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# Match seller or sparkplug? The human sciences and business

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The topic of the humanities and business irresistibly conjures up the image of the little match seller ('le petite marchande des allumettes'); nose pressed to the window pane, looking in on the grand life within. The humanities (and the rest of the human sciences, which include the creative arts and the social sciences) are thought to operate as a kind of handmaiden to the R&D powerhouses of science, engineering and technology, which in turn feed the growth businesses which deliver rising standards of living and consequential social benefits. In this view, the human sciences at best might help us to understand and manage the consequences of moving to a knowledge-based economy, but they could never be the sparkplug that ignites business growth and opportunity.

But this handmaiden model is patently inadequate to capture the growing contribution of the content and creative industries and the social phenomena that have rapidly grown around them in contemporary societies. Creative production and cultural consumption are an increasingly integral part *of* the growth economy, not merely part of analysing and managing it. The human sciences that undergird them should be seen as similarly central.

The creative industries are an emergent sector of the services economy of significant scale and dynamism worldwide. In the US the copyright industries were worth US$791.2bn in 2001, representing 7.75% of GDP and employing 8m workers. Their share of US foreign sales/exports was US$88.97bn – outstripping the chemical, motor vehicle, aircraft, agricultural, electronic components, and computer sectors. In the UK in the same year (but differently defined), they generated revenues of £112.5bn, employing 1.3m people, with £10.3bn exports and over 5% of GDP. In addition to scale, the creative industries are significant because they are drivers of the knowledge economy and enablers for other industry sectors especially through the provision of digital content which 'translates directly into the competitive advantage and innovation capability of other sectors of the economy' as well as through the nurturing of creative human capital and a creative workforce. Content and creative industries constitute an increasingly significant element of developed nations' economies.

Rather than being relegated to a residual or marginal status, sociologists Scott Lash and John Urry and business analyst John Howkins claim that creative production has become a model for new economy business practice. Rifkin claims that cultural production will ascend to the first tier of economic life, with information and services moving to the second tier, manufacturing to the third tier and agriculture to the fourth tier.

Most R&D priorities reflect a science and technology-led agenda at the expense of new economy imperatives for R&D in the content industries, broadly defined. However, as Rifkin argues, the broad content industries sector derives from the applied social and creative disciplines (business, education, leisure and entertainment, media and communications) and represents 25% of the US economy, whilst the new science sector (agricultural biotech, fiber, construction materials, energy and pharmaceuticals) for example, accounts for only 15% of the economy. In fact all modern economies are increasingly consumption driven (60% of GDP in Australia and 62% of US GDP) and the social and cultural technologies that manage and stimulate consumption all derive from the social and creative disciplines.

In Australia, these industries or enterprises are valued at between $19 and $25 billion a year (the elasticity of the figures are the tip of a large iceberg of statistical imponderability) – as much as the residential construction industry. And think how much the construction industry sits at centre stage as an index of the nation's economic health! The creative industries are growing at a fast clip. In the high

growth areas, like digital content and applications, they are growing at twice the overall rate of the overall economy. Many Australians are involved in the creative industries, ranging from hobbyists to full time employees and small businesspeople: 2.5 million say they work in these areas, and of those about 900,000 get paid for it.

We can no longer afford to understand the social and creative disciplines as commercially irrelevant, merely 'civilising' activities. Instead they must be recognised as one of the vanguards of the growth economy. R&D strategies must work to catch the emerging wave of innovation needed to meet demand for content creation in entertainment, education and health information, and to build and exploit universal networked broadband architectures in strategic partnerships with industry.

Not only is R&D in the applied social and creative disciplines required for its own commercial potential, but also because such R&D must be hybridised with science and technology research to realise the commercial potential of the latter. Commercialisation depends on 'whole product value propositions' not just basic research.

The growth economy requires both *R* and *D*: the contexts, meanings and effects of *cultural consumption*, in Rifkin's terms, are as important for purposes of policy development as *creative production*. The work of Richard Florida, in *The Rise of the Creative Class*, stands as eloquent testimony to this indivisibility. Major international content growth areas, such as online education, interactive television, multi-platform entertainment, computer games, web design for business-to-consumer applications, or virtual tourism and heritage, need *research* that seeks to understand how complex systems involving entertainment, information, education, technological literacy, integrated marketing, lifestyle and aspirational psychographics and cultural capital interrelate.

They also need *development* through trialing and prototyping supported by test beds and infrastructure provision in R&D-style laboratories. They need these in the context of ever shortening innovation cycles and greater competition in rapidly expanding global markets. R&D strategies must work to catch the emerging wave of innovation needed to meet demand for content creation in entertainment, education and health information, and to build and exploit universal networked broadband architectures in strategic partnerships with industry.

What, practically, does this mean for Australian business? Business leaders - B-HERT might act a key forum for this – need to consider whether it is in their interests to support the development and diversification of the national innovation system to include these industry sectors and disciplinary inputs. This amounts to building an Australian 'creative innovation system' – deciding whether the creative and content industries and the disciplines that undergird them - are going to be 'match sellers' or 'sparkplugs' in Australian business and government strategy.

Currently, they are not on the radar of mainstream R&D and innovation policies, which remain resolutely focused on science and technology, barely beginning to address even the services sector. Australia's national policy focus – from the national Innovation Summit in early 2000 which set the stage for *Backing Australia's Ability*, to the voluminous *Mapping Australian Science and Innovation* study from the Department of Education, Science and Training in 2003 which underpinned the second iteration of *Backing Australia's Ability* – follows this pattern.

However, there has been some progress in putting the human sciences and the content and creative industries on the national agenda. Australia now has a set of national research priorities that are much more progressive than the original very narrow set of exclusively 'new science' priorities. Due to persistent lobbying rather than a 'rational-comprehensive' policy process, there is now an explicit human science dimension to all four national research priorities, albeit still conceptualised largely in handmaiden mode. The priority for 'Frontier technologies for building and transforming Australian industries', though, has a substantial focus on digital content and innovation. In this priority area there are key statements such as 'research is needed to exploit the huge potential of the digital media industry', and a number of examples of content applications such as e-commerce, multimedia, content generation and imaging are mentioned for priority research and development. In addition, under the priority goal of 'Promoting an innovation culture and economy' there is a stated intention to prioritise 'maximising Australia's creative and technological capability by understanding the factors conducive to innovation and its acceptance'.

It is early days in tracking how this opportunity for R&D in creative and content innovation might play out, but in building this pathway, Australia is in company with emergent international trends. The European Commission's Framework Program 6 is organised into thematic areas. Most are still science and technology-focused but there are two areas - Information Society Technologies, and Citizens and Governance in a knowledge based society - which will directly support arts and humanities research. Information Society Technologies includes two categories of direct relevance: Cross media content for leisure and entertainment, and Technology enhanced learning and access to cultural heritage. In the US, reports such as *Beyond Productivity* are a good example of a probe from the National Academy searching for purchase for an investment strategy for the digital arts and design based on innovation (William Mitchell *et al* 2003, *Beyond Productivity: Information Technology, Innovation and Creativity*. Washington: National Academies Press). In New Zealand, the Foundation for Research, Science and Technology has promulgated explicit R&D policy for the creative industries, identified as a national 'Growth and Innovation Framework' priority along with biotech and ICT.

The case for Australian business working with the human science disciplines to turn them from match sellers to sparkplugs is now on the table. Here are some leading examples. The Creative Industries Cluster Study, a research program initiated by the Department of Communications, Information Technology and the Arts (www.cultureandrecreation.gov.au/cics/), has begun to build this agenda. One of reports in the study program outlines the shape of a national creative innovation system (QUT Creative Industries Research and Applications Centre and Cutler&Co 2003, *Research and Innovation Systems in the Production of Digital Content*, www.cultureandrecreation.gov.au/cics/Research_and_innovation_systems_in_production_of_digital_content.pdf). A Digital Content Industry Action Agenda is being promulgated (www.dcita.gov.au/arts/film_digital/digital_content_industry_action_agenda), with an R&D and Education/Training component integral to it. The Australasian CRC for Interaction Design, the first Cooperative Research Centre devoted to building and prototyping creative applications, is into its second full year of operations (www.interactiondesign.qut.edu.au). A study program conducted by CHASS and funded by the Department of Education, Science and Training tells us a lot about how the human sciences are appropriately commercialising their IP (chass.org.au), beginning to dispel the assumption that these disciplines are a dead zone for commercialisation. The Australian Mobile Telecommunications Association (AMTA), the peak body for Australia's high growth mobile telecommunications industry, tasked a group of human science specialists auspiced by the Academy of the Social Sciences in Australia to prepare an agenda for long term research into the social and cultural impact of mobile communications (ASSA, *The Impact of the Mobile Telephone in Australia: Social Research Opportunities* http://www.amta.org.au/default.asp?Page=435).