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## Knowledge and Studio Culture in Portuguese Architectural Schools since Bologna

### Abstract:

The curricular harmonization of the European courses, the *Bologna Process* (1999-2009), relocated an emphasis in the specificity of architectural education inside a university environment. Nowadays, the architect's basic training embraces a Master's degree and compromises *research* as an educational purpose. Furthermore, doctoral courses and research centres are associated, framing funding and evaluation, and pressing an overall urge for professional academic production, which can move the schools away from the *construction site* into the library and the laboratory, turning the learning programs into extensions of the research ones. Therefore, in the halls of the design studio arise the *researcher-teacher-designer*, professor *Clark Kent* (Figueira, 2013). Within this scenario, the article exposes both the organizational, curricular and didactical evolutions in Portuguese schools, and inquires the models and the knowledge, transmitted and produced, trying to foresee any paradoxes requiring an epistemological clarification.

Keyword: Architectural Education in Portugal, Architectural Design, Studio Culture, Knowledge, Research

## 1. The architect as an artist / From the nineteenth century to 1940 / the beaux-arts system

In Portugal, as in Europe, the teaching of architecture evolved from a medieval conception of a complete and integrated form of knowledge to a progressively specialized and fragmented one. The institutionalization of the architectural knowledge in the country goes back to at least the sixteenth century, with the dissemination of the international treatises (Silva 2011, p11). Later, a more formal architectural education was enhanced in the seventeenth century, with the establishment of several Drawing Classes and then culminating in the founding of *Academias* of Lisbon and Oporto in 1836, through the new constitutional monarchy (1820-1910).

The *Academias* of Lisbon and Oporto were later reformed into *Fine Arts Schools*, in 1881, and they would remain on the sidelines of universities for another century<sup>2</sup>. And even in 1950-57, when a modern architectural education reform was implemented, the schools somewhat maintained themselves in the company of fine arts, and progressively challenged the technocratic spectrum that overshadowed their artistic and humanistic tradition (Moniz 2011, p546-547).

In the preceding *beaux-arts* system, before the 1950's reform, *art as an end in itself* was extolled and the teacher was also a renewed professional, creating a tradition of *master teachers* (Silva 2011, p14). The training was organized in a double cycle: a *basic drawing course* and *upper specialized classes*<sup>3</sup> (including *civil architecture*), and had a

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<sup>1</sup> Preceded by the *Academy of Fine Arts* in Rio de Janeiro (1816) and more than a century and a half after the *French Academy of Beaux Arts* (1666) (George 1964, p.16-22). Several authors elaborate on this moment of Portuguese architectural education, as Frederico George (George, 1964), Ana Vaz Milheiro (Milheiro 2005), Helena Maria Lisboa (Lisboa 2006), Gonçalo Canto Moniz (Moniz 2011) and Leonor Matos Silva (Silva 2011).

<sup>2</sup> The Universities of Lisbon and Porto would be created in 1919, with the 1st Republic (1910-1926), with a view to democratize education conditions. However, only in 1932 (Reform of 32) courses in fine arts were matched to those of the other institutions of higher education. The aim was to equate the status of professor with higher education and recognize the importance of professional graduates, especially in architecture (Lisboa 2006, p.38)

<sup>3</sup> Access to the latter assumed the powers granted by the *Academic Drawing Course* or equivalent taught by private teachers of recognized merit. The second group of courses was attended by far fewer students and was limited to mean the minimum qualification to apply for the positions inside the *Academies* or equivalent courses, or to access categories like "academy merit". The recognition of courses as "superior" was an inner issue, and without repercussions in the remaining system of teaching (Lisboa 2006, p38)

length of 8 to 10 years (with the 1881 curricular reform). Given the weak professional environment for both practice and teaching, the simple access and frequency to school opened access to the profession<sup>4</sup>.

After a basic training in drawing, which had a focus on the human figure and in statue model copy, the course of *civil architecture* combines *composition classes* (one per year and in a programmatic sequence of increasing complexity) with a series of different courses ranging from history, building construction or algebra (Lisboa 2006, p74-75). Later on, in 1911, the new republican regime (1910-1926) would also reform Fine Arts education, reducing the length of the *basic course* to three years, with the third and last year chosen between the vocational areas of architecture or other arts. The *upper course of civil architecture* increased to 7 years, with five curricular years and 2 on an apprenticeship regime outside the school (which included further three exams given before a jury, in the school<sup>5</sup>).

In 1932, at the dawn of "Estado Novo"<sup>6</sup>, a new reorganization altered this structure by introducing the figure of *emulation contest*, as traditionally practiced at the *École* of Paris. The overall training was then organized in 3 learning cycles: the *general course of architecture*, with a four-year term and annual curriculum, leading to the *upper course of architecture*, consisting mainly in architectural composition contests (emulations) and several courses of *artistic archeology drawing and theory*. This second cycle didn't have a predefined time length, but rather a certain *score* that would be attended by surpassing several compositions (emulations). The third and last cycle required was a two-year internship, outside the school, followed by a thesis, now called *tender for obtaining diploma of architect* (CODA)<sup>7</sup>.

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<sup>4</sup> However, with the reform of 1881, the *basic course* opened the doors to a career of high schools teachers, draftsmen of the Ministry of Public Works and of municipalities, while the *special course in architecture* allowed access to the place of architects of Public Works and municipalities and teachers of academies (Lisboa 2006, p.74-75). Concerning the associative aspects, note that the Royal Association of Portuguese Civil Architects and Archaeologists is founded in 1863 (George 1964, p30).

<sup>5</sup> Namely: graphic evidence or an architectural design "as if it was meant to be built", written evidence or memory, budget and specifications of the project and oral evidence relating to the project (George 1964, p46).

<sup>6</sup> "Estado Novo" is the self-designation of the authoritarian, autocratic and corporatist political system of rule that was made possible by the Revolution of May 26, 1926, and lasted until its overthrow by the Revolution of April 25, 1974.

<sup>7</sup> As in (George 1964, p49), notably (Silva 2011, p.18) argues that it is in fact implemented a tripartite cycle, with the internship and the CODA.

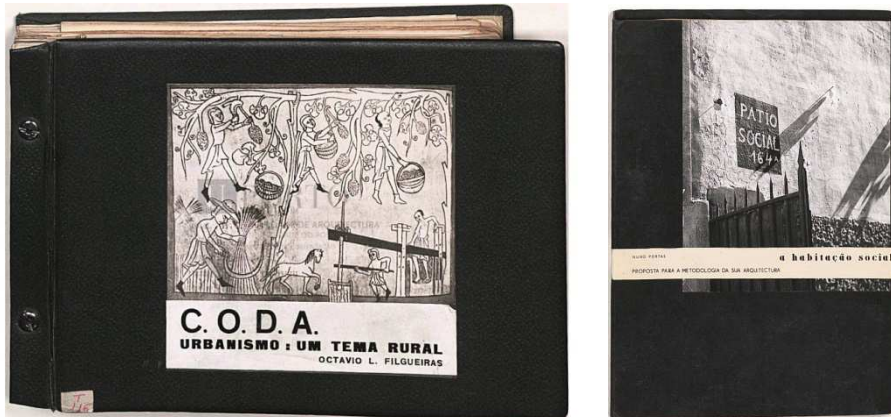


FIG 01 and 02: CODA by Octávio Lixa Filgueiras, "Urbanismo - Um Tema Rural - Castelo de Paiva", 1953, ESBAP. The first eminently theoretical CODA and with a research character. CODA by Nuno Portas, "Social housing", 1958, ESBAP. Refused in Lisbon in 1957 for not having an explicit design component. It was through these experiences (including Arnaldo Araújo's CODA in 1957), that Carlos Ramos renewed the faculty staff in Oporto, combining the "teacher-designer with the teacher - researcher", and "thus giving consistency to the "university" character of the new reform" (Moniz, 2011, p368). By this time the lecturers were chosen by the School Board, without any public tender, among recognized architects in the city, which were then proposed to appointment to the Minister of National Education. It was intended to be a "school people" or "a chain of multiple loyalties" (Moniz, 2011, p.375), as quoted by Alexandre Alves Costa in "À memória presente de Mestre Ramos" (1987), in "Introdução ao Estudo da História da Arquitectura Portuguesa", FAUP Publications, Porto, 1995, p107.

## 2. The architect as a technician / 1940-60 / the modern education

It would be with the 1957 reorganization that, finally, the architectural courses of Lisbon and Oporto would be regarded as higher education courses. CODAs and emulations were abolished, as the artistic classes, in favor of new ones in social and exact sciences. The overall education maintained 3 learning cycles: the first one was reduced to two years long and had an introductory character with humanities and social sciences matters; the second was three years long and had a more architectural specificity; the third and last phase was one year long and mainly dedicated to a great architectural composition, after which there was an apprenticeship of six months with a subsequent probation report (replacing the CODA). Drawing, which was fundamental in the beaux-arts tradition, was reduced to a first-year course, shared with the Painting and Sculpture students (Moniz, 2011, p205).

The new social sciences classes matched the criticisms about the model of the *architect as artist*, as proposed in the 1st National Congress of Architecture in 1948, where practitioners claimed the principles for a *modern architectural education*: technical knowledge, spirit of collaboration, spirit of research, cult of discipline (Silva 2011, p18).

In the two only schools in the country, at Lisbon and Oporto, "an analytical method of design was experienced in the pedagogical act" (Silva 2011, p30). There was a new interest in the *methodologies of architectural design*, as in the *investigation of real* and in the *local geographies and cultures*, following the wake of urban planning in the 40s (ensuing the activity of the *Planos Gerais de Urbanização* since 1934-45<sup>8</sup>), the *Inquérito à Arquitectura Popular* (the survey on vernacular Portuguese architecture, made by the Architects Union in between 1955-1961) and with an awareness of the real circumstances behind the problematic of the *physical spacial organization* (Fernando Távora 1962<sup>9</sup>). It was a passage from a *conservative* and *formal* culture to a *modern, methodological* and *experimentalist* one that demanded a new *epistemological body*, which echoes in the schools were, for example, the acceptance of theoretical theses as final internship report, at Oporto<sup>10</sup>. An education for the profession, methodological and not stylistic, modern and reformist, positivist, vis-à-vis the new urban and industrial requirements of post-war Portuguese society, advocating the need for research and trans-disciplinary collaboration, to ensure the

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<sup>8</sup> That would lead to the creation in 1945 of the Urbanologia and Urban Design and Construction courses in the schools curricular structure (Moniz, 2011, p278).

<sup>9</sup> As "Da Organização do Espaço", by Fernando Távora, 1962. According Moniz (2011, p42-43) the text is marked by his trip to the United States, with a scholarship from the Calouste Gulbenkian Foundation, "where he visited in an organized and systematic way the main schools of architecture. From this journey to the American schools, the author takes a strong awareness of urban problems as he observes the relationship between the courses of Architecture and Urbanism."

<sup>10</sup> According Gonçalo do Canto Moniz, in ESBAP since 1953, with Octavio Lixa Filgueiras (Moniz 2011, p68.). Nuno Portas CODA would be rejected in Lisbon in 1957-58, by not having to project component (Carvalho 2012, p.25). The CODA are instituted by the 1932 reform and abolished in 1957, however, keeps up well after the date of retirement, given that "the entry into force of the new legislation did not imply, however, an immediate end to the production of CODA: it continued to be performed by students who completed the curriculum of the course in the first years of the "Reforma", or even before (a big time lag often exists between the end of the curricular frequency and presentation of CODA)" (Fernandes 2010, p.271).

assertiveness of the *why and the how*<sup>11</sup>.

The curricular reform of 1957 was also a transition from the *beaux-arts school* into the *university*, emphasizing the "educational" aspects but also their "cultural dimension" as "artistic irradiation centers" (Moniz 2011, p59-76). Research should be considered through *specialization courses* and *learning centers*. These transformations required an extension of the academic staff, being created the figure of the *assistant lecturer*, and the integration of *professor-researcher*, in parallel with the traditional *professor-designer*.

The transmission and production of knowledge therefore was not only made by the traditional annual student's exhibition, but also by *open courses*, thematic exhibitions and colloquiums, that would progressively open the school to the outside, in a process "parallel itself to the transformation of beaux-arts into a modern education" (Moniz, 2011, p293).



FIG 03: General Plan of the EBAP (Oporto) Pavilions (1949-51) by Carlos Ramos. The expansion and modernization of the school, as the decision to stay in the city center and not to move to a new campus, created unique conditions for a new educational and cultural dynamics (Moniz, 2011, p.304)

<sup>11</sup> As Le Corbusier "If I had to teach architecture": "(...) would deal to convey to my students an accurate sense of control, impartial judgment of the how? and the why?" Written for the students of the *École*, published in the students journal of the Architectural Association, *Focus*, 1938, "If I had to teach you architecture?" Re-published in Casabella, n.766, 2008, p5, as quoted in Moniz (2011, p172).



FIG 04 and 05: EBAP Architecture and Exhibition Hall Pavilion (1951-54). On the right the EBAP Drawing Pavilion (1947-1950), both by Manuel Lima Fernandes de Sá (DENN-DGEMN-MOP). The Pavilion of Painting and Sculpture, by Carlos Ramos, was inaugurated on 1952. In 1960 the *Aula Máxima* was opened (IAula Magna, by Octavio Lixa Filgueiras and Manuel Lima Fernandes de Sá). The Museum Pavilion, also designed by Carlos Ramos in order to strengthen the school's identity and memory, would never be built.

The *Centre for Architecture and Urbanism Studies* (predecessor of the current CEAU<sup>12</sup>) was established in 1952-53 by Carlos Ramos at EBAP (Oporto), and in 1953, in conjunction with the *Centre for Geographical Studies*<sup>13</sup>, within the University of Lisbon, and the *Centre of Peninsular Ethnology*, at the Faculty of Sciences of Oporto, a common research started leading to the *Survey on the Portuguese traditional expressions and techniques* (Moniz, 2011, p309), predating the famous *inquérito* by the Union of Architects, whose teams (from the northern areas) would meet in the EBAP facilities, proving a close relationship between the school, the profession and a desired disciplinary investigation. The CEAU was intended to organize "extracurricular" activities in a systematic way, which would encompass seminars, thematic courses, publications, translations, exhibitions and thematic investigations, such as the one from 1953. Encompassing teachers, students, alumni and practitioners (Ramos 1952, p7), it was a place to build a *sense of school*<sup>14</sup>.

In the Lisbon school, in the 50s, and opposed to what was happening in Oporto, the

<sup>12</sup> It would work informally until 1966 (Moniz, 2011, p.352), and would be refunded, formally, in a new institutional framework in 1994 as <http://www.ceau.arq.up.pt/ceau.asp>.

<sup>13</sup> Founded by the geographer Orlando Ribeiro in 1943. Notice that Orlando Ribeiro would give a course on "Human Geography" in May 1953 in EBAP (Moniz, 2011, p309).

<sup>14</sup> Promoting actions such as the *Magnas* exhibitions ESBAP (annually from 1952-68), that also represented a school opening towards the city, towards the production and dissemination of disciplinary knowledge.

direction of Paulino Montez (1949-57), resisted to change as long as the enacting law of 1950 was not regulated (until 1957). Among other damages, the hiring of new assistant lecturers was delayed, which made that in 1953 there were only 11 teachers for a universe of 600 students (Moniz 2011, p384). The students' work was only exposed in the *National Society of Fine Arts* from 1954 onwards, in the so-called "Extra-School Exhibitions", which were independent from the school board and would be established as a space for critique of the school itself. Extra-curricular activities were also organized by the students, including the VER magazine (1954-196?). All these had no formal support from the school and suffered from a multiple institutional difficulties (Moniz, 2011, p404-405).

Thereafter, following the growing interest in social issues, then associated with the country's growing need for housing and a latent urgency of effective city planning, it was established in 1962, in the new *National Laboratory of Civil Engineering* in Lisbon (LNEC<sup>15</sup>), a research team in architecture directed by Nuno Portas (within the *Division of Construction and Architecture*). After all there was a structural convergence with the international cultural debate, a "settling of cultures" (Figueira 2002, p40), who also represented a change from the *architect-artist* model into a greater technical and social skill and utility.

### 3. The architect as a social scientist / from the 60s to the 80s / the April Revolution

Entering the 60s, critiques around the 1957 reform increased. In 1964, in his aggregation exam to ESBAL (Lisbon), Frederico George defended the supremacy of art upon the "very deep impact of social and technological sciences" (George 1964, p10). Following an emerging international movement from the late 50s, criticizing the modern movement and the cultural dogmas of modernism in general (whether Team X or the 1956s CIAM at Dubrovnik, or the new movements in popular music, the arte povera, the May 68 and the north-American hippie movement). Within architecture, in Portugal, these are the times of the Inquérito (Survey on Popular Portuguese Architecture) and of the social role of the architect. It is also time for a renewed debate around the social and political utility of architecture. Questioning the ends as well as the tools, the methods and the training modes, within an epistemological repositioning.

Within a broader cultural perspective, there was a growing protest against the

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<sup>15</sup> LNEC was created in 1946 from the *Laboratory of Testing and Study Materials* of the Ministry of Public Works and the *Center for Civil Engineering Studies*, based at the Instituto Superior Técnico. The building headquarters were opened in 1952.



authoritarian political regime of Salazar, compelled by the post-war environment and by a stronger middle class. In 1962, this malaise was accentuated by the Colonial War (1962-74), followed by the first student riots (1962). After the May 68, the social instability would lead to the approval of the so-called "Experimental Regimes" (at the Lisbon and Oporto schools in 1970), that emphasized the "personality development of the student, their critical capacity, autonomy and responsibility through group work, participation in school management and control over their own education "(Moniz 2008, p10).

Accordingly with Gonçalo Moniz, "these experiences, with distinct models and results, converged on the refusal of the 1957 reform, and in the abandonment of a pedagogy reduced to a drawing brilliance and focus on architecture, or on the school as a field of experimentation and reflection upon the transformation of society" (Moniz 2011, p534). Although, the refusal of the reform was also the rejection of scientific and analytical content displaced from the disciplinary tradition, there was however a need to clarify the disciplinary field, defending in the university, a humanistic design methodology. Therefore, later on, in a lecture on the results of the *Experiment* in Oporto, Fernando Távora sustained: "what we are tired of is practitioners, and what is needed is people with solid theoretical training" (Moniz 2008, p4).

With the democratic regime, after the April Revolution in 1974, the importance of political and social issues consolidates, and students and teachers engage in the reorientation of the two courses in the country. In 1979, the still two single schools became the *architectural faculties* of Lisbon and Oporto (FAUTL and FAUP), leaving behind the former association with the fine arts schools. These new institutions, again, wanted not just to "give basic training leading to profession", but also to "conduct and stimulate scientific research" (Silva 2011, p43). However, this approach would be subject to intense debate, and once again there was a fear of losing disciplinary identity, with the change "from the *beaux-arts* ambiance to a "technical" context, and also the fear of any technocratic imposition over a pedagogical heritage" (Silva 2011, p43).

Also in 1979 a regime of *academic progression* and the *numeri clausi* were established for all institutions of higher education. Architecture entered into a university system *in consolidation* (Magalhães, 2004).



FIG 06 and 07: SAAL ("Serviço de Apoio Ambulatório Local", 1974-76), which can be seen as the "architecture of April 25". Frame of the documentary film "Operação SAAL", João Dias (2007). Left, Quinta da Malagueira (1976 -), Évora, Alvaro Siza, in the post-SAAL, shows how the language of modernism can be adapted to a historic and complex urban situation, and that diversity and context are not just a matter of image, but also of typology.

Throughout the 80's, with profound transformations in a recently democratic Portugal, higher education would have an unparalleled expansion, becoming a *mass education system*, resulting in a progressive expansion of existing institutions and in the creation of new ones. The old schools of architecture of Lisbon and of Oporto consolidated the status of colleges, and would prepare to move to new buildings in the early 90s<sup>16</sup>. Curricular plans were rewritten, and at Oporto the persistently built *experimental regime* of 68-69 was finally confirmed in 1983-84, while in Lisbon, engaged in a tuning curricular movement that would last until the early 90's<sup>17</sup>. This was the decade of postmodern experiments and *didactic dispersion*<sup>18</sup> in Lisbon, contrasting with the growing recognition of the Oporto school, either around the work

<sup>16</sup> New facilities: FAUTL at Ajuda (1993, architecture bay Augusto Brandão) and FAUP (1994). The study plans, beyond the experimental schemes and tumultuous times April 74, are implemented in the 80's.

<sup>17</sup> (Silva 2011, p.75). The author proposes for the Lisbon school 4 different phases between 1975-1990: 1975-79, phase 1 / Phase 2, 1979-83 (stabilization) / Phase 3, 1983-89 (effective branch of the 5th year in three elective branches: Architecture, Urban Planning Conservation and Renewal of Architecture and Urban Centres and also a more significant influx of graduate programs) / Phase 4, from 1989-90 (taken the option of a unique curriculum without branches)

<sup>18</sup> In the 80s there was a great opening number of assistant lectures in Lisbon (from 9 to 106) and, above all, a plurality of disciplines (contrasting with Oporto) and a plurality didactic approaches, establishing the Lisbon school as a school of *plurality* and *permeability* (Silva 2011, p74-75).

of Álvaro Siza (Vieira de Almeida 1998, p34), or around a persistent debate about the school's own historical and methodological legacy.

#### 4. The architect as author / from the 90's to a new century / a consolidated profession

Going through the 90's, there was a new acknowledgment of the profession, as a result of major changes in the economic and cultural climate of the country, including major investments in public infrastructures and equipment, and the accession to the European Community (1986). At the same time, there was a strong international recognition of Portuguese architecture<sup>19</sup>. Hence, there was newer cultural and symbolic position of architecture that went along with the democratic reconstruction, making a progressively more artistic and iconographic design approach. There was a growing cult of the *architect as author* and architecture as a representation of the new regime and of a new time.

There was also a proliferation of architectural courses, ending the monopoly of the old schools of Lisbon and Oporto (FAULT and FAUP), and in a decade the number of students went from 1800 to around 9000<sup>20</sup>. At the same time, as a result of reconfigurations in the framework of the academic career, the doctoral thesis started to emerge in the field of architecture, still corresponding to individual movements, without a framework of research streams<sup>21</sup>. At the same time, significantly, the school of Oporto (FAUP) and the new public school in the University of Coimbra (DA-FCTUC) implemented a theoretical dissertation for final graduation thesis, reinforcing the theoretical component in the basic formation in architecture.

At the turn of the century, J-A (the architects association journal) devoted two consecutive numbers to teaching and to what they called the need to *faire école*. In the first issue editorial, "The Country of Teachers", Manuel Graça Dias questioned the proliferation of courses, the lack of preparedness of lecturers and the gap of the university machine "on their inability to incorporate differences", particularly in the incapacity to accept the practical contribution of the design studio and their

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<sup>19</sup> Álvaro Siza with the Mies Van der Rohe award in 1988 and the Pritzker in 1992. In Portugal, the Secil Architecture Prize was established in 1992 and the 1st edition was won by Eduardo Souto de Moura with the Casa das Artes at Oporto.

<sup>20</sup> Number of students enrolled in various courses of architecture in Portugal between 1950 and 2000 [tables]. Jornal dos Arquitectos, Lisbon, nº 201, 2001.

<sup>21</sup> And whose systematic study remains to be done.

practitioners, requiring them to mandatory PhD for access to academic career, when, he argued that "a good practitioner of architecture isn't necessarily a good teacher; but a good teacher, a good communicator, it will only be a good teacher (in design courses), if he or she is a competent and experienced architect" (Graça Dias 2001a, p3).



FIG 08, 09 and 10: cover of J-A n°201 (2001). Fernando Tavora, the Drawing Room at the School of Architecture, University of Minho (1991-2000), sketch of the author's work and image of the room (photo © Pedro Mendes). *Nulle die Sine Linea*, a beaux-arts room, a drawing-chapel, inside the university. Or a stronghold for a specific tradition in architecture education and knowledge.

In the following number, in a new editorial headlined "The Fashion and the Impossibilities", Manuel Graça Dias justifies the increase of pupils and courses and criticizes the complacency around the common expression "architecture can't be taught", noting that in addition to intuition it was necessary to structure the processes of "disciplinary recognition", and that teaching was about "assisting" the mechanisms of rationalization and clarification as well as the beauty and perfection (Graça Dias 2001b, p3). Indeed, the rapid emergence of new schools produced a distrust in the middle of the profession, which was based on the fear of change towards a progressive quantitative training. This fear was also shared by other disciplinary fields in the university, as a natural consequence of the expansion of the university system itself. Therefore, at the end of the 90s there was a claim for a verification of the training provided in new schools.

Consequently, the architects' professional association (OA<sup>22</sup>) implemented in 2000 an *admission system*, ending the direct admission of graduates into the profession and distinguishing between *accredited* courses and only *recognized* ones. The graduates from the first ones were bound to a traineeship and the ones from the second were required to carry out a written examination after the traineeship, in order access the profession<sup>23</sup>. The courses that were not accredited or recognized didn't grant access to the profession. This scheme, which was highly controversial and troubled since the beginning, would work until the end of 2006, when it was considered unconstitutional by the Supreme Administrative Court<sup>24</sup>.

The appreciation concerned for compliance with the European directives, namely the Directive 85/384/EEC of 10 June and its amendment, Directive 2005/36/EC of 7 September and respective transpositions into Portuguese law, as well as by the principles defined in the "agreement of the UIA to the recommendation of international professionals rules of architecture (1996-1998)", adopted as Guide document for the XXI UIA General Assembly, Beijing, 1999.

However, the verification system would exit the architect's direct influence near the end of the first decade of the new century, when, in view of the structural changes towards the *Bologna* harmonization, the government created an entire new

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<sup>22</sup> The Portuguese architects association became *Ordem dos Arquitectos* (OA) in 1998, with the publication of the respective statute annexed to DL no 176/98 of 3 July. The statutes referred to as tasks, in article 3, point o): "monitor the overall situation of the teaching of architecture and advise on all matters related to this teaching."

<sup>23</sup> A degree in architecture at the Faculty of Architecture - University of Porto (FAUP) was accredited for six years, the Faculty of Science and Technology - University of Coimbra (FCTUC) for 5 years, a degree in architecture from the Superior School of Oporto and the degree in the Faculty of Architecture of the Technical University of Lisbon (FAUTL) for 4 years. Courses in architecture at Lusiada University of Lisbon, Oporto and Vila Nova de Gaia were accredited for three years, and the course of Architecture School of Artistic Technologies of Coimbra for a period of two years.

<sup>24</sup> The first version was adopted on February 12, 2000, and suspended immediately on July 18. The suspension ceased on 6 June 2002. Amended in April 2, 2004. A New regulation would be approves in November 17, 2004, and revised for new regulation in October 2006, eliminating the admission test, accreditation and recognition of degrees, and stipulating that all graduates of all courses can apply to the Order of Architects through the completion of an apprenticeship (and further training at OA). Thus ended the evaluation of courses by the practitioners, passing the ability to the government, through the Ministry of Science, Technology and Higher Education (MCES), making the OA responsible for verifying the competence of graduates.

regulatory regime<sup>25</sup>, concerning to the evaluation and accreditation of higher education institutions and their courses. Within this scenario, it was created in the 2007 an independent *agency for the evaluation and accreditation of higher education* (A3ES), thus centralizing the quality check of all the higher education, through the assessment and accreditation of educational institutions and of their courses.

This new regulatory system confirmed the "binary nature of the system of higher education", underlining the conceptual separation between university and polytechnic education, stressing that the first should be directed to "solid scientific backgrounds, joining efforts and skills of teaching and research units", while the second would focuses on "vocational training and in professionally-oriented formations"<sup>26</sup>. Within the framework of the faculties staff, it was imposed a minimum ratio of one doctor per thirty students, while at polytechnics the figure of the "expert" was recognized, as someone with special professional curriculum relevance and quality in given area, being imposed that 35% of the staff would consist of this experts, PhDs or not, in the learning fields<sup>27</sup>. Finally, the university career is statutory reset in 2009<sup>28</sup>, introducing inter alia the principle of PhD as mandatory degree to access the career, and abolishing the category of assistant lecturer, as imposing the exclusive dedication as *regime-rule*, as well as the principle of compulsory periodic performance evaluation for all teachers.

It was a new organizational level, establishing a rough competition between schools and faculty staff, which imposed, associating evaluation and funding, a regime of *scientific production*. As stated in the new academic career statutes, enlists "scientific research as a central element of the college career" and establishes "conditions to the

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<sup>25</sup> Embodied in the following laws:

- DL n. 74/2006, of 24 March, as amended by DL n. 107/2008 of June 25, as amended by DL n. 230/2009 of 14 September, and DL n. 115/2013 of 7 August, which approved the requirements for accreditation of courses;
- DL n. 38/2007, of 16 August, which approved the legal system of quality assessment in higher education;
- DL n. 62/2007, of 10 September, which establishes the legal framework for higher education institutions;
- DL n. 369/2007, of 5 November, establishing the *Agency for Assessment and Accreditation of Higher Education* (A3ES).

<sup>26</sup> Article 3, paragraph a), the legal system of higher education institutions - L n. 62/2007 of 10 September

<sup>27</sup> Idem, articles 47º to 49º.

<sup>28</sup> DL n. 205/2009 of 31 de August.

exclusive dedication of its professors"<sup>29</sup>.

## 5. The practitioners versus the researchers / Studio culture within Bologna

Research was, as seen, required at first by modern architects at midcentury to enforce a paradigmatic change from the *artist* to the *professional*. The architect was a coordinator of experts, essential to a new industrial and urban society. Nevertheless, a shift that was primarily required by the practitioners to legitimize them amid the industrialized society looks now, in a new century, achieving independence through a professionalized faculty staff.

Factors such as the requirement of the PhD degree, the need for regular publication in refereed journals and the exclusive dedication requirement, multiplied doctoral courses and events such as highly thematic conferences and exhibitions. The compulsory membership in research centers and the framework of individual scholarships for doctoral theses inside the research units, pushes for further professionalization and academic production, opening up a course of developments whose impacts are still to be seen.

This set of changes also threatens with the exclusion of practitioners from the schools. Rising an impression of crisis over the traditional design courses. Somehow there is an ambiguity between two traditions: one of a knowledge transmission through a creative, synthetic practice, and another of knowledge production by analytical, eminently textual, systematization. There is a withdrawal from the *construction site* towards the library and the laboratory, with a tendency to frame the learning programs as an extension of the research ones and, not the least, as extensions of areas of academic specialization.

The traditional model of knowledge transmission within the architect's basic training has been the simulation of the very conditions of practice, held in courses traditionally taught by practitioner architects. Design, seen as a method of *experienced knowledge*, pragmatically gathers knowledge, experience and creativity, nevertheless remains at the center of the curricula of all architectural schools, however, the university system does not easily incorporate practitioner architects in the academic career, and challenges, due to different *epistemological traditions*, the

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<sup>29</sup> Idem, preamble.

emergence of *practical-researchers: the professor Clark Kent*<sup>30</sup>.

Therefore, in basic architectural education there is a sense of absurd displacement from reality, a feeling of perversion because the teaching of building is upon those who have never been in a building construction, thus overvaluing the *enchantment* of a cultural discourse upon the efficacy of a professional practice. In parallel, the nuclear courses of design, which are also the ones where the syncretic characteristics of architecture (meeting with imprecise limits a spectrum of interests that interweave the arts and sciences, materializing them in both technological and cultural artifacts), is more present, making it an area whose procedures are more difficult to fit with the university scientific standards.



FIG 11 and 12: The exhibition “África - Visões do Gabinete Colonial de Urbanização”, CCB, Lisbon (2013-14), resulted from a research project (2010-13), coordinated by Ana Vaz Milheiro and funded by FCT, joining DINÂMIA'CET-IUL/ISCTE-IUL, the Arquivo Histórico Ultramarino do Instituto de Investigação Científica Tropical (AHU/IICT) and the Instituto da Habitação e da Reabilitação Urbana (IHRU). In 2012-13 it was used in the master courses at ISCTE.IUL, in History of Portuguese Architecture and in the Final Design Unit, giving rise to elements of the exhibition at CCB and also to the production of several master theses and designs. The set of designs relating to the Interpretive Center Amilcar Cabral in Guinea - Bissau will be subject to specific exhibition in the Guinea-Bissau embassy in Lisbon in June 2014. Overall, this is a first experience of interconnection between education, research and knowledge dissemination (Image 11, © Domitianos Architects).

The traditional model of knowledge transmission within the architect’s basic training

<sup>30</sup> Jorge Figueira, 2013: "I do not deny the need to upgrade the university. I question the "internationalization" as the motto of a new technocratic utopia".



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Therefore, in basic architectural education there is a sense of absurd displacement from reality, a feeling of perversion because the teaching of building is upon those who have never been in a building construction, thus overvaluing the *enchantment* of a cultural discourse upon the efficacy of a professional practice. In parallel, the nuclear courses of design, which are also the ones where the syncretic characteristics of architecture (meeting with imprecise limits a spectrum of interests that interweave the arts and sciences, materializing them in both technological and cultural artifacts), is more present, making it an area whose procedures are more difficult to fit with the university scientific standards.

Hence, the transition from *transmission to production* of knowledge is far more complex, either by inaccuracy of its *epistemic limits*, or by blurring of methods of knowledge production. In other words, the question can be: *what and how* (and why) to investigate around the design and, how to validate and convey this knowledge? But, nevertheless, noticing that this is also a way to build around the design practice a procedure of *academic legitimacy*. However, relationships between education, research and practice are not a novelty in architectural education. History, theory, type, construction and methods have always supported architectural design, as *knowledge to design*. When a new *methodology* was claimed at midcentury, contrasting with the artistic emulations of the *beaux-arts*<sup>32</sup>, it was argued that "the method is more important than information"<sup>33</sup>. Even considering that "knowledge is the raw material for design"<sup>34</sup> and that the institutional aim of the schools, in the

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<sup>31</sup> Jorge Figueira, 2013: "I do not deny the need to upgrade the university. I question the "internationalization" as the motto of a new technocratic utopia".

<sup>32</sup> Here referring to the method of composition in the emulations, which was organized in sketch/partie taken on a day, and whose approval depended on the passage to the next stage, which was the development of the project in a given time (eg. one week).

<sup>33</sup> Walter Gropius, "Architectural Education", CIAM 8, Hoddleston, 1951, as cited by Moniz (2011, p165).

<sup>34</sup> Leslie Martin, "Report", *RIBA Conference on Architectural Design*, Oxford, 1958, available at: <http://www.oxfordconference2008.co.uk/1958conference.pdf>.

university environment, would be to form three types of architects: "the researcher, the builder and the urban planner"<sup>35</sup>.

This practical methodology symbolized a disciplinary epistemological particularity, in which knowledge is understood as "feeding the desire to express"<sup>36</sup>, in an ambivalence that is best experienced in the act of *simultaneous totality* and *contingency* that is the *making*.

This particularity comes from architecture being a profession, and one that links scientific knowledge with artistic practices. Which results in an imprecise spectrum of knowledge whose complexity does not easily coexist with models that do not admit its syncretism. Fearing that the overvaluation of the exact sciences methodologies endangers the architectural cultural heritage, there is a persistent distrust of any technocracy, leading nowadays to a reserve before the expansion of the professionalization of teaching.

For this environment also competes the so called *Bologna Adequacy*<sup>37</sup> and the set of principles and curricular changes resulting, for example:

- › The reduction of some courses of 6 to 5 years,
- › Imposing an academic calendar divided in semesters;
- › The reduction of hours of teacher-student contact;
- › The institutionalization of two learning cycles;
- › The creation of a *European credit transfer system* (ECTS), aiming to establish a pattern of curricular harmonization and convergence that allows mutual recognition of courses in Europe and student mobility (and teaching) between institutions and courses.

The adoption of learning cycles, which isn't a novelty in architecture education, is based on a differentiation between levels of learning and in a growing autonomy and critical ability of the student. Concomitantly, the ECTS system, would provide mobility between courses and allow individual curricula, easing formative assumptions and disciplinary contacts. However, the Portuguese architectural schools adopted a

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<sup>35</sup> Harvard Crimson, "Sert Proposes To Introduce New Design 1", Wednesday, March 18, 1953, available at

<http://www.thecrimson.com/article.aspx?ref=485541>. The researcher, the builder, and the city planner. Cited by Moniz (2011, p68).

<sup>36</sup> Louis Kahn, quoted by David Leatherbarrow (Leatherbarrow, 2012).

<sup>37</sup> It is the curricular harmonization, convergence of all college courses in the European Union. The process was triggered in Portugal under the XVII Constitutional Government (2005-2009).

conservative position. Starting with the designation of *Integrated Master*<sup>38</sup>, which consists in the maintenance of a curricular organization in a successive thematic sequence between learning cycles, while maintaining precedence's in between design courses. In parallel, history and theory, representation and technologies courses, maintained a concentric cadence, either of chronological order or of increasing complexity (see Table 1, with sequential organization of the Porto School, for example).

Significantly, in some schools, architectural design remained with annual frequency, while in other schools it was unfolded in two semesters with direct complementarities. In terms of workload, there was an effort to reduce overall lectured time but also to maintain a proportionality towards the previous curriculum offer. Maintaining the preponderance of architectural design courses, as implemented since 1957. In a way, there were several adjustments allowing that all would continue as it was.

**Table 1: FAUP – design, theory and history (area of architecture). Sequential organization of the curriculum**

Year 1	Year 2	Year 3	Year 4	Year 5
<b>Introductory, Abstract</b>	<b>Consolidated city</b>	<b>Housing, Repetition</b>	<b>Equipment, Exception</b>	<b>Urban Design</b>
General Theory of Organization of Space	Theory 1 (Development of the theory, twentieth century)	Theory 2 (practice: design, research, writing (word) and design)	Theory 3 (Public space)	theory 4 (Urbanism)
History of Ancient and Medieval Architecture	History of Modern Architecture	History of Contemporary Architecture	History of Portuguese Architecture	-

Even though, one can sign the expansion of end-of-graduation exam format, which

<sup>38</sup> Observing different material available online, and querying DOMUS schools guide of architecture and design, it appears that the *Integrated Masters* is a Iberian reality. However there is at least the exception of course of the AA in London, which is also due in 5 years (1+2+2) with no separation between Bachelors and Masters degrees and allowing access to the RIBA examination. Already in Italy there is a formal separation of the two courses (Laurea Magistrale and Laurea). Outside the panorama of Bologna, some schools as HGSD (Harvard) do not offer Bachelor (1st level), but only Masters. Several schools offer master's degrees in sciences or theory of architecture, complementary to traditional master, as post professional degree or for students considering an academic career as a researcher. The traditional master's degree is recognized by the Accrediting Boards for access to the profession

was generically adopted as an autonomous theoretical dissertation. This format, practiced by the schools of Coimbra and Oporto since the 90's<sup>39</sup>, became the main model in Portuguese courses since 2008, emphasizing the progressive importance of research on the basic education for the profession (as well as the lecturers' interest in managing this source of short essays).

## 6. Architectural design culture and knowledge within the university after Bologna

Accordingly, this return to design is also an *aggiornamento* around the design culture inside the Portuguese university. Because it is apparently an evolution of the traditional model of architectural design teaching, towards a more explicit critical component, achieving the so-wanted *specialization of academic nature, using research and innovation or the deepening of professional skills*<sup>40</sup>, and attending the cognitive specificity of architecture, therefore apparently opposing the basic contradiction in which the closer academics approach of university research protocols, and further distancing themselves from the real concerns of active and creative practice (Allen 2012, p202-229).

This position, which can be seen as a reaction to the institutional criteria of universities, also foresees the legitimization of the design disciplines, taking part on a movement that comes from the pioneer *Design Methods* to the more contemporary *Design Research* and *Design Thinking* movements.

Nevertheless, in the Portuguese panorama, with the multiplication of architectural schools and the abrupt transition from a *vocational school* towards a kind of *cultural production school*, and whilst a tradition of knowledge production is also being built<sup>41</sup>, we can understand the uneasiness among the field both as a healthy mechanism of self-preservation and of epistemological definition. Even because, as stated by Bruno Gil in *Investigations of invention and reinvention of memory*, "even though we all

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<sup>39</sup> The origin of this model, in Coimbra and Oporto, accompanies and reflects, we believe, the raising importance given to the theory in the curricula's, which emerges as autonomous course in each curricular year, evolving gradually besides the design courses and autonomously from the history of architecture courses. Which gives the theoretical dissertation the character of natural corollary of a given curricular structure and, it should be noted, occurs complementary to the design.

<sup>40</sup> DL 74/2006 of March 24, article 18, paragraph 3.

<sup>41</sup> Including al postgraduate, doctoral and continual education levels.

acknowledge that research is integrated into architecture and into his teaching, we were often confused with what constitutes original research in the discipline", which uncertainties arise from a short time of maturation: "If the project is 500 years old, research is no more than 50 ... It was in the 60's that architecture centers popped up, which were also research ones" (Gil 2012).



FIG 13 and 14: Cláudio Gonçalves (UAL) 2012 Secil Students Prize, "O Mergulho" - a thesis in design. "Ensinar pelo Projeto", International Colloquium on the Teaching of Design in Architecture Master, DARQ-FCTUC, Coimbra, September 2012

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