Both of Stuff and Not: A Teaching Experience in the Contemporary Condition

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Architecture is a quite elusive discipline, both unleashed and restrained by a perennial calling into question of its own fundamentals. Being and becoming an architect means to cast a doubtful, unsatisfied, interrogative gaze on the world and especially on the world of architecture. Teaching such a (self-) critical discipline is, therefore, an intrinsically impossible task. Of course, syllabuses include specific competencies such as drawing, history, structures, law, economics... but when it comes to integrating them into the architectural project, any fixed framework becomes questionable, and it is precisely this questioning that makes design architectural, offering that necessary potential which can turn mere building into architecture.

At the entrance of the Corderie in the Venetian Arsenale, the 'Monditalia' exhibition curated in 2014 by Rem Koolhaas for the 14th Biennale displayed some cruel figures about the contemporary condition of the architect. One of the posters focussed on the relation between professionals and inhabitants in European countries along with the USA and China. While each Chinese architect can count on forty thousand potential clients, the numbers American or European practitioners deal with look far smaller (respectively 1/1,300 and 1/1,200). At the bottom of the list, highlighted in colour, Italy stands out with an astonishing 1/400 ratio, hardly comparable even to closer situations, like Portugal (1/688) or Germany (1/806).[1]

Italians represent around a quarter of the European architects and our schools still 'produce' a lot of them. In recent years, this trend is slightly slowing down, with a parallel shrinkage of the educational offer and a decrease of its appeal. The 6802 places available in 2019 were roughly equivalent to the amount of applications, and the numerus clausus mechanism, which asks for a minimum level in a national admission test, further reduced the mass of rookies actually enrolled in our architecture faculties.[2] Nevertheless, their amount is still huge.

This long-lasting quantitative pressure has triggered many adverse side effects, both within and without the educational process. One of the most evident is that many of our graduates never started — and never will start — a career as an architect (Heyman, 2015).[3] In this condition, architectural teaching faces the hidden task of hopefully maintaining good levels in the usual disciplinary applications while trying to become a positive asset for those who will spend their abilities in different, unpredictable

1 The 'Monditalia' exhibition, curated by Rem Koolhaas with Ippolito Pestellini Laparelli, was part of 'Fundamentals,' 14th International Architecture Exhibition, La Biennale di Venezia, Venice, 7 June-23 November 2014, curated by the Dutch architect. The poster about the architect/inhabitants density is included in the slide show available in the 'Venice Biennale 2014: Monditalia' webpage, <https://oma.eu/projects/monditalia> [accessed 20 November 2019].

2 The Italian Law, 02 August 1999, nr. 264, introduced the numerus clausus discipline in our University system and established which degree courses must apply it. The number of places available for the current academic year in architecture faculties in Italy has been published in the Minister Decree, 27 June 2019, nr. 592, in a specific attachment, <https://www.miur.gov.it/documents/20182/1390866/D.M.++n.592+del+27-06-2019-+Allegato+Tabella+posti+Architettura.pdf/6f5779fb-f186-92d9-c7fd-a794c6b6d403?version=1.0&t=1561731046271> [accessed 17 July 2019].

3 See Heyman S., 11 March 2015. 'In Italy, an Oversupply of Architects'. The New York Times. For a European survey and some figures about the professional situation, see Architects' Council of Europe (2019). 2018 Annual Report & 2019 Outlook. PDF, <https://www.ace-cae.eu/uploads/tx_jidocumentsview/ACE_REPORT_2019_EN_HDEF_ARCHIVE-compressed-min.pdf> [accessed 01 August 2019].

manners and fields, in order to enabling them to play a positive social role beyond building. This task is going to be increasingly crucial also beyond the Alps. In the aftermath of the subprime crisis, it became evident that the most established building markets will offer less and less possibilities to run a professional practice as architects to new graduates. What has been 'normal' in Italy in the last fifty years has started to affect also other countries, where population dynamics, economic trends, technological developments, ecological concerns, and other phenomena are dramatically changing the professional world.

ITALIAN MASS UNIVERSITY

With its long history of architectural overpopulation, both within the profession and the school, Italy offers a privileged experimental terrain, whose observation can highlight some of the challenges this situation presents to contemporary education. Our teaching system suffered the first 'demographic' impact in the 1970s, when the baby boomers arrived in mass at the university driven by a concrete hope of social improvement, a more widespread wealth, and an easier access to higher education, financed with public spending and opened in 1969 to all high school degrees.[4] Out of a sudden, a very elitist institution became stuffed with people, coming from very different backgrounds, motivations, skills and possibilities. Especially architecture attracted lots of students, lured by its glamour (architects often featured in romance novels) and blurred disciplinary identity, which bridges arts, sciences, and humanities. When I enrolled at the IUAV (University Institute of Architecture of Venice) in 1978, I was one in eighteen hundred, and similar or bigger hordes where entering the other nine schools in Italy. As an immediate consequence, courses were overcrowded. The first year Architectural design studio I attended counted more than three hundred students, with one professor and no teaching assistants. We had to work out our group project with just three critics, one of them displaying the drawings while chasing the teacher along the staircase...

Things went a little better thereafter thanks to a sort of 'natural selection,' which reduced the number of students year after year. However, my last studio still counted more than eighty of us.

4 The protest of 1968 pushed the Italian Parliament to emanate the Law, 11 December 1969, nr. 910, which opened the access to higher education to five years high school degrees, independently from their field. Therefore, for instance, classic literature studies became accessible to people coming from technical Institutes, where neither Greek nor Latin were taught.

Working out projects exchanging experiences between professors and apprentices was impossible and both had to develop survival strategies. Self-teaching was unescapable and self-help groups of students rose up as a first response to the lack of contact with the counterpart. Many professors, on the other hand, went more theoretical and got somewhat obsessed by transmissibility of compositional rules and formal languages. Durandian apparatuses, made of fixed elements and their combinatorial mechanics, answered to both personal research issues and their teaching effectiveness. The increasing multitudes of students — and assistants — made these devices even more attractive for their promise to reduce the margins of interpretation and get to rapidly identifiable and assessable results. The archetypical and simplified grammar developed by the most prominent protagonists of 'la Tendenza' thrived in the overcrowded environment of Italian mass university and a similar approach to language issues marked an entire generation of teachers.

The architects who taught me — born around the 1930s — transformed design's weak systems of empiric tools in philosophical certainties, selling idiosyncratic poetics as scientific (i.e. deterministic) theories. Very soon involved in teaching and criticism, they both accepted and tried to resist, according to their leftist political commitment, the many building opportunities post war Italy offered them, fighting professionalism while running their professional practice. The sort of intellectual architecture prompted by this paradoxical attitude put reality into quotation marks, providing to their theoretical positions an effective, self-referential coherence. Personal languages became sort of religions imparted through punishment and very rare rewards (we worked hard to skip the assistants and get harsh comments directly from the professors, who usually reviewed only the projects that deserved their attention...).[5]

Obviously, those individual poetics were far from composing a consistent whole. Nonetheless, the contradictory sequence of different design experiences made some methodological sense, for both the explicit, specific teaching purposes and their accidental side effects. Secular attitudes could feed upon the conflicts among sects, which weakened their ideological efficacy: if something can frame the first 'Europan generation,' it could be looked for in the sharing of this sort of disenchantment. On the other hand, those who found something close to their sen-

5 Some of the issues here addressed are differently unfolded in three articles of mine. See: Corbellini G. (2018). 'Design By Research'. Villardjournal, 1; Corbellini G. (2018). 'Autonomy by Drawing: Gianugo Polesello on Route '66'. Footprint, 22; Corbellini G. (2018). 'Learning through a Distracted Reception'. Fuoco Amico, 6.

sibility had the possibility to worship one of the design 'cults' they met along the educational path. They were quite a lot and many old initiates of those academic 'churches' remained within the university as teachers. This is a quite obvious phenomenon, especially for approaches that leaned on self-reproduction as a way to affirm and confirm their relevance, but the Italian overcrowding of architects amplified it, because of the harsh competition that made often impossible to build up an academic career while dealing with the profession. Actually, good practising architects are now rather rare within the academia, which developed a recruiting system that promotes writing scholars — me included — rather than hands-on designers.

ITALY NOW

Anyway, both the epigones — and the epigones of epigones — of our masters and those who developed a more doubtful and independent attitude suffer a dramatic lack of charisma in comparison to the previous generation. For instance, in that 1982 of my last design studio at the IUAV, I had the possibility to choose between Vittorio Gregotti, Aldo Rossi, and Gino Valle: this is something unimaginable nowadays, for both the teachers' condition and the students' attitude. Neither personal prestige, when still survives, nor authoritarian methods seem to help us in catching our audience attention. Besides the rising issue of political correctness and a mutated balance of power, rude manners in the present Italian situation wouldn't be credible. Our university system is traditionally geared towards 'productivity', with relatively low tuition fees and the possibility to attend courses virtually forever, failing and repeating exams dozens of times. In architectural design studios, this means projects endlessly negotiated over time until something 'edible' enough to get a sufficient mark comes out. Moreover, when in the 1990s the number of students with regular careers became one of the main parameters of higher education financing, any physiologic selection turned out less practicable. Professors were accordingly burdened by the responsibility of their teaching results, which is not a bad thing in itself, but took the educational exchange toward limited, less challenging goals. Consequently, almost everybody who pass the admission exam (a multiple-choice test hardly able to detect any design attitude) will graduate in architecture.

In the 1990s were also introduced the so called 'scientific-disciplinary sectors',[6] which contributed to isolate design

6 Law, 19 November 1990, nr. 341, introduced the Disciplinary Sectors, further regulated by the Minister Decree, 30 October 2015, nr. 855.

from other, more specialized matters, like history, drawing, technology, restoration, etc. This disciplinary fragmentation, covertly aimed to multiply teaching positions (again a consequence of overcrowding), eventually developed into a landscape of conflicting power groups with autonomous goals and methods, gradually detached form the ones of the architectural project and populated by teachers just slightly interested in design issues. Architectural attitudes became paradoxically rare among architecture professors, so that students were progressively exposed to contradictory messages about roles, approaches, ways of thinking concerning the discipline.

By the way, faculties composed this way are both cause and effect of another anomaly. Regardless European recommendations and common sense, master theses in Italian architecture schools are more than often worked out without getting to an architectural project. Of course, some very valuable researches probe sophisticated historical or technical issues, but, actually, we graduate a lot of 'architects' unfocused on the fundamental tool of a discipline that the facts of life might take them to practice or control. I know very well, having tutored dozens of them, that undergoing a design theses doesn't automatically assure good professional results. Nevertheless, the disciplinary weakness within architectural schools mirrors an even weaker role of design in our environmental transformation, as the mauled Italian territory sadly witnesses.

The 'Bologna Process', which at the end of the century introduced a quantitative measure of the students' workload, adding homework to the time spent at school for lectures and exercises, dramatically increased the presence of collateral disciplines in Italian syllabuses and, especially, their real weight (Slager et al, 2016).[7] Minimum requirements about credits' distribution and aggregation suddenly snatched time to design, previously the main commitment of any architecture student. Credits measurability implicates furthermore an idea of linear connection between the effort spent and the results achieved: a concept that meets the students' expectations along with the society's ones and zestfully embraced by academic communication and programmes. Courses' briefs started to read like contracts, with precise declarations of the kind of

7 In 2011, at the University of Trieste, I made some comparisons with other schools in order to collect information for the new syllabus. This random survey on European masters in architecture showed that an Italian graduate attends in five years roughly half courses in architectural design (an average of fifty credits) than her colleagues beyond the Alps (about one hundred). For a discussion about the Bologna Process' concequences on art disciplines education see Slager H. in conversation with Oosterman A., Breddels L., and El Bahrawy A. (2016). 'After Bologna', Volume, 48, p. 131.

skills and competencies delivered and, again, measured in the exams.[8] Basic disciplines came out therefore stiffened and transformed in sort of funnels supposed to deliver average knowledge, further simplified by the need for assignments to comply with the workload indicated by the credits. For instance, the monographic courses of architectural history I was offered in Venice forty years ago — with bibliographies of dozens of books on very specific topics and periods — disappeared completely, as far as I know, substituted by more traditional chronologic sequences and articulations. Thus, the experience of digging deep in the challenging complexity of something very idiosyncratic gave way to a shared, but more superficial collection of rudiments. The same happened with the teaching of drawing, now generally aimed to transmit standard techniques, completely independent from the projects represented. Even the training on the works of famous masters — Wright's or Le Corbusier, let's say — undergoes indifferently the same anodyne drawing system, as though they were so similar and the tight bond between design imagination and the personal toolbox that delivers it completely irrelevant.

CONTEMPORARY CONDITIONS

Measurability, linear productivity, shallowness, standardisation hardly apply to an intrinsically dissipative endeavour like architectural design, which asks for a continuous reworking of its premises and results. Architecture usually delivers very contingent and provisional truths: students used to predictable teaching assignments find it difficult to understand this negotiated practice, where almost nothing could be taken for granted.

This is however a quite widespread condition. Often my Erasmus students show the same bewilderment of the Italian ones and share similar attitudes. Our own complicated situation, of course, didn't develop in isolation from major global events, which are deeply impacting everybody's life, along with architecture and its teaching. The revolution in information technologies is undeniably decisive in the rapid change we are

8 In Trieste, it was mandatory writing the courses' briefs according to the so-called 'Dublin Descriptors.' the 'Dublin Descriptors developed by the Joint Quality Initiative are proposed for adoption as the cycle descriptors for the framework for qualifications of the European Higher Education Area. They offer generic statements of typical expectations of achievements and abilities associated with awards that represent the end of each of a Bologna cycle.' Bologna Working Group on Qualifications Frameworks (2005). Framework for Qualifications of the European Higher Education Area. Copenhagen: Ministry of Science, Technology and Innovation, p. 9. At the Politecnico of Turin, there are parts of my own courses briefs I cannot modify.

living right now. Many clues indicates in its pervasive penetration the main reason of the growing unease in intergenerational communication that emerges in schools. This is not the usual, trite lamentation driven by nostalgia: even young professors find it difficult to achieve normal educational goals and schools multiply pedagogical tutorials for teachers, in an attempt to deliver complex knowledge in snippets.

Quite surprisingly, the technical gap between younger apprentices and the 'digital migrants' who try to teach them is not the main problem. Actually, professors are on average still better skilled in specific software applications than their students. What emerges is rather a different attitude toward learning. Everybody who lectures faces for instance a dramatic reduction in attention time. On the one hand, we are now used to an accelerated pace of everything, from football playing to narrative rhythms. On the other hand, an early addiction to hyper-connection, multitasking, contents on demand etc. seems to undermine the capacity to endure all the boring tasks any intellectual training entails. An incredible pressure of the present overwhelms us, luring our desire for immediate gratification and jeopardizing the sheer possibility to focus on a single task for a while. The depth of time comes out as flattened, blurring differences and hierarchies, making everything almost equivalent, interchangeable. Easy access, storage, and retrieval of information seem to magnify this effect. We conveniently outsource memory to our devices: no more need to remember telephone numbers, dates, names... But doing this, we are also reducing the 'materials' able to nurture intuition, build up connections, organise research paths.[9] Virtual environments, operated through a limited set of standard interfaces (keyboard, mouse, touchscreen...), further detach us from physical manipulation and its key role in any process of comprehension, memorisation, and exploration of possibilities.

Another feature of the internet is that it works as a bidirectional communication environment. Actually, it thrives upon the information we eagerly provide just browsing contents. Those latter arrive to us selected according to our previous searches and behaviours. The web environment is therefore something individually tailored, so that different persons asking the same query on Google will get different results. Knowledge comes therefore as a sort of infinite mirroring

9 I know, this is the same argument Plato used against writing in the Phaedrus. It sounds very conservative, but it makes sense of our human condition, of beings made of flesh and bones.

effect, producing biased positions. Social media multiplied this effect, enclosing people in information bubbles virtually detached from everything provides different vantage points, interpretations, words, and languages. The success of these interactive web 2.0 technologies leans also on the exposition of the self they allow. Everybody becomes the star of a self-built narrative, firmly believing that her or his own ideas, affairs, vicissitudes are worth of others' attention: a situation further bolstered by the demographic dynamics in affluent countries, where less and less younger people grow up pampered by older generations. The willingness to learn, namely to experience a continuous questioning of our convictions, beliefs, opinions, faces therefore a harsh conflict with a strongly rooted urge of seeking attention and the need of reassuring confirmations of established positions.

Data banks, search engines, and social media are obviously part of a wider array of digital prosthetics. Applications and their algorithms smoothen the workflow, getting us rid of many repetitive tasks. Those routines offer, however, a sort of suspended territory where any creative endeavour explores promising mistakes, unexpected potentials, serendipitous encounters. They perform a very important role, for the sake of each single work and especially for training. Without undergoing the trial and error experience entailed with design it will be hard to educate those abilities still needed to play the role of curator digital machine are giving us, selecting inputs and outputs rather than working out the whole process. Again, the promise of linear efficiency introduces expectations at odds with the dissipative feature of architectural design and its logic, both in its education and practice.

Nevertheless, big data and artificial intelligence implicate even more challenging transformation scenarios, with the power of quantity able to overwhelm the 'traditional' scientific approach based upon the understanding of processes and their manipulation (Carpo, 2017). Specialized approaches, even those directly related to the information technology field, are probably going to face higher risks than architectural design. The 'last species of comprehensivists,'[10] as Buckminster Fuller framed architects, seem paradoxically better geared to survive the ongoing automation and, maybe, find a way to thrive within the deep change it involves.

10 This Fuller's quote is reported by Wigley M. (2015). Buckminster Fuller Inc.: Architecture in the Age of Radio. Zürich: Lars Müller, p. 71.

A TEACHING EXPERIENCE

If the same issues that threatens architecture as a discipline give it the opportunity to become crucial, how to 'design' its teaching in order to take advantage of the above listed problems? In many years of didactic experience, I devised and tested some adjustment of what has been important in my own training, updating them along the way. The exposition at the IUAV in the 1970s and '80s to the high penetrating radiation of 'disciplinary autonomy' vaccinated me from an idea of architecture as something valuable in itself, disconnected from the facts of life that made possible its realisation. This 'purist' approach would ironically betray its identity as a tactical, ever-shifting, multi-disciplinary, inclusive, negotiating attitude. Yet, building up an architectural gaze is something I still aim to, even in the overcrowded, problematic educational environment of Italian universities.

My last experience at the Politecnico of Turin can resume some methodological devices I developed in order to cope with the present conditions. In the second semester 1919–20, I taught the first year design studio of the Bachelor in architecture. This course, recently introduced within the new syllabus and just started, has been thought of as an introduction to spatial comprehension and manipulation. Its maximum attendance would be of seventy-five students but, according to the above-mentioned decrease in enrolment numbers, I had about sixty apprentices. Given the six credits assigned and the crammed teaching schedule, the corresponding sixty hours of school time meant no more than one hour per student, including lectures. Therefore, usual critics and individual reviews were quite hard to perform. Most of the exercises were rapidly commented with video presentations, using a pars pro toto approach, namely focusing on some representative moods, errors, good ideas, attitudes as cases. Despite the fading attention of students and their disappointment in seeing their work skipped, compared with others, or pointed out as a negative example, some issues seeped in. Nonetheless, the demonstrative power of a drawing hand looking for a design solution is irreplaceable. My two assistants and I set up therefore individual tutorials, no more than three sessions of four hours, at an accelerated pace of ten-fifteen minutes for each student.

Besides those didactic tunings, the pressure of numbers suggested some further measures: an artificial context, devoid of the complexities of usual urban spaces or natural landscapes; a theme — the house — close to the daily experience; a project process split in exercises able to approach its complexity from different vantage points; and a teaching method based on the manipulation of examples.

The exercises concerned the reading and modification of the Hagen Island district, built in Ypenburg by the Dutch studio MVRDV in 2003. It is a polder development, made of row houses, that ironically interprets homely archetypes. This feature makes it both a background for different design possibilities and an illustration of a fair, simple, and interesting design interpretation. Each student worked on a residential unit, complete with house and garden, and proposed an extension and a new overall configuration.

Getting the ability to read usually precedes writing, therefore imitation, a decisive instrument in learning creative disciplines, is the main driver of this studio, which I accordingly called 'Copy & Paste'. However, since our 'writing' (designing) is a way of 'reading' (understanding contexts and the directions of their transformation), this course relied on the project as a tool of collecting and producing knowledge. Design examples provide shortcuts and act as instant contrast agents in interpreting conditions and selecting possibilities. Their use helps also in building up a personal 'library' of different approaches and projects, which form the necessary toolbox each architect uses to work out any design task. Students were asked to search and propose examples on their own along the ones provided by the teacher, in order to encourage their self-teaching attitude. They were also requested to imagine their clients' desires and needs, starting from randomly generated features, and to produce programmatic questions about their design task.

The relationship between words and things, the narrative binding between the architectural projects and their reasons, acted as a main educational apparatus. Discursive practices, which are intrinsically linear, work as representative media for space imagination, as scale models or drawings do. In other words, they perform a 'critical' function even before a critical attitude has been trained and achieved. This triggers a mutual improvement of the ability to 'read' projects and to 'write' them as sets of logically organized operations.

Did those tactical moves work? Unbelievably well, at least according to their premises. Design results were on average quite good, with some pretty convincing highpoint. Less easy to verify is the influence of the hidden intention of this course (and of my whole teaching effort[11]): to enhance the students'

11 I published some books, variously intertwined with my teaching activity, where the relationship between design issues and discursive practices unfolds: Corbellini G. (2018). Exlibris: 16 Keywords of Contemporary Architecture. Siracusa: LetteraVentidue; Corbellini G. (2018). Telling Spaces. Siracusa: Lettera Ventidue. Corbellini G. (2017). Dr. Corbellini's Pills: Tips for Architecture Beginners. Siracusa: LetteraVentidue; Corbellini G. (2016). Lo spazio dicibile: Architettura e narrativa. Siracusa: LetteraVentidue.

critical, and especially self-critical, ability, in order to gear them towards the unexpected scenarios set up by the ongoing phenomena of virtualisation. The more electronic prosthetic applications will erase distances in time and space between desires and their realisation, the less built answers (and the authorial skills needed to produce them) will be requested. Even this profession so strongly entangled in materiality should undergo the translation of its own disciplinary instruments for spatial imagination into other dimensions. Exporting the architectural gaze into the immaterial is key to keep us in touch with 'reality' and get commissions.

Both of stuff and not.

Fig 1: 'Copy & Paste', Politecnico di Torino, Bachelor in Architecture, First year design studio, 2018–19, Giovanni Corbellini with Sarah Becchio and Paolo Borghino, additions to MVRDV's Hagen Island housing, first project proposals, 02 April 2019.

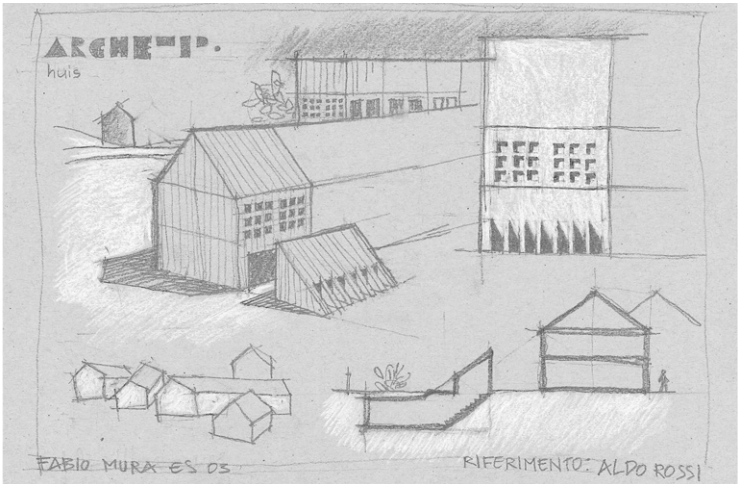

Fig 2: 'Copy & Paste', Politecnico di Torino, Bachelor in Architecture, First year design studio, 2018–19, Giovanni Corbellini with Sarah Becchio and Paolo Borghino, student Fabio Mura, first project proposal, 02 April 2019.

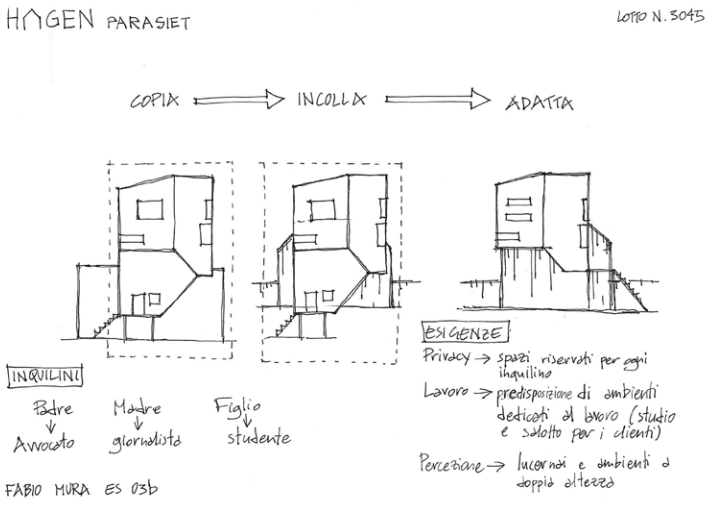

Fig 3: 'Copy & Paste', Politecnico di Torino, Bachelor in Architecture, First year design studio, 2018–19, Giovanni Corbellini with Sarah Becchio and Paolo Borghino, student Fabio Mura, second project proposal, 09 April 2019.

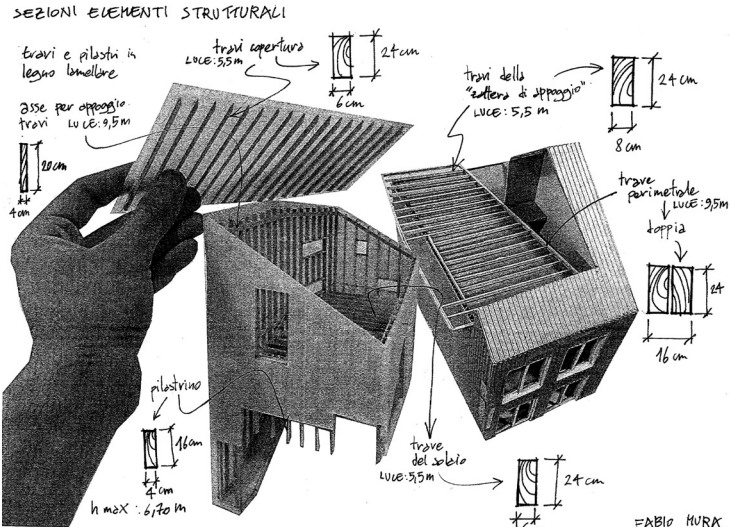

Fig 4: 'Copy & Paste', Politecnico di Torino, Bachelor in Architecture, First year design studio, 2018–19, Giovanni Corbellini with Sarah Becchio and Paolo Borghino, student Fabio Mura, design development, 28 May 2019.

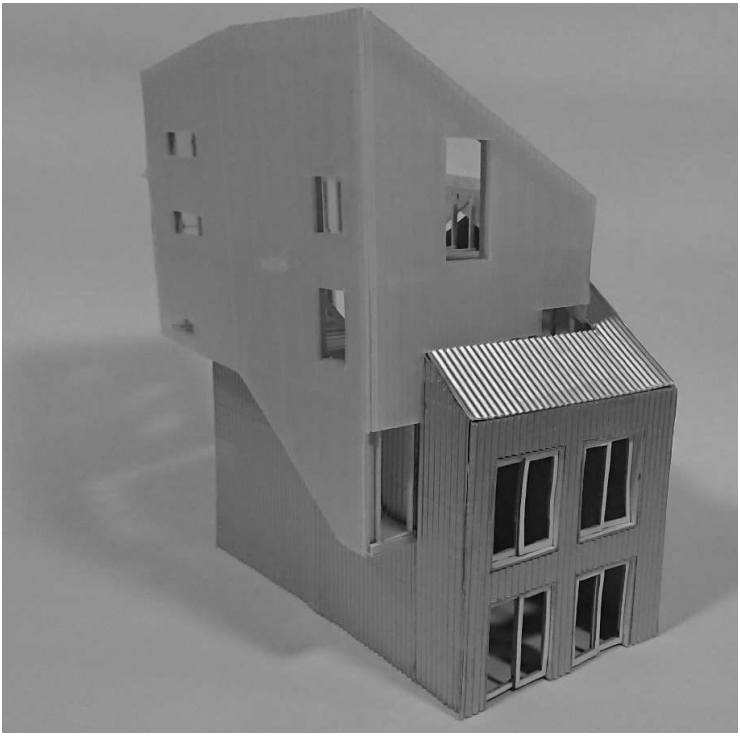

Fig 5: 'Copy & Paste', Politecnico di Torino, Bachelor in Architecture, First year design studio, 2018–19, Giovanni Corbellini with Sarah Becchio and Paolo Borghino, student Fabio Mura, final model, 11 June 2019.

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