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‘Science as a vocation? Hybrid academics in overlapping institutional and career spaces’

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Introduction

‘Inwardly as well as externally, the old university constitution has become fictitious. What has remained and what has been essentially increased is a factor peculiar to the university career: the question whether or not such a Privatdozent, and still more an assistant, will ever succeed in moving into the position of a full professor or even become the head of an institute. That is simply a hazard.’ (Weber 1918 speech at Munich University)(Weber, 1946).

Weber’s ‘Science as a vocation’ lecture raises many issues that remain highly relevant today, but none more so than his depiction of the high degree of uncertainty (‘hazard’) in academic career transitions and appointments. In the modern university, this is reflected in the more intense and prolonged competition for entry into the core segment of the academic profession and the growth of academic marginal/ contingent labour. The negative consequences of such career hazards and the predicament of those who are permanently trapped in the contingent labour market are poignantly described in Childress’s (2019) book *The Adjunct Underclass*. However, these negative consequences tell only half of the story of a system of uncertain career transitions. In this paper, I draw attention to a related aspect that has been overlooked: the emergence of a growing population of hybrid academics operating in the intermediate labour market bridging academia and other institutional sectors. The term ‘hybrid academics’ refers to those individuals who develop their careers and professional identities by combining resources from both the academic and non-academic fields. For example, academic-entrepreneurs who straddle science and business (Lam, 2011; Jain et al., 2009), academic-policy experts/researchers who work at the interface of academia and think tank/governmental organisations (Osborne, 2004; Tchilingirian, 2018), and artist-academics whose careers straddle academia and professional arts (Lam, 2018; 2019a). These hybrid people occupy a distinct position in the academic career system that builds on their mobility across occupational/institutional boundaries.

This hybrid segment of the academic/scientific workforce has always existed but the growth of project-based employment, coupled with recent changes in the rules governing knowledge production have contributed to its enlargement and prominence. My analysis will focus on the external structural conditions and career actors' inward sensemaking and response actions associated with the growth of this hybrid population. It builds on my empirical research on the career work of academic scientists and artists operating at the intersection of the academic and practitioner communities, and the empirical evidence gleaned from the wider literature. I argue that there is an enlarged overlapping space between universities, business and government, and this space is structured around the mobility of people across sector boundaries and supported by a transitional (intermediate) labour market.

Hybrid academics are particularly interesting because they call into question the linear model of academic/researcher career that has been portrayed as an ideal model underpinning the professional identities of academic researchers. They also shed light on the dynamic interplay between career boundary-crossing, identities and knowledge production. Exploring the careers and work experiences of these people will enable us to grasp the new challenges and possibilities that academics/universities face in the more complex and multiple institutional environments in which they now operate.

The growth of extended entry tournaments: Fuzzy work boundaries and career crafting

A distinct feature of the academic career system is that it combines stable employment with more transient positions that offer considerable organisational flexibility. Entry to the stable core and career progression are characterized by a tournament model that generates intense competition and induces high productivity. Freeman et al (2001) argue that the tournament model of career in universities provides a powerful incentive for scientists to work hard to produce high effort and output. This applies to the tenured professors who must continue to do good research to sustain their reputation in the scientific community and also, the pre-tenured researchers, who must compete to obtain tenured positions (Li and Ou-Yang, 2003; Stephan and Levin, 2001). However, it can also produce undesirable consequences for those career aspirants who fail to gain entry to the core and become trapped in the secondary segment of the job market. This is best illustrated by the phenomenon of 'trapped postdocs' much discussed in the literature (Dany and Mangematin, 2004; Lam and de Campos, 2015).

Recent research shows the growth of what can be described as 'extended entry tournaments' in the labour markets of many knowledge intensive sectors in Britain (Marsden, 2011; Lam and Marsden, 2017). This includes academia where competition for entry has become prolonged over a considerable period of a person's working life, and given rise to extended entry tournaments. The background to this is the growth of project-based work and more transient employment relationships. Unlike the more well-structured and regulated occupations/professions, entry to the academic job market is relatively open and has become more so in recent years. Thus, it is possible for more aspirants to enter the sector and compete for entry into the stable core, and to do so over a longer period. The three stylised career tracks in Figure 1 show the different ways in which a given cohort of aspirants may progress,

or not, towards gaining entry to the established segment of the occupation. The figure illustrates the idea that the tracks are not linearly upward, but contain considerable upwards and downwards variation – Weber’s ‘hazard’ - so that there is always a good deal of uncertainty as to which track one is on, and therefore, about one’s likely success in gaining access to the established part of an occupation, denoted by crossing the fuzzy grey line. Given the ambiguity and fuzziness in such open systems, there is also a risk that aspirants continue to compete for entry long after their opportunities in other occupations have started to close down. Thus, there is a likelihood that some will become trapped in the ‘slow stream’, and have to make do with precarious employment conditions because it has become too late to enter other occupations.

While some may well be contented with being stuck in the slow or auxiliary career tracks of their preferred occupations; others may engage in career crafting by holding multiple jobs or constructing a portfolio of projects in order to mitigate career risks. Lam and Campos (2015) refer to the former as ‘extended apprentices’ who have become trapped in perennial temporary employment and the latter as ‘runaway apprentices’ who proactively develop alternative ‘hybrid’ career options. The fuzzy nature of the boundary between the different career tracks opens up opportunities for career crafting and the development of hybrid options that are neither fully inside nor outside academia. For example, in the scientific and technological fields, research has shown a growing trend for young scientists to recraft their careers at the intersection of science and business by engaging in knowledge-intensive start-ups, or combining academic and entrepreneurial careers (Fochler, 2016; Lam and de Campos, 2015; Roach and Sauermann, 2010). In social science and humanities, there is a growing fluid segment of the academic labour market where researchers hold dual work roles and employment relationships cutting across the boundaries of academia, think-tanks and/or governmental organisations. Tchilingirian (2018) refers to these hybrid researchers as ‘interstitial intellectuals’ who work in the semi-autonomous organisational spaces between fields. In creative arts, there is a well-established overlapping job market between academia and media/performing arts where there are ample opportunities for individuals to combine relatively stable academic employment with more transient project-based work in the art world (Bennett et al., 2009; Lam, 2018). These examples show that the ‘occupational threshold’ dividing those who are either in the ‘core’ or ‘auxiliary’ career tracks is not as clear cut as it seems and may have become more fuzzy in recent years.

The decline of traditional linear career paths and loosening of occupational boundaries have stimulated a ‘spirit of exploration’ amidst a growing ‘sense of insecurity’ among academics. Whitchurch (2019) highlights the rise of the ‘itinerant academic’ who exercises agency to mitigate career risks by adding experience and generating roles that can be used to gain credibility outside the university.

Changes in the rules governing knowledge production: from Weber's 'bright lines' to 'grey lines' ?

The blurring of career boundaries and growth of hybrid academics have also been stimulated by changes in the rules governing academic knowledge production. For the last three decades, there have been significant transformations in the way academics relate to the wider society and how research is conducted and managed in academia. The closer ties between universities, business and government (Etzkowitz, 2008), the rise of Mode-2 knowledge production (Gibbons et al., 1994; Nowotny et al., 2001) and increase in practice-based disciplines (Saarela, 2018) have expanded opportunities for academics to conduct research that crosses disciplinary and institutional contexts. In life sciences, for example, there is a sharp decrease in the institutional distinctions made across the academic and commercial settings, to the extent that some authors argue that 'academic and commercial life scientists are now members of a single technological community' (Powell and Owen-Smith, 2002: 107). Many bioscientists have dual occupations or operate as 'linked scientists' whose career work straddles the domains of public and private knowledge production systems (Smith-Doerr, 2005; Zucker et al., 2002). Likewise in social sciences, new sites of knowledge production, referred to as 'spaces between fields' (Eyal and Buchholz, 2010) have emerged in spaces between established disciplines and institutional sectors. Policy research and advocacy organisations known as think tanks are examples of knowledge producing organisations located in such spaces spanning the boundaries of the academic, political, economic and media professions (McLevey, 2015). These spaces are populated by individuals with boundary-crossing career experiences whose credibility emerged from a complex web of relationships across academic and non-academic fields (Tchilingirian 2018).

In parallel with this, universities have also actively developed hybrid organisational structures such as university-industry collaborative research centres and think-tank-like research groups in response to growing pressures for tighter coupling of research to societal returns and the demand for the production of socially relevant knowledge (Lam, 2007; Osborne, 2004; Perkmann et al., 2018). These hybrid research structures enable academic researchers to collaborate with industry or other non-academic organisations on research that is more applied and market-oriented. They may also be enrolled as associates of think-tank-like institutions by the Government, political parties, research councils, business and by think tanks themselves (Osborne 2004). The search for societal and economic relevance in research (and teaching) has also led to a proliferation of new roles and positions (e.g. managerial and knowledge transfer) that require a mix of academic and non-academic competences (Musselin, 2007; Henkel, 2016). Many of these new positions cannot be easily integrated into the work roles and careers of traditional academics. Research suggests that these positions are increasingly taken up by a new breed of 'quasi-academics' or 'pracademics' (Posner, 2009; Whitchurch, 2012)). Many of these hybrid people have specialist professional skills and diverse career trajectories, and some were former practitioners in the allied professional fields who join academia at a later stage in their careers. They often bring with them past knowledge, work norms and network relationships to their current academic roles, and may have different conceptions of their professional

selves and expectations of the institutions in which they now work (Beyer and Hannah, 2002; Henkel, 2016).

My own research shows that these hybrid academics can be profoundly disruptive of established academic norms, work practices and knowledge boundaries (Lam, 2019a; 2019b). Their desire to resolve the identity tension inherent in their hybridity and gain cross-domain legitimacy prompts them to act as agents of innovative practices. For example, in science and engineering, many scientist-entrepreneurs are key players in creating and sustaining hybrid organisational arrangements that facilitate science-business collaboration and the combination of Mode-1 scientific research with Mode-2 industrial problem-solving (Lam, 2007; Lam, 2011). Others challenge the academic norm of communism that gives priority to publication over patents and use the freedom of the hybrid space to promote the legitimacy of patenting as an alternative source of scientific credit. In social sciences and humanities, academic policy entrepreneurs who straddle the academic and policy/political fields have gained prominence and academic recognition in major U.K. research universities. Many of them have prior work experience in think tank and public sector organisations before joining academia, and some continue to pursue their careers using a ‘revolving’ door between the two environments (Lam and King, 2017; King, 2018). In the creative disciplines, a growing population of artist-academics has contested the established knowledge hierarchy in academia that privileged textual/conceptual knowledge. Their persistent campaigning for change has led subsequently to the legitimisation of audio-visual modes of knowledge production in academia (e.g. audio-visual doctoral programmes) (Lam, 2019a).

The extant literature has focused on how the increased privilege afforded to socially relevant and applied knowledge may erode Weber’s ‘bright line’ that separates science from politics and ultimately undermines scientific autonomy and creativity. However, Weber’s conception of a bright line and his portrayal of the value free scholar was not a description of the scientific conduct of his contemporaries: it was his own ‘spiritual exercise’ to solve the potential crisis of the scientists that work in the context of the modern university (du Gay and Ossandón, 2018). One might argue that the erosion of the imagined ‘bright line’ and its metamorphosis to a ‘grey’ line/zone in the contemporary environment calls for a new kind of spiritual exercise – ‘hybrid identity work’ - among those who construct their careers and professional identities at the overlapping spaces of potentially conflicting institutional sectors (Lam, 2010; Lam, 2019a). Understanding how these people resolve their internal identity conflict and negotiate external legitimacy across institutional boundaries can reveal the profoundly disruptive nature of hybrids and their role in influencing the norms and practices of the academic/scientific knowledge production system.

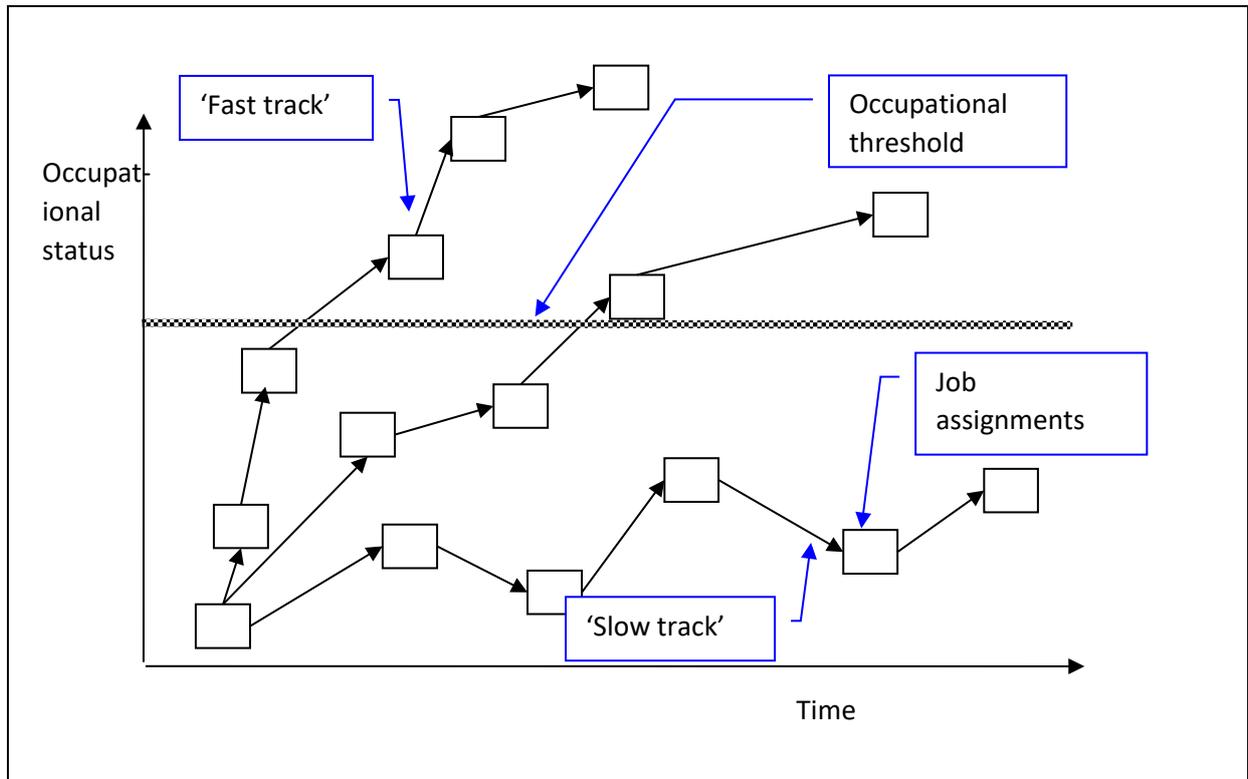
Conclusions

The archetypal linear model of academic/research career in which the ‘cognitive’, ‘community’ and ‘organisational’ careers (Laudel and Gläser, 2008) progress in alignment was never as widespread as commonly supposed. It is an ideal that underpins the professional identity of the ‘pure’ scientist/researcher who clearly demarcates ‘science’ from ‘non-

science' and advocates 'science as a vocation' driven by curiosity and a love for the subject. However, this ideal model remains an unmet career aspiration for many and does not reflect the more diverse and fluid careers experienced by the majority in the contemporary environment. The increased openness of the academic job market and the widening institutional contexts in which academic careers unfold further challenge the dominance of this supposedly ideal researcher model of careers. The continued portrayal of this model as an ideal can create a blind spot in our research and limit our understanding of the more varied possibilities pursued by career actors in response to the shifting academic landscape and work environment. The paucity of research on the career trajectories and knowledge production activities of hybrid academics is a case in point. As a normative ideal that embodies the desire to fulfil a vocation or calling, the linear model may also promote a custodian career orientation and inhibit career exploration among earlier career academics. At a broader societal level, Holden (2015: 42) argues that the ideal model of a pure scientific career promotes a particular moral economy of science and 'instils a willingness perhaps to undergo action that might address the inequality and increasing precariousness of scientific careers'.

That said, the ideal pure researcher model that upholds the vocational appeal of science as a calling remains critically important in protecting the moral economy of science - it acts as a counterweight to economic and market imperatives. The emergence of hybrid actors can be seen as a response for reconciling the conflicting institutional pressures on academics and universities. Hybrids are adept at resolving the paradox of combining opposing values and reconfiguring social boundaries. For many hybrid academics, the vocation of science as a calling and its entrepreneurial application are not mutually exclusive (Lam, 2011; Sauermann and Roach, 2012). To these people, science as a calling may take on a reimagined new meaning. It combines the neoclassical conception of destiny/duty with the modern view that emphasises self-expression/self-fulfilment in the pursuit of hybrid careers and integration of different types of scientific/knowledge activities. This dual meaning of calling with its 'outer and inner requiredness' (Thompson and Bunderson, 2019) was anticipated by Weber in his 1918 lecture on 'Science as a Vocation'.

Figure 1 Career tracks for an unstructured occupational entry for a given cohort



Adapted from Marsden (2011).

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