



Creative occupations as knowledge practices: Innovation and precarity in the creative economy

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The ARC Centre of Excellence in Creative Industries and Innovation (herewith CCI) was established with two simple policy objectives. One was to assess anecdotal and boosterish claims about the growth rates of the creative industries, and hence, to measure the size of the creative industries contribution to gross domestic product (GDP). The other was to ascertain the contribution of the creative industries to employment. Preliminary research detailed in Cunningham and Higgs (2009) showed that the existing industrial classifications did not incorporate the terminology of the creative industries, nor did they disaggregate new categories of digital work such as video games. However, we discovered that occupational codes provide a much more fine-grained account of work that would enable us to disaggregate and track economic activity that corresponded to creative industries terminology. Thus was born one major centrepiece of CCI research – the tracking of national occupational codes in pursuit of measuring creative industries policy outcomes. This paper commences with some description of empirical work that investigates creative occupations; however, the real point is to suggest that this type of detailed, occupation-based empirical work has important theoretical potential that has not yet been fully expended (though see Cunningham 2013; Hearn and Bridgstock 2014; Bakhshi, Freeman and Higgs 2013; Hartley and Potts 2014).

Taxonomy of creative work

The *industry segments* that are generally agreed to define the Creative Industries are Architecture, Design and Visual Arts; Music and the Performing Arts; Film, Radio and Television; Writing and Publishing; Advertising and Marketing; and Software and Digital Content. High-level categories of creative *occupations* also use these descriptors, though more fine-grained codes are available. Creative occupations can be segmented into two

groupings: Cultural Production occupations and Creative Services occupations (see Figure 1).

TYPES OF CREATIVE OCCUPATIONS

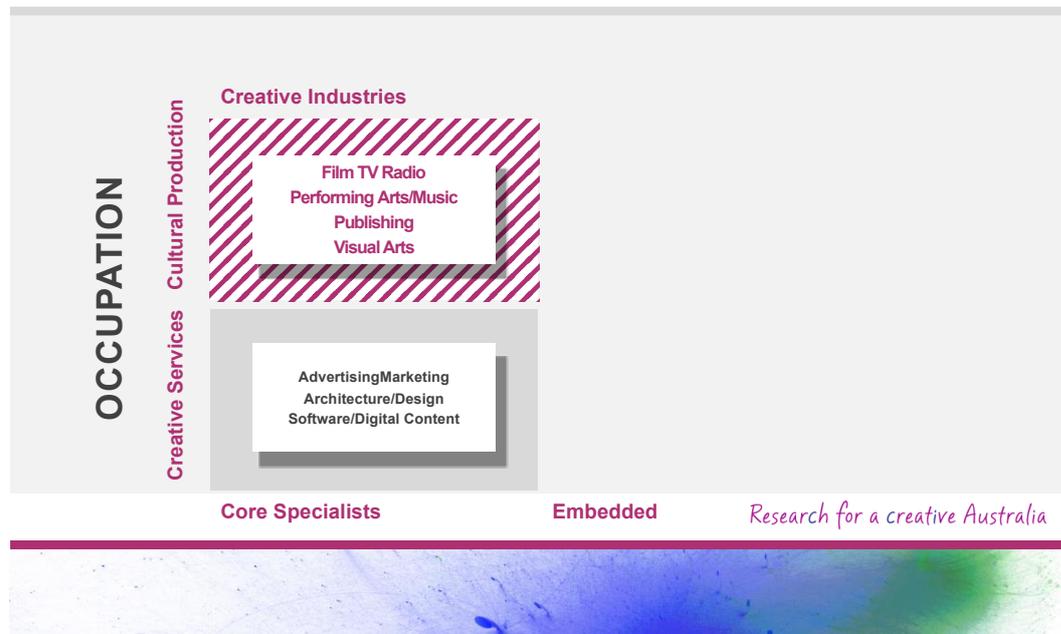


Figure 1. CCI taxonomy of cultural production and creative service occupations

However, occupations in these categories are not only found in the creative industries but are also deployed across *all* industry sectors, often creating new services and products (Cunningham and Higgs 2009). As CCI research has shown, there is an increasingly large number of creative workers *embedded* in industries beyond the core Creative Industries (for example, in manufacturing, health, banking and mining).

Thus, from CCI research (e.g. Cunningham and Higgs, 2009; Cunningham, 2013) we know creative occupations reside in one of four sectors of a 'creative workforce quadrant' (see Figure 2). Cultural Production jobs in the Creative Industries are primarily concerned with creating cultural consumption for the end consumer (B to C). Creative Services firms typically involve business-to-business (B to B) contracting in design marketing or digital content. The deployment of creative occupations in other sectors of the economy is primarily to provide in-house creative functions or perhaps manage or source these functions for external providers.

TYPES OF CREATIVE OCCUPATIONS

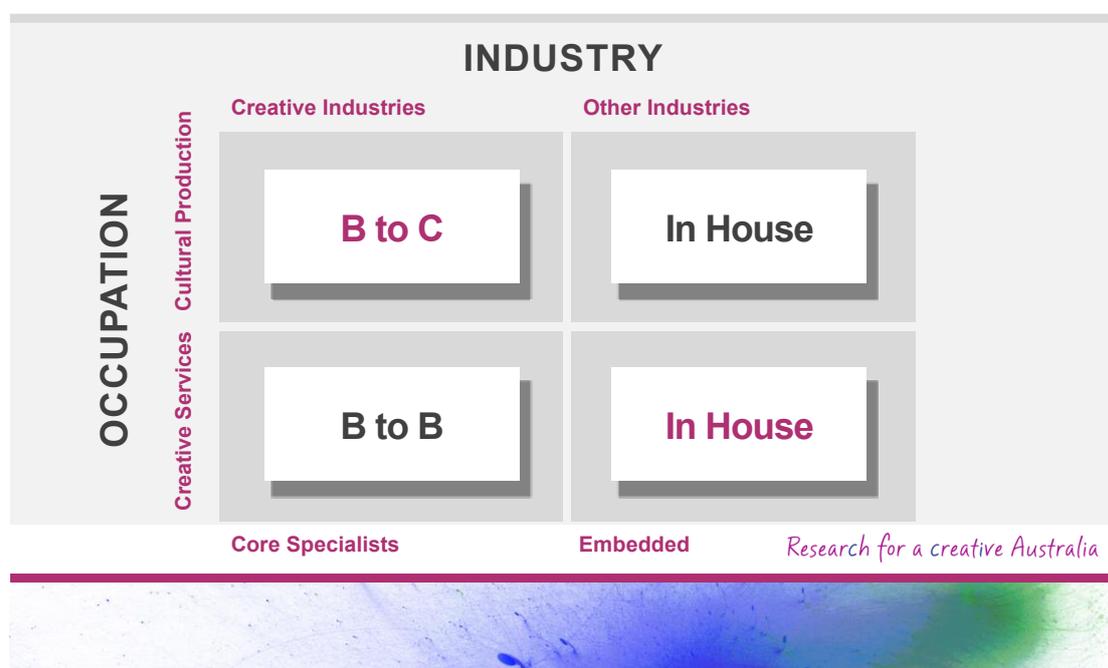


Figure 2. The creative workforce quadrant (Source CCI)

By comparing 2006 and 2011 ANZSCO data (for Australia) for this taxonomy (in Figure 3), we are able to tell a story both about the size of the workforce in these segments as well as how rapidly it has been growing. As can be seen in Figure 3, in Australia, creative occupations are growing at a rate above the average job growth rate for the country as a whole. By far, the largest segment of creative occupations comprises creative service workers embedded in other industry sectors. This segment of the creative workforce has been growing, on average, at 2.5% per year throughout the 2006–2011 timeframe. Creative occupations within Creative Services companies are the second biggest in size (at 92,205) and are growing at the fastest rate: an annual average growth of 4.5%. The Cultural Production workforce, contrary to some accounts, also grew to 56,779, at a rate of 2.7% per year. The final segment of the creative workforce quadrant are Cultural Production workers employed in other industry sectors; this segment is comparatively small, but still represents about 10% of creative jobs and has been stable throughout this census period. About 30% of employment in this category comes from occupations involved in publishing specialist knowledge for particular industries (e.g. health or agriculture). Artist educators are another category of occupation in this group.

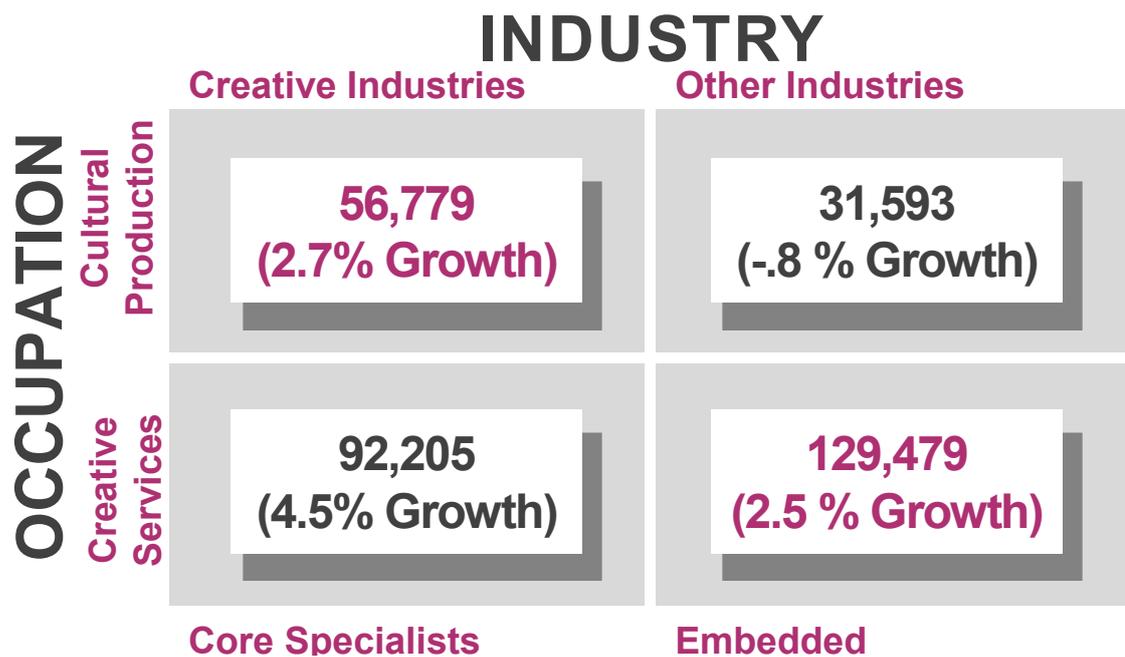


Figure 3. Size and growth rates of creative occupations in the creative workforce quadrant (Source: CCI/ABS)

A creative workforce of nearly 300,000 is a significant contribution to national employment when compared with the Australian Bureau of Statistics top 10 categories of employment (See Table 1)¹. Granted, we are referring to a more general categorisation, but surprisingly, there are more creative workers than nurses, truck drivers, accountants and primary school teachers (Table 1). (At a similar level of aggregation, the 57,000 cultural production workers in the creative industries are a larger cohort than the 53,000 general practitioners.) Moreover, the largest category of workers in Australia – which is not included in the creative workforce quadrant – comprises some 511,000 retail sales assistants, many of whom quite explicitly work at the coalface of cultural consumption. This includes retailers in fashion, luxury goods, and arguably, any product or service for which style, experience, brand or cultural expression is a component of the service. If these workers were included, the size of the creative workforce might in fact be much larger. With retailing rapidly digitising, the occupation of retail assistant will need to adapt or become extinct. More involvement with digital content or the cultural experience of products could see new categories of work evolve that are part of the creative economy workforce.

Sales Assistants	511,000
Nurses	241,000
Managers Retail	227,000
Clerks General	216,000

¹ The data in Table 1 are from November 2012 but are of the same order of magnitude as 2011 census data.

Receptionists	190,000
Truck Drivers	184,000
Accountants	169,000
Commercial Cleaners	167,000
Primary School Teachers	155,000
Accounting Clerks	155,000

Table 1. The 10 most numerous occupations in Australia (Source: Australian Jobs 2013)

In addition to the size of the employment categories in the quadrant, we can make some comment on their growth rates. Creative jobs have displayed a growth rate of 2.5 to 4.5% per year in the three main quadrants of the creative workforce. Although this is not the strongest category of employment growth in Australia, it is still notable, especially if support workers in creative firms are also considered. In fact, a number of important employment categories declined in Australia within the same timeframe (e.g. manufacturing). In addition, many of the fastest growing occupations were in low-paid services work. For example, demographer Bernard Salt (2013) describes Australia's employment change during this period as "The great Barista shift", pointing out that approximately 8,000 metal engineering process workers disappeared but 13,000 baristas materialised. In general, industrial jobs have declined, while clerical, caring and managing jobs have increased. Those industrial jobs lost were higher paid and male dominated compared with the newer services jobs, which tend to be part-time and female dominated. Interestingly the occupation that increased most in the period in question was that of a carer, with an increase of 31,000 workers. This is almost the exact number of creative services jobs created across the economy. However, it could be argued that creative services jobs are more integrated with innovation in the economy and thus more important economically than either baristas or carers. In fact, the evolving transitions of the Australian workforce are really a textbook case of the decrease of agriculture and manufacturing, and the increase of services (tertiary activities) and the quaternary or knowledge sector (including media and culture) (see Figure 4).

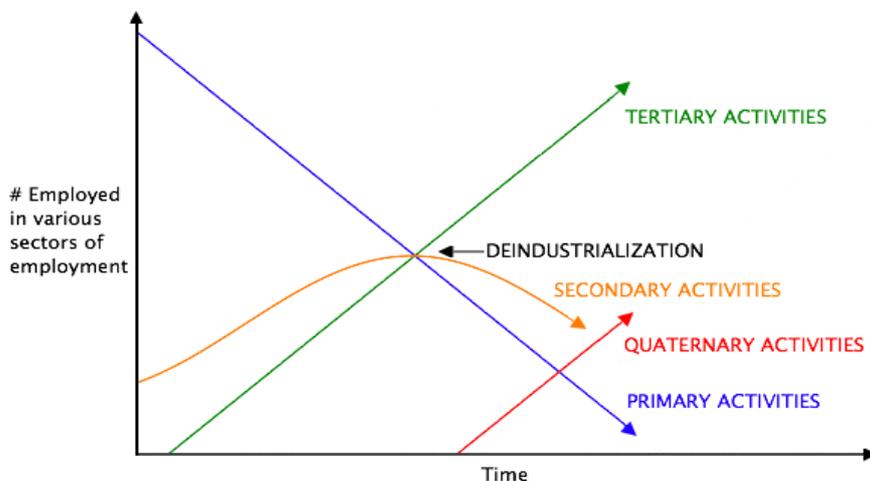


Figure 4. The Four-Sector Model of the Economy (Source: Wikipedia)

Narratives of the four quadrants

Over and above the numerical realities of each of the four creative workforce quadrants, one can posit a narrative regime concerning each of these four groups of creative occupations, and the work they do. Work, career and occupational identity are all established constructs within the sociology of work. Occupations are gendered – and hence gender narratives adhere. The world of work is the subject of popular cultural narratives (e.g. Madmen; How Green was my Valley). Moreover, academic studies of work sometimes employ a narrative approach (Isaac 2008). That is, the world of occupation is a cultural-symbolic construction before during and after it is a statistic. An artefact, and in this regard, the default narrative for the world of creative cultural work, really derives primarily from the cultural production sector, even though the other sectors are numerically more significant.

Narratives for all of the four quadrants are needed to balance that of the dominant cultural production quadrant. Figure 5 encapsulates the following narrative sketches:

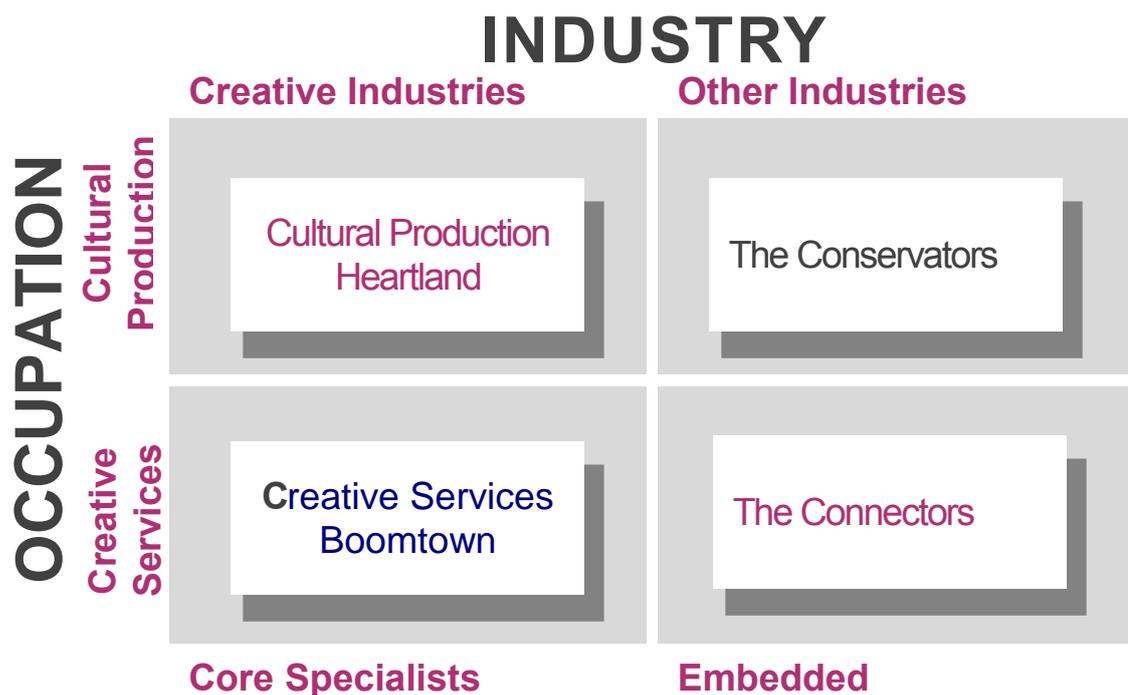


Figure 5: Creating a narrative of the creative workforce quadrant

1. Cultural Production Heartland

- Undergoing digital transformation in skills and structure of employing companies: digitalising of traditional professions (Goldsmith 2014) is the dominant contributor to this growth
- Source of training in core disciplines

- Traditional oversupply of employee entrants – therefore casual employee/volunteer/intern issues
- Questions of precarity often raised and some evidence for this
- A range of factors compensate for wage differentials

2. Creative Services Boomtown

- Largely SMEs
- Growth of digital advertising is a strong example.
- This sector may subject to be cyclical trends in outsourcing, which are in turn related to competitive pressures in both labour market for creative as well as pressure on costs in a sector
- Focus on creative process more so than embedded processes
- Less evidence of precarity but claims are sometimes made

3. The Connectors

- Embedded creatives connect the creative professions to the more powerful sectors of the economy
- Also connect main sectors of the economy to creative resources
- May manage or broker of creative services
- Demand for creative content on company web sites is spurring in-house content producers even whole news services in some sectors (e.g. financial sector and finance news)
- In addition to creative domain knowledge, this requires abilities in connecting creative process to commercial outcomes such as product enhancement and business models

4. The Conservators

- At first glance, a puzzling category, but these have real creative job content and are not a case of creatives working as waiters
- Publishing occupations are the most common category (30% of total) and they perform a conserving and documenting role for many sectors
- Artist educators replicate and create knowledge in the community and shore up the educational pipeline of creative
- Some surprising conjunctions are found (such as sculptors in construction) and research is needed to better describe this work (for example, 5% of this category is coded as “Artists not elsewhere categorised”)

Implications for Creative Industries theory

Why are the three main quadrants of the creative workforce growing so strongly?

Florida’s highly criticised, and admittedly flawed (e.g. Storper and Scott, 2009) theory,

nevertheless drew attention to the possibility that occupation codes (his measure of talent) might usefully be used as an input into predicting regional (city) productivity. Underlying this was a belief that ‘the creative class’ do something fundamentally transformative in the work place.

A recent study by Lobo, Mellander, Stolarick, and Strumsky (2014) finds evidence for why this might be. They set out to investigate the impact of inventiveness (patents) and (education) on regional productivity. However, they also included measures of the density of creative occupations² in their model to examine the effect of creativity. Their results showed no relationship between inventiveness and productivity, except through the moderating variable of technology, specifically technology concentration and diversity. Furthermore, they argue that “the most effective measure of regional inventive capacity, in terms of its effect on technology, productivity, and productivity growth is the share of the workforce engaged in creative activities” (p. 2).

Lobo et al. (2014) posit that it is the ability of an economy not to invent, but to deploy and adapt, that is essential to productivity. Creative workers have three important roles:

- to offer points of difference that add value
- to recognise and have an appetite for new things
- to enhance the generic absorption of creativity throughout companies.

This empirical picture is consonant with the view of innovation proposed by Cunningham and colleagues (Cunningham 2011; Potts & Cunningham 2008; Potts, Cunningham, Hartley, & Ormerod 2008). They argue for a move away from thinking only of the creative industries – narrowly defined – towards thinking of the creative economy as a set of innovation-enhancing processes involved in all industry sectors. Recent work by Moretti (2012) on employment growth in the US presents a compatible picture. He shows that employment growth is related to “brain hub” cities and these have a higher concentration of the creative class. Moreover, every creative class worker generates five services workers’ jobs in that hub.

Clearly then the study of occupations needs to be understood as having bearing on a broader range of questions than just the issue of enumeration of jobs and who has them. For example, occupations exist in organisations independently of the current incumbent. That means that an occupation is first and foremost a set of knowledge practices, or more expansively, knowledge, skills, identity formations, social relationships and practices. Occupations include codified knowledge and tacit knowledge – at least when enacted.

When occupations come together in organisations, they combine to produce outputs that are, perhaps, valuable. Organisations exist in competitive ecologies and apart from

² Their definition, based on Florida, includes, but is broader than, the quadrant referred to in this paper.

tangible resources, they can be thought of as knowledge regimes that are sets of actors, routines and knowledge practices. Both organisations and occupations are therefore arguably subject to competitive selection over time. Occupations are embedded knowledge, including codified and tacit knowledge, which has been subjected to evolutionary processes through the labour market and the economy of firms. Hartley and Potts (2014) explain innovation (both cultural and industrial) as system evolution wherein the chief mechanism at play is the formation of groups or ‘demes’ that create and distribute knowledge. These groups (or knowledge systems) are adversarial and the clash of groups and their knowledge regimes creates novelty. Perhaps, the theoretical significance of occupations is much larger than at first glance. The questions that are asked in relation to this construct typically have to do with access, inequality and the conditions of labour. These are of course valid; but equally, questions can be framed around occupation as knowledge and its role in innovation and economic evolution.

Put another way, the majority of research on occupation considers it as a dependent (or outcome) variable, for example, asking what factors affect occupational outcomes (such as participation by different genders or status groups). Often occupation is treated just as a descriptive taxonomic factor in enumerating employment per se. However, a number of important programs of research have recognised the possible theoretical importance of ‘occupation’ as an input or predictor of other economic outcomes.

For example, human capital theory posits that a range of human attributes – including knowledge – can be empirically related to wages, where wages can be used as a measure of how valuable or productive a worker is to an organisation. Human Capital Theory is widely debated, but it offers one strand of empirical work that is very relevant to the discussion here. Human capital research often partitions forms of human capital and a relevant taxonomy here is that which considers human capital as composed of task-specific, occupation-specific and industry-specific human capital. Kambourov and Manovskii (2008, 2009) have made a case for the importance of “occupation specific human capital” and demonstrated that approximately five years of occupational tenure accounts for as much as a 20% increase in wages, and moreover, that tenure with an employer does not add much to this. For many occupations (e.g. truck drivers) industry context is irrelevant to this effect. Other studies (Sullivan 2010) show that in some professional occupations both industry and occupation have an effect on wages. This research is very relevant to the quadrant of creative work presented in this paper and has implications for understanding career trajectories amongst the quadrants, as well as growth in the different quadrants. In short, occupational knowledge constitutes knowledge sets that are hard to gain, hard to transfer, valued to different degrees, and selected in the evolutionary process of firm survival.

A key question in this line of argument we have been considering is: What is the nature of the competitive process in the rise and fall of different occupational groups, in the labour market and the economy of firms?

Hearn and Bridgstock (2014) set out to explain why firms employ embedded creatives. They suggested that the resource-based view of firm competitiveness should be considered as an explanation. The classical resource-based view (Barney 1991) suggests competitiveness hinges on resources, such as physical resources, intangible IP, and inimitable knowledge. To be competitive, resources should be:

- valuable
- rare
- inimitable
- non-substitutable.

Given equal capital and tangible resources, firms seek to add scarcity and inimitability through the design of new intangible IP, as well as trademarking novel aesthetics in brand and packing, which increase perceptions of value. For example, Grabher (2002) studied advertising agencies and found an ecology that is driven by the imperative to produce unique and novel original solutions to problems. Another approach undertaken by Hearn and Bridgstock (2014) to explaining why embedded creative were employed was to review studies of outsourcing versus insourcing of creative services. Again, they found evidence that these decisions were affected by the competitive pressures firms faced, as well as the nature of the task in terms of its demand for high-quality, novel solutions versus more pedestrian solutions.

Bowman and Swart's (2007) delineation of separable, embodied and embedded forms of capital is also relevant to questions of the embedding of creative occupations compared with using creative service firms or contract freelancers. In their study of advertising services, they argue that all tangible, physical assets and intangible IP are resources that can be separated from the worker. In contrast, embodied human capital comprises the skills and knowledge of individuals and/or teams.

Bowman and Swart (2007, p. 500) argue that:

It is likely to be in the interest of managers (acting on behalf of the firm's owners) to reduce the proportion of embedded capital in the capital structure by converting embedded capital to separable capital. This conversion process can be achieved by codifying tacit knowledge, systematizing value creation processes to effectively 'de-skill' them, or rotating staff to reduce the firm's dependence on specific relationships formed with clients by individuals or teams. Alternatively, where employees are able to 'convert' embedded capital into embodied capital..., their

bargaining power increases, and their ability to capture the rents generated is consequently enhanced. They might achieve this by increasing their clients' attachment to themselves as individuals, rather than to them as representatives of the firm, or they might ensure that, over time the knowledge they have gained through their experiences remains in their heads.

Following this line of reasoning, we can see that taking an innovation theory approach to creative work does not preclude consideration of the conditions of employment – the so-called precarity debate. Rather, such an approach provokes consideration of why different conditions of employment might be encountered depending on the embodied creative resources that individuals bring to a company. Moreover, consideration of the four quadrants and their different narratives suggests an expanded tapestry of issues to consider in analysing creative labour issues. Most debate on the precarity of creative labour proceeds using a de facto focus on the cultural production quadrant, ignoring the other 80% of creative labour. What is known about the condition type and of work in these other quadrants, particularly embedded creatives? If we respect the innovative capacity of creative labour we potentially arrive at a different vantage point from which to examine the issue and arrive at different prescriptions to resolve issues.

Hearn et al. (2014) suggest that writing on the precarity of creative labour can be summarised as following a “thesis-antithesis” arc. The first wave of creative industries advocacy (if not boosterism) tended to demonstrate one of three trends in relation to creative labour employed in the creative sector: valorising it (Howkins 2001), celebrating the freedom of it (Leadbeater 1999), or focusing on the stable end of it (Florida 2002). The critics of this early writing (e.g. Gill and Pratt 2008; Banks 2010; de Pauter, 2011; Hesmondhalgh and Baker 2011) argued correctly that the issue of the condition of creative labour had been ignored and that (perhaps less correctly) conditions were in fact, for the most part, dire.

Cunningham (2014) has attempted to reconcile the thesis/antithesis divide by examining the data produced by CCI. He finds conditions of oversupply of labour (particularly in the creative and performing arts) in sectors where there probably has always been an oversupply (e.g. Lingo and Tepper 2013), but also strong growth in employment and remuneration comparable to other professions. In Australia, compared with manufacturing labour, creative labour is thriving.

Potts and Shehadeh (2014) used the Household Income Labour Dynamics Australia (HILDA) to provide a different kind of data relevant to this debate. Based on their analysis of HILDA, they suggest precarity is somewhat evident among creatives within the cultural production and creative services sector, but not among creatives embedded in other industries. The embedded creatives show the highest levels of permanent employment and entitlement for paid leave, for either sickness or maternity leave. Total

pay satisfaction, job security and hours worked are lower for specialist creatives than for their embedded counterparts. There is an elevated expectation that work stress will lead to sickness, which is consistent with longer hours and greater precarity for the cultural production and creative services sectors of the quadrant. However, the HILDA data also suggests there are non-monetary compensating factors that may explain why workers choose to work in these sectors: satisfaction with the work itself, and the flexibility afforded in lifestyle and work hours.

Such findings suggest that much more attention needs to be paid to all four quadrants of creative work in descriptive accounts of creative work the conditions therein. This is not just because there are superficial differences (which there are), but rather, because the innovation dynamic, and hence the precise reasons and mechanisms for engaging creative labour, and the types of human capital (i.e. task, occupation and industry) are likely to be different in each case.

In their critique of Florida's work, Storper and Scott (1990) argue that in creative urban economies "detailed attention must be paid to actual and potential failures of the critical machinery of the urban production system as it is embodied above all in inter-firm networks, local labor markets and regional innovation processes. There can be no boilerplate approaches to the resolution of these failures, and each case needs to be treated with all due respect to its historical, geographical and sectorial specificity" (p. 164).

The next iteration of creative labour studies needs not just greater attention to contexts in its descriptive accounts, but, in addition, more emphasis on WHY labour is employed under the conditions it is. Attention is required to the lines of enquiry sketched above, in relation to occupation, innovation and the evolution of economies. Growth in employment in specific occupations occurs within an evolutionary process in which different kinds of competitive pressures are brought to bear, both between firms and within the occupational landscape. Occupational, industry and task-based human capital are selected in a competitive manner, and specific path dependencies are created for firms, based on how they govern this selection process (Mayer, Somaya and Williamson 2012). Creative human capital may be embodied or separable (Bowman and Swartz 2007) and this affects the negotiation position of labour. As a result, "in the contemporary urban hierarchy where many non-routine, highly skilled labor-intensive tasks in the division of labor – those most closely related to innovation – are located in major metropolitan areas, while routinized and capital-intensive operations are increasingly being relegated to smaller cities and low-wage countries" (Storper and Scott 2009, 163).

Conclusion

Jobs ain't jobs. This is particularly true in advanced economies where entry into

numerous professions requires substantial tertiary study, and progression necessitates the refining of skills, knowledge, and the sophisticated performance of career personas. Five years of experience creates occupation-specific human capital and equates to a 20% increase in earnings. Although we may want to critique the reification of professional knowledge, we are usually glad that our brain surgeon is not a fishmonger. This paper advances the idea that occupations constitute knowledge regimes, and social groupings of this knowledge. Moreover, by tracking people in occupations, we track knowledge flows. These regimes are selected and combined to create competitive advantage. The mechanisms of selection and combination are relevant to both innovation research and labour research in the creative sector. Researchers in CCI started out counting creative jobs, and as reviewed here, this research demonstrates that the creative workforce is growing strongly; is located right across the economy; and enjoys conditions of employment that are at least no worse than any other profession. However, this research also has the potential to provide a methodology and measurement approach that can be used to develop and test theories of innovation, labour precarity and economic evolution itself.

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