

Tomlinson, M (2023). A paradigm shift in the dialectical relationship between higher education and the labour market: Reconstructing human capital, value, and purposeful work, *Peking University Education Review*, 21(3), 2-22.

A paradigm shift in the dialectical relationship between higher education and the labour market: Reconstructing human capital, value, and purposeful work

Michael Tomlinson, University of Southampton, Southampton Education School, Southampton, United Kingdom.

M.B.Tomlinson@soton.ac.uk

ORCID: 0000-0002-1057-5188

This article analyses how the relationship between higher education and the labour market can be (re)articulated during times of recent economic and social transformation. We argue that there has been a gradual reframing of employability and HE outcomes from technicist and utilitarian perspectives, often inspired by classical human capital theory, towards relational understandings that include interactive signalling between employers and graduates, as well as the role of capital and identity formation. Many of the understandings of higher education's role in the labour market elide contextual and structural challenges that impact how the supply of and demand for graduates is regulated. The paper applies the New Human Capital approach for understanding the supply of skilled labour and its effective realisation at the demand side, including concerns over labour quality, value and purpose. This further entails a fundamental retooling in our understanding of higher education's role in meeting economic goals and the labour market's capacity for enabling the realisation of graduates' potential for meaningful labour. This raises wider policy and practical implications for how universities and employers may better interact and facilitating sustainable relationships between graduates and employers.

Higher education, labour market, human capital, signalling, capitals, labour value.

Introduction

The relationship between higher education and the labour market is complex and conceptually ambiguous, yet policy makers and some academics often construct the relationship as having clear relational principles (Lauder & Mason, 2020; Tomlinson, 2021). The starting place has centred largely on higher education's role in economic growth, with university graduates occupying a central place in a post-industrial economic landscape characterised by knowledge capitalism and digital innovation (Jung, 2022). Informed by classical human capital theoretical framework, this approach has been hugely influential in shaping national policy frameworks on higher education expansion, financing and curricula. Overall, a powerful economic narrative has developed since the latter decades of the twentieth century that the purpose of higher education is serving the rapidly changing demands of late capitalist market economies. A related motif has been the call for college graduates to be sufficiently prepared through their

higher education to achieve successful labour market outcomes and add meaningful value to the workplaces where they will be employed (Brigstock & Jackson, 2019).

This article provides critical analysis and reformulation of the traditional understanding of the relationship between higher education and labour markets, including the ‘employability’ agenda upon which this is often predicated. We aim to provide critical insight on how this relationship has been formulated, mainly at a policy level, and what this engenders for higher education institutions and their alignment to the labour market. Attention is given to the numerous contextual and structural challenges that operate beyond HE systems, but which influence some of the (unintended) consequences of policies which are intended to promote their correspondence with the labour market.

Challenging the continued economic framing of higher education’s role and purpose is important as such framing continues to eschew many complex realities in relation to its ongoing expansion, internationalisation and marketisation, as well as current debate about work organisation and labour forms in an era of marked digital disruption (Kaplan, 2021; Chan, 2016). Yet the goal here is to do more than critique this for its own sake and instead provide an alternative conception of both human capital and understandings of human capability and relations to economic life that goes beyond utility maximisation. This requires more meaningful policy engagement with how HE can support graduates’ future employment outcomes. Furthermore, this also refocuses the issues away from the instrumental accumulation of human capital towards individuals’ own relationship to their human capital, including its role in facilitating access to purposeful employment pursuits that have value beyond enhanced wage return.

The article argues that conventional economically-driven and policy-led framings do not capture the complexities of higher education’s relationship to the labour market, largely because many of the issues facing HE systems and its key stakeholders relate to wider structural challenges that exist outside. Drawing on an alternative reading of human capital theory (Brown et al., 2020), we show higher education’s relationship to the labour market can not be sufficiently explain by a technicist correspondence of supply and demand for higher level skills. This interface is instead shaped by a range of structural, socio-economic and labour market forces that in turn influence how graduates fare when they enter the economy. The ways in which higher education translates its value to the labour market needs to acknowledge the

relational nature of individuals' experience of economic life, including their values, identities and other life narratives beyond the accrual of private good human capital.

This article first provides an overview of the dominant human capital framework and how it has influenced many of the HE policy frameworks around continued expansion, skills policy and institutional accountability. The paper then introduces the reformulated version of human capital developed by Brown et al., (2020) and then examines wider contextual and structural challenges working outside of higher education institutions, including demand-level factors (employers) and graduate inequalities. We further consider the nuances in people's relations to their own capital and labour contribution through a discussion on meaningful and purposeful work before a discussion on what such a reconceptualization means for higher education policy in this area.

Human capital, supply-demand matching and higher education as a private good investment

The relationship between higher education and the labour market has been understood principally through the conceptual lens of human capital theory (HCT). In essence, the theory argues that higher education generates both public and private economic value by making individuals more productive as a result of additional time spent acquiring formal knowledge and skills (Denison, 1962; Becker, 1976). The accumulation of additional skills has a direct economic trade-off as these are transferable, commodifiable and marketable, enhancing both a workplace's productive capacity and, therefore, an individual's wage return potential. The theory presents post-compulsory education, in particular higher education, as an economically generative institution that enhances individuals' functionality in the labour market and access to private goods, not least enhanced wage premia. Becker conceives the skills provided by higher education in terms of both specific and generic skills – whereas the former enables individuals to access specific areas of technical expertise commanding higher wages, the latter can be more universally adapted to open up a wider scope of occupational choice. Essentially, the investment one makes in higher education provides a powerful platform by which to operate in the labour market. By extension, individual behavioural choices towards both education and training and subsequent employment are guided by individualised rational decision making. Individuals make private cost-benefit calculations around the decision to participate, weighing benefits (mainly wage returns) against costs – now increasingly those towards participation.

The continued expansion of higher education over time is a prime example of a policy response informed by human capital logics. This works from the premise that the supply of educated labour is matched by the demand with clear alignment between the skills provided by a mass higher education system and those required of a knowledge-driven economy. Higher education serves an important corrective to skills shortages, met by an educated workplace who can add value. Furthermore, this is seen to reflect a Say's law whereby continued supply of skills generates further demand, particularly when that supply engenders technical skills that enable markets to innovate and expand their technological infrastructures (Autor, 2015).

Many countries have moved towards high participation rates where nearly up to half their members have some form of post-compulsory education (Cantwell et al, 2018). The expansion of HE is thus a response to this belief by striving to resolve immediate skill problems and to foresee future skill needs (COM, 2017). Furthermore, employers are willing to fully utilise the skills of their workforce by adapting their production process in response to any changes in the relative supply of labour (McGuinness et al, 2018). HE expansion fulfils dual social and economic goals as it enables more heterogeneous groups to access opportunity structures whilst ensuring the economy is serviced by more skilled and agile future employees.

Overall, human capital theory presents a neat mechanism between the supply of skilled labour and its utilisation. Higher education enables individuals to become productive agents who are more employable because they own and directly exchange their knowledge and skills. Returns to education are determined by the skills demand of jobs, how much a job is in economic demand and the levels of education required to execute jobs, and further, add productive value to a company (Sattinger, 1993). Employees make rational choices in selecting jobs to maximise income and gain an advantage over less qualified individuals. Specialised forms of human capital enable workers to be productive in specific tasks which allows employers to pay higher wages where demand for such skills is high. This, however, overlooks how demand for specific skills (including those of higher education graduates) varies based by both industry-specific patterns, as well as by relative levels of economic scarcity or buoyancy (Henseke & Green, 2017; Holmes & Mayhew, 2016).

Human capital defines the purpose of HE, and its continued expansion, principally in terms of economic growth. Such framing has become inextricably linked to a range of policy approaches which have sought to make higher education institutions more efficient and publicly

accountable. Market-driven reform across many higher education systems has brought into focus its wider value and how it is conceived as a social and economic good. The explicit policy framing of higher education as a private good, mainly couched in terms of individualised concerns for personal economic return, has clear implications for students' relations to universities and how they value and value their experience. Much of the research over the past decade has highlighted students' growing identification as consumers, intensified by increased personal contribution to HE (Brooks et al., 2022). Within a more market-driven system, the rules of institutional competition prevails. A largely performative agenda that seeks to measure institutions against each other on how well they perform in a range of overarching metrics has ensued in the UK, especially around student satisfaction, retention and graduate employment (Gunn, 2022).

The ideological creed of human capital theory has clearly extended to recent discourse on the value of higher education and how it can be measured. In the UK, the existential status of programmes and institutions increasingly rests on their ability to successfully ensure measurable employment returns. In the UK for example, since the start of the 2010s, there have been stronger moves to ensure that there is more publicly available information about the value of different institutions. Institutions are obliged to publish key information sets about specific outcomes they generate and how this compares relative to other institutions in national league rankings. The more recent Teaching Excellence Framework and Graduate Outcomes (TEF) framework use explicit markers of quality in terms of student satisfaction scores, retention, widening participation and graduate employment returns to assess the value-added associated with each university. The latter is a very significant component in how the public value of an institution is appraised, mainly through the criteria of how well it generates successful outcomes. The market exit of degree programmes and institutions which provide purportedly lower 'economic value' has been heralded as a way of sharpening provision and ensuring that quality is tightly coupled with demand (DFE, 2023).

Skills and more skills

A sub-concept within the human capital model is skills, which is often defined as individuals' technical capacity to add value through the application of specialised expert knowledge. Higher education is an important institutional provider of skills, mainly through the subject disciplines that students formally learn within. The more skills student can acquire, the more these will be diffused within the economy and the more productive they and their workplaces will be

(Mason, 2020). These again will generate further demand for skills as services and goods become upgraded through skills-based innovation and design.

One of the complicating factors here is that the skills acquired in educational contexts are not easily matched with the labour market, even during times of economic buoyancy (Holmes & Mayhew 2016). Skills instead are contextual and demand-based: those which have any economic value are acquired in the labour market and then realised through meaningful engagement in work activities. This problem is often reinforced by alleged employer discontent with the skills provided by higher education, which are often reported to be lacking when graduates enter the market. Such rhetoric has been conveniently adopted by policy makers eager to increase accountability and market-led measures on institutional performance (Keep, 2020).

The skills logic has often been adopted widely within institutions as an attempt to harness improved skills levels and meet shifting employer demands. One of the main emphases has been promoting modes of curriculum, learning and assessment that have more applied and vocational relevance (Jung, 2022). The core purpose of higher education is seen as instilling appropriate skills and dispositions, mainly via the correct forms of training and curricula, to meet the increasing complexities of contemporary jobs. The more that formal learning programmes can be modelled on purported employer demands and ‘skills gaps’, the more graduates will be able to meaningfully adapt and contribute to the economy (Hora, 2016). This ultimately privileges a technicist conception of educational development, founded on principles of acquisition, accumulation and transference. Thus, if an individual can be formally instructed to acquire specific skills, such as ‘effective communication’, the demonstration of such communication when the individual enters the labour market will enhance their performance and productivity.

Developing a clear and coherent skills formation strategy has proved an enduring challenge for higher education institution and other public bodies. This is largely because there is no common ground in understanding what skills are valuable and how they directly impact on an individuals’ employment prospects. The critique of skills discourse in educational policy has been very longstanding (Ainley, 1993), but some recent critiques have provided further insight into why these continue to be problematic. Wheelahan et al., (2022) have discussed how skills policy often works from a reified understanding of skills whereby they are presented as

conceptual realities which have an identifiable role in human performance. This is often accompanied by a set of unquestioned assumptions about their value, relevance and role in leveraging improved personal and workplace outputs. When reduced to codified behavioural properties, skills frameworks present a hollowed-out version of human action which is disconnected from the cultures and contexts in which their value is enacted.

The skills paradigm therefore constitutes a crude form of possessive individualism which disconnects individual action from authentic meaning-making when people negotiate the labour market. Holmes (2017) also provides a critique of the role of discursive regimes in shaping thinking and strategic planning within institutional life. Much of this is based on the propensity for institutions to adopt linguistic devices or categorical taxonomies that have an independent reality to what is performed in the so-called 'real world'. As such, they can be encoded into performance criteria and, increasingly, competitive marketing that provide unique qualities to graduates because of attending a specific institution. The challenge is then for institutions and educators to pre-empt what skills matter and how they translate into improved employment outcomes – a task made more difficult by the ambiguity of terminology and the interchangeability of notions such as 'skills', 'attributes' and 'qualities'.

Ultimately, both human capital framework and the skills policy agenda which it reflects have placed sustained demands on higher education institutions. The extent to which these demands can be met raises significant questions about how the nexus between HE and employment structures should be framed, including the economic purpose of higher education and the outcomes it generates.

We now turn to a different analytical focus which considers wider structural and contextual issues in the HE-employment interface often overlooked by traditional economic perspectives. This approach focuses on demand-based and contextual factors, including the role of employers, economic change and structural inequalities in accessing occupational areas suitable for highly-qualified labour market entrants. We look at the role of signalling and other forms of capital that explain how higher education qualifications are interpreted as valuable. Further consideration is given to the problem of labour market equality among graduates as well as the role of employers in influencing employees' access to suitable forms of employment and how they can meaningfully contribute to higher education institutions.

Re-framing the HE-labour market interface

Critical analysis of the traditional conceptual approach to the HE-labour dialectic raises some fundamental questions around how sustainable conventional human capital framework is at a time of social and economic change. The policy solution has tended towards increasing the supply of graduates with enhanced skills levels, as this will address many of the challenges of economic change. The problem of translation, that is, how the activities and achievements within higher education manifest themselves in a favourable labour market tend to be framed around technicist matching.

This issue has been raised by Brown et al., (2020) through what they refer to as a crucial distinction between labour scarcity and job scarcity. The labour scarcity principle works from an understanding that supply of skilled labour has not kept pace with changing economic demand. The demand for skilled jobs has increased over time yet has been under-served by a post-compulsory system that does not provide sufficient or appropriate skills to meet the scale of technological change. The problem is framed as a lack of suitable human capital flow to meet rapidly changing skills demands. According to classic HCT, opportunities for skilled employment are abundant but remain out of reach to those unable to leverage favourable economic returns in an open competition for skills. Underemployment reflects a structural misalignment between educational and labour market outcomes: the lack of return on human capital is a consequence of not meeting extended skills demands.

The alternative principle of *job scarcity* works from a fundamentally different premise. Rather than job competition reflecting an open contest for high demand forms of labour, the labour market has not generated sufficiently good quality jobs to meet the expanded skills potential of the workplace. Furthermore, technological developments have resulted in increased deskilling of many professional or middle-level jobs, and in some cases their obsolescence. This connects to these authors' earlier argument (Brown et al., 2011) that, over time, not only have lower-skills ('blue collar') employment become at risk from automation or cheaper forms of global offshoring but also increasingly have many middle-level jobs. The incapacity problem has occurred precisely at a time when demand for educational qualifications has reached its highest levels globally (Cantwell et al., 2018). The problem of job scarcity does not simply concern access to equitable forms of employment, but also opportunities to fully capitalise on any accumulated human capital.

Understanding individuals' relationship to their own capital, including the complex relationship between labour and value and the identities which underscore such relationships, is also an important issue. This is even more pertinent in a labour market context marked by not just work intensification, but uncertainty in the nature of labour process and production stemming from technological advancement. Reframing the supply-demand relationship between what higher education provides and what the labour market requires, raises some important questions. What role do higher education qualifications play in shaping outcomes? How equitable is access to appropriate forms of graduate jobs and, relatedly, has equity been enhanced or challenged by mass HE? What is the role of employers in regulating access to equitable employment, both at the level of selection and nurturing graduate skills and talent beyond the entry phase? Can we find a more meaningful understanding of graduates' economic role, including the principles of their employability, beyond human capital and skills accumulation?

Signalling, social exchanges and capitals

Alternative conceptual approaches to the value of HE in the labour market have paid closer attention to the relational and relative dimensions involved in the HE-labour market nexus. A relevant conceptual alternative, albeit working from similar economic foundations, is signalling theory (Arrow, 1973; Spence, 2002; Connelly et al, 2011). Accordingly, the qualifications that higher education produces are valued for providing information about a prospective employers' potential ability, and therefore, productivity. Key employment stakeholders operate under conditions of uncertainty and often imperfect information: employers can only infer about a job candidate's future employment value and the job candidate will also only have partial information about potential positive outcomes if employed in a targeted company. Both parties need to send information exchanges in terms of their potentiality that help reduce informational opacity and uncertainty. Employers use higher education qualifications for screening prospective employees. Higher education qualifications are proxies for skills and productivity rather than direct components of them. The interpretation of signals therefore plays an important part in how employers screen graduate candidates. How effectively a graduate communicates or translates their educational profile into favourable information signals is crucial to hiring decisions. Inferences employers make about likely 'fit' and productive potential come down to both tangible information (qualifications, reported skills, work experience) and less tangible (behavioural qualities, work ethic, shared interests).

The value of higher education credentials in the labour market can partially explain the investment decisions employers make towards university graduates. The traditional social exchange between higher education and the labour market has been largely predicated on qualifications between reliable signals of future productivity and efficient trainability of graduates. This relationship has been significantly complicated by mass higher education which has reduced, rather than increased, the informational transparency of degree credentials. Essentially, in contexts of mass credential production, formal qualifications lose their status value which means that job candidates must do more to leverage further signalling potential. The information exchange between job candidates and employers is based on more elaborate communication strategies as they both strive to convey and screen job potential.

According to the principles of labour scarcity, weakened labour market conditions such as recession results in employers increasing the skills demands required from employees. Employers have reduced options to select the more appropriately skilled graduates due to the structural misalignment between education institutions and workplaces, also attributable to a weakened economy. It becomes less difficult for employers to select from a finite pool of graduate talent who can more easily signal the productive value of their credentials. Alternatively, in massified HE contexts, employers have a surplus of over-qualified, abundantly skilled employees who are part of the same job competition queue. They can in turn easily increase signalling demands and engage in forms of occupational filtering that decrease the formal value of credentials and make entry criteria more challenging for suitably qualification candidates – often under the guise of banners such as ‘healthy competition’ and ‘talent management’.

The latter situation has been proved to be more of a reality for new generation of graduates, and certainly over the past few decades. Labour market shocks such as Covid-19, irrespective of how transient and differentially impacting this has been, have shown to impact most severely those entering the labour market for the first time (Forsythe et al., 2022). Such contexts significantly diminish the value of formal qualifications, but also substantially limit opportunities for graduates to enrich and express their signalling value (for example, gaining a training opportunity) (Tomlinson et al., 2021). This brings into play the importance of other forms of social and cultural assets that help enrich their profiles and help negotiate employers’ increased recruitment demands and become crucial in how ‘employable’ new graduates are perceived to be and translate their future labour value.

Higher education institutions continue to generate human capital value for graduates, and this provides a foundational signal of potential which explains why many employers continue to recruit graduates over non-graduates (Belfield et al., 2018). They can also enhance individuals' capacity to form meaningful social relationships and facilitate access to wider socio-cultural opportunities and horizons. Yet the signalling value of these alone is limited because they relate to increasingly shared experiences and opportunities for those who have participated in higher education.

HE and the endurance of structural inequalities

One of the promises of the development of mass higher education was the reduction of wider social inequalities and the enhancement of social mobility (Scott, 2019). Yet an enduring paradox that policy makers have yet to resolve is: why at a time of such widespread accumulation of human capital do so many graduates struggle to find suitable employment? Levels of graduate underemployment have increased since the start of the century and were on the rise in the period preceding the Covid-19 pandemic (ONS, 2020). The pandemic clearly exacerbated such patterns, with many graduates during the 2020-21 period being confronted with significant contraction in recruitment, early training pathways and job offers (Ray-Chaudhuri & X, 2023; Tomlinson et al., 2021). Consequently, this cohort of graduates were more likely to experience initial wage and career penalty and marked disruption to early career trajectories.

Whilst the impacts of the pandemic might not have been as profound as first anticipated, and levels of employment and underemployment returned to pre-pandemic levels, it did expose the ways in which inequalities were played out across the graduate population. This includes groups who have traditionally been less well insulated from strains of economic recession and enjoy far less in terms of protective support mechanisms. Whilst serving as disruptive shock events, experiences such as economic recessions and pandemics impact individuals differently depending on levels of resources that minimise its most deleterious effects. For example, some of the most vulnerable social groups, including those with disabilities, neurodivergence and special educational needs were shown to be most disadvantaged in achieving returns on their higher education, more likely to be excluded from equitable job opportunities and to experience sustained unemployment (Tomlinson et al., 2021). Evidence over time has shown that

graduates' socio-economic profile, gender and ethnicity continues to have a significant influence on how well graduates fare in their careers (IFS, 2020).

Much of the extant research has shown how this works at both a systemic level and at the level of graduates' personal exchanges with the labour market. At a systemic level, there is a clear pattern of socio-economic advantage in terms of accessing the highest wage returns and opportunities, most typically those from socially advantaged backgrounds. This is most pronounced in market-orientated contexts which contain highly-stratified higher education systems. Whilst accessing and succeeding in HE generally is more likely for those from more advantaged social backgrounds (Reay, 2018), a further salient issue is the relative status value of their higher education. There is clear evidence globally that, in stratified higher education systems, graduates from more advantaged social backgrounds graduate disproportionately from the highest-ranked institutions (Mok and Jiang, 2018; Boliver, 2013), which plays a crucial role in their access to the best graduate jobs.

There are several factors accounting for the relationship between institutional status and opportunity in the labour market. The first is the time-honoured symbolic-status of higher-ranked institutions. They have gained an historical reputation for producing the best 'world-leading' research and top calibre graduates who have reached the elite stratum of occupations. Related, is the tightly selective nature of these institutions, ensuring that only top performing and academically elite students can enter. This often means that quality becomes conflated with prestige, even though the labour market outcomes of graduates from elite institutions tells us very little about the quality of educational provision (Ashwin, 2020). The second is the formal, sometimes implicit, relationship between top companies and higher-ranked institutions. In the bid to attract and recruit the most sought-after graduates, many leading-edge companies construct notions of 'talent' around graduates who have attended the most prestigious institutions given that these contain what are perceived to be a finite pool of future business elites (Lauder et al., 2018). Employers in elite occupational areas rationalise such decisions on commercial rather than social justice grounds. It is only rational to select and then nurture those who will succeed in competitive and highly demanding organisational fields. Hiring those who require additional training and support runs inevitable risks.

Graduating from a prestigious institution provides formal institutionalised cultural capital that feeds through to the embodied cultural capital of individual graduates who feel naturally drawn

to elite occupational fields. According to signalling theory, both graduates and employers draw on past knowledge and experience of likely favourable returns. Elite employers recruit from high-ranked institutions because of the proven performance of such graduates and status is seen as a reliable marker to address imperfect information. This often means that, even accounting for how much talent an individual demonstrates at HE level, some graduates deploy more successful signalling strategies than others.

A more nuanced socio-cultural angle has looked at the cultural composition of elite occupational fields and how business elites and graduate elites operate by a set of often tacit and powerfully coded behavioural schemas that affirm each other's social standing (Rivera, 2015; Friedman and Laurison, 2019). Such processes also serve to exclude those who are not culturally primed in this way via powerful processes of symbolic closure (Tholen, 2017). Many of the interactions between graduates and employers are based on symbolic information exchanges that conform to affective rather than purely technical valuations of suitability. Other research in this area has focused more on the way in which inequalities are reproduced through individuals' interactions in social space (Bathmaker et al., 2013; Ingram et al., 2023). This illustrates the significant role that pre-existing social advantage plays in the ways in which graduates understand and respond to the shifting demands of the graduate labour market, which in turn influences the strategies they can deploy to access competitive employment. Individuals' formative socialisation provides a set of engrained dispositions that instil a sense of what is achievable and possible and how to best approach the social and economic world. This ultimately makes them more attuned to engaging in work-related pursuits and other life projects which allow for a hyper-mobilisation of their credentials and related forms of capital. When used as an anticipation to positional competition, this amounts to a form of 'opportunity stacking' whereby work-related achievements and experiences are used to leverage an enhanced position in accessing opportunities (Wright and Mulvey, 2021).

The role of employers and demand-level mediators in graduate employment

There is an abundance of critical research exposing the inherent inequalities in accessing occupational areas which entail considerable positional competition amongst highly-qualified job seekers. There has been a tendency for employers to remain a powerful, yet ambiguous, stakeholder in the HE-employment nexus, mainly because their role beyond judgement-making and selection has not always been made clear. The development of mass higher education has offered opportunities and challenges for employers. The main challenges concern the

weakened signalling power of formal qualifications and distinguishing between graduates with similar educational and social profiles. This nonetheless provides a surplus of graduate talent which operates in both times of economic buoyancy and depletion (Mayhew and Holmes, 2016).

Much of the research in this area has explored employers' recruitment decisions, their perceptions of graduate talent and how signals are used during job selection processes such as interviews or assessment centres. Much of the analysis has centred on employers' conceptions of 'talent' and how this informs judgement about the calibre of different types of graduate (Brown & Hesketh, 2004; McCracken et al, 2016; Anderson & Tomlinson, 2021). Talent is often framed as a scarce and elite resource which is typically confined to a small group of graduates, but which converts itself into substantial organisational advantage. However, in many cases, this has either become a shorthand for behavioural competences that are the preserve of socially advantaged graduates (SMCPC, 2015), or framed around nebulous selection criteria to justify recruitment decisions in competitive contexts (Anderson & Tomlinson, 2021).

A variety of empirical themes have been illustrated by research into employer gatekeeping practices, all of which carry social equity implications given the exclusionary mechanism that continue to characterise hiring decisions. The first is the growing signalling opacity of degree qualifications and the need to exercise more stringent screening practices. Technician criteria such as the capacity to meeting job performance demands, whilst being imperative for some occupations, is not the ultimate guiding principle in shaping perceptions of talent, or even simply role suitability (Handely, 2018). Many of the decisions instead appear to be informed by a range of personal, social and cultural criteria based on anticipated socio-cultural fit (Rivera, 2015; Hora, 2020). As Hora describes, the principles of cultural sorting based on shared repertoires of interests, lifestyle, and cultural synergies are powerful encoded in the hiring process and inform judgements about graduate calibre and suitability. Employers screen largely using intangible socio-cultural criteria, representing a form of homo-cultural exchange between employer and job applicants. Such practices also demonstrate the ways in which signals carry information about resources – typically personal, cultural and affective – concerning the make-up of candidates.

Research has shown how many of the communicative signals that employers interpret is mediated by the institutional context of workplaces (Cai, 2013). The ways in which graduates and employers interpret signalling information often comes down to normative judgements that are referenced against an organisation's culture, rules and regulatory norms pertaining to what constitutes skilled social action. Employers may decode signals through the lens of national and cultural context, for example, signals on cooperation rather than individual talent being more valued in collectivist or regulated labour markets. In a recent elaboration of this approach, Cai and Tomlinson (2023) have integrated the signalling model with a capitals perspective: essentially, employers' use of signalling is referenced against the institutional context in which future graduates will be employed, including institutional beliefs, norms and values. This provide a powerful lens through which graduates are appraised and upon which their future performance is judged. These judgements are not so much about technical skills, but also a range of socio-cultural and behavioural schemas that are seen as crucial resources in how well graduates will integrate within given workplaces.

Further critical scholarship has sought to address the role of employers in enhancing graduates' initial and sustainable employment outcomes (Keep, 2020; Fugate et al, 2021; Akkermans et al., 2023). The role of employers in graduate outcomes constitutes more than that of gatekeepers of graduate talent and scrutineers of HEIs' offerings. Both graduates and institutions must translate their potential, but the problem of translation is two-way between HEIs and workplaces. Employers too must translate their offerings and role in developing graduates. This point has been developed further by Akkermans et al., (2023) to highlight employers' proactive roles during three key phases of initial employability development – before graduates enter (pre-flow), during the job-entry negotiation stage, i.e. recruitment (through-flow) and during their early career stages (through-flow). Acknowledging the processual and developmental process in finding and sustaining employment, such an approach highlights the shared responsibility between key stakeholders in the employability contract. For example, employers can play a meaningful role before graduates enter in the forms of career-enriching work experience and internship. When graduates are recruited, employers play a significant role in further enhancing employees' human capital, and other forms of career capital, through the provision of efficacious professional development and workplace career learning opportunities. This centres on the investment decisions employers are willing to make in developing and retaining graduate talent.

The point of discussing employers and demand-side forces is that this is integral to reframing human capital perspectives beyond meeting the performance imperatives of jobs. Much of the value of human capital depends on how successfully this can be socialised or adapted into other forms of capital that influences the initial stage of employability formation. Employers play a key role in mediating these both via selection and active workforce development strategies, all of which impact directly on the graduate opportunities and outcomes beyond what higher education provides.

Meaningful and purposeful work

A core assumption built into traditional human capital theory is that individuals' labour market motivations are founded on crude forms of utilitarian self-optimisation – that is, individuals work to maximise earnings potentials and ensure favourable returns on any investments made towards further learning. This essentially conceptualises human agency in terms of economic calculus: motivation and human desires are reducible to economic gain and finding the most efficient means of achieving these. The labour market is depicted as an exchange of skills which carry differential economic value which determines productivity and, in turn, wage capacity. Individual employees own and exchange their human capital as a commodity to be sold in exchange of favourable returns. Economic reward is the primary value individuals ascribe to their place in the labour market because this establishes not only their market freedom but also social worth. However, conceptualising people as 'homo economicus' carries assumptions about the key drivers underpinning their relationship to paid labour.

The new human capital approach calls for a reformulated notion of human capital which re-examines individuals' relationships to their own capital, and crucially, the all-important connection between labour and capital. A key distinction can thus be drawn between humans as *capital* and humans as *capitalising* where the emphasis is instead on the "exchange and translation of individuals' activities leading to productive work within (a) wider definition of contribution" (Brown et al., 2020 p141). One of the wider goals of education, not least those forms that lead to enhanced capacity to capitalise on human capital, is to enable future graduates to think more meaningfully about their relationship to their labour value and meaningful future economic contribution. This goes to the heart of what it means to experience 'positive' returns and outcomes because many of the current measures of graduate outcomes (i.e. finding employment after 18 months) reveal little about the nature or quality of that employment.

Many of the markers of ‘objective’ career success (Heslin, 2005) centre on a linear and restricted conception of what is valuable and meaningful in working life. This largely pertains to externally defined, or ‘extrinsic’ markers of success and value, often resting on factors that provide public recognition of one’s value: wage, status, promotion. These are clearly distinct from more substantive and enduring components of success, all of which may have limited external recognition. This is also relative. A person may have high wage returns and formal status (all successful human capital indicators) but feel limited subjective success as this is overridden by burnout, a toxic working environment or minimal job satisfaction.

Three important dimensions, sometimes interrelated, are salient when reconceptualizing people’s relationship to work and what may constitute purposeful work: value, meaning and identity. They specifically concern what a person finds important in life and aims to build a life narrative around; pursuing activities that matter and provide core life purpose; and constructing a self-perception and concept that empowers one’s sense of agency. The role of meaning in how people navigate life trajectories has been a theme in philosophic and psychodynamic theory over time (Frankle, 1963; Maslow, 1962). Meaning is thus an important element in how people are existentially aligned to their wider social environments. As Steger and Dik (2010) discuss, employees find meaning both through their work and during their work – i.e., relationships with others, developing a sense of contributing to something worthwhile and finding intrinsic value through ones work – is a paramount goal. The notion of ‘vocational mission’, sometimes referred to as ‘calling’, has been used to describe the social and psychological foundations of career affiliation and identity formation (Dik and Duffy, 2009). Vocational mission encompasses a range of personal, social and civic values that provide an enduring sense of purpose and, if channelled externally, connection to a greater good.

Research on graduates’ values sets reveals the endurance of substantive values as central to what graduates want to achieve from working life (Allen et al., 2007; Allan et al., 2017). Such values concern the pursuit of meaningful work which provides a platform for personal development and self-expression, including job quality and sustaining interest. The development of intrinsic career values, informed by a sense of meaning and purpose through future work, are often significant in helping sustain an early career narrative. Research by Jackson and Tomlinson (2019) found that, whilst extrinsic and intrinsic values sets do not exist independently, many graduating students attach high importance to substantive values

pertaining to creative involvement, job quality and fulfilling a sense of vocation. This also relates to how engaged and proactive they are in their early career management and how well they are able to sustain career goals despite experience of early setbacks.

Not surprisingly, the pandemic forced many graduates to reevaluate their goals in contexts where opportunities became scarcer – most wanted job security and a decent overall income to provide relative levels of existential certainty in a higher-risk context (Tomlinson et al., 2021). This research found that the most important values recent graduates conveyed were societal contribution ‘or giving something back’ or making a ‘genuine impact’; a theme which resonated with contemporary discourses on ‘essential work’ at a time of national emergency. As with previous research, the stronger sense of vocational purpose connected to the degree to which graduates were able to navigate challenging early career pathways, including managing the pandemic crisis entailing delayed job entry.

The other significant dimension in purposeful work is work identity and the extent to which employees are able or willing to invest a strong sense of self in working life to enable them to form values and goals and identify with different areas of the labour market. Fugate et al., (2004) discuss how career-related identities provide a ‘compass’ that enables people to sense-make about the future and form meaningful employability narratives that connect different educational, work-related and life experiences. This can be enabling if it provides an affective and motivational basis for individuals to realise idealised selves through their future work. As Smith et al., (2019) note, the process of identity formation is dynamic and relational as self-identity is often formed through roles that graduates enact, as well as crucial processes of socialisation into work-related contexts. Much of this depends on how successfully claims to an emerging identity are warranted and affirmed by significant others. The formation and mobilisation of identity capital (Cote, 1997; 2016) – that is, investing in a strong sense of who one is or might become through their work – enables individuals to establish a purposeful career narrative platform that merges their ongoing personal and professional selves. As with the notion of ‘vocational mission’, such identity work helps individuals navigate multiple demands, including work intensification, routine job change and technological upheaval.

Discussion: Towards an alternative policy framework for enhancing graduate employment

The traditional human capital approach to understanding higher education and its role in economic development is not sustainable, either as a basis for national policy or for understanding higher education's role in human capability. This paper has discussed how analysis needs to engage with deeper relational issues that exist in higher education's correspondence with the labour market. Employers have remained a phantom player in the role of economic development, largely because their role has been depicted as recipients of skills rather than purveyors, or indeed further enablers (Keep, 2020).

Moving the focus beyond accumulative human capital is one part of acknowledging the institutional and structural complexities in higher education's connection to the labour market. This necessitates reframing graduates' relationship with their future employment and the meaning they ascribe to their own employability and, relatedly, labour value. Many of the official governmental promises on the link between education, skills and returns are largely unfulfilled as returns on investment in HE have declined over time, exacerbated during periods of economic instability (Rothstein, 2021; Suleman & Figueireido, 2020). The principle of job scarcity cuts directly to the wider problem of static social mobility, underemployment and perceptions of low job quality. This can be easily redressed as an educational problem and sidestepped by the shorter-term solution of continued high participation levels because "It is easier to create educational opportunities than jobs" (Marginson (2016, p. 420).

It has therefore become important to develop more coherent policy frameworks on which to enhance the prospects of future cohorts of graduates. Employability frameworks are targeted at the level of HE because they provide a relatively straightforward supply-side solution to plugging skills shortages. But this does little to address the problem of rising un- and underemployment over time because many organisations continue to occupationally filter graduates for non-graduate jobs, especially in flexible labour markets like the UK, US and China (Cappeli, 2020). The imperative to recruit trainable and adaptable graduates at a lower cost means that the hierarchy of job applicants forming the structural job queue is much less clear. This also means that equating employability with higher education performance, at both an individual and institutional level, greatly overplays employers' reliance on crude performance measures for signalling graduate talent (Di Stasio, 2014). These tensions have been found in multiple national contexts, including China and the US, where the expansion of

HE has impacted on social mobility and access to professional fields (Chan and Zhang, 2021). Practices of social closure and positional competition become more pronounced as job assignment based on formal links between degree subject is replaced by competitive signalling, often linked to reputational prestige of higher education institutions and the projection of ‘world class’ stature (Ren et al, 2017).

One fundamental issue concerns the role of employers and workplaces in enhancing graduate outcomes if this cannot be achieved by HE institutions alone. The skills policy discourse has effectively led to a form of institutional behaviourism whereby education institutions are pre-empting externally defined criteria of what provision they should be implementing and assessing their activities against (Wheelean et al., 2022). The more effectively they can demonstrate this, the more they will be rewarded or avoid sanction. Apart from diverting them from other important educational goals, this delimits the role of demand-side actors in enhancing employees’ productive capacity. The evidence is clear now that employers are a key stakeholder in enabling graduates to fulfil their economic potential and develop sustainable careers (Fugate et al., 2021; Akkermans et al., 2023).

The role of demand-side levers in enriching human capital is crucial to wider debates about job quality and purpose. This is clearly important for graduates who have experienced initial forms of underemployment. Given also that many disadvantaged graduates lack first-hand forms of social and cultural capital or struggle to attain equitable first-time employment (Ingram et al., 2023, finding equitable pathways to graduate-level and sustainable job opportunities is clearly a policy imperative. These challenges further correspond to the growing market orientation of many national HE systems and economies where the clear matching of graduates to formal labour market positions has declined. In the contexts such as China, other factors come into force in shaping access to professional fields, not least the role of social networks and the personal qualities of graduates (i.e., *guanxi*). This extends to the criteria employers use in this context, increasingly entailing behavioural competences and dispositions around resilience and values sets that align to workplaces (Wang et al., 2022; Cooke et al., 2014). Therefore, as the formal link between higher education and job allocation weakens, inevitable questions emerge over the flexibility and adaptability of current provision for equipping graduates with resources beyond technical skills and subject knowledge.

Other countries such as France, Germany, Finland and Portugal have also witnessed the growing misalignment between HE system and their labour markets, largely as a result of the growing massification and marketisation of these systems. In all these contexts, it appears that employers have raised requirements to reduce uncertainty over the value of formal qualifications (Behle, 2020). Consequently, the regulated labour market model of matching graduates to specific occupational positions has become increasingly obsolete with less segmentation between graduate and non-graduate jobs in these contexts.

At the level of HE provision, more innovative practices are required in integrating different facets of curriculum in ways which support graduates' quest for meaningful and sustainable careers beyond checklists of skills and codified records of achievement. Employability policies, including those based on measuring the utility value of degree and graduates' purported economic success, need greater nuance in capturing the efficacy of institutions' offerings in facilitating improved graduate outcomes. As evidence indicates, the building up of career capitals, identities and vocational dispositions are more important than acquiring functional skills.

A continued problem with current employability discourse is that it often works from a so-called narrow or 'thin' conception of career development (Souto-Otero et al., 2023) based on the acquisition of qualifications and skills for short-term employment returns. They instead need to encompass thicker and more developmental conceptions of human capital and future skills that appreciate the complexities in translating the supply of educated individuals into meaningful and value-based labour. Connecting with student and graduate labour values and the development of rich employability narratives beyond employability skill acquisitions (Quinlan & Renninger, 2022; Jackson & Tomlinson, 2019) would provide a sound basis for measuring the effectiveness and, by association, value of formal educational provision. Clearly, a considerable new body of research has demonstrated the significance of graduates developing and mobilising different dynamic forms of capital that enhance their early and longer-term career outcomes. (Clarke, 2018; Tomlinson, 2017; Tran et al., 2020). The evidence from more recent employer research indicates that employers understand and utilise the role of career resources in informing judgment of graduate suitability and future performance (Cai & Tomlinson, 2023; Anderson & Tomlinson, 2021). Institutions will need to therefore work from forms of curricula innovation that embrace thicker and richer approaches to employability development

References

- Ainley, P (1993) *Class and skill: changing divisions of knowledge and labour*, London: Cassell.
- Akkermans, J., Tomlinson, M. & Anderson, V. (2023) Initial Employability Development: introducing a conceptual model integrating signaling and social exchange mechanisms', *European Journal of Work and Organizational Psychology*, 1080/1359432X.2023.2186783.
- Allan, B., Owens, R, and Duffy, R.. (2017). Generation Me or Meaning? Exploring Meaningful Work in College Students and Career Counsellors, *Journal of Career Development* 44 (6): 502–515..
- Allen, J., C. Arnesen, J. Calmand, M. Frontini, J. Paul, M. Rostan, and R. Velden. (2007) *The Flexible Professional in the Knowledge Society: General Results of the REFLEX Project*. Maastricht, Netherlands: Maastricht University.
- Anderson, V., & Tomlinson, M. (2021). Signaling standout graduate employability: The employer perspective. *Human Resource Management Journal*, 31(3): 675-693.
- Ashwin, P. (2020). *Transforming university education: A manifesto*. Bloomsbury Academic.
- Autor, D. (2015) Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3): 3–30.
- Behle, H. (2020) Students' and graduates' employability: a framework to classify and measure employability gain, *Policy Reviews in Higher Education* 4(1): 105-130.
- Belfield, C., Britton, J., Buscha, F., Dearden, L., Dickson, M., van der Erve, L., Sibieta, L., Vignoles, A., Walker, I., and Zhu, Y. (2018). *The relative labour market returns to different degrees: Research report (DFE-RR787)*. DfE and IFS.
- Boliver, V. (2013) How fair is access to more prestigious UK universities? *British Journal of Sociology* 64(2): 344-364.
- Bridgstock, R., & Jackson, D. (2019) Strategic institutional responses to graduate employability: Navigating meanings, measurements and what really matters. *Journal of Higher Education Policy and Management*, 41(5): 468–484.
- Brooks, R., Gupta, A., Jayadeva, S., Lainio, A. & Lazetic, P. (2022) *Constructing the higher education student: perspectives from across Europe*. Bristol: Policy Press
- Brown, P., Hesketh, A., and Williams, S. (2004). *The mismanagement of talent: Employability and jobs in the knowledge economy*. Oxford University Press.
- Brown, P., Lauder, H & Cheung, S. (2020) *The Death of Human Capital: its failed promise and how to renew it in an age of disruption*. Oxford: Oxford University Press.
- Brown, P., Lauder, H., and Ashton, D. (2011). *The global auction*. Oxford University Press

Cai, Y. & Tomlinson, M. (2023) 'A renewed analytical framework for understanding employers' perceptions of graduate employability: Integration of capital and institutionalist perspectives'. In T. Broadley, Y. Cai, M. Firth, E. Hunt, & J. Neugebauer (Eds.), *SAGE Handbook of Graduate Employability* (pp. 479-495). London: Sage.

Cai, Y. (2013) Graduate employability: A conceptual framework for understanding employers' perceptions. *Higher Education*, 65(4): 457-469.

Cantwell, B., Marginson, S., and Smolentseva, A. (2018). Conclusion: High participation higher education in the post-Trow era. In B. Cantwell, S. Marginson, and A. Smolentseva (Eds), *High participation systems of higher education* (pp. 434–469). Oxford University Press.

Cappelli, P. (2020) The return on a college degree: the US experience, *Oxford Review of Education*, 46(1): 30-43.

Chan, W.K & Zhang, J. (2021) Can university qualification promote social mobility? A review of higher education expansion and graduate employment in China, *International Journal of Educational Development*, 84: 1-7)

Chan, R. (2016) Understanding the purpose of higher education: An analysis of the economic and social benefits of higher education. *Journal of Education, Planning and Policy*, 6(5): 1–40.

COM (2017). *Communication from the commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. On a Renewed EU Agenda for Higher Education*. Brussels: European Commission.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011) Signaling theory: A review and assessment. *Journal of Management*, 37(1): 39-67.

Cooke, F. L., Saini, D. S., & Wang, J. (2014). Talent management in China and India: A comparison of management perceptions and human resource practices, *Talent Management*, 49(2): 225–235.

Cote, J. (2016), *The Identity Capital Handbook: A Handbook of Theory, Methods, and Findings*, Department of Sociology, The University of Western Ontario, London, ON.

Denison, E.F. (1962). *The Sources of Economic Growth in the United States and the Alternatives before Us*. New York: Committee for Economic Development.

Department for Education (2023) *Crackdown on rip-off university degrees* (press release), London: department for Education

Di Stasio, V. (2014). Education as a Signal of Trainability: Results from a Vignette Study with Italian Employers. *European Sociological Review*, 30 (6): 796–809.

Dik, B.J. and Duffy, R.D., (2009) Calling and vocation at work: Definitions and prospects for research and practice, *The Counseling Psychologist*, 37(3), pp.424-450.

Forsythe, E. *et al.* (2022) Where have all the workers gone? Recalls, retirements, and reallocation in the COVID recovery', *Labour Economics*, 78: 102251.

Frankl, V. E. (1963). *Man's search for meaning*. Beacon Press.

Friedman, S & Laurison, D. (2019) *The Class Ceiling: why it pays to be privileged*, Bristol, Policy Press.

Fugate, M., A. Kinicki, and B. Ashforth. 2004. "Employability: A Psycho-social Construct, Its Dimensions, and Applications." *Journal of Vocational Behavior* 65 (1): 14–38.

Fugate, M., Van der Heijden, B., De Vos, A., Forrier, A., & De Cuyper, N. (2021). Is what' past prologue? A review and agenda for contemporary employability research. *Academy of Management Annals*, 15. <https://doi.org/10.5465/annals.2018.0171>

Green, F., and Henske, G. (2017) *Graduates and graduate jobs in Europe: a picture of growth and diversification* London: Centre for Global Higher Education.

Gunn, A (2022) *Teaching Excellence? Universities in an age of marketisation*. London: Sage.

Handley, K. (2018) Anticipatory socialization and the construction of the employable graduate: A critical analysis of employers' graduate careers websites. *Work, employment and society*, 32(2): 239-256.

Heslin, P. (2005) Conceptualising and evaluating career success, *Journal of Organizational Behavior*, 26(2): 113-136.

Holmes, C. and Mayhew, K. (2016). The economics of higher education. *Oxford Review of Economic Policy*, 32(4): 475–496.

Holmes, L (2017) 'Graduate employability: future debates and directions', in M. Tomlinson & L. Holmes (Eds) *Graduate Employability in Context: theory, research and debate* (pp. 359-369) Basingstoke: Palgrave.

Hora, M.T. (2016), *Beyond the Skills Gap: Preparing College Students for Life and Work*, Harvard Education Press, Harvard.

Hora, MT (2020) Hiring as cultural gatekeeping into occupational communities: implications for higher education and student employability' *Higher Education* 79(3): 307–324.

Ingram, N., Bathmaker, A.M., Abrahams, J., Bentley, L., Bradely, H. (2023) *The Degree Generation: the making of unequal graduate lives*. Bristol: Policy Press.

Institute for Fiscal Studies (2020). The impact of undergraduate degrees on lifetime earnings. London: IFS.

Jackson, D & Tomlinson, M (2019) Career values and proactive career behaviour among contemporary higher education students, *Journal of Education & Work*, 32(5), 449-464.

- Jung, J. (2022). Working to learn and learning to work: Research on higher education and the world of work, *Higher Education Research & Development*, 41(1): 92-106
- Kaplan, A. (2021) *Higher Education at the crossroads of disruption*. London: Emerald Press.
- Keep, E. (2020) Employers: the ghost at the feast, *Journal of Education and Work*, 33(7): 500-506.
- Lauder, H., Brown, P., & Cheung, S. Y. (2018) Fractures in the education–Economy relationship: The end of the skill bias technological change research programme? *Oxford Review of Economic Policy*, 34(3), 495–515.
- Lockwood, B (1991) Information Externalities in the Labor Market and the Duration of Unemployment? *Review of Economic Studies* 58 pp. 733-753.
- Marginson, S. (2016). The worldwide trend to high participation higher education: dynamics of social stratification in inclusive systems. *Higher Education*, 72(4): 413–434.
- Maslow, A. *Toward a Psychology of Being* (1962)
- Mason, G. (2020) “Higher Education, initial vocational education and continuing education and training: where should the balance be? “ *Journal of Education and Work* 33 (7): 468-490
- McCracken, M., Currie, D., & Harrison, J. (2016) Understanding graduate recruitment, development and retention for the enhancement of talent management: sharpening ‘the edge’ of graduate talent. *The International Journal of Human Resource Management*, 27(22): 2727-2752
- McGuinness, S., Bergin, A. & Whelan, A. (2018) Overeducation in Europe: Trends, convergence and drivers. *Oxford Economic Papers*, 70(4): 994–1015.
- Mok, K. H., & Jiang, J. (2018) Massification of higher education and challenges for graduate employment and social mobility: East Asian experiences and sociological reflections. *International Journal of Educational Development*, 63, 44-51
- Mok, K.H. & Wu, A.M. (2016). Higher education, changing labour market and social mobility in the era of massification in China. *Journal of Education and Work*, 29(1): 77–97.
- ONS (2021). *Graduates’ labour market outcomes during the coronavirus (COVID-19) pandemic: occupational switches and skill mismatch*, Bristol: Office for National Statistics.
- Ray-Chaudhuri, S and Xu, X. (2023). *Are the kids alright? The early careers of education leavers since the COVID-19 pandemic*. London: Institute for Fiscal Studies. Available at: <https://ifs.org.uk/publications/are-kids-alright-early-careers-education-leavers-covid-19-pandemic> (accessed: 17 April 2023).
- Reay, D. (2017). *Miseducation: Inequality, education and the working classes*. Policy Press.
- Ren, S., Zhu, Y., & Warner, M. (2017). Dilemmas concerning the employment of university graduates in China, *Studies in Higher Education*, 42(3): 551–571.

Rivera, LA (2015) *Pedigree: How Elite Students Get Elite Jobs*, Princeton, Princeton University Press.

Rothstein, J. (2020) The Lost Generation? Labor Market Outcomes for Post Great Recession Entrants. *National Bureau of Economic Research Working Paper Series No. 27516*.

Sattinger, M. (1993). Assignment models of the distribution of earnings. *Journal of Economic Literature*, 31(2), 831–880.

Scott, P. (2019) Martin Trow's elite-mass-universal triptych: conceptualising higher education development, *Higher Education Quarterly*, 73(4): 496-506

Smith, S., Hunter, D. & Sobolewska, E. (2019) Getting in, getting on: fragility in student and graduate identity, *Higher Education Research & Development*, 38(5): 1046-1060.

Souto-Otero, M., Garcia-Alvarez, J. & Santos-Rego, M-A. (2023). Subject choice motivation and higher education students' conception of employability. *British Journal of Sociology of Education*, 44(4), 606–630.

Spence, M. (1974) *Market Signaling-Informational Transfer in Hiring and Related Processes*, Cambridge, Mass: Harvard University Press.

Spence, M. (2002). Signaling in retrospect and the informational structure of markets. *American Economic Review*, 92(3): 434-459.

Steger, M & Dik, B (2010) Work as meaning: individual and organisational benefits of engaging in meaningful work', in N. Garcia (Ed) *Handbook of Positive Psychology at Work*. Oxford: Oxford Hanbooks Online.

Suleman, F. & Figueireido, M. (2020). Entering the labour market in the context of higher education reform and economic recession: young bachelor and masters graduate in Portugal. *Journal of Youth Studies*, 23(10), 1396-1417.

Tholen, G (2017) Symbolic closure: towards a renewed sociological perspective on the relationship between higher education, credentials and the graduate labour market, *Sociology*, 51(5): 1067-1083.

Tomlinson, M, Binnie, G, & Burg, D. (2021) *The impact of COVID-19 on recent graduates' career decisions and outcomes: a report into the employment experiences of graduates from UK Higher Education during the pandemic*, Sheffield: Association of Graduate Careers and Advisory Services.

Tomlinson, M. (2017) Forms of graduate capital and their relationship to graduate employability. *Education + Training* 59(4): 338-352.

Tran. H.N, Pham. T. Tomlinson, M., Medica, K & Thompson, C. (Eds) (2020) *Developing and Utilizing Employability Capitals: Graduates' Strategies across labour markets*, London: Routledge

Wang, M., Xu, J., Zhao, S., & Bian, H. (2022). Redefining Chinese talent management in a new context: A talent value theory perspective. *Asia Pacific Journal of Human Resources*, 60(2): 219–251.

Wheelahan, L., Moodie, G., & Doughney, J. (2022) Challenging the skills fetish, *British Journal of Sociology of Education*, 43(3): 475-494.

Wright, E & Mulvey, B (2021) Internships and the graduate labour market: how upper-middle-class students ‘get ahead’ *British Journal of Sociology of Education*, DOI: 10.1080/01425692.2021.1886051.