

Critical Subjects #01

Amin
Taha

Theo
Dounas

Five
Critical
Essays
On
Architectural
Education

Shelagh
McNerney

Patrik
Schumacher

Austin
Williams

MACHINE
BOOKS

This pamphlet is a critical intervention into architectural education.

Specifically referencing the uk, its critique is applicable more broadly. It is the first salvo in what we hope will be an open and challenging conversation.

We want you to read the essays, criticise or support them, pass them on and discuss the issues raised. We know that there are many things to argue about in the state of architecture, urbanism, construction and education. Only by opening the floor to a range of speculative opinions will we be able to clarify the best direction for the subject. We must provide the space for faculty members, academicians, architects and students to genuinely experiment.

Within the academy of all places, dissenting views should be tolerated but argued over, challenged but respected so that bold, new, and sometimes unorthodox ideas can flourish.

How then should architecture be taught?

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A Student's Perspective

Shelagh McNerney

About a year before the pandemic, I had a memorable conversation with an engineering colleague who was teasing me about the number of flights I'd taken around Europe visiting buildings and cities to feed my interest in architectural history. He had lived and worked in the Far East as a young engineer but was now suggesting that the new generation could do everything that they needed to do online.

I pointed out that visiting a city and experiencing a place is fundamental to any meaningful understanding of architecture, of a site, of a culture. It cannot be appreciated simply on a screen. I advocated walking about, taking in the sights, getting a feel for places from Birkenhead to Bilbao. I was adamant that satellite "street view", fly-throughs or renderings could never be a total substitute for physical experience and local knowledge. Nor could the screen be a human relationship. Clients, staff and communities are people, not data sets. It was in vain: he dismissed me as old-fashioned and said that my views on the matter could no longer be justified. I was shocked.

During this lockdown year I re-immersed myself into full-time academic life. As I did so, joining a Masters course "in London" but solely online, that conversation kept coming back to me.

My year as a virtual student has led me to ponder what I and other students have missed in the promise of, what was called, a "learning experience" provided through Zoom every day. The debate about online learning has moved away from the possible damage done to the student experience and focused instead on a celebration of its convenience. Online is no longer a temporary, unfortunate necessity but has come to be seen as an advantage, a boon. There has been some attention given to the impact on the social isolation of undergraduate students and their consequent well-being. But

blended learning is here to stay we are told. We now have words like “modern”, “accessible” and “efficient” in place of “challenging”, “engaging” and “educational”.

But what I want to consider in this essay is the wider question of the physical, built world and the human relationships that are essential to an urban experience. What does the virtual or online world mean for the profession of architecture and its practice? If the concrete physical world and the cut and thrust of human relationships are not essential experiences then what are we relating to and who are we building for?

The features of my particular course were reassuringly enticing in the recruitment booklet. We would:

- examine architecture and cities from early-modern to contemporary,
- develop a deep architectural knowledge, and critically interpret buildings, texts, architects, urban spaces and cities, as well as other representations and creative practices
- work with some of the world’s most respected historians and theorists,
- refine historical and critical research skills,
- be part of a world-leading centre for architectural teaching, • research in a truly global city — London.

Testimonials further confirmed what was on offer:

“This degree... teaches you to question not just to confront questions and buildings but to look at them from other angles.”

“What is so inspirational and what was so pioneering about the programme is that it teaches you a way of thinking about the built landscape.”

In reality, the curriculum and the changing language of intellectual thought associated with the subjects of architecture and history seem to focus on so-called “lived experiences”. Every lecture and seminar referenced race, intersectional identities, gender inequality through the ages, queer spaces, decarbonisation, energy efficiency, pathways to net zero, guilty empire/post colonialism, decolonising methodologies, slavery, bio-politics. I was free to declare my own “positionality” provided that it reinforced the narrative. But what of architecture itself?

In my practical experience, concrete examples of human advancement and debates about what and how we build, all required physical presence. Blended learning ain't it. The practice of architecture itself and the methods by which buildings are designed and the conventions associated with how planning, investment, procurement, designing and building takes place are learned through experience. They are absorbed through relationships with people in physical places. Team meetings, multi-disciplinary competition, legal conflicts, chats and challenges are all essential to the process of building structures but also metaphorically in building relationships. Defending your schemes in person and listening to clients and enthusiastic community opposition are at the heart of architecture. Or at least they were. Covid isn't really the problem, it has simply exacerbated the tendency for remoteness in teaching, in argument, in engagement, in distance learning and the distance from learning.

Ways of thinking actually develop through exposure to different ideas, different methods, opinions and debate. Even for the quiet ones in the classroom, observation and modelling of behaviours between protagonists is part of the learning and process. This happens in university as in working life. Social interaction, team working, group work, or spontaneity do not happen within time-tabled virtual common rooms. Actual people, not imaginaries. These are all real losses to the "learning about architecture" experience.

Online realities

But do you miss what you never had? The activities promised to me this year, that never materialised, include:

- Face to face teaching and seminars
- Discussions with mixed cohorts across ages, countries and experiences
- Group events
- Site visits
- Visits to academic libraries and archives
- International field trips
- Spontaneous catch ups with staff and fellow students • Access to newly

built campus facilities costing over £150 million

• Interaction within a “dense, social and networked building” • Seeing and breathing London; its buildings, neighbourhoods and people

For international students in particular, the promise of the London experience must have had a wholly negative impact on their understanding. For those on the other side of the world choosing to live in “European time” for a year of Zoom lectures makes me wonder what the “thinking about the built environment” means when you don’t enter that environment at all.

Instead, our education involved pre-recorded and occasional live lectures, and a few visiting lecturers sharing their screens. We prepared through digitised and scanned texts and links to films and reports in our own homes on our own hardware... on our own. I tried to arrange a virtual cinema screening on-line, but the technology couldn’t handle it.

Live Zoom seminars in groups of three with sociable students were bearable when everyone made an effort on screen. But like any cohort, many didn’t participate in the 20-minute “speak now” sessions. Some academics worked hard to mute opinionated students whilst encouraging and drawing out others, without appearing censorious or judgemental. But maybe not everyone had something to say and encouraging them to say something in the name of student engagement is often time-wasting and pointless.

My online classroom experience indicates that passive compliance and agreement are much easier to foster, but debates, argument and dissent are more difficult to convey on a screen. Critically, it is more difficult to examine new and old ideas in depth without all the social cues, physical communication signals and indications of disagreement when arguing about who is right and who is wrong. Thinking aloud, experiencing self-doubt and throwing around half thoughts on a screen is not a good look. The art of critical conversation is surely dead in this curated chatroom. Of course, the university is delighted by this cheap option. Some lecturers are delighted by this separation from any awkward interrogation of their ideas.

Administrators are delighted by the de-personalised, arms-length technology while still taking the money. Universities can publish polished video content about their student-centred services and pretend to give a damn about the student experience.

Safe spaces

As I read about the death and life of great cities, considered the body and the city in western civilisation, and perused the canons of modernism, my student inbox was rammed with messages of support from the institution I could not see.

The university emails were personal but copied to everyone. They were concerned about my health but preferred that I didn't leave my home. Fears about a virus compounded fears about harassment, sexism, racism and homophobia. In the modern university the perception of being in danger has become an ever-expanding paranoia. Over recent years, university security teams grew, as did crime prevention and personal safety advisers associated with online bullying, harassment, and misconduct. We have Code Administrators and Complaints Tribunals. We have access to a university hate crime reporting tool with handy database. We have wardens, student residence emergency response teams, campus-wide CCTV, monitored by 24-hour control room staff. For public health fears we have counselling services with same day appointments for disability, mental health and well-being issues along with online and telephone counselling and 24/7 advice. Money is being spent to make sure that someone is available to blow your most mild insecurity out of all proportion, any time, day or night.

The notion of a safe and open environment at the university is repeated every day, all year round, but it is accompanied by a sense of impending risk, doom and attack. There are guides to staying healthy during exams, advice from current students on wellbeing, mental health and volunteering and even guides on how to avoid getting your phone snatched on campus.

If I wasn't nervous about arriving at a new environment before, then I might now start to feel excluded from these self-defining vulnerable groups, forums and networks. But there is no return to campus just yet.

When this is all over, what will the absence of physical contact, site visits, tours, being, socialising, or touching libraries, archives, buildings and history be for architecture and architects? To quote Richard Sennett, "throughout a lifetime a person takes in more of the outside—less self,

more other”. This statement rests on his belief that “a big dense diverse city was the place where people could practise and gradually strengthen their moral muscle”. That was 50 years ago. He has more recently said, “a computer screen can never replace human interaction nor the visceral physical presence of people thinking, learning and arguing together”. This is true.

It is stimulating and especially pertinent for architecture. After all, our built environment has been created over centuries from the blood, sweat and tears of humanity—both metaphorically and literally —that is so absent from the sterile Zoom common room of today. Architects, often defensive of their position in the professional building team, run the risk of becoming far too comfortable in their living room armchairs, increasingly distant from the outside world. Maybe universities need to demonstrate the vitality of the environment they are teaching about by experiencing it. It is not the physical world that is redundant, but we might become so if we sit back in our armchairs.

I see the work produced by architectural cohorts over the summer of 2020 being moulded by how we can bring the outside world into our personal spaces. It is the opposite of History’s lessons. We are no longer instructed to be in, and with, the outside world but to bring the world into our home. The emphasis continues to be on how we adapt our homes for the future to keep us safe and withdrawn from the world itself. This is a loss not a gain for the human condition.

Shelagh McNerney

M.A. student, independent built environment consultant

Twitter: [@ShelaghLtd](https://twitter.com/ShelaghLtd)

The Knowledgeable Apprentice

Amin Taha

Without wanting to address the entire history of architectural education, we might begin with the apprentice traditions which introduced the concept of seven years of learning and qualification. Spent alongside “master masons” who would suggest their knowledge had been passed from one inculcated generation to the next since the building of the pyramids, the student would submit their masterpiece at the end of that period allowing them to graduate as a master.

The 1563 Statute of Artificers legally bound guilds to their apprentices who remained “journeymen” (from the French “journée” referring to work paid by the day) becoming master-masons able to work independently and train others. This was common practice throughout Europe with most Renaissance architects having gone through that process, overlapping with sculpting and painting. To a large degree it was middle-income families who had social connections and were able to make payments for their children to enter such schooling. Wealthier families and lower income families respectively, had either no need or no opportunity for socio-economic advancement.

Choosing what wasn’t even understood yet as “architecture” was one of several emerging economic opportunities. Parents could choose to indenture their children to guilds for haberdashers, leatherworkers, candlemakers and so on. It was an education system in which all pupils achieved mastery and by so doing, understood their past traditions and were intimately aware of the inherent properties of the materials with which they worked. In his *Lives of the Most Excellent Painters, Sculptors and Architects*, Giorgio Vasari explains how mastering such comprehensive skills propelled newly graduating masters into the vanguard of experimentation and innovation in their discipline.

What if you were an aristocrat, taking an interest in the subject but not inclined to spend seven years in a quarry, learning your trade from a master from a lower social class? Leon Battista Alberti was such a well-heeled example. Son of a wealthy nobleman exiled to Florence he excelled in mathematics, joined the religious orders, read ancient Greek and Latin, and took an interest in painting and architecture. He was the archetypal renaissance man. Vasari credits Alberti's prolific writing on architecture and his work on perspective, as a core component of disseminating an understanding the design process.

Vasari relies on social capital, the friends that allowed direct access to patrons great and good, leading all the way to the Pope. He does, however, criticise Alberti's "leaning misaligning marble pilasters and arches" at S. Maria Novella suggesting that Alberti did not having sufficient building experience by not having undertaken a full apprenticeship under a master.¹ By contrast Filippo Brunelleschi's work on Florence Cathedral's dome is the "heaven sent" culmination of Brunelleschi's intellectual, curiosity-driven apprenticeship years in goldsmithing, stonemasonry, sculpture, and architecture under Donatello before a period in Rome surveying new and ancient buildings. For Vasari, successful architecture results from a comprehensive immersion in materials, structure, theory, and history under the apprenticeship of a master.

Elizabeth Merrill² suggests that by Vasari's time, the latter half of the 16th century and early 17th century, experienced masters began to establish academies, setting themselves alongside university professors, and drawing on humanist ethics that defined a profession as mixture of manual, theoretical, and artistic expertise to be employed for social, civic, and moral purposes. Eventually subsumed within the formal academic system they still retained the need to master materials and structures before graduating.

By the time Renaissance-era Classical architecture entered England via Inigo Jones, Italy already had several generations of experience to help develop a broader teaching method additional to the apprenticeship system. Not so in England.

Jones, born in Smithfield in London to a Welsh clothworker, was initially apprenticed to the carpenter's guild, where his drawing skills were brought to the attention of an aristocratic benefactor who funded Jones' education via the grand tour, as well as an Italian academy for drawing and carpentry skills in the Classical fashion. With carpentry and stone masonry (the latter needing the other for temporary and permanent works), architecture dominated the curriculum. On his return, Jones created the Palladian Queen's House, the Banqueting Hall and St. Paul's Covent Garden. It is worth noting that Jones' tour of Italy took in a spectrum of work from that of the purist Andrea Palladio to the idiosyncratic Palazzo del Te by Giulio Romano. Jones' apprentice was John Webb, also born in Smithfield, who went on to have his own successful career as an architect and court painter.

Italy's growing formalisation of architectural education within academies and universities would take another hundred years to develop in England through such institutions as the Royal Academy of Arts. Before then (and much like the earlier Italian apprenticeship system) for those not born into fortune like Christopher Wren, John Vanbrugh and Nicholas Hawksmoor it would be complete chance whether aptitude crossed paths with opportunity. For Webb, that opportunity came in the shape of a benefactor named Richard Boyle, also known as the "architect earl," otherwise titled the 3rd Earl of Burlington. At an early age, he had shown an aptitude in music such that George Fredric Handel had dedicated an opera to him while a guest at Burlington House, the family Palladian estate. Boyle had developed an interest in architecture during two grand tours at the ages of 18 and 21 and relied heavily on William Kent, who had begun life as an apprenticed signwriter until, as you can probably guess, his aptitude came to the attention of benefactors who sent him on the grand tour and a period of study at an academy in Rome before returning as a master architect and landscape designer.

The Architects' Club

With the advent of industrialisation and urbanisation in the 18th and 19th centuries, knowledge transfer *viz* the training of architects tended to one of two models: aristocratic "amateur" architects or apprenticed assistants to a

master. James Wyatt whose forebearers had invented the automatic cotton spinning wheel that propelled the industrial revolution, was schooled in Venice under the patronage of the British Ambassador to the Venetian Republic. Returning to become a significant architect he remained unhappy with what he perceived to be a proliferation of illegitimate styles undertaken by architects with no grounding in antiquity.

After much handwringing on the matter and regular meetings at Thatched House Tavern with John Soane (son of a bricklayer) and brothers Robert and John Adam (sons of a stonemason and self taught architect) in 1791³ they established The Architects' Club, to be permanently housed at the tavern. Though not exactly a pub, given it was located amongst Piccadilly's gentlemen's clubs, it consolidated the title Architect and taught theory and drawing within an academy or under a recognised master. Social snobbery meant that the Architects Club, was no place for oiks, and apprenticed "stonemasons, carpenters, craftsmen, measurers and surveyors of buildings" were denied entry. This socio-economically driven exclusion of outsiders was reinforced by a strict internal hierarchy of Fellows.

What if, to secure work, one wished to be recognised by the Club but could not afford the grand tour, time at an academy in Rome or Venice, nor had a patron to help you out? Applying to be an assistant to a Club member would be the only alternative, and this process became formalised as "pupillage." Curiously, given that lowly "craft" apprentices were looked down upon, seven years of pupillage were still required before the master deemed the assistant worthy for consideration by the Club.

By 1832 the Club gained a Royal Charter to become the Royal Institute of British Architects. With entry to architecture now controlled and limited by the RIBA, competition was intense and open to abuse. Some parents paid to place their children in offices paying no salary but with the promise of graduating them after seven years. Families ended up in debt, in penury. During the feverish urbanisation of the 19th century, those who longed for an idealised pastoral utopia, like Ruskin, Dickens and Morris, reflected society's view that architecture had "broader social implications"⁴ and architects had ethical responsibilities.

In Dickens's novel, *The Life and Adventures of Martin Chuzzlewit*, the architect Seth Pecksniff is an incompetent and unscrupulous master who charges his pupils an education fee but never allows them to graduate. Three years after its publication, pupils banded together to create a teaching institute, the Architectural Association, which was Britain's first academy similar to those in Rome. As they initially shared premises with the RIBA, they were taught by its illustrious Fellows. Yet unlike those in Italy there would be no years spent with stonemasons and carpenters understanding the nature of the materials, there was no training to develop fine drawing skills. Both regulatory and educational institutions had perhaps inadvertently limited learning to that experienced by the aristocratic amateur architect.

The seven-year apprentice/qualification period conveniently metamorphosed into the higher education funding system as Bachelor and Master degrees. Professional specialisations fell into silos for engineers and surveyors, and the original definition of architecture as a synthesis of Vitruvian values, "firmness, commodity, delight" inevitably diminished. Architects became interested in aesthetic delight with no longer an understanding of the other two.

The introduction of full fees for a course that is longer than any other now makes the question of relevance more urgent. It would not be farfetched to suggest that the RIBA and universities have sleepwalked 18-year-olds into huge student debts and some of the lowest paid jobs for any undergraduates and postgraduates available. Locked into the Ministry of Education's flip-floppy, cost-cutting criteria, architecture schools have removed once mandatory courses on history, theory, materials and structure, environmental science and fire engineering. Learning outcomes are shoe-horned into design studios. Courses must earn their keep by increasing student numbers; with high fees (even higher fees for non-nationals).

Money talks

Does this begin to have the air of Pecksniff; a business case modelled on more student fees for less comprehensive or competent teaching? The answer ought to come from the expectation of actual professional

competency. For instance, the Royal Institute of the Architects of Ireland (riai) have maintained their expectation of detailing, project and contract management so that architects' ideas are tested across all Work Stages. To ensure an architect qualifies with competency, the RIBA and riai steer, monitor and inspect teaching curriculums. The RIAI has recognised the diminishing role of architects in designing and controlling details, and now factor that into how they examine. They have adjusted to the social, economic, and practical reality of architecture. Meanwhile, the RIBA education programme continues to graduate beautiful drawings, interpretation, and the integration of abstract ideas.

All architecture students—and architects—need, at least, to add a more intimate knowledge of materials and their structural properties in order to experiment. They need to argue for poetic and cost-effective assembly using the language of their clients and quantity surveyors. Seven years of teaching and apprenticeship to a master should be able to provide that.

A fragmented, expensive education was not consciously constructed: it has simply drifted into existence. Placing architecture within unstable education policy silos takes it further from its intended purpose. Students are graduating into an environment of procurement methods that reallocate the responsibilities of the consultant leader to those untrained in understanding the coordination of materials and structures.

If the architect were more comprehensively trained in materials and structure, results could be demonstrated to be cheaper, more robust, safer, and hopefully all done with delight. In short, more intelligently assembled to make better architecture. Counterproductively, elemental costs are often prioritised over the whole assembly. It is difficult to defend encouraging 18-year-olds to enter architectural courses when they leave them with high debts, ill-equipped for the profession either ethically or practically.

If these courses were not within already established and well-regarded institutions, many would be closed as scams. For these reasons alone, we ought to place students within an architectural practice. It requires the 2,800 uk chartered practices to accommodate 15,500 students. Those practices of ten or fewer staff (75% of the total) taking one student, the larger taking the greater portion, and the celebrated aj100 taking even more. What is

currently a Part I or Part II placement would be spread across the academic period with at least one or two days per week in practice, with a salary that would, if the student wished, remove the need for maintenance loans. Professional development can be upgraded to contain academic as well as industry content and aligned to teach both students and practitioners.

As Giorgio Vasari highlighted five hundred years ago, electing to learn through theory alone, abstracted from the experience of working masters is inadvertently diminishing students' skill sets, and consequently the architecture we all inhabit.

1 Vasari, Giorgio (1912–1915) “Leon Battista Alberti”, *The Lives of the Most Excellent Italian Painters, Sculptors, and Architects*. 1550. Transl. Gaston C. DeVere.

2 Merrill, Elizabeth (2017) “The Professione di Architetto in Renaissance Italy”, *Journal of the Society of Architectural Historians*, 76 (1): pp. 13–35.

3 Colvin, H (2008) *Biographical Dictionary of British Architects*, Yale University Press.

4 Schwarzbach, F.S (2013) *Dickens and the City*, Bloomsbury.

Amin Taha

Chair, Groupwork

groupwork.uk.com

Twitter: [@Groupwork_arch](https://twitter.com/Groupwork_arch)

Master-Student Engagement

Patrik Schumacher

When teachers of architecture—full time teachers or architects teaching part-time—reflect on their task, methods and criteria of success' they try to relate general disciplinary issues like the built environment's significance to social progress or the architect's professional role in a changing society on one side: with the general concerns of pedagogy on the other. However, unlike school teachers, teachers of architecture (like university teachers in general) are not professional pedagogues. Teachers of architecture, often practicing architects, are largely autodidacts with respect to the science and art of pedagogy. Teaching in architecture has not been professionalised and only tangentially and sporadically partakes in the discourse that guides the education system of society, usually reinforcing the mainstream concepts and principles of pedagogy.

The insights we associate with contemporary progressive pedagogy are in fact as old as the academic discipline of pedagogy (or education science) itself, which had its first flourishing, with a dense cluster of treatises, in (the Protestant parts of) the German speaking world towards the end of the 18th century. The discourse centred around an ambitious concept of education ("Bildung"), full of humanist pathos, in explicit contrast to the mere training of skills and transference of knowledge ("Ausbildung"). In English the former translates as (self) development, the latter, training. To some extent the difference is institutionally represented in the Anglo-Saxon world in the difference between liberal and vocational education. The German Bildung of the 18th and 19th centuries was deemed superior for its emphasis on the pupil's moral development.

A science of pedagogy emerged from the systematisation of debates about secular education and educational reform supported by magazines and practical guidebooks, absorbing the influence of the French Enlightenment (Rousseau) and English Empiricism (Locke and Hume). The first formal

academic professorship in the science of education was instituted at the University of Halle in 1778 with Ernst Christian Trapp as first appointed professor.

Bildung aspired to the formation of an autonomous, responsible moral subject. Johann Stuve (1752–1793) called for the “free development of the young human being’s talents, powers, and self-expression, in accordance with his general human nature, his individuality and his social situation”¹. The prominent pedagogue Joachim Heinrich Campe (1746–1818), who also became the home teacher of both Wilhelm and Alexander von Humbolt, insisted, against romantic sentimentality, to found educational practice on science. The developing child should freely choose its sensations. Campe emphasised that “the free play of ideas, thoughts and emotions are the only means of education and self-perfection”² and that the child will not be able to transform the material it is passively receiving into insights, but that “self-activity alone exercises, strengthens and develops the mental and physical powers of the child.”³

Since then, the doctrine of self-activity has been foundational in pedagogy. In Campe’s approach, self-activity builds on the natural inclination of imitation and the natural capacity for empathy, and sociality. Morality was always emphasised too; after all, this secular pedagogy was offering itself as a substitute to centuries of church-dominated education. The moral thrust of the new education was strongly emphasised by Johann Gottlieb Fichte (1762–1814), who served as first rector of Berlin University from 1810, and who characterised the new pedagogy as “the deliberate and sure art of cultivating the pupil to pure morality.”⁴

The issue whether and to what extent the full development of the individual conflicts with and can be sacrificed for the individual’s usefulness to society was already thematised in the late 18th century German pedagogy (e.g., by Peter Villaume). Even the slogan of the importance of “learning to learn” was already explicitly formulated in the first decades of pedagogy’s flourishing, namely in the treatise on educational reform put forward by Wilhelm von Humboldt (1767–1835): “The young human being is doubly engaged in learning, with the immediate learning itself, but also with the learning of learning.”⁵ According to Humboldt (who was the founder of

Berlin University and who rejected class differentiation within the educational system) education is work on oneself, as the individual's active appropriation of scientific knowledge. Fichte made a similar point: "However great or small the sum of the knowledge that he takes with him from education, he has surely been left with a mind that for the rest of his life can grasp every truth whose cognition will become necessary to him, that remains as constantly receptive to instruction by others as it is capable of independent reflection." ⁶

Liberal or vocational?

The general thrust of a humanist pedagogy was, once more, effectively summarised over 100 years later by John Dewey, whose pedagogy still seems progressive to us today (perhaps because the gap between ideals and educational realities on the ground remains.) Dewey summarises the contrasts between traditional and progressive education as follows: "To imposition from above is opposed expression and cultivation of individuality; to external discipline is opposed free activity; to learning from texts and teachers, learning through experience; to acquisition of isolated skills and techniques by drill, is opposed acquisition of them as means of attaining ends which make direct vital appeal; ... to static aims and materials is opposed acquaintance with a changing world." ⁷

The point of this excursion into the universally espoused insights of (an always progressive) theoretical pedagogy is to emphasise that these insights and the value asymmetry between liberal education (*Bildung*) and vocational training (*Ausbildung*) is presupposed here, to make sure that the distinction between the master-apprentice model and the peer-to-peer model, despite superficial appearances, is neither confused with the conservative vs. progressive distinction, nor with the liberal education vs. training distinction. Both models are compatible with an enlightened humanist pedagogy that aspires to facilitate the students' independent, critical-reflective intellectual development.

In the master-apprentice model the teacher assumes a position of leader who invites students to join his project as junior partners. The teaching

relation starts as an apprenticeship that evolves into a discipleship that finally aspires to approach a relation between collaborating peers. In the peer-to-peer model, the student initiates the project and the teacher acts only as a sounding board: someone to bounce ideas off.

There is no inbuilt preference, one over the other, with respect to all educational situations. Nevertheless, it is the master-apprentice (or master-disciple) model that I am personally pursuing in my teaching practice and which I am defending here. I also believe that it is, in most cases, the more appropriate, honest and realistic model, not only for undergraduate studies but also for graduate (or post-graduate) studies. It reflects the (hopefully not only presumptive, but real) asymmetry in knowledge and experience between teacher and student and entails the appropriate expectation of the university teacher's resourcefulness as a leader in his/her field: a resourcefulness that elevated him or her to a university position in the first place.

When it comes to doctoral studies, the "peer-to-peer" or "sounding board" model might often be, and ideally should be, the appropriate model for the underlying relationship and terms of engagement. The same applies to exceptionally strong and strong minded graduate students who know what they would like to do and who are only looking for a sounding board. In situations where all student work is conducted in teams (as is the case with my teaching at the Architectural Association's Design Research Lab (aadrl)) this full individual self-determination is harder to accommodate. This also extends to my PhD research group where the master-apprentice model with its implied leadership role for the supervisor or advisor still prevails to some extent. Another factor that plays into the choice of model is the resoluteness of the teacher's own positioning. Not everybody embodies a determinate paradigm or has a determinate project to share. For some the sounding board role is more congenial. Thus, my own preferred teaching model, despite its advantages, is not always viable or most appropriate. In what follows, I primarily mean to refer to post-graduate level design projects (from the aadrl) rather than to PhD research work.

One key thesis here is that the apprenticeship model can and ideally should adhere to the principles of a progressive pedagogy aiming for the full, final,

confident and discursive-reflective ownership of the work by the student (or student team), inclusive of its underlying motivation, thesis, and argumentatively defensible rationality. Such self-confident appropriation of the work is credible even where students join as apprentices and the study project's underlying theoretical premises, problematic, brief, methodology, style and argumentative defence might have been largely provided by the teacher. The teacher's input includes a critical involvement with myriad design decisions.

Whether the teacher provides his leadership via critical guidance or via outright project leadership very much depends on the quality of the students. The master-apprentice model allows for a wide range of variation on this axis from guiding to leading. In any event, the studio teacher has a lot to offer, namely a well-thought-through studio agenda with sufficient horizon of solution resources to ensure that the design task can be successfully addressed. On this basis, original, unexpected solutions that exceed what was anticipated by the teacher are welcome. However, the resultant design thesis, no matter how original, will always contribute to the framing paradigm. In my case, the paradigm of parametricism / tectonism is expansive and open-ended enough to allow for the development of an inexhaustible number of original, innovative contributions.

Developing the paradigm

Under the auspices of the master-apprentice model the student project usually partakes in and contributes to the teacher's larger design research programme that in turn relates to his built and unbuilt oeuvre as pursued within the collective effort of his professional practice, in my case the evolving oeuvre of Zaha Hadid Architects. My design studio projects are always embedded in a cluster of simultaneous projects operating from the same premises and addressing the same problematic and brief with the same (or closely related) design methodology. Further, these projects are always embedded in a lineage of completed, comparable projects that act as benchmark reference projects and that help the incoming students to visualise the level that they should aspire to supersede. These benchmark projects act as paradigmatic exemplars or paradigms (in the Kuhnian sense).

Since aadrl operates with overlapping student cohorts—starting each year but finishing after 18 months—all students have the benefit of witnessing the process they will go through later. They see how these projects are developed and debated. They are also briefly drawn into the projects of their predecessor cohort as apprentices, helping with the final charettes finishing the projects, and then they witness these projects’ final presentations and crits.

This way of teaching / learning might be called “paradigm teaching/learning” because the students are socialised into a determinate, well-rehearsed paradigm by participating in the creation of yet another (hopefully further enhanced) exemplar. The paradigm, in the sense of a set of principles, values and methodological precepts is not only made tangible by a set of paradigmatic projects but the paradigm is also theoretically articulated in resources like books, papers and recorded lectures made available to the students. Finally, the principles, values, and methodological precepts that constitute the paradigm are, again and again, explicitly referred to, argued for and related to the projects in tutorials and crits. Thus, there is sufficient opportunity for the student to assimilate, critically engage with, as well as actively work within the offered paradigm.

Indeed, the students are required to stand up, explain and defend their work within the paradigm, in front of invited critics who will confront the project, its thesis and its premises with both immanent and extraneous critiques, in public presentation events. The students know and anticipate this. They know they cannot rely on pre-scripted formulaic phrases. They must fully comprehend and internalise the paradigm so that they can transfer and apply its principles, values and typical turns of argument to new situations and unexpected discursive challenges. They also know that they will have to make an original creative design contribution. All of this implies learning through experience, genuine self-activity, and the capability of independent reflection (to refer back to Dewey, Campe and Fichte).

While the educational relationship within the master-apprentice model starts off with a strong asymmetry in competency and authority, the teaching and learning process proceeds to balance out this asymmetry, so that, finally, the apprentice advances to become a genuine peer. This is an appropriate model

especially for the final master thesis that completes the formal educational career of the student and establishes him or her as a colleague. This trajectory is highly beneficial for the student and also benefits the teacher's agenda as he gains a group of eager apprentices who dedicate their time, energy and creativity to advance the design research program and the larger paradigm in which the master is invested. That these students grow rapidly to become full-blown collaborators, perhaps competitors, is another advantage.

If this paradigm has value within the discipline and within society at large, then the societal benefits exceed the benefit in mere education. Innovative paradigm expansion feeds into a collective, cumulative upgrading of the discipline's capacity. Graduate or post-graduate level university teaching is, within architecture, one of very few, and probably the most important, research arenas, hence the name "Design Research Laboratory". This benefit of feeding into a collective cumulative research and sustained disciplinary upgrading is far less certain in the case of the open-ended sounding board model, which is not structurally geared to enact this role or function (which some of us expect from our leading architecture schools).

The active participation/learning experience is energised by being perceived as a means of attaining ends which make a "direct vital appeal" (to borrow from Dewey). This combination of paradigmatic positioning, i.e., positioning within the cumulative collective research programme of parametricism / tectonism, with the connection to successful real-world practice is potent and empowering: it gives credibility to the student's work by suggesting that their work has not only innovative thrust and theoretical relevance but also the prospect of being built.

In contrast to these opportunities offered by 'paradigm learning' within the master-apprentice model, the peer-to-peer sounding board model seems rather impoverished.

Here the teacher gives hardly more than a studio title (and perhaps, an intellectual provocation) and leaves the elaboration of the brief and thesis to the student. The teacher thus confines themselves to immanent critique, possibly in the manner of a Socratic dialogue, without conclusions or impositions. No expected deliverables are specified, and no pre-defined set

of success criteria. The underlying assumption that all students already come with sufficiently elaborate and worthwhile internal resources that only need to be given space to unfold is not only overly optimistic as a default assumption, but also such an assumption is fundamentally fallacious due to the social-historical discursive origin of all worthwhile ideas. Productive intellectual agency cannot be located in individual minds left to their own devices.

Another problem is that there is little guarantee that the different student projects within the peer-to-peer studio are comparable, or relevant to each other. The possibility of utter incommensurability between projects cannot be excluded. (This kind of teaching is typical in contemporary art schools.) There is also the limitation of the teacher's competency with respect to the student defined agenda, brief and thesis. In the apprenticeship model, the teacher can utilise his best knowledge, skills and experience for the purposes of teaching. While this description of the peer-to-peer model might seem like a caricature, this art-school-like approach exists in many contemporary schools of architecture. Again, these reflections are not meant to discredit or altogether discard this peer-to-peer model. It certainly has its keen attraction for students, and it has an indispensable role to play. However, the limitations identified above imply that it cannot and should not become the dominant or default model for architectural education in general, even if certain ideological currents prefer it. The peer-to-peer model is not the only logical contemporary embodiment of the enlightened, humanist, progressive pedagogy we all subscribe to.

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Patrik Schumacher

Principal, Zaha Hadid Architects

zaha-hadid.com

Decentralised Education

Theo Dounas

The 20th century stands as a large concrete slab on the body of architecture. Notwithstanding the material advances that were made since 1900, we have always experimented with architecture, its politics, its philosophy, and yet its education remains stubbornly narrow. From all this experimentation, no clear, unifying global thrust has ever emerged despite intensive efforts to pinpoint, contain and classify the avant-garde, the orthodox, or the everyday banality of architecture.

Architecture tried being an art, then had a shot at transforming into a science, and finally compromised with something like “both an art and a science”. In fact, architecture is most probably a practice, defying classification, providing shelter, undermining any philosophical readings that we might have of its signs and meaning. Architecture is building, concentrating matter in space and time, addressing production, function, people, and life.

Herein lies the crux and the problem of architectural education: Architecture can be taught *ex cathedra*, but only by designing *more* architecture do we advance the purpose of architecture and create better architects. It is, in essence, a speculation about the future.

Architectural education, like the discipline it teaches, has had something of a renaissance in the 20th century. We have observed the Beaux-arts model, the Bauhaus model (accidentally creating an architectural style), the Ecole Polytechnique model, and the UK studio model. Within these arise two thematic questions: how do we organise the curriculum (if you have one), and what kind of style might such a school produce? Both questions revolve around freedom. Is the student free to study whatever they need, or do we have to define for her all the details of the curriculum? Is the student free to develop whatever spatial and material organisation they need, or do the

tutors guide the student restricting the freedom on one hand, but forging excellent practitioners on the other?

As a counterpart to this kind of thinking, one might refer to Radical Pedagogies by Beatriz Colomina.¹ She and her students map out a series of historical architectural paradigms to investigate how they might now address the two questions posed above and, in the process, develop or challenge their canonical status. In some of these experiments, it was revealed that the institution that hosted them had outgrown them, and their radical origins had been forgotten, in others it was the tutors that had moved on and recreated new radicalised architecture. Or, more admirably it was their students that had emerged to become either icons or *enfant gâtés* of the global architecture scene. Of course, in all these cases, it was the global spread of experts and the mobility and contestation of ideas that contributed to the creation—through happenstance and hard work—of radically new ideas that would change the face of architecture.

Such architectural and educational experiments (and others besides) often look like works of localised effort and centralisation, where the expertise of students and professors are all concentrated. But the global architectonic system works in a decentralised manner, or rather, it thrives in a decentralised manner.

File sharing security

Decentralisation has received a great deal of attention from political experts and activists. Borne out of the French Revolution and hailed by anarchists it is often seen as the core mechanism through which citizens can engage, i.e., citizens acting locally to challenge the hierarchical system, for instance. On the technical level, in the last 30 years various distributed and decentralised information networks have emerged that have had unique social, economic and informational characteristics: the Tor network, for example, (an encryption for online anonymity) provides secure communications, whereby the bit-torrent protocol provides resilient file-sharing activities. It has also become the paragon of the anti-copyright political movement. In the last decade, blockchain technologies have been developed to provide

peer-to-peer economic and value transfer networks beyond centralised control of the banks or the state.

Blockchain, in particular, is a distributed system of economic value that was created as a counter-technical system to the established failed economic network. As Bodó et al explain in their paper, “Decentralisation: a multidisciplinary perspective”, blockchain provides a parallel on how one could imagine a socio-technical network of both global reach, power, and democratic, horizontal decentralisation.²

Blockchain, in the form that operates today, uses a distributed network of computer nodes, strong encryption, and algorithmic mechanisms that guarantee immutability in the architecture of the decentralised network, i.e., one cannot tamper with the data on the blockchain. This is combined with a protocol of trust (algorithmic measures that guarantee agreement on the information within the blockchain, without the need for central authorities, that would introduce the idea of central control along with all of its advantages and disadvantages). If architected correctly, the distributed nature of blockchain creates a very resilient network whereby large swathes can go off-line and yet the whole system will continue to operate.

In parallel, the network as a whole and each node has the capacity to execute software code (smart contracts),³ emulating legal finality (an undisputable resolution). This practically means that we have on our hands a global computer that can do a lot more than transactions outside the established financial system. It can encode and regulate informational relationships, in space and time... for example, designs for architecture. Additionally, it can regulate (monetary) incentives which can be built into the system. With a careful structuring of the smart contracts, where participants agree on targets and procedures, one can build stigmergic, collaborative educational platforms, where coordination is not the task of a central authority, but more of a distributed mesh-like swarm of actors that collectively learn and build new knowledge.

This can easily become the technological bedrock of a new, global architecture school that does not need the institutions of the past to advance knowledge on architectural design. The beauty with this kind of system is

that the existing architecture schools can become nodes in the decentralised education system, each one of them answering the aforementioned questions on freedom and technocracy in their own kind of way. Additionally, one can imagine new types of nodes in such a system stemming, for example, from architectural practice or social needs.

We could use these ideas to advance architecture beyond the mere informational, intellectual and experiential exchange. As it is now, say, a scholar travels to another school (Note: in classic liberal fashion a “scholar” means both a student and/or a teacher, treated equally) to participate in a research workshop, course or programme whose schedule and goals have been set in advance, and managed by a quality assurance system that stifles impromptu innovation, intuition and fluidity.

Global possibilities

Under a decentralised schema, we can build a global architecture school where one selects lectures from a school in China, say, and studios from a school in London, New York or Japan. Each scholar weaves their own architectural curriculum by selecting and building experiences from each of the nodes.

I am not advocating only education from afar via Zoom or some such, but also encouraging physical mobility: the scholar would actually have to go to these places. While the coronavirus pandemic has accelerated the use of digital and remote-learning technologies in education, architectural workshops, studio discussions, seminar groups suffered from a lack of face-to-face, peer-to-peer and localised delivery in the same physical space. As such, I am not advocating for a *virtual* school, but for a global school where physical location and physical context is celebrated and incorporated into the decentralised operations.

Locally and collectively, the nodes creating this new school of architecture, along with their scholars participating freely, can finally balance freedom and intuition. Encapsulated into rigorous educational offerings, democracy and technocracy would thrive, rather than be trapped in the oppositional debate between democracy or technocracy.

This framework would establish some interesting features: a scholar at one node could offer their expertise in a truly global fashion, with a strong local base. The Scholar-Architect would at once be a tutor and the next instance a tutee learning and exploring knowledge in an area in which they do not have expertise. Through the smart contracts running on the global architecture school block chain, scholars (and society) would be able to pitch their own ideas for funding, or their own solutions to problems and briefs set on the platform. Society would be able to describe—and set—architectonic or technical problems to be solved and could stigmergically collaborate in providing knowledge, design, solutions. Everyone could contribute and take advantage of this global hive of knowledge.

Nodes—the current architecture schools—would act as regional concentrations of expertise and action, providing a local interface to the global system. Funding the global school would be executed through cryptocurrencies, and special smart contracts where scholars willing to learn would pay in, while scholars willing to work for it would receive funds. Ring-fenced funds would provide scholarships and traveling allowances, while a small proportion would secure the operating expenses of the endeavour, building a school that would pay for itself, rather than a school that would need to be maintained either by the market or public funds. Of course, this requires both a healthy scepticism and risk-taking approach from the point of view of working against established power and authority, developing relationships and marginalising bureaucracies, with the goal of moving to radical decentralisation.

Each architectural school node, as part of this decentralised, distributed system could develop, in depth, their technocracy and their democracy. A fantastic consequence of this would be the intense engagement of the scholars in developing architectural knowledge beyond delivering a curriculum that has to negotiate bureaucratic agendas and officious frameworks. It could be architecture in its purest form: practice.

This engagement is necessary at the moment so that architecture, collectively as a discipline, tackles the threat and benediction of automation and automated production. With blockchain providing the most flexible, optimised and resource-intensive system possible to organise a global

architecture school, the problem would shift to architectonic production itself, both in terms of design-via-artificial intelligence and of construction-via-robotic-industrialised-fabrication. A combination of all three could, under certain decentralised power regimes, allow for the creation of infrastructure that pays itself, and maintains itself with minimal intervention from humans. This requires the concentrated global efforts of a number of committed architects and scholars for a number of years, and the distributed, decentralised understanding that the community benefits of such practices would have to be shared rather than developed for profit.

Other nodes could also devote themselves to knowledge that defies automation, pure craft, in a playful dance where craftsmanship is preserved and developed as a leisurely activity and knowledge, rather than as a production mechanism. Equally, nodes interested in social practices that have an experimental spatial dimension could inform and interact with the crafts or automation nodes. New Nodes could be invented now or in the future providing solutions to problem we never knew were solvable or generating new manners and voices on how to frame the world architectonically.

In this way, we might be able not only to coalesce, but to forge new pathways for architectural education. Decentralising—working on the horizontal level but harnessing global resources — might be the way in which we finally free architecture and its education, and really make it into an art and a science.

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Theo Dounas

Learning Excellence leader,
Scott Sutherland School of Architecture; director, Roubo
roubo.co.uk

Twitter: [@Arlav](https://twitter.com/Arlav)

Question Everything

Austin Williams

Christopher Wren held the first professorial chair in Astronomy at Gresham College in Bishopsgate from 1657–1659, a period of social turmoil at the tail end of Cromwell’s Interregnum. As political and religious tensions presaged the Restoration of the monarchy under Charles II, intellectual meetings that had been discontinued in 1658 were once again permitted. On 28 November 1660, after Wren had given his regular Wednesday afternoon Gresham lecture, twelve associates “did according to the usual manner, withdraw for mutual converse”.¹ These were all members of “an experimental philosophical clubbe” who were reflecting on the development of the sciences and keen to provide more formal foundations for a learned society for enquiry into “a philosophy of mankind”.² The Royal Society was born and granted its first charter of incorporation on 15 July 1662.

The Society’s motto: “Nullius in verba”, proposed by them in 1663, translates to “on the word of no-one” and reflects on the rs Fellows’ determination to ensure that scientific statements should be backed up by verifiable experiment. But more importantly, the phrase was an expression of independence—of intellectual autonomy—in order to withstand the encroachment of external authorities. Politically-skewed science after all, is not really science if it exhibits bias. Just as advocacy research is no longer open-minded scrutiny but merely the promotion of a prejudice or a pre-determined social policy agenda. Nowadays by contrast, propaganda is all too often welcomed into the academy as a direct influence on pedagogy: scholarship and activism are casually conflated, key research is funded *only* if it reinforces social policy objectives, and there is barely a murmur of criticism when areas of academic enquiry are deemed to be impermissible.

The ideal concept of *nullius in verba*, of “question everything”, is the essence of this essay. It is as important today as it was 360 years ago.

Today, we have academic institutions that have forgotten to question established norms and simply regurgitate them unthinkingly. In Wren's day, architecture was integral to the Vitruvian mathematical sciences and so more prone to a rational scientific method. Today, of course, architecture schools celebrate the fact that the subject is a science and an art; a theory and a practice, historically-grounded and imaginative, and thus it is easier to present the subject as amorphous and relative and not prone to simple educational tropes. By defining it as all things to all people, it is beholden to no-one and free to create its own rules.

On one hand, that creative independence for architecture students is essential. But on the other hand, the science part of architecture has become influenced by psychology, and especially behavioural "science", exploring ways of nudging people to do the "right" thing. Meanwhile, the art or the aesthetic integrity of architecture is seldom considered to be intrinsic. Instead, aesthetics is appreciated instrumentally, predominantly if they can tick another socio-political box or two. "What is the point of firmness, commodity and delight in the face of crop failure, nothing to drink, or breathe?"³ asks journalist Christine Murray suggesting that we must downplay our fetish for well-designed buildings and instead deal with global issues through the prism of architectural functionalism.

It all seems so noble, so progressive: who would not want to save the world through their chosen university subject and, of course, idealistic architecture students clearly have a desire to create change. But change in an age of personal and social restraint has merely permitted architecture schools to reject the values of the past and replace them with vogueish cultural orthodoxies. There has been little debate on this. Instead creatives, designers and architects act through their related institutions and academic administrations to *impose* change rather than persuading students and faculty of the merits of their case.

Thought experiments

Architecture, unlike many other subjects, is an area of academic enquiry that delves variously into social, political, legal, financial, technical, moral

and ethical considerations. As a pedagogical exploration, architectural education encourages—or it should encourage—the student to formulate (at least in embryonic form) what they really believe in. This is perhaps less dependent on the pedagogical method of delivery, and more on the principle that students have to be confronted by a wide-ranging cavalcade of ideas in order for them to formulate, renounce or enhance their own opinions.

In the early 20th century, in *The Science of Logic*, Hegel addressed “the perversity of enlisting mathematical categories for injecting some determination into the method and the content of philosophical science”. He addressed ideological problems through dialectical engagement with those very ideas in order to refine one’s relation to the question at hand. The Hegelian concept of *Aufhebung* (translated as “sublation”) was used to inquire upon an issue. It simultaneously allows a negation of someone’s original position while preserving the reasonable essence of that position. This suggests that a student needn’t throw away their preconceived ideas for the sake of a pedagogical approach (although they might want to or be logically inspired to by the power of an alternative intellectual argument), but they must be encouraged to develop their understanding and be able to critically engage with and intelligently self-reflect on their original ideas.

Similarly, the Socratic method is a process whereby an idea is interrogated within a rigorous and engaging process of question and answer, each question building on the prior response. It relies on a cross-examination of the original thought or argument, a counter-argument, often resulting in a logical refutation of the original position. Indeed, since it is a Socratic *dialogue*, either side of the argument is open to refutation by superior knowledge and reasoning. These and other pedagogic procedures are intended to offer a refined, developed understanding of an issue, one that has been tested and not found wanting. Lebbeus Woods noted that architecture is a Socratic dialogue in which “the method of continual questioning and discourse based on dialogue not only works but is essential in a community that prizes both diversity and inventiveness”.⁴ He was speaking of diversity of opinion.

In today’s academy, pedagogy tends to prefer diversity in *everything but* opinions. It celebrates a fluid discourse but tends to promote one position as

correct and reject the other as ill-informed. There is no longer a nuanced Socratic engagement or dialectical discussion, but an imposition of correct thinking and the marginalisation and delegitimisation of others. Political ideas are being foisted on the student with no scope for questioning, let alone dissent. Questioning is restricted within acceptable parameters. The Royal Institute of British Architects (RIBA), for example, has created a “new direction for architectural education” by enforcing “mandatory competencies” that must be taught, learned and convincingly demonstrated. Fair enough, this is a practical professional after all, and students ought to know about contracts and structures. But the key agenda for the RIBA is around the “catastrophic effects” of the climate crisis and architects’ ethical and social responsibility to deal with it. Indeed, the American Institute of Architects (aia) has adopted a position that claims that “ignoring sustainability is officially unethical”.⁵

Under compulsion to recite the narrative, UK architecture students need to demonstrate “climate literacy” implying that those students with only a marginal interest in environmental matters, or those more concerned about other things in life, will mark a student out as an unethical illiterate. Students (and qualified architects too) will need to demonstrate that they are exploring “nature-based solutions”, “biophilic and sensory design”, “low carbon transport networks”, “carbon offsetting”, etc.⁶ A student’s ethical competency will be demonstrated by *inter alia*, a commitment to sustainability, or an engagement in pro bono/charity work. It matters not if you agree with these environmental or socio-political values, you will be judged on your performative compliance with these political objectives. Architecture students, says the RIBA, should “raise awareness and change the culture”.⁶ These ritualised catechisms are recited to confirm one’s acquiescence to a proscribed set of moral virtues that will lift the architecture student further above the hoi polloi.

Many (I have refrained from saying “all”, even though I presume it may be the case) educational establishments have adapted to this style of teaching. Notionally rejecting the master-student “elitism” of old-school tutors, they have replaced it with an even more patrician approach. Once upon a time, students would reject the *a la mode* school of thought on offer as a way of asserting their own beliefs or as a sign of rebellion. Nowadays, passivity

reigns. Students are told to design sustainably or they just aren't with the programme (whether they know what sustainability means or not is irrelevant). The point is to show that you have adequately sought to demonstrate virtue.

In the past, there were political positions and counter-positions within architecture schools, whereas now there are shallow slogans encouraging students to “make a difference” the vacuity of which simply implies that if you make the right noises, say the right things, you'll get the marks. Given that lecturers are as prone to this narcissistic culture war as their students, it leaves intellectual engagement, the free and open enquiry of education, the rigour and fairness of pedagogy, in a mess.

No critique

A theory is a formal statement of the rules on which a subject of study is based. Critical Theory is the pedagogical preference *de nos jours*. It is a reworking of the Marxist understanding of exploitative economic relations, replacing class politics with a juvenile assertion that every manifestation of reality is effectively an instrument of oppression. Even if it is true, which it isn't, “critical theory” privileges the *form* of oppression over the *content*. More problematically it enforces compliance in as much as you cannot *not* take a position. At least, in the past students could choose Marxism, capitalism, or several other challenging, polarising political ideologies whereas now students are protected from harmful ideas; offered safe spaces and provided with ready-made theories and homilies.⁸

Author, Helen Pluckrose notes that “Critical education theory holds that it is dangerous to allow students to express... disagreement” on the basis that they are denying “the truth” as laid down by... er... critical education theorists.⁹ She is referring to an example of a male student who questioned an orthodoxy in class and was immediately shut down for a potential microaggression. There are a number of political issues; from the climate emergency to critical race theory to gender studies that seem to have just one right answer. A recent book advocates that design needs to be “seen through the eyes of various subjectivities—feminine/masculine,

bourgeoise/ascetic, historically referential/mute, western/eastern,” and woe betide a suggestion that these formulations are irrelevant to your design intent, or worse, that you don’t agree with them. It seems that the inverse rule applies to those universities that boast about their critical-thinking skills in that the more they talk about it, the less criticism and meaningful thinking takes place.

It is important to add that subscribing to a political position is usually the result of reading, thinking and challenging one’s world view. In current practice, the student is seldom even asked what they believe—that is almost irrelevant—but simply handed down social policy agendas on a platter, masquerading as a design brief, and told to follow instructions.

In her investigation into the murky world of “critical” theories, Pluckrose says that training people in critical theory “is not like training them in protocols of data protection where compliance with the law can reasonably be required. It is more like training them in a belief system like Christianity and denying employees the right to be openly Muslim, Jewish, Hindu or atheist. Nobody should be required to pretend to believe”.¹⁰ An education programme that demeans individual agency and gaslights individuals over their own beliefs is not how academia should work.

In a famous op-ed in the New York Times, Bingler and Pederson argued that “architecture’s disconnect is both physical and spiritual”.¹¹ Architects profess to understand the public, and often to speak on their behalf, but often demonstrate little real understanding of extant public life or regard for the public mood. By inculcating a moral superiority in architectural students, the condescension towards the public is reinforced in the next generation of architects. In the immediate aftermath of the Brexit vote, for example, a RIBA Journal survey revealed that 78% of respondents “do not think the electorate made the right decision, while only 13% do”. Such a profound ignorance of the public’s mood, a hubristic belief that the great unwashed made the “wrong” decision, and that architects were blessed with the “right” answer is lamentable. Since then, many architecture schools have doubled down on their belief that their attitudes and approach to social justice are ethically superior and are convinced that their role is to arm—rather than educate—the next generation of students with political

messaging predominantly so that they, in turn, can educate the public out of its errant ways.

Sadly, students are being brow-beaten with single narratives to an extent that they often aren't aware of alternatives. Reading widely is not exactly encouraged. A new book by us architectural historian, Irene Cheng notes that we must no longer ignore "architecture's role in the social processes of subjection".¹² To point out that very few architects have literally subjugated people, or to say that you don't agree with the formulation, might get you cast out of the class and of polite society. But only by reading more, discussing more deeply, and challenging more openly can we come to a sensible realisation of the core issues. Maybe students will find that they are more interested in architectural education than environmentalism, more into Revit than race theory. Maybe more classes and fewer cliches. All too often, contemporary students have not arrived at stated beliefs as a result of a rigorous process of intellectual inquiry but have been taught that one way is the right way. Many have never been challenged on these "correct" regurgitated views, merely congratulated. If students are given a narrative that spoon-feeds them in one particular direction, they are not being treated to open inquiry, but indoctrinated. That is not good for architecture, for education, or democracy.

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Austin Williams

Course leader, Kingston School of Art, director, Future Cities
Project

futurecities.org.uk

Twitter: [@Future_Cities](https://twitter.com/Future_Cities)

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The Future Cities Project has been critically exploring issues around the city and society for nearly two decades. From the so-called Urban Renaissance, through the Big Society, Brexit, and Covid 19, we have written several books, hundreds of articles, and organised innumerable local, national and international events that have tried to unpick the arguments.

The project of The Future Cities Project is to critique the rise of determinism, instrumentalism, dogmatism and didacticism in urban and city discourse, in practice and in academia.

Our manifesto, mantownhuman — Manifesto: Towards a New Humanism — is available at futurecities.org.uk/images/mantownhuman.pdf

Contact: futurecitiesproject@gmail.com
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