ideal economic subject, the radical creator of explicit knowledge, in Silicon Valley, sharply separated from the slow, hierarchal, incremental innovation practices of German and Japanese firms so pitifully embedded in strong tacit cultures.

In a thoughtful, and far from positive, review of *Still the New World,*[149] David Bromwich suggests that "it is natural to ask what the motive is for a study that so completely identifies the artistic avant garde with the momentum of the capitalist market, a work that is world-historical in its diagnosis yet ultra-American in its focus and preoccupations."[150]

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[148] This reading of new museology and American formalism is highly partial and generally misleading. The 'abstraction' of the museological object hides the often-violent history of colonial conquest and cultural appropriation and is therefore, far from value free. Applying such a term to the social sphere similarly hides the violence of some forms of 'immigration' – slavery being the obvious example. Aesthetic abstraction is itself viewed entirely within the frame of American formalism as established by Harold Rosenberg and Clement Greenberg. The complexity of early 20th European abstraction– with its elements of political radicalism, tricksterism and anarchy – is less easily co-opted into such a neat and cosy formalist narrative.

[149] David Bromwich, *A Millennial Twilight Faith that has No Politics to Speak of,London Review of Books*, vol. 22, no. 10, 18 May, 2000.

[150] Bromwich questions Fisher's positivistic acceptance of the loss incurred in creative destruction and what he regards as the American-centric regard for 'the future'. The loss that results from creative

In view of such an observation, it is worth returning briefly to Leadbeater. In the chapter toward the end of his book called the 'Power of Fantasy' Leadbeater makes explicit his own belief in the relation between aesthetics and technological/industrial innovation.[151].

> Culture - not Science technology or even economics - will determine how deeply embedded these changes become in our daily lives. The same was true of mass produced products of the industrial economy. Economic and cultural innovation went hand in hand. Henry Ford's River Rouge plant in Detroit was in full swing as James Joyce was writing *Ulysses*, the first challenge to the orthodox novel. The first films were shown commercially in 1903, as Ezra Pound was writing his first formalist poems, marking the start of modern poetry. And in 1907, Picasso put on view perhaps the most shocking painting of the century: a portrait of three prostitutes which marked the start of Cubism and modern art. Economic and scientific modernisation succeeds when it is accompanied by a cultural creativity that revolutionises the way we see the world.[152]

In Leadbeater's analysis, technological and economic developments are tied to a process of acculturation enacted by 'radical' aesthetic visionaries. Two possible explanations are available as to why Leadbeater pursues such a notion. On one hand, his residual Marxism may lead him to believe that a 'common creativity' impels society forward.[153] On the other hand, 'modernisation' may require a *'cultural wing'*, a

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destruction he points out, is a loss of memory. The destruction of memory has always, as Bromwich suggests 'been a weapon of tyranny, a weapon that by coincidence it shares with competitive technological capitalism'.

[151] Bromwich, op. cit., p. 228.

[152] Of course *Demoiselles d'Avignon*, was *not* as Leadbeater claims, put 'on view' in 1907. Also, it is interesting to note that the pairings between the aesthetic and industrial here repeat the division between the legal regimes of copyright and patent that commodify such manifestations of creativity.

[153] The self-conscious pairing of the industrial and the aesthetic, also recalls the beliefs of art historians who worked under the influence of Hegel. Alois Riegl for example, suggested that all visual forms, whether 'fine art' or 'craft' (or in this case, industrial), were underpinned by *the will to form*. In other words, all created objects bore the 'spiritual hallmark' of their age. For a discussion of Hegel's influence on art historians, see Fernie, op. cit., pp. 13-20. Also see, Fernie's introduction to Riegl, ibid., pp.16-17 and ,excerpt from Riegl, ibid., pp. 120-126.

rhetorical cadre, to pursue its objectives.[154] Ostensibly, the idea of a 'cultural creativity to revolutionise the way we see the world' has a reasonably strong precedent in the Modernist avant gardes of the early 20th century. However, the avant gardes of mid 20th century New York provides a stronger case.

The thesis elaborated by Fisher – that abstraction is somehow a *natural* product of the American way of life, and can be taken as a symbol of that life – has a long pedigree. In 1950, Arthur Schlesinger published *The Politics of Freedom*, a book that identified the abstraction of the New York school of Abstract Expressionism with the core western values of individualism and freedom of expression. Modernist art was thus presented as a bulwark against 'totalitarianism'.[155] Schlesinger's book contributed an array of arguments that augmented what had, since 1947, become official, though covert, US foreign policy. The details of Schlesinger's involvement with the *Psychological Warfare Division* of the CIA and the *American Committee for Cultural Freedom* are extensively documented in Francis Stoner Saunders' recent study *Who Paid the Piper? The CIA and the Cultural Cold War*[156].

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[154] One way of seeing Leadbeater's aestheticising tendencies, and those of the knowledge economy in general, is as a particular kind of policy. In a sense, rhetoric can itself be *policy*. Denis Houck analyses the balance for example, between art (rhetoric) and science (hard figures) in two important letters written by John Maynard Keynes to Franklin Roosevelt – those that influenced the emergence of the New Deal. Houck suggests that the rhetorical, aestheticising, aspects of Keynes' economics were devices consciously employed by Keynes. Within the context of the Great Depression, Houck argues, good rhetoric functioned as "the very ground of economic policy and economic recovery". Rhetoric, in other words, can itself constitute a programme of action rather than merely functioning as window-dressing for economic 'science'. Houck claims that the broadly Keynesian fiscal policy pursued by Roosevelt's administration in the early 1930s, supplemented the scientific aspects of economic policy – acting as an article of faith, or a procedure for whipping up and hyperbolising business confidence in the future. See Denis W Houck ' Rhetoric, Science and Economic Prophecy' in Woodmansee and Osteen, op. cit. (Houck is Assistant Professor at Florida Atlantic University.) The sources of Keynes own aestheticising tendencies can be found in his well-documented association with the London avant-garde. In addition to his involvement in wartime art's policies leading to the formation of The Arts Council, Keynes was close to the Bloomsbury Group. His relationship with Duncan Grant lasted until his marriage to Lydia Lopokova. See Richard Witt, *Artist Unknown: An Alternative History of the Arts Council*, Warner Books, London, 1998.

[155] 'Totalitarianism' in Schlesinger's lexicon was a portmanteau word that conveniently encompassed both fascism and communism.

[156] Frances Stoner Saunders, *Who Paid The Piper? The CIA and the Cultural Cold War*, Granta , London, 1999. The American Committee for Cultural Freedom was an offshoot of the CIA's main cold war device the Congress for Cultural Freedom. Perhaps unsurprisingly, Clement Greenberg was a regular attendee of the bashes organised by the American Committee.

Stoner Saunders' book is an attempt to rescue analysis of the maze of cultural organisations managed by the CIA in the cold war period from more radicalised political efforts of analysis made in the early 70s. As part of the attempt to characterise the motives of former left wing intellectuals involvement the cultural cold war, she cites a passage form Saul Bellow's *Humboldt's Gift*. The thought processes of Charlie Citrine, Bellow's narrator, capture something of the psychological character of those involved in *'The Congress'*.

> There came a time…when, apparently, life lost the ability to arrange itself. It had to be arranged. Intellectuals took this as their job. From, say, Machiavelli's time to our own this arranging has been the one great gorgeous tantalizing misleading and disastrous project. A man like Humboldt, inspired, shrewd, nutty, was brimming over with the discovery that the human enterprise, so grand and infinitely varied, had now to be managed by exceptional persons. He was an exceptional person, therefore he was an eligible candidate for power. Well why not?[157]

What is striking about this particular choice of literature is the way the *Kulturkampf* is itself captured in an image of *rhetorical composition*. The image of arrangement is entirely consonant with an image Fisher draws on from Emerson's essay *Circles*. The world *as-it-is* is encountered as a circle, neatly arranged with all its parts *composed* tightly together. To the newcomer, the world encountered is already under the imaginative spell of earlier generations of thought, the "sediment of thousands of years of different imaginations" as Fisher puts it. At first sight, the fixed and perfect nature of the circle leaves little room for intervention from the newly arrived. However, in Fisher's account of Emerson, the new arrival then inscribes a new and larger circle, an invention that surrounds and dissolves what initially appeared to be fixed and complete. *Circles,* in other words, is a parable of the imagination working in the

[157] As quoted in Stoner Saunders, ibid., p. 3.

rhetorical mode of composition.[158] The point Fisher wishes to make is that the world is what we imagine it to be. The economy he describes is based entirely upon such 'imagining into wealth'. Fisher's own book is an act of such re-composition. The literature he discusses has, like Humboldt's 'life', apparently lost the ability to arrange itself. Each author is in turn therefore re-composed in line with the ideological economic image he wishes to project.

As Stoner Saunders suggests, a central feature of the *Kulturkampf* enacted between the 1940 and 1960s was 'to advance the claim that it did not exist.'[159] The secret programme of cultural propaganda relied on 'soft' linkages and collusions, the power of friendship, 'salon diplomacy and boudoir politicking'[160]. One would be hard pressed to find definitive links between the cultural approach to the knowledge economy of Fisher and the economic and political approaches of Leadbeater and Suarez-Villa. However, just as in the cold war, it is the soft linkages and collusions between culture and political economy that are important here. The connections forged between 'economic' approaches to culture – exemplified here by Fisher – and the 'cultural/aesthetic' approach to political economy – exemplified by Leadbeater – reinforce each other. Where political economy becomes the touchstone for cultural criticism, and 'cultural creativity' provides a similar function for political economy, it is reasonable to suggest that a new, all encompassing, *ideology* of creative production is at work.

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[158] As with the discussion of Bourdieu's image of production in Chapter Three, the recourse to the rhetorical concepts of composition seems unavoidable.

[159] Arguably, this is still the case. Ex-CIA operatives provided Stoner Saunders with willing help in putting together an extremely well-researched and documented account of CIA activities between 1947 and (approximately) 1966 – this is interesting since it follows the first rule of denial – i.e. that was 'then' this in now.

[160] See Stoner Saunders, op. cit., p. 6.

THE CREATIVE SUBJECT AND CREATIVE DESTRUCTION: THE RHETORIC OF INTELLECTUAL PROPERTY LAW AND THE SEMIOTICS OF CREATIVE LABOUR

THE AMERICAN SUBJECT: JOHN MOORE'S BODY IN THE SOCIETY OF CREATIVE DESTRUCTION

The three case studies of the knowledge economy discussed above, at work in economic theory, political rhetoric and cultural criticism are tied together by a belief that the subject in the knowledge economy is at all points creative. Whether construed specifically through the locus of production or consumption as a general resource to be mined, or as the subject of political rhetoric and cultural criticism, the subject of the knowledge economy is always creative in character. A privileged position is retained however for creative subjects that are deemed to be radical or creative/destructive in character.

The knowledge economy however produces more than rhetorical positions. As the Charles River case suggested, American *law* has long recognised arguments related to innovation that could be regarded as creative destructive in character. The Charles River case established the principle that privilege granted in the past was secondary to the good of society 'understood as its right to the best possible future.'[161] As Fisher argues, the Supreme Court ruling set 'the philosophic and legal tone for the American relation to property', affirming the priority of new creations over existing property rights, provided that a 'public utility' could be proved. In Fisher's words it 'made creative destruction the law of the land'[162].

[161] Fisher, op. cit., p. 22.
[162] Ibid., p. 23.

In 1990, the case of *Moore v The Regents of the University of California*[163] established a precedent with regard to the rights of the subject that parallels and complements the principles of creative destruction established in Charles River case. Moore is significant for two reasons. Firstly, it demonstrates the operation of an ideology that privileges the rights of the creative subject over all other forms of subjecthood. Secondly, as in the case of *Brown v DMC* discussed in Chapter Three, Moore also demonstrates the way differing ideologies of creative labour – the rhetorical and the semiotic/networked – inform the division of property rights that stem from creative labour. It is therefore a further example of the structural patterns of the knowledge economy.

As argued in Chapter Three, the emergence of the semiotic/network models of creative labour has not simply replaced the rhetorical model. In the art world, as in the economy generally, the two models co-exist, operating side by side, frequently *without* conflict. Fisher's analysis of American literature a good example of the way the two modes can be used together without contention. For Fisher the works of individual authors – the very image of the rhetorical mode of composition – are set within the broader context of networked creative labour. His analysis skewers down the production of individual authors within the social networks of technological innovation. Such technological networks define the conditions of an age within which the individuated creative labour of authors takes place.[164] In Fisher's *no conflict* formulation, the semiotic/network theory of labour does not undermine the author's claim to property rights – networks of innovation simply provide the social ground upon which the possibility of authorial production and consumption is situated.[165]

However, in the real politick of the knowledge economy there are many instances where the models are forced into conflict. *Brown v DMC* is one example of an increasingly common phenomenon in which semiotic/network theory is applied as a

[163] Boyle, op. cit., p. 101.
[164] In a sense, this could simply be seen as a straight social history approach were it not for the evolutionary straightjacket that is in play.

method of limiting an individual's property claims to their intellectual labour. Despite the use of the network model to limit the number of claimants to an invention or innovation, the rhetorical mode of composition is still very much in evidence at the point where property rights are claimed in law. Conflict between the semiotic/network and rhetorical models is clearly a factor in the Moore case. What is specifically interesting about the case however is the way that the creative network is organised to specifically exclude Moore. The final judgement in the case goes further, placing the property rights of the creative network over the individual in a manner that closely resembles the principle of creative destruction established in the Charles River Case.

The Facts of the Case

In 1976, John Moore underwent treatment for hairy-cell leukaemia at the University of California Medical Centre. The medical team attending him led by Dr David Golde became interested in the qualities of certain aspects of his blood, which massively overproduced T-lymphocytes. The doctors realised that the abnormalities in Moore's T-lymphocytes could be used to manufacture lymphokines that regulate the immune system. Put simply, Moore's cancerous spleen had enormous commercial potential. Without Moore's knowledge Golde's team performed tests on his blood, sperm, and bone marrow. Moore's spleen was eventually removed for 'arguable' medical reasons after arrangements had been made to deposit the tissue with a research unit at the University of California. In 1981, a cell line established from Moore's cell line was patented by the University of California and his doctors. Moore sued for damages, claiming firstly that consent had not been given for the research, and secondly for an invasion of his privacy. The aim of Moore's legal team was to prove that Moore possessed property rights to his DNA. In the absence of specific legislation relating to

[165] In this sense, Fisher's position recalls that of the Modernist avant garde, as described with reference to Schumpeter.

an individuals right to property in their gene line, the only measure available to Moore's legal team rested on a supposed 'property right' in privacy.[166]

The Ruling

The Supreme Court of California reached a final ruling in favour of the University of California in 1990. The court ruled that the patent taken out by the university superseded any property claim Moore might possess in his genes. The court argued that the patented cell line was 'factually and legally distinct from the cells taken from Moore's body.'[167] Federal patent law permitted the patenting of organisms provided that such organisms were the result of 'human ingenuity'. The court judged therefore that the growth of human tissues and cells in culture is 'difficult' and is 'often considered an art' – effectively upholding a patent granted in 1983 as reasonable evidence of the universities claim. [168] In other words, the court ruled that there were no property rights applicable to Moore's body, except insofar as by 'inventive effort', and 'art', aspects of it could be *replicated* in the laboratory. [169] The judgement specifically suggested that Moore could not be given a property right in his own body since to do so may hinder the free flow of information on which scientific research culture is based. As James Boyle notes in a caustic analysis of the legal inconsistencies of the case, the same 'public interest' argument was studiously ignored in the aspect of the judgement that upheld the patent right given to the University of California. To put this another way property rights were only a 'problem' for the free flow of scientific research when the emanating from the uncreative 'source', Moore himself. Property rights that emanated from 'creative activity' of the network instigated by Moore's doctors however were not regarded as a hindrance to the free flow of information,

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[166] It is not necessary here, to detail this particular legal argument, but a full discussion of the case, and the privacy argument, can be found in Boyle, op. cit., pp. 21-24, 97-107.
[167] All quotations in this paragraph from Boyle, ibid., p. 106.
[168] Patent law rewards inventive labour and specifically prohibits the patenting of naturally occurring raw materials that are effectively 'discovered' rather than invented.
[169] In James Boyle's words: "Moore becomes a naturally occurring raw material whose un-original genetic material is rendered unique and valuable by the inventive effort, ingenuity and artistry of his doctors".' Ibid., p. 106.

despite the fact that in terms of 'the free flow of information' *any* property right presents some form of impediment. The implication of the judgement therefore is that creative property rights, intellectual property rights, take priority over both the claims of Moore and the free flow of information. 'Public utility' is seen to reside not in an individual's supposed private monopoly in their DNA 'inheritance' but in the *future* medical benefits that may arise by diverting those assets into the private property of the patent holder. To put this most simply the case extends the principle of creative destructive – thrashed out in the Charles River case – to the individual subject.

JOHN MOORE'S BODIES

In upholding the principle of creative destruction so central to postulations of the knowledge economy, Moore does so specifically through a discourse on the subject and intellectual property. One result of the property discourse in the Moore case is the division of John Moore's body into two realms of property. In theory, the separation of the corporeal and the incorporeal realms of movable and intellectual property could provide a model that would permit Moore the literal and legal possession of his *physical* body without and prohibiting the ownership of the *image* of his body by his doctors. However the Moore case is very murky, no neat, clear-cut divisions between corporeal and incorporeal property applied in the case.

The judgement in Moore upsets some of the classical doctrines of property law. The concept, derived from Locke's *Second Treatise of Government*, suggesting that all property rights stem from the *ownership of the self*, is frequently cited in defence of private property in all its forms.[170] The central principle of the 'labour theory of property' suggests that *self-possession*, and by extension the ownership of ones labour,

[170] Particularly so in American legal literature –partly because of American law's historical root in English law, and partly because of the widely-held opinion that Locke's *Second Treatise* influenced Jefferson.

is the vital grounding of all property.[171] The judgement in Moore ostensibly undercuts the grounding condition of the 'labour defence' of property – the literal ownership of the body/self – from which, in theory, all other property rights flow.[172] Moore suggests that the self-possessed Enlightenment body can be gently disaggregated in the name of the 'public good' represented as possible medical advances in the future.[173] The case effectively suggests that the creative destructive networked-subject takes priority over the Enlightenment body. However, this is not to suggest that the subject of intellectual property law simply takes precedence over the bodily subject, or, that there is a clear division between the owner of the image of the body and the body itself.

The law has long made distinctions between *literal* possession and *legal* possession[174]. While Moore operated as a unique individual in a Cartesian sense, 'in one piece' and in 'possession' of his faculties, the legal rights to ownership of his body were spread across *a number of different property forms.* The judgement in Moore rests upon questions of labour and differentiations made between different property forms. Despite the fact that Moore's DNA was clearly 'possessed' rare and highly individualised properties, no property rights were found to be applicable to Moore as

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[171] On this basis, attempts were made by activists to draw analogies between the corporate ownership of Moore's cell line and the provisions of the Constitution of the United States prohibiting slavery. See for example the patent sought by Stuart Newman and Jeremy Rifkin on the 'Chimera', or human pig hybrid. Here, the specific intention was to highlight the splicing of human genetic information into the genetic code of animals. Would for example a pig hybrid with 40% human genes possess 40% human rights? Does the ownership of such an 'authored' hybrid represent a form of human ownership or slavery? As James Boyle puts it "As yet no genetically engineered lumpenproletariat uses the language of the Thirteenth Amendment to plead for citizenship, but in the judgement of many, that is only a matter of time. It is the ultimate mark of the information society that we will soon have *authors* of living, sapient beings, authors who will presumably assert that they are not slave masters but creators, and entitled to intellectual property rights as such". Boyle, op. cit., p5.

[172] It has been argued that the case represents an aporia in property theory. If self-possession is undermined by intellectual property law, then labour theory falls apart and so, by extension, does intellectual property law since it rewards labour. There are however a number of problems with the assertion. Intellectual property is rhizomatic– personality/moral right defences for example, are not as reliant on labour theory. Similarly, monopoly of government grant does not imply property given in exchange for labour. The Lockean defence is likewise only one of many defences of property, but it is the only one that is so vociferous in grounding property in self-ownership. As I argue towards the end of this chapter, ownership of the body and ownership of images of the body are easily separable. However, the unsettling aspect of Moore is the failure to sufficiently separate the corporeal body from the incorporeal.

[173] It is doubtless a fortuitous accident that the public good coincides so neatly with the requirements of business.

the literal, physical embodiment of such a peculiar genetic 'composition'. Property rights were however awarded to the scientific team who 'discovered' the peculiarities of his DNA. The labour of his doctors in *composing* an image of his cell line was regarded as special and individuated enough to qualify as an 'invention' and was thus able to sustain a patent. Put simply, Moore's 'composition' was regarded as an effect of nature whereas his doctors composition was regarded as work.

Since the Thirteenth Amendment of the Constitution of the United States prohibits the ownership of individuals in a *corporeal* sense, Moore himself could not be 'owned' by his doctors. However in an *incorporeal sense* his image clearly could be. In the ruling Moore becomes something like Leadbeater's chocolate cake, a finite corporeal entity, while his DNA become a 'recipe' *produced* and owned by his doctors. The division here is between tacit knowledge – that passed down by tradition, literally genealogical in this instance – and explicit knowledge.[175] 'Moore the cell line', 'Moore the patent', is explicit knowledge available everywhere, at a price, while 'John Moore' tacit knowledge incarnate, shuffles inevitably towards his grave.

Taken this way, the knowledge economy interpretation of the case would suggest simply that the relationship between Moore and his doctors is akin to that of an artist and his/her model – Golde's team simply made an image of Moore's cell line, converting it into useful information and as such possess intellectual property rights to that information. The Moore case however the case is not so simple as the knowledge economy theory would indicate. The process of translation into information was only possible with the removal of a 'pound of flesh' from the model. In order for informisation to take place, physical material had to be removed from Moore's body and placed in culture. The law does not prohibit the trading of 'spare' body parts. Human tissue, once outside 'the body', is depersonalised and property law and market

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[174] A thief, for example, may be in *literal* possession of stolen goods. *Legal* possession suggests that the individual possesses a right in the thing they effectively control.

[175] Collecting auntie's recipe for chocolate cake and publishing it, or moving from tacit to explicit knowledge is the essence of the knowledge economy.

conditions come into play.[176] In other words for the image making to take place, parts of Moore's *body* first had to enter into private property. Once distinct from his body, the legal rights to Moore's spleen could be disaggregated[177]. Despite the fact that Moore himself was not regarded as a tradable entity his body parts were. From his tissue Dr Golde's team were able to peel off an image of his DNA. The peculiarity of the process however is that even small amounts of tissue hold the image of the whole individual form which they are taken. Like a hologram, when broken into pieces, even the tiniest fragments retain within themselves the image of the whole. In other words, intellectual property rights could only be established once part of Moore's body had become 'movable' property. However, the *image* created form the part is not that of the part but that of the whole. In this sense in that sense two Moores emerged from the case, one corporeal and one incorporeal, John *Moore-the-person* and *Moore-the-commodity.*

THE USE OF RHETORICAL AND SEMIOTIC/NETWORK MODELS IN THE IDEOLOGY OF CREATIVE DESTRUCTION

Having divided Moore's body, however problematically, into the natural and the created, the creative aspect can itself be seen to be divided. Different models of creative labour informed the case, falling along now predictable lines. The 'creative' labour that secured the patent was networked in character. Golde headed a medical team and filed a patent on the research in his own name and that of selected members

[176] As Judge Broussard suggested in his dissenting opinion on the case, "the majorities rejection of plaintiff's conversion cause of action does not mean that body parts may not be bought or sold for research or commercial purpose or that no private individual or entity may benefit economically from the fortuitous value of plaintiff's diseased cells. Far from elevating these biological materials above the marketplace, the majority's holding simply bars plaintiff, the source of the cells, from obtaining the benefit of the cell's value, but permits defendants, who allegedly obtained the cells from plaintiff by improper means, to retain and exploit the full economic value of their ill-gotton gains free of…liability." As quoted in Rifkin, op. cit., p. 61.

[177] The court left open the possibility of an appeal on the grounds that Moore did not give consent for removal of his organs.

of his team and the research institution – the University of California.[178] The disaggregation of rights to the 'invention' in such cases bears little or no relation to any hierarchy based on 'inventive' capacity of individuals. In such cases established academic hierarchies and institutional employment conditions characterise the network and the ownership of rights emanating from the network. Theoretically, the creative activity is 'semiotic' in character, a network of human and non-human actors is at work, the creative act is performed within the relationships of such actors. However the raw material – and in this case a human actor – is explicitly excluded from the network. When it comes to claiming property rights in the innovation created by the network, existing institutional hierarchies and protocols determine the shape of the claim, masking the actual flow of labour within the network.

As in *Brown v DMC*, the network is used to exclude actors that may have a proprietorial claim, which challenges the claims of the 'instigators' of the network. However, it is interesting to note that when the network finally seeks patent recognition the semiotic/network model gives way to the rhetorical model. The Moore judgement interprets patent law in terms that can be characterised as *compositional.* The court found that the patented cell line was distinct, 'factually and legally', from the cells taken from Moore's body. The movement from the source, Moore's body, to the new existence as a product of 'human ingenuity' involves a compositional trope. As Boyle points out the *uniqueness* of Moore's DNA was precisely what interested Dr Golde's team, despite the courts finding Moore's DNA was 'in principle' *identical* to everyone else's. The efficacy of Golde's research rested upon the precise replication of Moore's specific genetic abnormality in the laboratory. In no way then could the researchers be regarded as *innovating* the cell line.[179] The patent was, in effect, awarded for an act of *translation* or what one might call an act of *picture making.* The innovate step in such patents consists not simply in the 'physical' growth of the cell line but in its *translation into information* – a series of numbers and letters on the page

[178] The specific remuneration to individuals in such a case will usually be decided on the basis of pre-existing employment contracts.
[179] By the same token neither could they be said to innovate the techniques of cell culture which would in any case be covered by a separate patent.

that enact an identification and understanding of the cell line. To put this simply, such patents require the patentee to c*ompose* an image of pre-existing matter. An act of composition that is entirely consonant with the rhetorical mode of creative production.

CONCLUSION

Moore v. The Regents of the University of California follows then not only the creative destructive ideology of the knowledge economy but also articulates itself on divisional hierarchies of tacit and explicit knowledge (assumed self ownership and intellectual property), resolving itself finally upon the confluence of rhetorical and semiotic modes of creative ideology. The privileged subject in the case is creative in character and creative destructive in particular.

More generally then it is reasonable to suggest that the 'cultural turn' in economic theory, represented by the dematerialisation of the contemporary economy outlined in this chapter, fractures on lines similar to those laid out by dematerialisation in art in the 1960s. The overlay of rhetoric and semiotic models of creative labour is central to both moments of dematerialisation. The use of the semiotic model of creative labour as a tool with which to manage 'human capital' has become increasingly routine in the era of 'the Knowledge Economy'. However conflicts between the semiotic model and deeply rooted beliefs in certain aspects of the rhetoric model are common and are often fought out between the instigators of creative networks (corporations) and participants in such networks (political subjects). The new ideology of creativity expounded from developments in art practice and post structuralist theory strongly *desubjectivises* the production of intellectual property. In the case of Moore, de-subjectifying takes on an entirely new *empirical* meaning. Post-modern theory moves directly into the realm of economic and political rights.