The teachers hunch and the practice of teaching through design

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Weimar 1919.

Walter Gropius establishes the Bauhaus as a school for a new world, unifying art, science and technology.[1] The new world had no shape yet, it needed to be designed. Design was the way to bring this new world into shape. Existing approaches of architectural education were considered incapable of developing the proper design capacity to respond to the challenge that society was facing: Beaux-arts pedagogies relied upon cultivation of aesthetic ideals, anchored in fixed canons, reproducing a world of the past; polytechnic institutes were oriented on engineer approaches, proficiently applying existing knowledge to well-known design questions, but incapable of coping with how to design for the not-yet-known; apprenticeship and pupillage was too narrow and pragmatic, and establishing a status quo of craftsmanship, rooted in tradition rather than facing "otherness". None of these approaches where providing fundamentally new vistas for a future world to inhabit.

Design thus - understood as the practice that unites art, science and technology - would be the core of a new pedagogy, envisioning a new profile of graduates, able to unite these – so far distinct - realms of art, science and technology. With this ambition, the Bauhaus reached far beyond the goal of delivering proficiently designing craftsmen. If the practice of design took such a central role in the Bauhaus, it was not because design was a main skill to be trained, but because it was understood as a mental capacity to conceive a new future, and to induce a transformative and edifying process in young people, leading talented youngsters into creative visionary citizens.

Since design was at the core of the pedagogy, one can say that teachers were teaching through design. The practice of design was the pedagogical method. But the nature of design is teleological: you always design something in order to reach something. So, who is to decide what to design in order to reach what? In this regard, Gropius was aware of the importance of the persona of the teacher. In a letter to Ernst Hardt, in the early days of the Bauhaus, Gropius argued that reaching the ideals would only be possible by attracting the "right" persons. Thus, he took care that central positions were not taken by academics or scientists, but by teaching practitioners and designing teachers. Content matter and organization of the curriculum are important, but these components reflect a status quo – that what is already known, a state of affairs. Providing an outlook for the future requires more than transferring such state of affair, something additional, namely "good" teachers, and more precise: the minds of good teachers. Gropius thus decided to attract well-known and important artists and designers, "even if, deep down, we cannot fully comprehend their innermost meaning at this time".[2] Although the Bauhaus project relied on a carefully designed curriculum in terms of content and timetables, it deliberately subjected itself to the uncertainty of agencies it could not control nor predict, namely the unpredictable and even incomprehensible minds and aspirations of individuals, which it considered nevertheless of utmost value and properly edifying.

Oxford 1958.

RIBA's groundbreaking conference on architectural education questions the relevance of architectural programmes of the time. It was out of doubt that architectural design had to play a central role in rebuilding post-war society, providing the high level of amenities that a modern world deserved. But architectural schools were stuck and self-indulgently reproducing themselves, which subsequently reflected itself in inappropriateness of the profession as a whole. To turn the tide, education was key. Architectural education thus had to drastically take a different tack. The conference report states that architectural education was "not fully exploring all the related aspects of the subject." What was needed was to establish bridges with sciences (namely the Arts and the Sciences, the Engineering Sciences, Sociology and Economics). Architectural education needs the different

types of knowledge that these sciences provide. The way how to bring these bits and pieces of knowledge together, is through theory. The conference report explains:

> *Theory is the body of principles that explains and interrelate all the facts of a subject. Research is the tool by which theory is advanced. Without it, teaching can have no direction and thought no cutting edge.*[3]

Architectural education, all the other scientific disciplines alike, should thus rely upon research. Architectural education was now seen as a primarily intellectual pursuit, to be organized within the context of a university or institutions with comparable standards. This principle had strong implication on the profile of faculty as well. On the one hand, architectural education requires researchers that realise those bridges with the other scientific disciplines thus enlarging the range of specialised knowledge, but on the other hand, the ultimate end of research is situated in application in professional practice. Therefore, the report states that in the end, the profession should give the lead and play a central role in education.

> *What is necessary is an arrangement which brings into teaching, architects with creative ability and extensive practical research experience so that they may add to the fund of knowledge that is available at school. [...] It also requires a readiness on the part of able practitioners and specialists to take their place from time to time as teachers.*[4]

The conference report called for experimental development, and saw this situated in cross-overs - interrelations between architecture and social needs, between architecture and the physics of environment, etc. – and in co-operations – practitioners with structural engineers, mechanical engineers, production engineers, management and time study experts, but also with clients, sociologists, psychologists, physicists and physiologists. Schools of architecture were thus seen as opportunities for the interchange of ideas between men of different interests and experience, but populated by a dual structure of researching academics and professional practitioners. Architectural education was to maintain two one-directional flows: a flow of knowledge stemming from scientific research to professional practice, and a flow of experience stemming from professional practice to teaching practice.

USA 1996.

The Boyer Report connects design pedagogy and research to the central missions of both university education and the architecture profession – architectural education is a societal good. Architectural education should get "more firmly behind the goal of building not only buildings but more whole-some communities".[5] But the report also reveals that cohabitation of an architectural programme in a university environment remain uneasy. W. Cecil Stewards, then-dean of the University of Nebraska's College of Architecture, witnesses that

> *for many university administrators, especially those on research-driven campuses, [...] the architectural field [is seen] as a splintered and disputatious, and the design orientation of architecture faculty places architecture among the 'soft', 'fuzzy', and undervalued disciplines in the comprehensive universities.*[6]

And Henry N. Cobb, the then-chairman of Harvard's Department of Architecture, pictures the relationship with the university in the following terms:

> *[...] with its curious studio-based teaching methods, with its paucity of scholarly research, and its dedication to serving the highly 'contaminated' professions of architecture, landscape architecture and urban planning, must appear, to borrow the language op 'Peanuts,' as a kind of 'Pig-Pen', character in the university family – that is to say disreputable and more of less useless, but to be tolerated with appropriate condescension and frequent expressions of dismay.*[7]

The report not only confirms a gap between teaching practitioners and academics, but refines this straddle into a scope a five categories:

> *"(i) those whose backgrounds are mainly academic; (ii) those who combine teaching with limited practice, (representing the core of full-time design teachers; (iii) those with well-balanced careers in teaching and practice (an increasingly rare breed); (iv) practitioners who teach, mostly on a part-time or adjunct basis; and (v) practitioners who work outside academia but devote rime to mentoring graduates and providing internship opportunities."*[8]

The report relates these categories to particular types of scholarship, that Boyer had elaborated in an earlier report, namely scholarship of discovery (scientific inquiry, aiming at the production of knowledge), scholarship of application (referring to the capacity of applying knowledge that

resulted of scientific inquiry), scholarship of integration (referring to the capacity to design, i.e. integrating different types of knowledge, reaching beyond mere application, including aspects of what we today would refer to as trans-disciplinarity), and scholarship of teaching (referring to transfer of knowledge).[9] In other words, according to Boyer & Mitgang, providing architectural education with the rich academic environment that it needs, requires a diversity of faculty profiles. Rather than a division into practitioners and academic, faculty is to be seen as an heterogeneous collective of persons with different competences, pursuing different interests and intentions, aiming at different goals, and following different modes of operation. This observation, in its turn, calls for explicating which competences, which interests and intentions, which goals and which modes of operations are at stake, and how they relate to each other (or not). Higher education should be conceived in terms of its consequences, but highly depends on the operation of its actors. Both have kind of moral duty relating to society:

> *The scholarly activities of both faculty and students should relate not only to private goals and agendas) but to matters of consequence to the profession, and beyond that, to society as a whole. No less important than acquiring design skills, technical competence and business judgment, education must begin to help students develop the ethical grounding, the intellectual roundedness, and the maturity to weigh the impact of their work on present users and future generations.*[10]

Europe 1999.

The Bologna declaration aims to harmonize higher education in Europe. The process is set out over a timespan of one decade, and will result in the establishment of a European Higher Education Area (EHEA) in 2010. Its initial goals were dual, (i) to create a European citizenship that promotes peace, mutual understanding, tolerance, and confidence among peoples and nations and (ii) to provide society with proficient graduates that have the necessary competences to face the challenges of our time.[11] Not only at the level of European higher education policy but also at the level or European research policy, a similar need was felt to remedy a lack of coherence across countries. So, half a year after Bologna's European Higher Education Area – EHEA - the idea of a European Research Area – ERA - was launched. And the ERA affected higher education as well. Universities were seen as places where both areas, EHEA and ERA, overlap. Subsequently, they were considered as key players

in the quest to make Europe "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion", the so-called Lisbon Agenda.[12] Academic Higher Education was now formally entangled with research – the birth of the so-called Research-Teaching Nexus concept. The research-foundation is the legitimation for higher education to be academic.

Till then, in line with Boyer's types of scholarship, research was understood as the production of knowledge, and higher education teaching as the transfer of knowledge. The Bologna process though took a different angle. Transfer of knowledge was considered insufficient to develop the competitive graduates that the Lisbon agenda called for. What was needed was the development of competence. So, in the Bologna logic, levels and degrees are not expressed in terms of content, but in terms of pre-set and harmonized competence descriptors. Also at the level of specific professional profiles and diplomas, the expected level for graduation is no longer a matter of content, but of competence, expressed in terms of so-called specific learning outcomes. Teaching is no longer driven by course content and knowledge transfer, but by pre-set outcomes for the students to achieve. Consequently, education is seen as the provision of the conditions that allow this intended learning to happen.[13] Higher education is conceived to provide the student, as independent learner, the opportunities to gather the competences needed for graduation. Teaching moved from content-driven, to outcome-oriented. The role of the teacher moved from exploring societal issues, to teaching towards outcomes.

Where are we now? Part 1: The problematic side of the shift from teaching to learning.

While the Bauhaus, the Oxford conference and the Boyer report pay great attention to characteristics of teaching and profiles of teachers, the Bologna process shifts the discourse towards learning and learners, from knowledge to competence, and from content to outcome. While these shifts have many aspects to applaud, they also entail problems. The Dutch educationalist Gert Biesta points to two. The first problem is that "learning" is basically an individualistic concept, even if it includes notions as collaborative or cooperative learning. This contrasts with "education", which always relates to interaction and purpose: someone educates someone else, and there are particular aims related to the acts that intend to educate. The second problem is that "learning" is basically denoting

processes and activities, but open to content and direction. The emphasis on the student as an independent learner, aiming at achieving pre-set competences has pushed in the back discussions about content, purpose and direction of education. According to Biesta, there is an urgent need to reframe discussions about the purpose of higher education, as well as discussions about what is "good education". He argues that the debate should not be reduced to a discussion about competence-based learning outcomes, but address three levels: qualification, socialisation, and subjectification.

· *Qualification* refers to processes of transmission and acquisition of knowledge, skills, competence and dispositions, i.e. related to an operational ability "to do".
· *Socialisation* refers to the development of an awareness of belonging to a specific (cultural, professional, societal) community, culture and tradition, i.e. an awareness of context and situatedness.
· *Subjectification* contrasts with socialisation, in that it refers to the ability for independency from social, political and cultural orders, i.e. the process of becoming a subject.

These three dimensions are distinct, but interrelated. Biesta argues that, when studying or discussing links between teaching and educational intentions, none of these three dimensions should be negated. To re-discuss the purposes of higher education in these terms also implies to discuss the agenda, to discuss which issues are to be put on the table, and what it is, that teachers are to bring in, as educators. It is a plea for shifting the attention from learning back to teaching, from competence back to content, and from outcome back to purpose and direction. Particularly for professional- and societal-oriented programmes such as architecture, these questions are paramount.

Where are we now? Part 2: The problematic side of the emphasis on research.
The increasing emphasis on research, as reflected in the Oxford's call for lining up with science, Boyer's adherence to scholarship, and Bologna's plea for a Research-Teaching nexus, has caused problems, tensions and confusion, particularly in practice-based and profession-oriented disciplines, such as architecture.[14] For decades, even for centuries, architectural practice has been considered as an evident cradle of disciplinary knowledge and locus of knowledge production. In his essay "Design research, the first 500 years", Jonathan Hill argues that the advancement of the discipline has always been found in a productive relationship between drawing, writing and building.[15] And while it is generally agreed that architectural education requires a careful balance between theory and practice, it becomes increasingly difficult to maintain the right balance between academics and practitioners. In 2009, the Nordic Association for Architectural Research wrote a position paper, in which they state:

> *The best practitioners of architecture traditionally teach at the schools of architecture, while architectural researchers, are publishing their research in nationwide journals and books that are read by the whole profession of architects and by a large part of the surrounding society. This kind of dialogue between theory and practice is currently under threat. Rigid merit systems borrowed from the scientific world without close relations to architectural practice operate with very narrow definitions of research and research communication.* [16]

Increasingly allocation mechanisms of university funding are based upon bibliometric data of a selective set of scientific journals. Nothing comparable exists for merits that originate in professional practice. Increasingly scientific research activity and proficiency are becoming main criteria for academic tenure, leading academics to further alienation from their disciplinary peers in professional practice, which is, of course, very problematic.[17]

Also the nature and scope of professional practice changes. Since massification of higher education, the university has delivered not only huge cohorts of professional graduates, but also huge cohorts of knowledge producers – graduated researchers, often with a PhD, operating in laboratories, research centers and consultancy business, outside the walls of the university. This evolution of gradual development of research activity outside academia can also be seen in the field of architecture. Think of how AMO emerged out of OMA, or how firms like Snøhetta and White started their own research departments, as entities within the company. In 2016, Michael Hensel and Fredrik Nilsson's published the book "the Changing Shape of Practice", in which they demonstrate the increase of research activity within architectural practices of different size, ranging from small to very large practices from the UK, USA, Europe and Asia.[18] On year earlier, Anne Dye and Flora Samuel published the book "Demystifying architectural research ", a guide in which they advocate research as a feasible and valuable option for professional practice.[19] However, these knowledge

production sites outside academia operate under different conditions, logics, and evaluation systems.20From an educational perspective, the pivotal question now, is how to acknowledge, identify, and recuperate this knowledge production into academia? If higher education is to be based upon research, and if the moral duty of higher education, and a fortiori architectural education, is to face and address actual societal, cultural and environmental issues, then this nexus with research cannot exclude links with these non-academic knowledge production sites.

The ACSA-EAAE Teachers Conference, Antwerp, 2019. What these pivotal moments of educational policy had in common was a feeling that "change was in the air". They reflect a belief that educating young people was key for reaching a better world. Today, as in 1919, 1958, and 1996 (US) 1999 (EU), societies face huge challenges - climate change, globalization, urbanization and social transformation. At the same time new tools, modes and methods are at our disposal – digitalization, data mining, and myriads of technological innovations and new media. Alternative paradigms and epistemes provide new perspectives and ontologies to see and comprehend the world – feminist, post-colonial and post-anthropocene perspectives, the ascent of artistic research, etcetera.

No doubt that we have to change views and habits, deal with uncertainty and face the unknown, but the fundamental questions then are how to apply these tools, modes and methods, and how to relate to the many available perspectives and ontologies, in order to reach which goals.

Universities and more particularly Schools of Architecture are the places par excellence to take up this edifying and orienting role, in full academic freedom. This implies that they have to deal with central questions such as how will the agenda be set, and who will set the agenda. The Bauhaus aimed at uniting art, science and technology, and brought together the minds of important artists and designers. The Oxford Conference aimed at establishing bridges between sciences and the profession in order to transfer knowledge from research to practice. It attributed a leading role to outstanding professionals, "taking their place from time to time as teachers." The Boyer & Mitgang report held a plea for abandoning the dichotomy between academics and practitioners, advocating architecture schools as communities covering different types of scholarship, each

of them taking a different stance to knowledge, and each of them providing a particular contribution to both education and society. The Bologna process transcends knowledge as the basic resource for higher education, by implementing competence development as its main target. Learning outcomes are harmonized across countries, and teachers are instrumentalized in the contract with the student to achieve pre-set competences. But, as Biesta argued, given the huge challenges that our time is facing, increasingly this focus on the independent student, and higher education as a "well-dressed" table of competence-generating ingredients is criticized. Gradually the question about the public role of the university and professional-oriented higher education re-appears. A re-framing of the debate about higher education is needed. And this debate should not only focus on learning and the learner, but include teaching and the teacher. In order to take up its societal role and duty, the discussion about higher education has to include content, purpose and direction. What is the role of higher education in setting the agenda? And what is the role of the teacher, as an educator of students and, subsequently also society, in setting this agenda? Who is there to teach? What is put on the table? And why?

For all these challenges and given all these opportunities of new media, technologies and paradigms, design is a great asset and a rich pathway. Firstly, design is a way of exploring and demonstrating what can be done - on the one hand by revealing new possibilities of existing constellations, on the other hand by conceiving new constellations to provide answers that could not have been thought before. But secondly, next to demonstrating what can be done, design also allows for exploring and discussing questions about what ought to be done. The presentation of a newly designed reality, as an offer to society - a what-if scenario, a well-underpinned hypothesis, a hopeful suggestion - allows experts, scientists, stakeholders and all citizens to evaluate meaning, impact, and make up the mind. It helps to get debates and discussions about possible futures out of abstraction, rendering them the precision they require. Design thus is a great help in providing orientation for society. But at the same time, the very act of thinking about how the world could be, and how it would look like then, which is the very practice of design, is edifying in itself, exactly because of the many questions it raises, and the many fields and stakeholders to which it reaches out. In this regard, and taking into account the critiques concerning the shift

from teaching to learning that I explained above, I consider it more fruitful for the moment to look at pedagogies of architectural education in terms of teaching-through-design, than in terms of the more established and somehow eroded concept of learning-by-doing.

Moreover, today, practice-based design research has come of age, and has led to significant research projects and publications. We see proof of astute architectural research in both written and non-written output. We have seen how throughout all the transformative events in educational policy, described above, the relevance of design practice remained present. Is it due to an undisputed premise that the spaces of pedagogy and inquiry alike are one continuous and collective space of learning? If research and teaching are seen as two fundamentally intertwined sides of one diptych, practice is the hinge that holds those parts together which unhinged and on their own become meaningless.

The **Antwerp 'ACSA/EAAE Teachers Conference'** focuses on the hunch that drives the practice teacher/researcher in his/her teaching or research. In its call, the joint conference of the North American and European association for architectural education, solicited for scholarly presentations for the conference and proceedings, as well as project-based position statement posters for a conference exhibit. It addressed both practitioners and academics with an interest to explore the present and future role of teaching practices in relation to research and its broader pedagogical contexts thereby inviting for reflection inspired by the following questions:

· Must the teacher primarily conduct typological, tectonic, compositional, or technological experiments— the more 'classical' themes—to focus on general transferable skills of design practice, but potentially overlooking pressing issues that challenges our built environment - or, should he/she formulate studio assignments in line with a contemporary agenda—be it socio-political or eco-cultural—potentially making curricula drift away from these classical themes?

· If professional practice is a privileged site for the production of knowledge, and the emergence of new insights, how to secure that this knowledge and these insights reach academia? What is the nature of such knowledge and insights, and what is their edifying capacity? What is the nature of the expertise that is developed in inquisitive professional design practice?

Why would it be crucial to incorporate such expertise in the academic environment?

· If design practice is a proper way of coming to know, which then, are the interests that are pursued? Do the 'design practice' and the 'teaching practice' of a teaching practitioner constitute one continuum? Do design teachers that have undertaken research into their practices observe their 'teaching practice' to be fundamentally transformed?

· Can the studio/faculty be seen as a thinker-space that provides uncompromised inquiries to the best of all available knowledge rather than having to follow the most lucrative (i.e. following a commercial or socio-political agenda)? Can we imagine a space of learning that integrates craft and speculation, urge and fascination, skill and imagination, criticality and creativity, individual formation and social consciousness?

These four sets of questions have fed four lines of thought, gathered under the headings

  i.   the Hunch and architectural pedagogies,

  ii. education philosophy about the Hunch,

  iii. incubating Hunches about pressing issues into academia, and

  iv. applying academics' Hunches into the real.

During the conference, these four lines of thought have been explored through 107 paper presentations and 14 poster presentations, selected out of 299 submitted abstracts. Authors and presenters have then had the opportunity to write a full paper, enriched with critics and comments of reviewers, peer panels and discussions on the floor. The result of these reviewed papers can be found in the four chapters that structure these proceedings.

The conference expressly aimed at transcending disciplinary, including contributions from different fields of expertise in creative practice research at large. Difference and variety of contribution formats and a polyphony of 'voices' are essential to the core concerns at stake in the conference. The goal is to bridge practice and academia, to reemphasize the public role and duty of higher education, the question of societal relevance, with a central focus to the role and position of the teacher as an educator.

Endnotes

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