

'From Cultural Studies to Cultural Science.'

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ABSTRACT

This paper, first presented at a symposium on the 'past, present and future of cultural studies,' traces disciplinary changes in the study of culture from the perspective of 'cultural science,' a term that was used by some of the earliest practitioners of cultural studies, including Raymond Williams. The paper goes on to describe some problems with cultural studies as it has become institutionalised. It suggests that some of the concerns of the present moment, including work on the creative industries, show that a new version of cultural science is needed, based on evolutionary principles, in dialogue with the evolutionary approach in economics that was called for a century ago by Thorstein Veblen. This evolutionary turn, or 'cultural science 2.0,' it is argued, offers a radical and challenging future for cultural studies.

PREAMBLE: THE STATE WE'RE IN?

This paper was commissioned for *Cultural Studies: Past, Present, Future: A Symposium on the State of Cultural Studies* (September 2009), organised by Graeme Turner and supported by the ARC Cultural Research Network. The line-up of the half-day event was:

- Graeme Turner (ARC Federation Fellow and director of the Centre for Critical & Cultural Studies, University of Queensland) 'Introduction: What's Become of Cultural Studies?' Turner's paper was drawn from his forthcoming book, Ordinary People and the Media: The Demotic Turn (Sage 2010);
- *Chris Rojek* (Head of Department and Professor of Sociology and Culture, Brunel University, London) 'Stuart Hall and the Birmingham School.' Rojek's paper is published in this issue of *Cultural Science Journal*;
- Frances Bonner (Reader in Film & Television Studies, University of Queensland) 'These are a few of my favourite things.' Inspired by Daniel Miller's *The Comfort of Things*, Bonner's paper analysed material traces of television shows, in particular cookbooks by TV chefs;
- John Hartley (ARC Federation Fellow and research director of the ARC Centre of Excellence for Creative Industries & Innovation, Queensland University of Technology) 'From Cultural Studies to Cultural Science' (of which this paper is a revised version);
- *Melissa Gregg* (Lecturer in the Department of Gender & Cultural Studies, University of Sydney): Discussant.

Institutional state – robust

This symposium is about 'the state of cultural studies' in the light of its 'past, present and future.'

Obviously there is more than one way to think about that topic, including by means of a distinction between its institutional and its intellectual states. *Institutionally*, at least in Australia, it could be argued that cultural studies is in good shape. It is widely taught in universities, including prestigious ones; successful in national competitive grant schemes; professed by both senior and emergent scholars; and served by publishers and journals both local and international. It even shows signs of 'impact' – with senior luminaries (well, one in particular) on PMSEIC and leading the ARC HCA evaluation committee for ERA.² It is regularly cited in the media (if not always with love and affection). Like everyone else speaking at this symposium, I have had a hand in these activities. So I don't feel the need to address the 'present state' of cultural studies *institutionally*, except – with all due respect to the Cultural Studies Association of Australia – to note that a new experiment in professional association for cultural studies is overdue. Even there, institutional help may already be at hand. As the CRN comes to the end of its ARC funding period, now might be the right time to call for a new cultural studies association to emerge from it, preferably as an outcome of its forthcoming summative 'state of the industry' conference.³ Perhaps the conference organisers can take that suggestion forward?

Intellectual state - residual

However, institutional robustness – where it can be claimed (and it is of course by no means universally experienced) – is not necessarily a sign of *intellectual* health.⁴

In 1898, long before we heard about Kuhnian paradigms and 'normal science,' the American economist and social theorist Thorstein Veblen made this comment on what can happen to a field when it stagnates:

The well worn paths are easy to follow and lead into good company. Advance along them visibly furthers the accredited work which the science has in hand. Divergence from the paths means tentative work, which is necessarily slow and fragmentary and of uncertain value (Veblen 1898).

What's more, he says, 'departures from the accredited method have lain under the odium of being meretricious innovations.' Veblen was referring to economics, about which more later. At this point I simply want to suggest that his characterisation of a non-dynamic field applies equally to cultural studies. The reason for making such an invidious comparison is, first, to emphasise that cultural studies is not the first field to face such issues (indeed, we seem to be lagging a full century behind economics) and, second, to suggest that the question posed by Veblen in 1898 – 'Why is economics not an evolutionary science?' – needs to be applied to cultural studies. More about that later, too. First, though, we must face the question of intellectual stagnation. Cultural studies was once an intellectual powerhouse; is it now merely doing 'accredited work' or even simply seeking 'good company'? Are attempts at new departures dismissed as 'meretricious'?⁵

As it has become institutionalised, some of the intellectual adventurousness may have been lost. Tony Bennett, who has proclaimed the demise of cultural studies at least once before – when he was preaching cultural policy studies in the late 1980s (see Bennett 1992) – seems to be of that opinion. He recently launched a new journal, the *Journal of Cultural Economy*, on the premise that the 'various schools of cultural constructivism ... have now pretty well run out of steam.' (Bennett et al 2008: 2). Meanwhile, the field is marked by infinitely extensible micro-level analysis. It has not even established an agreed system for taxonomic classification of these micro-descriptions, which was the phase in economics that Veblen criticised as pre-evolutionary. Cultural studies has not paid enough recent attention to the macro level; rather, as Chris Rojek's paper amply demonstrates, it is still using the theoretical approaches, terms and concepts elaborated in the 1970s.

I. PAST

Why is cultural studies not an evolutionary science?

Although he did not cite Veblen directly, it was Veblenesque impatience with 'well worn paths' and 'accredited work' in his own field – the field of literary criticism, or 'English' – that drove Raymond Williams towards cultural studies during those same 1970s, when it seemed 'emergent' rather than 'residual,' to use his terms for cultural dynamics. In 1974 he gave a speech to the Council for National Academic Awards, the statutory accreditation agency for degrees awarded at polytechnics and institutes of technology (as opposed to universities, which had their own degree-awarding powers). This speech was subsequently published in the US *Journal of Communication*. From this context, it is clear that Williams saw the alternative to English as coming from the outside: disciplinarily (from Continental social theory and US-based communication studies); institutionally (from the non-university sector of adult education); and geographically (from Europe and the USA). In other words he saw cultural studies as an exogenous shock to English (see Lee 2003 for a comparable analysis).

He particularly despaired of English departments in England, which were then much more influential than they are now. Despite the loss of empire and the rise of an affluent consumer society, English retained the Arnoldian ambition of providing a literary education, which was justifiable only on the grounds of 'civilisation': that graduates destined for government needed to learn to appreciate the point of view of others, to recognise ambiguity and complexity in human affairs, thence to recognise both long-haul impersonal cultural values and immediate moral dilemmas and thus, finally, to be able to form judgements independently. Graduates could then safely be despatched to administer a global commercial empire. Small wonder that English was known by some, including Terry Eagleton for instance, as the 'Queen of the Humanities' (this was before Freddy Mercury).

Despite the lofty ambition of its inherited purpose, by the 1960s English had shrivelled to what Williams described as a 'small world of small cultivators, heads down to their own fields,' where:

You can go on doing, in effect without challenge, virtually anything that has ever been done, but if you propose anything new you are lucky if your integrity escapes whipping; your intelligence and sensibility will have been long given up as dead' (Williams 1974).

Such an anti-innovation climate was sustained by 'the defences of special interests, the general drizzle of discouragement,' and 'inertia' (Williams 1974). In this bleak characterisation of the departmental climate, Williams may in fact have been erring on the generous side. Fred Inglis has described Cambridge's English department, where Williams worked, as a 'little boiling vat of spite' that 'seethed with detestation' (1995: 181). It was this to which Williams wanted to propose a radical alternative, which he called 'cultural science.'

Cultural science 1.0 and 2.0

Richard Hoggart's first act as founding director of the Birmingham Centre for Contemporary Cultural Studies (CCCS) was to invite the sociologist Alan Shuttleworth to introduce the work of the Continental 'cultural sciences' to the Centre. The earliest of the CCCS's famous 'Stencilled Occasional Papers' – No. 2, in fact – contained Shuttleworth's *Max Weber and the 'Cultural Sciences*' (1966).

Following this lead in his 1974 speech, Williams called his model of intellectual innovation 'cultural science' too, citing in particular the work of Max Weber and Wilhelm Dilthey. He traced the study of culture from early modern attempts to understand it as general human development driven by 'spirit' or 'consciousness,' to the Marxist notion of culture as material production. He wanted to move on further; to identify the 'central problem' of cultural science for the latter part

of the twentieth century as 'the relations between different practices' – and thence to see *communication* as a practice amenable to analysis by cultural science.

'Cultural science' is still used in this way by Tony Bennett, where the formula is 'the social, cultural and human sciences' (Bennett et al. 2008); and also by the Australian Minister for Innovation, Industry, Science and Research, Senator Kim Carr, who has let it be known that the word science 'is now to be interpreted in the broadest, Latinate sense' – i.e., to include 'humanities and arts scholarship.' 8

Raymond Williams glossed 'cultural science' thus: 'The approach I want to describe is that of cultural studies, which is English for "cultural science" (Williams 1974). In other words, cultural studies as such was imagined in this way. He was attracted to cultural science because of its *openness*, praising its 'spirit' as 'profoundly open, alert, and general' and he sought to emulate its 'vigorous and general humanity.' He used it to proclaim what he called 'an open conspiracy' that would work 'in new ways, by trial and error but always openly and publicly' (which is a good description of scientific method).

Using such means to study the *relations between different practices* remains the purpose of cultural studies in the current revival of the 'cultural science' venture that I urge here – 'cultural science 2.0,' as it were. The most important difference now is that cultural science can move beyond its 'Latinate,' pre-evolutionary phase (Veblen 1898). In the light of developments since the 1960s and 70s, the project needs to be updated to study *evolutionary change* in practices, and therefore to study *causal* rather than just *structural* relations.

What is 'evolutionary change'? According to Veblen, it is 'causal relations' in the 'cumulative sequence' of 'economic actions.' In cultural studies, it refers in the most general terms to the *growth of knowledge*. It is important here to distinguish recent neo-Darwinian evolutionary science from the social Darwinism that many in the cultural studies tradition 'hear' whenever evolution is mentioned. The approach recommended here is not seeking to justify current power relations by reference to imagined origins; on the contrary, it seeks to account for change, using naturalistic methods. In this it is no different in purpose – although it may have access to better tools – from the most exemplary works of early cultural studies, for instance *Policing the Crisis* (Hall et al. 1978).

The neo-Darwinian formula for causal sequence is 'VSR' – variation, selection and retention (Herrmann-Pillath 2010). Can such a formula be applied to culture? Veblen predicted in 1898 that an evolutionary approach to the 'process of cultural growth' was inevitable in the 'social and political sciences' as well as in economics:

An evolutionary economics must be the theory of a process of cultural growth as determined by the economic interest, a theory of a cumulative sequence of economic institutions stated in terms of the process itself. ... Under the stress of modern technological exigencies ... the social and political sciences must follow the drift, for they are already caught in it (Veblen 1898).

In the same paper, Veblen made an important distinction between 'animistic' and 'materialistic' thought: the former based on *individual experience*, which is elaborately projected on to the external world of nature; the latter on *impersonal scale*, where phenomena and causation cannot be understood by reference to individual people's perceptions, ends or values. Veblen argued that the kind of thought that proceeded from defined norms and supposedly 'natural laws' had not escaped from 'archaic' animism:

When facts and events have been reduced to these terms of fundamental truth and have been made to square with the requirements of definitive normality, the investigator rests his case. ... In effect, this preconception imputes to things a tendency to work out what the instructed common sense of the time accepts as the adequate or worthy end of human effort. It is a projection of the accepted ideal of conduct.

This critique applies just as trenchantly to social Darwinism as it does to pre-evolutionary thought. Such knowledge is not science – even in the Latinate sense – but ideology.

Unfortunately this century-old critique (of economics) seems to apply with uncanny accuracy to some current tendencies within cultural studies itself, where both cultural practices and the work of other writers in the field are judged against moral, political or artistic standards external to the process under investigation – ranging all the way from individualistic accounts of artistic and cultural genius to paranoiac visions of the malevolent agency of abstract entities – currently 'neo-

liberalism.' Anyone caught practicing cultural studies without displaying the 'instructed common sense of the time' (about what kinds of practices should be approved; and what kinds of politics should be denounced) is likely to attract the 'odium' mentioned by Veblen or, in Williams' words: 'you are lucky if your integrity escapes whipping; your intelligence and sensibility will have been long given up as dead.' In other words, we have turned our own world upside down, pursuing the very reverse of what 'cultural science 1.0' was meant to do.

It was important *then* for cultural studies – as part of the 'cultural turn' more generally – to open up the field of culture, not to close down the terms of debate. Thus, it sought to include a wider array of practices than had hitherto been canonised in the literary tradition, by introducing popular culture and everyday life into an analytical system that had been designed to form aesthetic and moral judgements about elite arts. And it drew new attention to the political and economic dimensions of culture, asking of any 'relational practice' the question 'cui bono?' – who benefits; for the good of which purpose? – as Williams himself put it (see Brunsdon 1997).

Thus did cultural studies – 'cultural science 1.0' – seek an appropriate practical method for analysing the constructed nature of the supposedly natural. Following Roland Barthes in particular, it refuted the 'instructed common sense of the time' as a form of bourgeois ideology. It increasingly sought an overarching 'macro' theoretical model for understanding the systems and structures within which such 'micro' constructions could be made.

Cultural studies proceeded in these tasks via a series of encounters with other disciplinary domains. First was sociology, via Shuttleworth and others including Weber. Subsequently, especially after Stuart Hall's ascendancy, the CCCS entered into dialogue with semiotics and textual formalism via a dialogue with 'screen theory'; and also, in a more troubled way, with feminism and thence other types of identity politics including those of race (see Rojek, herein).

But its most sustained dialogue was with Marxism. This was not the *political* or activist Marxism of the Communist Party, but *theoretical* or 'scientific' Marxism, especially the work of Louis Althusser and Antonio Gramsci; and the Marx of the *Grundrisse* and *German Ideology*, rather than *Capital* or even the *Communist Manifesto*. The CCCS were not alone in this move towards 'continental' Marxism. Cultural studies derived its own most sustained version of 'macro' structural relations from the Marxist 'base and superstructure' model that Williams himself borrowed (1973) on the way to publishing his own *Marxism and Literature* (1977).

These preoccupations with social structure (class inequality), textuality (constructions of meaning), identity (the politics of the personal) and structural Marxism (base and superstructure) have driven cultural studies ever since. It retains a structuralist interest in systems (in which *oppositions* can be identified) rather than an evolutionary interest in 'cumulative sequence' and change. And it has modelled 'macro' change as *exogenous* not *endogenous* – it would come from revolution (external shock) not evolution (cumulative sequence).

Although cultural studies has gone on to have productive encounters with many other fields, including anthropology, postcolonialism, and more recently geography, it has not enjoyed a sustained dialogue with economics, except in the truncated form of 'political economy,' neo-Marxist versions of which have dominated the field despite their marginality in economics as such (e.g. Chomsky, H Schiller, Garnham, T Miller). Cultural studies has therefore remained aloof from the turbulent changes *within* economics, as neoclassical economics has faced multiple challenges featuring such tendencies as the 'post-Autistic' network, heterodox and – especially, from the point of view of this paper – a particular direction in evolutionary economics.

Meanwhile, lacking an 'evolutionary turn,' cultural studies was apt to backsliding and stagnation: it too became normative, moralistic, looking for 'natural laws' (e.g. Marxist explanations for power); prejudging 'causal sequence' by knowing in advance the moral value of agents, whether they were artists, intellectuals or larger-scale agencies, e.g.:

	Hooray!	Boo!
Artists:	Avant-garde/youth	MOR entertainment
Intellectuals:	Hall, Williams	Hayek, Schumpeter
Organisations:	Public institutions (state)	Commercial firms (market)
Analytical positions:	"Critical"	"Neo-liberal"

It is all too easy in 'cultural studies now' (UEL 2007)¹⁰ to know in advance where to find fault, where sympathies should lie. It has departed radically from its original project, which I'm calling 'cultural science 1.0,' even as its latter-day

adherents laud and lionise the pioneers. Cultural studies was established to use empirical facts (e.g. texts), to employ empirical analysis (of closely-observed practices), and to develop theoretical synthesis with due attention to Williams's 'relations between structures.' Cultural studies needed that 'open, alert, and general' spirit to *analyse* ideology. But over the years it has fallen foul of its own purposes. It has imported ideology, in the form of pre-judged (prejudiced) political affiliations and allegiances, organised not around current problems of knowledge but under the shade of inherited prophets.

It is important *now* for cultural studies – 'cultural science 2.0' – not to remain stuck in that Birminghamite 'moment.' It is time to move on; and perhaps also for a little Schumpeterian 'creative destruction' to clear the way. That's what 'cultural science 2.0' is for.

Disciplinary migrations

Before moving on from the past, it does need to be understood that cultural studies does not have the field of culture to itself, and it seems likely that 'cultural science' is going to be invented whether we in the Latinate sector wish it or not.

In the first place, the distinction between the humanities and sciences is itself dynamic. A centuries-long trend can be observed where knowledge domains that started out as part of the humanities have evolved (or drifted) ever more firmly into the sciences, sometimes completely, sometimes causing a rift within a discipline, sometimes stopping halfway (in the 'social sciences'). Thus 'natural history' has evolved through botany, zoology and biology to (evolutionary) bioscience. Other migrants from the humanities to science include geography (once descriptive, it is now computational), psychology (now neuroscience), linguistics (now highly computational; and let it not be forgotten that Saussure proposed semiotics as the 'science of signs') and economics, to name a few. Some disciplines – anthropology in particular – show signs of moving in the opposite direction.

There have been many attempts to shift the study of human associated life (society and culture) over to the sciences. When Raymond Williams published his article on 'cultural science' in the *Journal of Communication*, positivist behaviourism was in its heyday in US communications science. His 'open conspiracy' must have looked pretty alien to the alumni of that industrialised grad-school system, trained in quantitative methods that were the route (or rote) to tenure in 'mass comm' at the time (and for some decades thereafter – 'mass comm' is still the biggest of the ICA's divisions).

Many in cultural studies, including myself, have thought that a shift towards such a version of 'science' is premature and misconceived. This version of empiricism more or less defined culture out of account, seeking generalisability on the basis of methodological individualism and abstracted (universalised) individual 'subjects' in a context where it is clear that there's a great deal more going on than individual rational choice.

In other words – but words that are not available to cultural studies if it refuses to engage with the disciplinary history of economics – US-style positivist communication science was a 'neoclassical' initiative that proved limited in its applicability to 'lived' culture or experience even as it produced quantitative data. In cultural studies, as also in economics in reaction to the neoclassical model, various 'heterodox' tendencies emerged, of which 'Birmingham' cultural studies was but one, that sought to provide explanations for culture based not on rational individualism and equilibrium models, but on institutions, history, and social structure.

In reaction to behaviourism in its own backyard, and to science more generally (as part of the 'military-industrial complex'), an allergic reaction to the very term 'science' became common in cultural studies. A stand-off was staged between science *as such* and cultural – or 'critical' – inquiry based on values, judgement, and political affiliation. Cultural studies offered a cogent critique of 'neoclassical' or positivist communication science.

But it was a mistake to withdraw from scientific endeavour as a result. Cultural studies would have done better, as heterodox economics has done, to maintain a scientific ambition while critiquing science. Of course some influential figures like Poulantzas and Althusser claimed Marxism *as* a science (as the Communist Party of China still does), a form of knowledge that stood outside of the ideology it analysed. However, 'scientific Marxism' was not in dialogue with scientific method in other domains; instead of unifying the field of knowledge it further sectarianised it.

Even so, because 'communication science' was itself ideological, pre-evolutionary, and tended to universalise from the sample-base of US-college students, it was appropriate for scholars of culture to resist premature scientism in the study of meaning systems. There was much to be learned from humanities-based, in-close analysis of contextualised constructions

of meanings where power is reproduced. In a sense, this was like the taxonomic phase of Linnaean botany – identifying and classifying the systemic connections among types of cultural action (lived experience) or artefact (text). Without such careful description, culture presented as a wild profusion with no pattern other than what the observer could make out of the experiential immediacy of observation itself – which is a 'method' proper to art (JMW Turner), rather than science (Joseph Wright of Derby).

Cultural studies was surely right to try to describe and to trace the organising principles that 'determined' such profusion. The problem though is that unlike botany it has failed to 'self-correct' or to draw its theorising and practical elements together in order to develop a model of such determinations that can be tested and built upon. Instead, cultural studies turned back to evaluation (based now on political affiliation not aesthetics).

So far it has refused to move beyond argumentation, where each practitioner is free to argue whatever they like – no-one is bound by anyone else's findings, and the field as a whole moves on by following trends and social movements (class, gender, race, sexuality, colonialism) rather than by reference to previous work in the field (which may be admired and repeated, but may just as easily be ignored). As well, cultural studies has so far refused to take the 'evolutionary turn.'

But meanwhile, the sciences themselves have changed radically since the time when Williams and Hall were writing, especially in the biosciences, which have completed their 'evolutionary turn' after a long period of taxonomic description, and in mathematics, which has benefitted from the incredible expansion of computing power, such that complex networks can be tracked and modelled where once they were what Benedict Anderson famously called 'imagined communities.' They need be imagined no longer; they are data.

Not surprisingly, then, the computational and evolutionary sciences are becoming ever more confident about explaining culture. The Santa Fe Institute, for one, was ambitious enough to ask: 'Is there a physics of society?' (Jan 10-12 2008) – and is confident that it can explain culture, if only as what Scott Page calls 'suboptimal behaviour' in complex models, preventing rational choice.¹¹

Similarly, Susan Greenfield is one of many neuroscientists who think – in her case without producing evidence for a link between scientific observations and social fears – that they can explain culture (watching television and computer screens) as well as brains (the action of neurons):

'My fear is that these technologies are infantilising the brain into the state of small children who are attracted by buzzing noises and bright lights, who have a small attention span and who live for the moment.' (*Daily Mail* 2009). 12

'Cultural science 2.0' ought to be mindful of these attempts from within science to explain culture, as well as seeking to adopt for itself a more systematic method of inquiry. 'We' may think we can do a better job of explaining culture than the physicists and neuroscientists have done so far, but we also need to engage with what (and how) the sciences know, and we need to convince them that what we have to say should be added to the knowledge base, rather than be discounted as non-scientific.

Method, media, and teleology

Does it follow that humanities-based disciplines are of declining utility? What can they offer to the study of culture *as a science*? Where once such a question was an excuse for insults across the divide of the 'two cultures,' now it opens a much more productive possibility. What is bringing science and the humanities together is evolution – the adaptation of complex systems to change.

In order to get to this point I'm going to reflect on personal history to show that the present moment offers a chance to *fulfil the promise* offered by cultural science 1.0, not to bury it. What drew me to the field? A product of a literary-historical education (i.e., an English Department), I was not satisfied with then-dominant Leavisite hold over of the 'great tradition' of the literary canon. Influenced by the teaching of Terence Hawkes, I was interested in how the most *sublime* works of art, as accepted by the 'instructed common sense of the time' – that is, Shakespeare's plays – were at the same time part of a *popular dramatic tradition* (Bethell 1944). How can 'high' art at the same time be 'population-wide' and what role can it play in nurturing intellectual freedom?

So my kind of cultural studies was organised around:

- *popular* culture (and the emancipatory potential of popular media)
- language (as a sense-making system or network as well as an evolving historical artefact)

- *media* (printing, broadcasting entertainment and information)
- *distinction* (class, popular/high culture etc.) raising the questions of structure, power, and change as well as values, quality, and teaching.

That combination involved experiential aspects (reflexivity, agency, identity and context), as well as 'objective' ones (the 'thinginess' or materiality of culture, including the empirical form taken by texts). Indeed, cultural studies was a powerful tool for showing how subjectivity had thoroughly invaded and compromised the supposed objectivity of knowledge and of structures based on differential evaluations.

This was one of the attractions of cultural studies. Self-reflexive and 'committed to a radical contextualism,' (Grossberg 1993), it sought to show how the evaluations and hierarchies of society as well as literary and intellectual merit actually worked, rather than trying to assign evaluative places within them. I liked this, since as an 'orphanage boy' my assigned place was not very appealing. But it was also good theory, for experience, identity, and reflexivity – the politics of the personal – were part of an important challenge to positivism and scientism, not least by feminism. It was part of the so-called 'cultural turn' in the sciences.

My interest was in:

- How someone inside modern urban popular culture could also analyse it (reflexivity and agency).
- How sign-systems (like language) in mediated forms (like TV) are and can be propagated among whole populations. Shakespeare was the model (not the exception) for analysing any elaborated textual system that combined human values with aesthetic and communicative elements for large, heterogeneous and anonymous audience/publics.
- How popular forms may carry serious content (again, with Shakespeare as the model), from *Whatever Happened to the Likely Lads* to TV news to fashion photography. Clearly, these days, serious reflexive thought on the human condition is carried by film, TV and online media. These same media are just as available for popularisation of scientific, historical-political and imaginative work as they are for entertainment indeed, as in Shakespeare, there's no distinction between the two.
- How systems and media *can be used* (not just how they are intended to be used, especially by corporate producers). Here I was a partisan of the 'active audience' tradition, in pursuit of social change via the agency-of-all (i.e. bottom-up, self-organising growth of knowledge); and interested in *unforeseen consequences* of what are now called 'affordances.'
- How, therefore, the future is open.

Another attraction of cultural studies was that it was clearly committed to *producing* as well as *reporting* change, using scholarship *for* change, or what I once called 'intervention analysis'; and media can be put to uses not imagined by their producers and owners. Veblen calls this kind of purposefulness 'teleological, in the sense that men always and everywhere seek to do something.'

There is a vital distinction to be made here. It is as important to pursue 'teleological' *action* as it is to avoid teleological *theory* – one must act with purpose but not explain the world as if it shares that purpose. It is thus important for the (political or social) 'end' not to leak across into the (scientific) 'means' of investigation. Thus, here was an approach to culture that was purposeful, not seeking to describe natural laws, least of all aesthetic ones (as had been attempted by 'great tradition' writers like F.R. Leavis). Instead, it broke the previously tight bond between three different types of teleological tendency:

- Teleological *actions*: the purpose of actions as seen by the agents involved: what were *their* ends? This question applies not only to individuals but also to governments, where it's called 'policy.'
- Teleological *explanations*: fitting facts to the model (this is or is not 'great' art).
- Teleological *world*: events are driven by spirits, or natural laws, or moral force, towards a preconceived end (e.g. profit, salvation, progress, racial domination).

The first kind of teleology is inevitable, a spur to action by individuals, and capable of being studied. The second two types are impossible, leading to bad science.

What is it that can study and understand change (including purposeful agency) without falling for the wrong sort of teleology?¹³ Evolution, of course.

II. PRESENT

A present moment

In *Policing the Crisis* (1978), Stuart Hall and his colleagues took a particular 'moment' – news reports about the sentencing of West Indian youths to lengthy jail terms for the 'new' crime of mugging – and asked how it could be explained. They used this trivial but telling moment to trace the cumulative causal sequence of hegemony in post-WW2 Britain, and to theorise that it was in crisis. Michel Foucault opens *Discipline & Punish* (1977) with a more gruesome 'moment' – an instance of pre-modern spectacular capital punishment. He used it to contextualise his study of the change from medieval pain-of-death to modern administrative methods of government, and to theorise that these amounted to what he called panopticism.

'Moments' are thus part of the cultural-studies kitbag. An ordinary event – minor, local and sometimes confronting – becomes the means by which a much larger and more complex set of historical determinations can be unravelled. This is Veblen's 'causal sequence.' Long-term and large-scale evolutionary processes operate in the here-and-now to produce what Hall called a 'conjuncture.'

Following this practice, the initiative that I want to describe now is such a 'moment'; that of the *creative industries*, marked by the 1998 publication of the British government's 'mapping document' (DCMS 1998; Hartley 2005). Such an event may invite a feeling of bathos when compared to Hall's imprisonment or Foucault's execution, but bathos should not blind us to the fact that all three of these 'moments' are governmental actions reported in documents that allow the analyst to glimpse, in Williams' words, 'relations between practices.' It may then be appropriate to use the 'method' of the 'conjunctural moment' to explain the creative industries.

Needless to say, it was not accepted as conjunctural by many observers close the scene at the time. Such instant judgements – like those of competitor playwrights who dismissed Shakespeare as 'an upstart crow' in the 1590s – may not stand the test of time. However, the critics had a point. The DCMS initiative could certainly be explained as a bit of political opportunism by Chris Smith, incoming minister for Culture, Media and Sport in the UK government, taking over a renamed 'National Heritage' department. He sought to boost the culture budget by associating the arts with economic growth, not just with 'heritage' values. This was doubtless another example of New-Labour spin of the kind that so infuriated the academic left as well as the media throughout the Blair decade.

There was also much to criticise about the DCMS definition of the creative industries, including the inclusion of certain sectors or the exclusion of others for purely local reasons, i.e. that London has an antiques market (included), or that tourism (excluded) came under a different departmental policy portfolio. In other words the 'definition' was self-serving, insular, and partial. So it was hardly surprising that it was regarded as unworthy, compromised by short-term self-interest, parochial boosterism, political spin and bad reviews.

Nevertheless, the moment of the creative industries may still yield important insights into longer-term changes in and among culture, the economy and politics, and not just in the UK. Internationally, the idea was quickly adopted and customised to local requirements in different countries across Europe, Asia and Australasia.

Therefore, it is worth trying to explain this 'moment.' In essence, that is the task that the ARC Centre of Excellence for Creative Industries and Innovation (CCI) in Australia has undertaken over a sustained period (since 2005). Indeed, just as the Birmingham CCCS had sufficient scale and ambition to attempt large-scale or 'macro' explanations of culture, so the Brisbane CCI has taken on an ambitious, team-based program of work that seeks to explain 'creative innovation' from first principles, by moving as systematically as possible from the here-and-now of the 'present moment' to an analysis of the conceptual underpinnings of creative identity, and thence to an understanding of real creative productivity and 'actually existing innovation' from the perspective of dynamic change, as the generative edge in the growth of knowledge.

We – the CCI team – approach the DCMS moment as part of a much more important set of changes. The much-cited 'mapping document' (DCMS 1998; revised 2001) raised in a new and urgent way the question of the relation between economic and cultural systems. But that was not all – it was also *purposeful*, seeking to *do* something about culture, not simply to produce a finished definition. The DCMS document sought to identify the source of economic value in creative production. Thus, precisely because it does hypothesise a strong economic role for culture, it demands that we investigate 'causal sequence' in the role of creativity, innovation and culture.

That is what we have been trying to do at the CCI. We wanted to understand creativity in terms of 'cumulative causal sequence.' What tools were available for the job?

From creative industries to cultural science

Here we have benefitted from an intense encounter with economics. It transpires that economics is every bit as turbulent as cultural studies, some of whose most familiar issues are mirrored in economics. In our attempt to explain creative innovation from first principles, neoclassical economics was not challenging enough, for it accepted a 'market failure' explanation of culture, and provided descriptive accounts of the 'cultural economy,' in which a very traditional notion of the arts was interrogated for signs of economic activity (Throsby, Caves, Lamberton). At the other extreme, the kind of 'political economy' familiar from media and communication studies (T Miller, Garnham etc.) was *too* challenging, knowing what was wrong in advance. New information is hard to extract from such 'critique.'

Thus the productive interlocutor turned out to be neither neoclassical economics nor political economy, but *evolutionary economics*. Like cultural studies in its early days, evolutionary economics occupied a marginal, agent-provocateur position in relation to mainstream (neoclassical) economics. Both were the disruptive irritant that, along with complexity science, sought to reconfigure the nineteenth century disciplinary knowledge system (Lee 2003). We have found this dialogue both provocative and productive, just as did the pioneers of cultural studies in their encounters with their interdisciplinary neighbours.

A core group within the CCI with humanities backgrounds, including myself, John Banks, Lucy Montgomery, Stuart Cunningham (plus occasional attendees like Jean Burgess, Axel Bruns and Michael Keane, as well as several PhD students), have been reading with and through the work of those with economics backgrounds: Carsten Herrmann-Pillath (2010), Jason Potts and his colleagues (several at the University of Queensland) including Kurt Dopfer, Stan Metcalfe, Mark Dodgson, John Foster, Peter Earl and John Quiggin.

We have now begun to publish the main conceptual advances of our approach so far, in economics journals like the *Journal of Cultural Economics* and *Industry & Innovation* (Potts et al 2008a; 2008b), as well as in more familiar humanities journals.

The convergence of cultural studies and evolutionary economics at the CCI is based on the recognition of common problems between 'culture' and 'economy,' which centre on the attempt to understand the drivers of creativity, innovation and change in contemporary creative processes, economic actions, and in the growth of knowledge. We have been calling this enterprise 'cultural science' (http://cultural-science.org/).

We have concluded that the cutting-edge of research on creativity lies in the triangulation of three domains: evolution, complexity, and creative innovation. This interdisciplinary interface is counterintuitive but highly productive:

- *Creativity* can be understood as reflexive adaptation to unpredictable change within complex systems.
- Complexity studies explain how social network markets are a vital enabling technology for the distribution of choice.
- And evolutionary theory focuses on the dynamics of change in the growth of knowledge. 14

These developments, added to those coming from anthropology, cultural studies and creative arts, enable us to rethink creativity as a property of agency in dynamic systems, not as an expression of the essence of uniquely talented individuals. The emergent form of 'cultural science 2.0' that we are exploring seeks to identify patterns of action in complex social networks; their past evolution and possible future scenarios, including paying attention to unintended consequences of choices at any given 'moment.'

In order to test the potential of this new direction, we sought to bring together researchers from around the world, who could help to shape a research agenda. A high-level international workshop was held at the State Library of Queensland in March 2008, hosted by my Federation Fellowship project and the CCI. It was co-funded by FEAST (Forum for Australian-European Science & Technology Cooperation) and attended by FEAST director Mark Matthews. FEAST is an Australian-EU treaty organisation, and this was the first such event they had supported outside of the traditional sciences. The UK's Arts & Humanities Research Council also contributed to its costs. It was a true arts/science collaborative initiative.

The CCI-FEAST Forum attracted thought leaders from Europe, the USA and Australia, in complexity and network studies, evolutionary economics, anthropology and creative innovation, both historical and contemporary. They included Carsten Herrmann-Pillath from Germany, Richard E Lee from the USA, and Paul Ormerod, Alex Bentley, Evelyn Welch

and Kate Morrison from the UK.¹⁵ Perhaps predicably for a bunch of neo-Schumpeterians, we called the event 'Creative Destruction.' Its purpose was not only to develop an interdisciplinary manifesto for cultural science 2.0, but also to link it with national innovation systems and research policy formation, which in Australia was rebooting under a new Federal government that had 'hit the ground reviewing' – in this case in the shape of the Cutler committee that eventually produced the *Venturous Australia* report.¹⁶

Social network markets and other novelties

The future-oriented view of this group is that creativity – both expert and amateur – is driving change in the nature of markets as well as dynamic growth in creative sectors like digital content. More fundamentally, reflexive creativity is what enables human culture to adapt and change, a process that – despite some 'mass extinctions' throughout the millennia – has resulted in the long-term growth of knowledge and in the creation of new values, both economic and cultural. In such company, culture can no longer be seen as the preserve of artists; nor can innovation remain the preserve of corporate engineers. Both require the activities and productivity of the millions who interact in the social networks that are now dispersed among whole populations. With the growing ubiquity of digital media these are becoming a more dynamic source of productivity than industrial-era innovation based on expert invention and the closed pipeline of the corporately controlled value-chain. The social network 'swarm' outperforms the IP-protected 'lab,' and at twice the speed.

Already, this work is gaining traction. Among other outcomes, we are reconceptualising how markets themselves work, including the idea that creativity is an 'enabling social technology' – just as markets themselves are. Like markets, science, the law and other such social technologies, creativity is required in order to enable individual choice, agency and enterprise to be conducted in a rule-governed but open-ended environment. We have defined the 'creative industries' *as* 'social network markets,' where choices are made not on the basis of rational choice in perfect equilibrium but on the basis of competitive status among networked agents. Individual choices are determined by the choices of others (Potts et al 2008), and thus markets are systems made up of those who are *paying attention* to certain types of choice. An example of this is fashion, in which competitive attention creates the market (Hartley & Montgomery 2009).

We also see creative innovation as dynamic, and are building the case for moving beyond 'creative industries' as a specialised industry sector, to investigate creativity as an input into the economy generally, thence to broaden the term to include the whole population by incorporating 'creative culture' – e.g. users and consumers as well as producers – into the model of social network markets (see for instance Hartley 2009).

Systems such as social network markets can be analysed using evolutionary economics, but they cannot be understood without an interdisciplinary approach that includes both in-close contextual techniques derived from the humanities (both textual and ethnographic) and computational power from the science & technology side – for instance in modelling social networks using complexity mathematics, or in 'mapping' networks of choice and influence in digital media such as the blogosphere, and monitoring changes in the way that people perform their cultural identity and relationships. Here again, we bump up against work that is already under way in neighbouring disciplines such as network theory, web-science and internet studies. Theory-building is also vital, to model how such actions may be patterned in complex adaptive systems, and how agents and enterprises navigate those systems. Again, such work is already well under way, for instance in ANT and its successor techniques (see Hawkins 2009 for a good example).

Investigation of these questions has already led to one new book, soon to be published by UQP, called *The Economics of Identity and Creativity: A Cultural Science Approach*, by Carsten Herrmann-Pillath. This is a thoroughgoing evolutionary approach to creativity and culture. It is:

- naturalistic (not mentalist) the world of ideas and that of 'matter-energy' are one and the same;
- externalist (not individualist) which means that identity is produced within networked interaction among brains mediated by language – the 'extended mind';
- anti-Cartesian (mind and matter are the same) so 'rational individualism' cannot be founded on a theory of mind; and
- knowledge is material not mental.

Herrmann-Pillath writes:

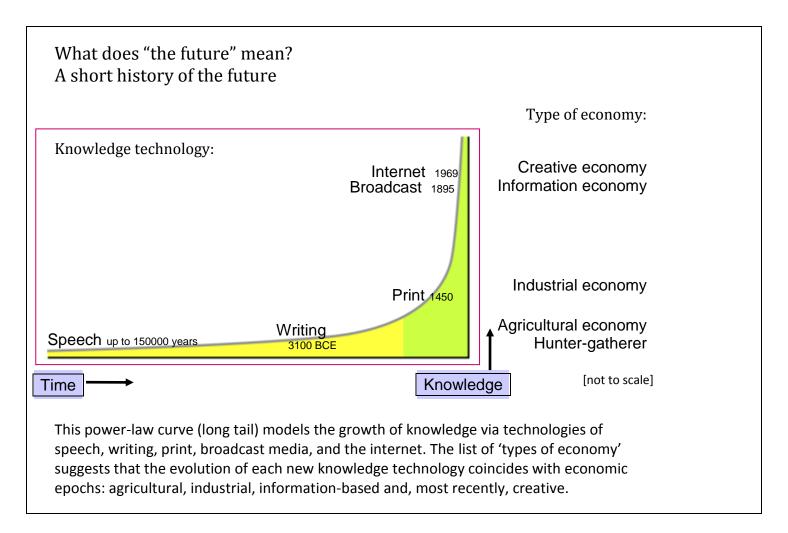
I submit that the externalist approach to human knowledge boils down to the *cultural science paradigm*. Cultural science explains human knowledge in terms of naturalism and externalism, and therefore uses an evolutionary paradigm to investigate the generation, diffusion and maintenance of human knowledge.

In this context:

markets can be seen as external knowledge systems, i.e. a special aspect of the 'extended mind' phenomenon. Markets as an outcome of cultural evolution are part and parcel of the knowledge structures that underlie individual action in markets.

Thus we seek to account not only for creativity but for the knowledge structures – including markets – within which it operates.

III. FUTURE



No predictions?

'Cultural science 2.0' is certainly not yet well-enough developed to claim that it is predictive, least of all to be able to predict its own future. It is currently focused on *learning* rather than *testing*: drawing ideas from different disciplinary histories to develop a new 'problem situation,' gathering data to test, and theory-building to produce new conceptual frameworks. But it does have ambitions, as the Cultural Science website says:

'Cultural science seeks an evolutionary understanding of a knowledge-based society past and present, in order to map the possibility space of future scenarios for creative productivity, to which public policy and business strategies must adapt.' (http://cultural-science.org/)

An important focus for future work must be *population-wide* analysis in an evolutionary approach. Cultural studies has made significant progress in reconceptualising culture, and creativity with it, as part of 'ordinary life' rather than as the emanation of individual genius (art) or corporate power (media). But it has not followed through on the implication of this move. It is no good looking at creativity, culture, or knowledge *as professional or expert systems*, whether individualist or corporate, any more than it would be to see them as expressions of spiritual inspiration or natural laws (in Veblen's

sense). We need to understand cultural, creative and knowledge systems *across whole populations*. This is why we have taken a strong interest in systems where consumer productivity and user co-creation are important features, including in the games industry, because it is clear that innovation occurs in the interaction between producers and consumers, professionals and players, and not within the confines of the production company.

However, in this context new problems arise. Mention of just a few must suffice here: important issues include institutions, distribution, and the role of the 'user.' Naturally, methodological problems also abound, as does the persistent difficulty of doing truly interdisciplinary research.

The main issue for cultural science at the moment may be the question of institutions for coordinating and scaling creative innovation: How do large-scale systems self-organise when productive agency is adding to their scale and complexity every day? How are individual actions organised into clusters, rules, hierarchies, how are these related to each other, and what causal force does institutional agency exert on the system as a whole?

In relation to 'whole populations,' it is a mistake to plump either for methodological individualism (as some versions of psychology have done, as well as neoclassical economics) or for single-cause determinations of entire systems (as Marxist-derived political economy has done) – both of these extremes miss out on the problem of institutions. Instead, an 'externalist' (extended brain) approach to creativity and identity requires intermediate levels of agency and organisation (which Potts calls 'meso' – in between micro and macro). Social networks *self-organise* via institutional forms, a process of coordination that forms one of the main objects of cultural science inquiry.

Institutional organisation is unavoidable – it is not an external force impinging on individual freedom of action like Charlie Chaplin's famous machine; it *enables* and coordinates individual action, intensifying and directing individual creativity and productivity. Thus, we cannot remain satisfied with an approach to institutions that condemns the most elaborated versions of them as somehow inhuman (as in 'capitalism,' 'globalisation,' 'the market,' 'corporate power' – or 'Rupert Murdoch'). Nor are we any longer in a cultural universe where individual access to creative culture – i.e. literacy – can be seen as emancipatory in itself, as seemed to be the case as print literacy was being universalised in industrial countries during the twentieth century.

Now, the information-universe is too large – or in economic terms transaction costs are too high – for mere access to ensure intellectual freedom; organisational forms and interactions also determine how individual agency operates in practice. New attention is needed to trace and understand the role of *selection*, *management*, *order* and *redaction* in networks and archives even as they continue to expand faster than exponentially.

A further problem is that of distribution. Anderson's 'long tail' has alerted everyone to 'power law' distribution (see the accompanying diagram), which seems to explain why some systems seem to favour a 'winner takes all' scenario, from blockbuster sales to bankers' bonuses. How widespread is this pattern of distribution in cultural and media forms? The possibility needs to be tested that relationships previously regarded as in opposition (e.g. elites as opposed to masses) may in fact be power-law gradients.

Social distinctions, up to and including class, may be better explained by network theory, with 'hubs' and 'nodes' (in Barabasi's terms) within a complex open network of relational identities, in which 'elites' have many connections within the network, and 'masses' (the long tail) have few. In other words, is what separates celebrities like Paris Hilton or Stephen Fry from the rest of us simply the number of connections they have within a social network market? Certainly such things are avidly measured – the number of friends on Facebook, or followers on Twitter, is publicly monitored and if of sufficient scale is itself cause for further celebrity coverage.

Such models are interesting because they focus on what connects all of the agents in a system, not on what divides them, and they allow for dynamism (change) in the position, status and action of any 'node' or agent, as well as in the network as a whole. Thus, 'distribution' can no longer be seen as shifting finished goods, meanings or knowledge *from* a productive centre (or cause) *to* a passive recipient (or effect); instead it requires attention to *distributed productivity* throughout the system.

Of course, one of the main attractions of a population-wide cultural science approach is that it focuses on creativity among 'users' as much as 'producers,' thereby continuing the cultural-studies tradition of focusing on ordinary culture, the active audience, and 'bottom-up' causation in meaning-systems. Problems arising from this perspective include a major question

about how to shift from small-scale, in-close 'micro' analysis of diverse local practices to large-scale, system-wide 'macro' understanding of the web of mutual causation.

In the CCI we have been pursuing this question by focusing on user co-created content – games (Banks), YouTube (Burgess), fashion (Montgomery), digital storytelling (Hartley). How do the 'relations between practices' work out in these contexts; and what might be the implications for public policy (including intellectual property), commercial strategy (betting the firm on co-created content is still high-risk), social network markets and community development?

Finally, cultural science presents problems of *method*, for we don't yet know how best to model change; how to measure 'cumulative sequence'; how to identify and describe population-wide processes of variation, selection and retention in the cultural sphere; how or what to predict in the growth of knowledge.

It does seem at the very least that we need to focus on probabilities in large-scale systems (e.g. what can I find on YouTube?) rather than on essences found in single texts (e.g. the signed work of art in a museum).

'Thought control in economics' ... and cultural studies?

Cultural science draws our attention to the extent to which the 'cultural' as a special sphere of peculiar value has converged with the 'economic' – which itself turns out to be inexplicable without attention to identity, creativity, and language.

Does this collapse of economic and cultural values into each other mean we're stalking horses for neo-liberalism? Many of our colleagues seem to think so (O'Connor 2009). But an alternative view comes from a surprising source. One of the most prominent contemporary organs of radical activism – the magazine *Adbusters* – is devoting its current issue (Sept/Oct 2009) to heterodox and evolutionary economics. It turns out that this is the chosen weapon with which to *oppose* the status quo. Addressing students of economics directly, the editorial for the issue (by editor Kalle Lasn) says:

Your university is a police state ... not a free marketplace of ideas in which innovation is acknowledged and rewarded. But outside your department, a vigorous heterodox economics thrives ... there are social economists, feminist economists, interdisciplinary economists, ecological economists and hundreds of intellectuals and maverick professors who are openly critical of the neoclassical paradigm and fighting to overthrow it (*Adbusters* 2009: n.p.).

The editorial concludes by giving the student a choice: 'You can ignore all of the screaming inconsistencies and accept the status quo ... Or you can align yourself from the get-go with the mavericks ... You can bet your future on a paradigm shift. I hope this book inspires you to take the riskier, more exciting path.'

It does seem strange to read the fiery rhetoric of the barricades in the context of the economics lecture-theatre. *Adbusters* seems to be channelling the radical appeal of early cultural studies, which itself, however, seems less and less able to offer its devotees a 'riskier, more exciting path.' Strangely enough, that old radical rhetoric may itself be exerting a form of 'thought control' in cultural studies – making it hard to recognise that things are changing over in the economics department. As the *Adbusters* editorial puts it:

... economics is a highly contested field ... a profession whose axioms, principles and credibility are being questions like never before. The prevailing neoclassical paradigm is crumbling and a new, more chaotic, more biologically based paradigm is struggling to emerge.

Certainly, cultural studies needs to distance itself from neoclassical economics, where, in the immortal words of Thorstein Veblen, the individual sits as 'a self-contained globule of desire.' But it must not reduce itself to that same status – self-contained, desiring, but unconnected to others. Such work may simply reproduce (unwittingly or not) the neoclassical model. To the extent that we still tend to treat both *identity* and *creativity* in terms of the desiring individual, that is just what cultural studies does.

We need to move on: 'Economic action must be subject matter of the science if the science is to fall into line as an evolutionary science' (Veblen 1898). By that token, the subject matter of an evolutionary 'cultural science' is *creative* action, which in the case of our own work, especially if it is allied with similar movements in economics, can be just as radical as ever.

¹ For instance, at Melbourne University, where it is glossed thus:

'Cultural Studies is an interdisciplinary field concerned with:

- cultural identities and media
- cultural texts from movies to mardi gras
- the workings of cultural power
- the consumption of cultural commodities
- the relationships between popular, national, and contemporary global culture
- the circulation, effects and meanings of culture in everyday life."

www.culture-communication.unimelb.edu.au/cultural-studies/intro.html

- ² PMSEIC = Prime Minister's Science, Engineering and Innovation Council; ERA = Excellence in Research for Australia, the national research assessment exercise. The ARC recently appointed 'esteemed academic' Graeme Turner as chair of the research evaluation committee for the HCA (Humanities and Creative Arts) disciplines: 'As a world-leader in cultural and media studies, the ARC is pleased that Professor Turner has agreed to lead the Research Evaluation Committee.' (www.arc.gov.au/media/releases/media_27Aug09.htm)
- ³ CRN = Cultural Research Network, host of this event. The 'State of the Industry' conference, marking the end of the CRN's ARC funding period, is organised by Melissa Gregg (discussant of this symposium), see www.uq.edu.au/crn/industry/.

⁴ The same point is well made by made by Michael Bérubé (2009).

- ⁵ A good example of the use of this very word to dismiss an attempted innovation in the field is Jim McGuigan's review of *Creative Industries* (ed. J. Hartley, Wiley-Blackwell 2005). McGuigan pours scorn on 'the generally meretricious contents of this book' (2006: 374). Those contents include chapters by Ellie Rennie, Lawrence Lessig, Graham Meikle, Geert Lovink, Nestor Garcia Canclini, John Howkins, Charles Leadbeater, Richard Florida, Toby Miller/Nitin Govil/John McMurria/Richard Maxwell, Brad Haseman, Umberto Eco, Janet H. Murray, Sir Ken Robinson, Luigi Maramotti, Jane Roscoe, Jinna Tay, Charles Landry, Justin O'Connor, Michael E. Porter, Ackbar Abbas, Stuart Cunningham, Charles Leadbeater/Kate Oakley, Henry Jenkins, J.C. Herz, Terry Flew, Jeremy Rifkin and Shalini Venturelli. The 'one notable exception' allowed by McGuigan is a chapter by Angela McRobbie. Since it is obviously absurd to characterise everyone else on this list as 'generally meretricious,' it seems inescapable that McGuigan's odium is reserved for the editor's attempt to move the field in a new direction.
- ⁶ Matthew Arnold's 'theory' of English was implemented in the Edwardian era, when English departments were established at Oxbridge. The sense of 'noblesse oblige' for English graduates was well conveyed by the first King Edward VII Professor of English Literature at Cambridge, Sir Arthur Quiller-Couch, who wrote: 'Since of high breeding is begotten (as most of us believe) a disposition to high thoughts, high deeds ... I shall endeavour ... to scour that spur of ancestry and present it to you as so bright and sharp an incentive that you, who read English Literature and practice writing here in Cambridge, shall not pass out from her insensible of the dignity of your studies, or without pride or remorse according as you have interpreted in practice the motto, *Noblesse oblige*' (Quiller-Couch, 1946 [1916]: 102).

⁷ Terry Eagleton is upbraided for his use of the term 'Queen of the Humanities' to criticise the work of gay historical materialist critic Alan Sinfield, here: www.timeshighereducation.co.uk/story.asp?storyCode=161892§ioncode=6.

⁸ The Australian Academy of the Humanities reported: 'The Minister has been clear that the 'S' in ISL [International Science Linkages] is now to be interpreted in the broadest, Latinate sense: humanities and arts scholarship will be supported in their own right, and need not include any component from the physical or natural sciences, although interdisciplinary collaborations are always welcome.' See: www.humanities.org.au/ISL.html; see also:

http://minister.innovation.gov.au/Carr/Pages/\$1MFORINTERNATIONALHUMANITIESANDSOCIALSCIENCECOLLABORATION.aspx.

⁹ See: www.paecon.net/.

¹⁰ Cultural Studies Now - An International Conference, University of East London, July 19-22, 2007. Self-described as: 'the largest conference of its kind to have been held in the UK for many years. Explicitly addressing the present, past and future fate of the discipline conceived as a radical intellectual project, the programme featured over a hundred panels on a wide range of topics, with participants from every continent. We were proud to host keynote addresses from Ien Ang, Rosi Braidotti, Kuan-Hsing Chen, Jeremy Gilbert, Alan Grossman, Judith Halberstam, Stuart Hall, Dick Hebdige, Doreen Massey, Áine O'Brien, Haim Bresheeth and Michael Rustin.' https://culturalstudiesnow.com/intersympo.htm.

¹¹ Scott Page: 'In this project, Jenna Bednar and I construct models of culture that build from standard game theoretic models of institutions. In our conception, culture consists of mental models that are consistent both within and between people in a community that which may sometimes result in suboptimal behavior.' www.cscs.umich.edu/~spage/culture.html)

¹² And see: www.abc.net.au/tv/fora/stories/2009/10/09/2709586.htm, for a recent Australian airing of the same fears.

¹³ Just for the record, I once wrote a book called *Tele-ology* (Routledge 1992), but that is another story – except to mention that it is the place where I described 'intervention analysis.'

¹⁴ We are not alone in seeking to introduce evolutionary thinking into the humanities, of course. A notable comparable venture (arising from psychology) is this: **The Darwinian Renaissance in the Humanities and Social Sciences**, a research symposium held at Queen Mary University of London in November 2009. It was announced thus: 'Darwin published The Origin 150 years ago. From that point on he, and many others, have applied evolutionary theory to behaviour. And from that point on controversy has never been far away. Darwin's own work contributed to the rise of Comparative Psychology in the late nineteenth century, which in turn impacted upon Behaviourism. The 1970s saw the rise of Sociobiology, and much criticism of attempts to apply evolutionary biology to human concerns. Initially these criticisms were grounded in Marxist ideology and set limits to the remit of biological science: human

properties required a different framework. More recently the humanities and social sciences have taken a similar view but with a post-modern twist, actively eschewing scientific, and especially biological understanding, and in so doing forsaking prediction. In spite of this history of ideological criticism, what might be termed the Human Evolutionary Behavioural Sciences (HEBS) have diversified into Evolutionary Psychology, Human Behavioural Ecology and Cultural Evolution, and in so doing have flourished. In this meeting we hope to showcase new and exciting work from within HEBS, and look at where efforts should be focused in the future. It is our contention that the humanities and social sciences cannot ignore the central place of evolution as a theoretical framework for understanding human affairs. See: http://www.qmul.ac.uk/events/public_show.php?id=1237

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¹⁵ See: http://cultural-science.org/papers.html.

¹⁶ See www.innovation.gov.au/innovationreview/Documents/NIS-review-web.pdf. Dr Terry Cutler, lead author of *Venturous Australia*, is Chair of the CCI Advisory Panel.