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Vocational Education in the 'Sharing Economy', and the Changing Nature of Professionalism.

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ABSTRACT Architecture is a vocational programme, leading to membership of the profession of architecture. The education of Architects in the UK is conducted in universities, but HEI funding incentives and industry aspirations for future professional practice are not aligned. In pursuit of funding and league-table recognition, HEIs seek to appoint PhD-qualified, specialist candidates to permanent academic posts. Meanwhile, government and industry policy pushes in the direction of collaborative practice, supported to some extent by institutional accreditation criteria requiring generalist abilities and holistic industry awareness. From this viewpoint, the widespread recruitment of the part-time tutor is clearly essential. The input of practising tutors is required to deliver the industry aspirations for professional education.

This paper will outline recent developments leading to the current explosion in zero-hours contracts, and then further expand the argument by considering the future nature of professionalism. Vocational education, and its professional accreditation, is predicated on the assumption that professions are static, specialised groups, operating within a defined spectrum of engagement. This presumption of stasis in future economic transactions is not logical in a rapidly expanding sharing economy. The increasingly collaborative, complex construction industry in contemporary society requires instead, the engagement of agile, networked, cross-disciplinary professionals.

KEYWORDS architecture, sharing economy, interdisciplinary collaboration, practitioner educators.

Professional Education in Higher Education Institutions

The professional education of architects, engineers, surveyors and other Chartered building environment professionals is governed by the relevant profession's regulatory or membership bodies. Whilst delivered almost solely through Higher Education Institutions (HEIs), professional accreditation requires, to a greater or lesser extent, the engagement of experienced practitioners as educators, contributing first-hand to the training of the next generation of professionals. This expectation is in direct conflict with the priorities of many HEIs, who respond logically to higher education policy, measurement and funding mechanisms by prioritising research potential and performance over industry knowledge, in their staff appointments.

The ecology of higher education in the UK has been substantively transformed over the last 50 years, with an explosion in student numbers (four- or five-fold since the 1970s), and a rapidly changing funding structure attempting to react to and support this ontological shift. The impact of tuition fees as a significant and essential source of income (paid to HEIs by students, in the form of loans from government) has made HEIs begin to consider students as 'consumers'; but this realisation sits alongside the reality that even more significant funding (far more in the case of research intensive universities) still comes from research funding; often project-based applications from academic experts; and from both public and private sources, nationally and internationally. 'All of this is meant to encourage HEIs to focus more on delivering value for money and responding to their various 'clients''.[1]

Tennant et al (2015) have noted that this peculiar development in HE funding and bureaucracy has 'served to legitimise a newfound class of construction lecturer: the 'career academic''.[2] Their argument is that in order to pursue a career in teaching in HEIs, individuals prioritise doctoral and post-doctoral study over industry experience; thereby decreasing their awareness of applied knowledge, and practice in industry. In not combining 'knowledge of both practice and theory, as advocated by Vitruvius… [career academics] … present a 'disengaged' role

model' (ibid, p.730). The authors recognise the argument that universities should 'educate those who wish to pursue a career in construction, rather than train students in specific technical practices' (Severn 1991, cited in Tennant et al, 2015), but find this to be directly in contravention of professional accreditation requirements.

Recent policy announcements from the UK Government (in development at the time of writing) suggest a change in HEI funding incentives which may go some way to addressing the strong bias towards academic research value. In spring of 2015, the Conservative Party used their election manifesto to commit to 'introduce a framework to recognise universities offering the highest teaching quality',[3] clearly seen by them to be a vote-winning policy in HE reform. This became known in the press as the 'TEF', or 'Teaching Excellence Framework'. Following successful election to government, the formal BIS paper confirmed 'TEF levels will offer incentives – financial and reputational' (BIS, 2015)[4]. Though the final outcome of this consultation is not known at the time of writing, it seems likely that universities will be increasingly reliant in future on evidencing teaching excellence, which in vocational courses is likely to include evidence of 'industry-relevant skills' (Engineering Council, 2014)[5]. An increased reliance on sharing data, metrics, and student satisfaction (which has a relationship to the expansion of the sharing economy, of which more later), is also leading to increasing numbers of universities placing value in the 'student experience': and student satisfaction in the increasingly consumerist arena of higher education, is clearly linked to 'employability'. These pressures indicate a potential change in the employment strategies of HEIs, which may lead to more interest in securing permanent roles for practitioner-educators. A further indication of the academic response to this changing market is found in the increasing availability of *professional doctorates*, and the opportunity to complete a 'PhD by Design' or a 'PhD by Practice': offering would-be academics more industry-engaged routes for doctoral study.

However, in the current situation, the coordinated and systematic pursuit for research excellence within UK universities and their [engineering] faculties has fragmented the

relationship between construction theory and industry practice' (Tennant et al, p.724). In this scenario, it will be shown that the 'casual tutor', or practitioner-educator, has an essential role to play in delivering professional education.

Institutional Accreditation of HEI courses

Architecture is relatively well-established as a 'profession' in the UK, being represented by the membership body of the RIBA since the award of the Royal Charter in 1834, and in addition, regulated since 1931 by the statutory body ARB (previously ARCUK), which also protects the title 'Architect'.[6] The stated purpose of the two bodies is very different, the RIBA maintaining its original c19th purpose of *'... the general advancement of Civil Architecture, and for promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith...',* (RIBA, 2016)[7] and the ARB now governed by the 1997 Architect's Act, a document prescribing a more prosaic mandate of 'maintain[ing] the Register....prescribing qualifications...issu[ing] a code of professional conduct and practice....mak[ing] disciplinary orders....and protection of title' (Architects Act, 1997)[8]. The ARB paraphrases this role in its own literature as a duty to '*protect the consumer*' (ARB, 2009)[9]. These very different definitions of jurisdiction have not precluded an ongoing civil war within the architectural profession about the territorial boundaries and relative supremacy of each organisation; a powerful distraction from the far larger and more pertinent debate of what it is to be a professional architect in the modern construction industry.

Both the RIBA and ARB support the premise that practising architects and designers play a significant role in the delivery of each level of this professional education in HEIs. ARB accreditation requires evidence, at all levels, "*That appropriate mechanisms will exist to ensure that the appointment, development and leadership of staff ...[ ].... takes account of the vocational, as well as the academic, aspect of the qualification*" (ARB; 2011)[10]. Interestingly, though ARB's criteria require the appointment of vocational staff, there is no mention of competence to teach in the ARBs Code of Conduct for architects. Should the requirement of competence to practice be

understood as being extended to tutoring positions in higher education?

In practice, HEIs cite the significant involvement of practising architects in the delivery of design studio courses, as evidence of achieving these aims at Part I and at Part II. It is a requirement of RIBA Validation that in Parts I & II, schools will "*provide courses where at least 50% of all assessed work at part 1 and at part 2 is undertaken as design studio projects*".[11] At Part III, it is a specific requirement of the Chartership examination that two UK-registered Architects act as 'external examiner' for each individual candidate, and uphold the threshold of entry to the profession. In the author's experience, in each case it is the norm to fill many of these critical positions by the employment of 'practitioner-educators' on zero-hours contracts. This precarious employment is at odds with the clear requirements for practitioner engagement indicated by the accrediting bodies.

In common with many professions, architecture feels its institutional autonomy (or perhaps in the case of architecture, duplicity) threatened by changes in modern society, summarised by Broadbent et al (1997) as 'institutionalised control...being degraded by the introduction of systems of individual accountability based on customer reaction.'[12] Modern 'value' judgements have less recourse to traditional meritocracy. 'The concept of 'client rights' has increasingly gained acceptance… […] ... Traditional professional attitudes are perceived as unacceptably patronising' (Eraut, 1994)[13]. New technology, particularly social media, have allowed peer- and client- networks to come in to being outside of institutional control, with a speed and agility that ensures their relevance to modern practice. Our institutions are unable to react so swiftly, and their imposed boundaries of operation can render their networks less valuable than those emerging externally. This institutional crisis, exacerbated by the myopic, intra-professional rivalry between the RIBA and ARB, is often equated with a crisis of identity of the architect as a professional, which I argue is a false correlation. Professional Institutions should not be equated with professional identity. However, if the relevance of institutional membership is in question, the value of institutional accreditation to HEIs is also in question,

further calling into question the role of the practitioner-educator in architectural higher education.

Architectural Practice; and the emergence of the 'Sharing Economy'

The interdisciplinary nature of professional practice in the built environment sector is a key factor in any discussion of architectural education. The professional institutions of the construction industry, many founded in the nineteenth century, are unsurprisingly based along traditional lines of professional operation. Contemporary industry think tanks agree these boundaries do not reflect current practice; the *Edge Report*, (Morrell, 2015)[14], in common with many practising professionals, exhorts the institutions to look beyond the traditional limits of their disciplines and work together to understand and support the modern professional context.

Bordass and Leaman (2014) explain this change in professional scope: 'as time passes, activities that once required judgment become codified, organized and commoditized, while new areas of promise and challenge arise'.[15] This statement indicates the changing nature of professional activity; and explains what is often portrayed as a fear that [a profession] may become obsolete. Contemporary practitioners, speaking usually from outside the professional institutions, argue the paucity of that rationale. As Till argues in the title of his 2009 book, '*Architecture Depends*'[16];- on any number of contextual, societal, environmental or political scenarios. There is no one process, nor even a fixed number of processes, in the practise of architecture: the institutional aim of codifying professional action is hopeless. Moser (2014) goes further: his definition of current practice, 'Architecture 3.0', 'brings [architects'] design-solving expertise into the design-for-solutions realm, where the end result is a series of aggregated solutions of which the production of a building may not even be one of the solutions'[17]. For Moser, 'the architect in Arch 3.0 is the master collaborator and the skilful disrupter'. (ibid., p.171)

Moser's positive description of 'disrupt[ion]' shares semantic characteristics with those who are proponents of the 'sharing economy'. This broad and contested term[18] is used here to describe activity encompassing a wide range of collaborative endeavours (e.g. Wikipedia), peer-to-peer asset sharing (e.g. AirBnB, Uber) and skills and knowledge exchange (e.g. TaskRabbit or Feastly). Each of these entrepreneurial businesses, generally enabled by rapid developments in digital infrastructure, are systematically reinventing and revolutionising traditional assumptions of the frameworks within which we enact commercial, cultural and knowledge-based transactions. The ability of intelligent automation to optimise our enjoyment of assets, and to connect those with shared interests and complimentary skills, has potential to improve efficiency and sustainability of practice across almost unlimited fora. The 'accreditation and validation' processes in this expanding economy originate in a mass, public feedback loop between service provider and user (a process subject to a variety of levels of (in)security and supervision) and the fluctuation of market demand. The rigours of professional criteria and accreditation explored above do not have a clear place, or application, in this emerging process for assessing value and validation.

It is possible to suggest, as the Susskinds do in their 2015 book '*The Future of the Professions: how technology will transform the work of human experts*',[19] that this huge change in the way we transact professional exchanges will change the nature of professionalism itself. The nature of Architecture as a profession is explored explicitly in their book, and remains under constant debate in contemporary professional circles. Architects see their traditionally dominant role in the construction process as under siege from increased diversification of roles and specialisms within the construction industry; from the facility of some of these practitioners with fast-evolving technological tools; from automation and digitisation of the architects' traditional skill base, offered by those tools themselves; and from the increasing power and monopoly of larger contracting companies who, in accepting levels of liability and risk that smaller architect firms cannot, wrest overall control of projects from architects. Simultaneously, architectural practitioners themselves are diversifying in ways supported by Moser's 'Arch 3.0' thesis: for example, taking on roles in enabling community engagement and imaginative use of built assets, a role which superficially has little

to do with the design and construction of buildings themselves. Exacerbating this crisis of professional identity, 'Assemble', a group of architectural designers, recently caused headlines in the architectural and national press on winning the 2015 'Turner Prize' (the UK's premier award for contemporary Fine Art) on the basis of an ongoing community engagement project for a neighbourhood in northern England[20]. The group are now the stars of popular architectural press; not one of them is yet a Chartered architect, or professes any interest in becoming so, or joining the professional institutions.

The above modes of architectural practice are atypical of professional activity amongst technically-dominated professions of the construction industry. Architecture (alongside the arguably less well-defined and respected interior design and landscape design professions, but unlike engineering,) 'is syncretic rather than entirely scientific' (Freidson, 2001)[21]. The discipline overlaps with arts, social sciences and humanities theory and practice. Whilst this broad content base can lead to miscommunication with more technical disciplines, the professional qualities acquired through 'tacit' knowledge (Eraut, 2000)[22] of a wide subject area allow 'expert framing' of a variety of problems, to use Donald Schön's expression[23]. It is perhaps this heterogeneity of epistemology that gives architects the perceived professional competence to practise across such a wide territory, and equally which leads them to fear for the coherence of their professional identity.

Alongside this high-profile crisis of identity, the majority of the architectural profession are quietly splitting into a two-tier system of professional practice. Over 80% of practising architects now work either in small private practice, doggedly delivering small projects, or in large multinational, multidisciplinary companies, either consultant or contractor, taking a small role in the delivery of a large piece of built environment infrastructure. (Building Futures, 2011)[24]. Contractual obligations and career flexibility mean that it is only the former group who are able to accept the precarious, short-term contracts for teaching architecture that are offered by HEIs.

The role of the 'Zero Hours' architectural tutor, or 'practitioner-educator'

The RIBA validation requirement of half of the assessed work in an accredited degree to be delivered through studio projects, creates a significant demand for studio-based tuition. Directed by professional validation requirements, and as a continuum of a process that began in c19th beaux-arts education, architecture is predominantly taught in design studios. Technical, social and theoretical concepts delivered in lecture- or seminar-based courses are applied to hypothetical design exercises conducted by students as individuals or in groups, under the supervision and guidance of a tutor. HEIs manage this time-heavy tutorial demand (far greater person-hours are required for delivery than in lecture-based subjects) by employing practising architects or architectural designers, who have gone through the same system themselves. The personal experience of the tutors is important: the same time constraints mean that they cannot be properly supervised in this role, and there is often little or no training allowance. These tutors are not given any detailed pedagogic instruction; they draw from their own experiences and 'learn on the job'. Repeat employment is dependent on student feedback, results, and student numbers; a situation analogous to the feedback loop of the sharing economy. An HEI running parallel architecture studios across several years may have up to 20 or more staff engaged on the basis of a few hours per week, rotating, and numbers swelling or depleting, each semester. Management of this numerous but fractional workforce is achieved through the minimal administration, and negligible corporate responsibility, of a casual or hourly-paid contract. This is the key role of the zero-hours tutor.

Left with a surprising degree of day-to-day autonomy with their students in the studio, and in many cases, more one-to-one contact time than any other member of HEI staff, the zero-hours tutor becomes a core part of the students' university experience. Studio-based delivery is oriented around the subjective application of theories, knowledge and skills to a design project, the framework for which is constructed by the educator, or 'studio master': often that same casual tutor. For students, the studio learning process can be intimate, demanding and intellectually exposing: it

requires research, application of knowledge in unfamiliar circumstances, the construction and testing of hypotheses, repetition, reframing, and in many cases, collaborative working. The learning experience has been compared to Kolb's ELM cycle (Brown, 2014)[25], to Savin-Baden's PBL framework (Edström and Kolmos, 2014)[26], to Lave and Wenger's *Situated Learning,* (Anderson and Priest, in Harriss and Widder, 2014)[27], and has a strong relationship with the theories of Donald Schön. These highly-regarded pedagogic theories are likely to be unfamiliar to the practitioners engaged in the delivery. Instead the tutors call on their professional experience and personal reflection to curate their teaching. The use of the term 'studio master' recalls a non-academic, 'techne-' or craft-based relationship of master and apprentice, more common to learning a trade than to the academic institutional model of learning.

The assumption is that the role of the casual tutor engaged in this delivery remains very much the relationship described by Schön more than thirty years ago: that of the 'expert' practitioner leading the student in 'reflective practice' through a 'language of designing'.[21] In the absence of offering casual tutors any training in their new role, the HEI employer is relying on *'professionals' intuitive capacity to reconceptualise a situation or reframe a problem* (Eraut, 1994 p.143) as a means of enabling student learning. Eraut is critical of this, in particular Schön's example of the architecture studio tutorial, at which he 'could not help but wonder whether the master designer was not a single-loop teacher, even if he may have been a double-loop designer'. (ibid. p.148) In this example the pedagogy is based on a belief in the superior knowledge and ability of the provider, the value of which is not critiqued; except perhaps after the fact, by the HEI on receipt of the outcomes of assessment and student feedback.

Contemporary discussions of architectural education are sceptical of the 'binary teacher-student relationship' (Brown, p.21) as an effective learning technique. This discomfort with traditional ideas of 'master' and 'apprentice' is not new, and I argue is analogous to the contemporary practitioner's move away from traditional professional roles, explored above. The contemporary practitioner, engaged by an HEI to teach, may use their limited autonomy to introduce

additional contributors to the studio, external voices, or real scenarios; for example, curating the 'live project' within the design studio. For Brown, one attraction of the 'live project' is that the binary tutor-student relationship 'is subverted, not only with the introduction of a client who is external to the academic environment but also with the recognition that every… participant may bring unique skills and knowledge to the process'. He argues, 'students must be supported in a negotiation between two value systems; an academic value system by which their work will be assessed and their clients; non-academic value system by which the brief will be satisfied.' (ibid, pp.21-22) In introducing students to this 'wicked problem' of negotiating contradictory value systems, the tutor is choosing to expose the student to a professional learning experience beyond the static criteria of the HEI and institutions. The negotiation of value systems is an integral part of professional ethics and trust; the zero-hours tutor, enjoying an ambiguous status between academia and practice, and freed from institutional propriety, is ideally placed to explore this issue with students.

Whilst practitioner-educators are uniquely situated to provide these experiences, the scenario above presumes a sophisticated understanding of active learning on the part of the practitioner, in order to exercise this ability. In practice, a lack of training and reflection on their educational practice may lead to continued assumption of the 'expert-student' or 'master-apprentice' tutorial model illustrated by traditional studio teaching. Academic teaching staff, constrained by a narrower professional network from which to leverage capital, may have the awareness, but not the ability, to set up the frameworks for these experiences with external collaborators in the studio.

The Professional Identity of casual teaching staff

Guy Standing, in his book *The Precariat* (2011) seeks to define an identity to reflect the increasing number of people in modern society employed on short-term and fractional contracts. His thesis is an attempt to categorise a new 'social class' named after his title. Whilst not addressing the wider implications of that argument in this paper, his definition of a particular skilled itinerant workforce (with

reference to their salaried peers) is worth repeating in relation to casual HE tutors in architecture.

> *Alongside the salariat, in more senses than one, is a (so far) smaller group of* **'proficians'**. *This term combines the traditional ideas of 'professional' and 'technician' but covers those with bundles of skills that they can market, earning high incomes on contract, as consultants or independent own-account workers. The proficians are the equivalent of the yeomen, knights and squires of the Middle Ages. They live with the expectation and desire to move around, without an impulse for long-term, full-time employment in a single enterprise. The 'standard employment relationship' is not for them.*[28]

The strong metaphor employed by Standing, of 'yeomen, knights and squires', serves to reinforce the perception of public esteem for individuals employed in this way. It gives us a historic precedent for itinerant professionals, assuming respected public status, without the affirmation of a permanent position. These figures were afforded professional respect and admiration. This perspective sits in stark contrast to contemporary insecurity of Casual HE staff[29] in reference to their social, or professional status. The zero-hours tutor is more often reported as deeming themselves under-valued by their contractual standing, than feeling themselves admired by their academic peers.

The economic status and security of casual HE staff is a very different issue. Current concerns about the cost of student access to higher education, exacerbated in architecture by the length of the course, reputedly antisocial hours and high costs, might be mirrored by concerns of 'access to tutoring' by those engaged in their education. The proliferation of 'zero-hour', unsecured contracts means that any individual reliant on income from teaching to pay regular bills and/or contribute towards contemporary personal economics of mortgages or credit ratings, is unable to accept the casual tutoring positions on offer from HEIs. The offer of short-term and zero-hours contracts effectively creates significant barriers to achieving representative socio-economic diversity in those tutoring student architects. The pool of talent is further restricted by the general reluctance of large companies to release salaried staff for regular day-long absences, in order to take up fractional teaching opportunities.

The teaching experience in the design studio is, akin to the learning experience, and series of intense intellectual encounters. As a primary figure in the individual student's experience of Higher Education, often at a stressful time in the lives of the learners, the studio tutor can unintentionally become a significant source of emotional, as well as professional support. Complex situations may be formally managed by other pastoral staff employed by the HEI, but initial contact will likely be with a familiar individual, placed by the HEI in a position of authority. Even in uncomplicated situations, the close relationship of tutor and student is likely to lead to some level of emotional investment on both sides. This investment, and the embodiment of this in the students' work, can be both exhausting and exhilarating. It at once explains the popularity of studio tutoring amongst some practitioners, and the unintended (unavoidable?) long hours of 'overtime' put in by many casual tutors, taking the form of either physical presence in the studio or preoccupation outwith the institution.

These factors contribute to a casual tutor workforce limited to a particular few demographic areas; individuals with flexible working arrangements who have either another reliable form of income, or minimal outgoings and commitments; and who have surplus emotional capacity to invest significantly in tutees. For example, the constraints raised above may present particularly significant barriers to those without financial security, or with demanding caring responsibilities. Students are presented with a limited demographic representing the 'practising architect' in their formative years of architectural education.

Learning and Teaching 'Professionalism'

The purpose of an accredited HE programme leading to Chartership in Architecture must be, in part, to teach professionalism. It is a nebulous term. Frank Duffy, architect and CBE, defines professionalism as "…a social construct that changes over time. At its core lie two key notions: *trust* and *the exercise of judgment* based on specialist knowledge." (Duffy and Rabeneck, 2013, p.116) (my emphasis).[30]

The issue of trust is multi-faceted; covering both public trust of the architectural profession, and 'collegial' relationships of trust between architects and their professional colleagues in the wider built environment industry. Intra- and inter-professional trust is essential to effective architectural practice in the inherently collaborative process of conceiving, designing, constructing and occupying a piece of the built environment. Developing both facets of professional trust and respect, 'public confidence' and 'collegiality', is an essential element of learning professional behaviour.

Public trust of architects is threatened by the perception, perhaps exacerbated by the decay of professional meritocracy in contemporary society addressed above, and compounded by the evidence of financial barriers in place for students wishing to qualify as an architect. 'The long shadow of the gentleman architect still hangs over the profession' (Building Futures, p39, ibid). Contemporary practitioners also find themselves asked to defend the architect's role in famously deficient or expensive buildings (the 2011 Stirling Prize winner, the Scottish Parliament in Edinburgh, is often quoted), or to justify esoteric peer value judgements (the decision by RIBA judges to award the 'House of the Year 2015' to a vanity project of undisclosed budget on the private Rothschild estate is a recent example).

In recognition of the importance of 'client rights' (Broadbent et al, ibid.) and the 'end-user' (Till, ibid.) architectural education increasingly seeks to present the viewpoints of these groups. Morrell[13] advised construction industry institutions, in the recommendations of his 2015 report of the necessity to 'improve the industry's offer to client' (Recommendation D1, p93) '… and society' (D2, p93). Learning these qualities is difficult, if not impossible, in a sterilised test-bed environment of academic peers. In contrast to the salaried 'career academics', practitioner-educators are likely to have an extensive network of transdisciplinary and client connections outside the HEI. They may be able to use this network to open a valuable 'information conduit' (Eddy, 2010),[31] linking the academy, and the students, with real clients and current societal issues, allowing discussion and evaluation of professional ethics through an applied instance, and in a public arena.

Eddy argues in her book '*Partnerships and Collaborations in Higher Education*', that individuals and faculty in this situation are excellently qualified to engage in collaborations, intra- and inter-departmentally, and with external parties outwith the HEI. In recent years there has been a concerted movement towards engaging external collaborators in architectural education: the 'Live Projects' discussed above.

'Live Projects' seek to deliver learning through design studio engagement with a real-world project. Over the last decade proponents of this method have begun to formalise their practice, arriving at a definition where "a live project comprises the negotiation of a brief, timescale, budget and product between a client and an educational institution" (Anderson and Priest, 2012, cited by Morrow in Harriss and Widder, 2014, p.xix). Students work directly with collaborators or clients outside the HEI, 'practising' what it is to be an architect. The experience navigates values, ethics and questions the professional role. The popularity of these projects is increasing; students enjoying the increased sense of agency, and HEIs perhaps considering the 'impact' and 'outreach' values inherent in these methods, loaded terms with significant value when measured against new HEI funding metrics.

'Collegial' trust is less clearly addressed by Live Projects. Freidson sees one aspect of the 'institutionalization of [professional] training in schools associated with universities' as 'the foundation for a strong sense of occupational community' (Freidson, p.100). His argument is that the shared experience of a prescribed educational curriculum (both 'process' and 'knowledge and skill') cultivates a cooperative spirit he also refers to as 'solidarity'. Two areas of this assertion merit particular attention: firstly the recognition of the role of 'schools' (or HEI faculties), and also importance of a shared 'process', in the development of community identity.

Architecture's broad base of enquiry, straddling design, social sciences and technology, has led to programmes of architecture being located in an extraordinarily diverse range of faculties in various HEIs across the UK. The author has studied or worked on courses in a faculty of Architecture and History of Art; a school of Design at an ex-polytechnic; an art college; a college of

Humanities and Social Sciences; and an Engineering school in an ex-mechanical institute. The 'occupational community' in each is very different, and will not represent the full spectrum of co-professional disciplines with whom architects must collaborate in practice. Members of a design team, for example, are likely to be from a technical engineering/construction background, and might struggle to feel 'solidarity' with a graduate from an art/art-history faculty. In this scenario, the ability of practitioner-educators to open the academy doors to co-professionals from different backgrounds may provide essential education, otherwise lacking in interdisciplinary communication and professional respect.

Finally, studio-based delivery, the 'norm' in architecture, is extraordinary in engineering, construction, legal and development courses. Assessment of architecture students is generally by a portfolio of coursework; assessment of engineers, contractors and surveyors often via examinations. There is little or no presumption of shared process in professional education between the disciplines; meaning no cultivation of the valuable 'occupational community'. Without cross-departmental or ex-institutional collaborations, graduates of built-environment professions must construct their relationships of inter-professional trust and respect from a standing start.

Duffy's second point, the *exercise of judgement* (ibid.) is extremely difficult to define. Eraut suggests this 'mysterious quality' has much to do with 'the interpretative use of knowledge' (Eraut, 1994, p.49). The application of knowledge to scenarios, as a means of learning professional judgement, is supported by the design studio approach detailed above. However the studio scenario alone does not replicate essential characteristics of professional practice- for example the scope of engagement and activity across the architectural profession, or the collaboration with colleagues across disciplines; in which knowledge must be applied and tested in order to develop professional judgement. It is opening the studio up to these external influences, through leveraging a valuable professional network, that allows students the opportunity to engage their nascent professional judgement. It is the unique position of the practitioner-educator,

between industry and academy, that affords the best prospects of teaching this key aspect of professionalism.

Future Professionalism in the Sharing Economy

The exact definition of the 'sharing economy' is nebulous, and the territory incorporates various other economy neologisms: 'the collaborative economy', 'the exchange economy', 'the gig economy', 'the peer economy' etc. Despite this, the rapid growth of activity in this area has convinced the UK government that the sector is worth investing in through high-level policy support. The policy document itself provides us with a working definition: 'The government wants to ensure that Britain is the global centre for the sharing economy, enabling individuals and businesses to make the most of their assets, resources, time and skills through a range of online platforms'. (Budget 2015, clause 1.193). The document goes so far as to specifically propose 'guidance to JobCentre Plus staff to signpost job-seekers to sharing economy opportunities'. This form of employment is to be actively promoted in the UK in the imminent future.

A particular feature of the sharing economy is the model of employment contracts for the service- or goods- provider. "Class action law suits against Uber and Lyft … [in the US] … are challenging the classifications of freelancer or contractor versus employee (a legal classification that demands benefits and protections)." (Logue and Höllerer, 2015)[32]. The contract model for these roles is, essentially, the same 'zero-hours' form of contract used by HEIs to employ casual tutors. If the growth of the sharing economy continues, is this a model for widespread employment for service-providers, technicians and professionals across industries?

Ian Brinkley draws together a number of studies and data sources in his article for The Conversation "*Hard Evidence: how has the sharing economy changed job security?*" (August 2015). His conclusion is that there is little evidence of statistically significant moves towards changing models of employment to date. The sharing economy remains a minority industry. Projected growth indicates, by 2025, that it would comprise 'a total market worth…. of less than 1% of GDP'.[33]

Though it seems unrealistic to predict a swing in traditional employment models given the above evidence, the popularity of peer-to-peer exchange systems, and the inexpensive immediacy offered by technology, does suggest a significant move of some services that currently rely on traditional transactional relationships, towards this new economy. Knowledge, information and processes that can be codified and shared will clearly be open to operate through systems similar to this. Peer-to-peer networks and secure value exchange systems such as blockchain and bitcoin[34] may also allow this model to progress into the provision of more complex services, secure transactions and contractual interactions. The activity of 'proficians' will be enabled on a much greater scale, and with greater agency and immediacy. The formation of project teams may be possible almost instantaneously. This will change the basis for high-level professional transactions; enable new metrics of measurement and feedback; and may fundamentally change the nature of professionalism.

Are professionals currently employed on zero-hours contracts actually experiencing the shape of future professional activity? Practitioner-educators juggle multiple responsibilities to a variety of clients and end-users. They navigate conflicting ethical positions, and leverage social networks across traditional institutional boundaries. These competencies may be part of the essential skillset of the future architect. Zero-hours tutors may be tacitly providing students with a model of professional behaviour that equips them better than we realise for future architectural practice.

The 'zero-hours' tutor in architectural education

The widespread employment of practitioner-educators as casual tutoring staff on zero-hours contracts is a result of a combination of institutional policy from HEIs and accreditation criteria from professional institutions. As a result, the precariousness of employment of professional architects in education is in some manner sanctioned by the RIBA and ARB. However, neither the HEIs nor professional institutions regulate the practicing architects' proficiency to teach. The assumption seems to be that tutors teach professionalism by example.

Architectural education requires students to acquire skills and knowledge across a broad spectrum of activity, and to test their professional judgement through the application of these skills. In the design studio, skills are applied and tested on projects, and increasingly opened up to contributors from outside the academy, reflecting the growth in recognition of the importance of public respect and professional trust. In this scenario, the practitioner-educator finds themselves in a position of great value to both the student and HEI, being part of a wider cross-institutional and interprofessional network seen by Eddy as 'a form of [Bourdieu's] social capital', primarily because of its ability to 'leverage capital' [of all kinds]. (Eddy, p.59.) The casual tutor, and not the career academic, is in the best position to create the most effective scenarios for learning professional behaviour.

The importance of networks to professional operation and agency is linked to the growth of the sharing economy, and fundamentally challenges the forms of meritocracy embodied by the traditional professional institutions. This change in the nature of professional activity, however widespread, is to be expected on some scale. The move towards technology and social networks enabling more flexible and agile working relationships seems an inevitable response to the current misalignment between traditional professional institutions and current practice.

The overt challenge arising from this argument is to the professional institutions; not only in architecture but in associated professions; to explore, predict and support the future nature of professional practice. Traditional models of chartership, accreditation and competency have to prove their relevance in a world with new systems for transaction activity, and for making value and trust judgements. If found to be without application in this economy, the current structures or institutional recognition will need to change, rapidly, to maintain relevance to future professionals.

HEIs themselves are renegotiating their position as providers of education, research and innovation. Alongside the introduction of the TEF, recent developments in Research Council funding suggest international and interdisciplinary partnerships will be favoured in the awarding of research funding; here the professional academic is being incentivised to

form new networks and demonstrate agency and effect traversing traditional disciplinary boundaries and roles. The value of the traditional lecture as a privileged form of information and knowledge exchange for students is called into question by increased online sharing of high-quality, free-to-access material. Student and Funder 'clients' expect something more, and different, and expect this value to be evidenced by 'impact' and feedback. The challenges facing professional institutions and those in industry are not so different from those facing the academic profession.

This view of the changing nature of professionalism suggests that the practitioner operating through a zero-hours contract, navigating responsibilities and sitting between institutions, offers a model for future professional behaviour beyond that which they are employed to teach. The argument proffered here situates the 'zero-hours' tutor, or *profician*, as a keystone in understanding the emerging professionalism of architectural practice in the context of a rapidly changing economy, not yet recognised or supported by the institutions governing architectural education. In the current absence of professional regulation of their teaching activity, and paraphrasing Duffy (ibid), these critical individuals are *trust*ed to *exercise [their] judgement* in imparting their very particular *specialised knowledge* to their students. The role of the entrepreneurial practising tutor in delivering architectural education is vital to the professional learning of future architects.

REFERENCES

1 Ben Jongbloed and Hans Vossensteyn, 'University Funding and Student Funding: International Comparisons', *Oxford Review of Economic Policy*, 32 (2016), pp. 576–95 p.584.

2 Stuart Tennant, Mike Murray, Alan Forster, and Nick Pilcher, 'Hunt the Shadow Not the Substance: The Rise of the Career Academic in Construction Education', *Teaching in Higher Education*, 20 (2015), p.724.

3 John Morgan, 'Tory Manifesto Promises "framework on Teaching Quality"', *Times Higher Education (THE)*, *The Times*, 14 April 2015.

4 *Fulfilling Our Potential; Teaching Excellence, Social Mobility and Student Choice*, BIS/15/623 (Her Majesty's Stationery Office: Department for Business, Innovation and Skills, 2015)

5 *The Accreditation of Higher Education Programmes*, UK Standard for Professional Engineering Competence, 3rd Edition (Engineering Council (EngC), 2014)

6 Origins of the profession in Britain (17 Dec 2015) Designing Buildings Wiki. Available: <http://www.designingbuildings.co.uk/wiki/The_architectural_profession#Origins_of_the_profession_in_Britain> [accessed 7 Jan 2016]

7 'Our History, Charter and Byelaws' <http://www.architecture.com/RIBA/Aboutus/Whoweare/Ourhistory.aspx> [accessed 10 December 2016]

8 *Architects Act, 1997 c.22*, 1997 <http://www.legislation.gov.uk/ukpga/1997/22/contents> [accessed 10 December 2016]

9 Architects Registration Board, 'Board Members' Role Descriptions', (2009) <http://arb.org.uk/files/files/Item%2008_Role%20Desicriptions_Appendix.pdf>

10 'Applying for Prescription of a New Qualification | Architects Registration Board, UK' <http://www.arb.org.uk/prescription-procedures-applying-for-prescription> [accessed 10 December 2016]

11 'RIBA/ARB Criteria for Validation' (RIBA Publications, 2011), p.5.

12 Jane Broadbent, Michael Dietrich, and Jennifer Roberts, *The End of the Professions?: The Restructuring of Professional Work* (London ; New York: Routledge, 1997), p.1.

13 Michael Eraut, *Developing Professional Knowledge and Competence* (Falmer Press, 1994)

14 Paul Morell, *Collaboration for Change: The Edge Commission Report on the Future of Professionalism | Edge Debate* (London: The Edge Commission, May 2015), p.113.

15 Bill Bordass, and Adrian Leaman, 'A New Professionalism: Remedy or Fantasy?', *Building Research & Information*, 41 (2013), pp. 1–7 p.5.

16 Jeremy Till, *Architecture Depends* (The MIT Press, 2013)

17 Cliff Moser, *Architecture 3.0: The Disruptive Design Practice Handbook*, 1 edition (London ; New York: Routledge, 2014), p.53.

18 Chris J. Martin, 'The Sharing Economy: A Pathway to Sustainability or a Nightmarish Form of Neoliberal Capitalism?', *Ecological Economics*, 121 (2016), pp. 149–59.

19 Richard Susskind and Daniel Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts* (New York, NY: OUP Oxford, 2015)

20 'Assemble Wins 2015 Turner Prize', *Dezeen*, 2015 <https://www.dezeen.com/2015/12/07/assemble-architecture-collective-wins-2015-turner-prize-liverpool-housing-regeneration-project/> [accessed 10 December 2016]

21 Eliot Freidson, *Professionalism, the Third Logic: On the Practice of Knowledge* (University of Chicago Press, 2001), p.72.

22 Michael Eraut, 'Non-Formal Learning and Tacit Knowledge in Professional Work', *British Journal of Educational Psychology*, 70 (2000), pp.113–36.

23 Donald Schön, *The Reflective Practitioner: How Professionals Think In Action*, 1 edition (New York: Basic Books, 1984)

24 Building Futures, *The Future for Architects - Full Report - BD* (RIBA, 2011), p. 46.

25 James Benedict Brown, 2014. 'Learning theories for Live Projects' in Harris, H. & Widder, L. (eds) *Architecture Live Projects: Pedagogy into Practice*. Abingdon: Routledge.

26 Kristina Edström and Anette Kolmos, 'PBL and CDIO: Complementary Models for Engineering Education Development', *European Journal of Engineering Education*, 39 (2014), pp. 539–55.

27 Jane Anderson and Colin Priest, 2014. 'Developing in inclusive definition, typological analysis and online resource for live projects', in Harris, H. & Widder, L. (eds) *Architecture Live Projects: Pedagogy into Practice*. Abingdon: Routledge.

28 Guy Standing, *The Precariat: The New Dangerous Class* (London, UK ; New York, NY: Bloomsbury Academic, 2011)

29 'Casual Lecturers "stigmatised by Job Titles"', *Times Higher Education (THE)* <https://www.timeshighereducation.com/news/casual-lecturers-stigmatised-job-titles> [accessed 13 January 2016]

30 Francis Duffy and Andrew Rabeneck, 'Professionalism and Architects in the 21st Century', *Building Research & Information*, 41 (2013), pp. 115–22.

31 Pamela L. Eddy, 'Special Issue: Partnerships and Collaborations in Higher Education', *ASHE Higher Education Report*, 36 (2010), pp. 1–115.

32 Danielle Logue and Markus A Höllerer, 'Uber "Micropreneurs" Signal the End of Work as We Know It', *The Conversation* <http://theconversation.com/uber-micropreneurs-signal-the-end-of-work-as-we-know-it-42483> [accessed 17 August 2016]

33 Brinkley, Ian, and Lancaster University, 'Hard Evidence: How Has the Sharing Economy Changed Job Security?', *The Conversation*

<http://theconversation.com/hard-evidence-how-has-the-sharing-economy-changed-job-security-46049> [accessed 17 August 2016]

34 'The Trust Machine; The Promise of the Blockchain', *The Economist*, 417 (2015), p.13.