

# Constructible ground

## An Exploration in community

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Figure 1. Summer Workshop. UGLY Pavilion ALICE- Théâtre de VIDY. 2014-2015 : Inside Lausanne (Image©Dylan Perrenoud)

I shall become a master in this art only after a great deal of practice, until eventually the results of my theoretical knowledge and the results of my practice are blended into one—my intuition, the essence of the mastery of any art<sup>1</sup>

Erich Fromm

## INTRO

We will present and analyse how the **Practice of Teaching** is structured within ALICE (Atelier de la Conception de l'Espace) at ENAC Faculty<sup>1</sup> at EPFL Lausanne -in particular with the first year Bachelor design class- during the last 4 years. Responsible of the First Year Project Design Teaching Program since 2010, the ALICE Lab has been consistently working on the **Teaching of Practice**, on "the very moment in which ideas are translated from one medium into another, and in particular, from the realm of the mind into physical output"<sup>2</sup>.

## OVERVIEW AND CONTEXT

Walter Gropius' **Theory and Organization of the Bauhaus** (1923), the 1958 **RIBA's Conference Report** by Sir Leslies Martin and Ernest Boyer's Report **Building Community** (1966) -bibliography provided by the 2019 ACSA/EAAE Teachers' Conference Committee-, jointly with **The Craftsman** (2008) and **Together** (2012) -both by Richard Sennett- structure this paper.

Following Richard Sennett's remark on "coordination working

much better if the two hands (of a musician) work together from the start"<sup>3</sup>, the ALICE Lab goes one step further from the first option stated at the RIBA conference (1958)- with regards for architecture students to "be brought into the closest possible touch with all the requirements of practical building"<sup>4</sup>- when introducing the idea of developing a **live project as a school subject** in First Year Program - with the so-called HOUSES- since 2015.

Recalling the **Teaching of Practice**, almost 100 years ago, Walter Gropius pointed out the importance of intellectual education running parallel to manual training as well as its promoting the contact between the individual and the community in order to "provide the common basis on which many individuals are able to create together a superior unit of work"<sup>5</sup> The relevance of Crafts and Building Community are here -and in the ALICE Y1 program- carefully intertwined.

## GEOGRAPHICAL AND CULTURAL BACKGROUND

Given ALICE's partially Swiss German origins<sup>6</sup>, it may be fruitful to recall moments of specific teaching at ETHZ (Eidgenössische Technische Hochschule Zürich) to contextualize ALICE within the Swiss architectural and educational background. Hans Schmidt - standing as the architect theoretician of the 'Neues Bauen' movement in Switzerland- is quoted by Martin Steinmann in **Architectura recente nella Svizzera tedesca**<sup>7</sup> (1991) noticing that "**construction** is not architecture, it is a necessity." This is what Bernhard Hoesli<sup>8</sup> -during the 60ies and 70ies- tried to transmit to his ETHZ students. Pretending he was a farmer, he decides to stay far from form and to keep the architect's discourse as close as possible to architecture as making, to construction itself. **Bauen** -building-, combined with **empiricism**<sup>9</sup> and curiosity, dives directly into "how space-making and architecture can be taught and learned without preconceptions"<sup>10</sup>.

## HOUSE'S SERIES

The HOUSE series is a concept of teaching that starts for the hypothesis that it is possible to design and build ONE project with very large groups of authors. The HOUSES themselves house each a series of sub-projects -ROOMS- that have been conceived by groups of 15 to 20 students, guided by a team of studio directors<sup>11</sup>. The ALICE y1-program<sup>12</sup> meticulously outlines the timeline and a list of required elements, to provide a common ground for dialogical<sup>13</sup> discussion, to negotiate the configuration of a dozen studio-projects and how they will be materialized inside a common framework.

After completing a workshop with first year students in summer 2015, at the Théâtre de Vidy-Lausanne -leading to a wooden pavilion (Fig.1), in strong resonance with Max Bill's project for the Swiss National Exhibition 1964-, the ALICE team considered an ambitious hypothesis: Would it be possible to construct one project with over two hundred students as authors and builders? The HOUSES series was born, in the strong conviction that collective work is a crucial dimension in the discipline of architecture and that each freshman should be able to participate in an enriching experience of conceiving, developing and constructing a project from idea to built-form,

enabled by a program that would offer an immersive initiation to architecture. The 2015-2016 program **Inside Paris** scheduled HOUSE 1 -an 11m x 11m x 11m timber construct- to be completed on campus by May 31<sup>st</sup> 2016. HOUSE 1 (Lausanne 2015-2016), HOUSE 2 (Zurich 2016-2017) and HOUSE 3 (Brussels 2017-2018) have each initiated a unique collaboration between around two hundred freshmen architects, the teaching team, engineers and other partners.

## PROTOSTRUCTURE

Behavioral neuroscience<sup>14</sup> has shown that in supportive environments, the ratio of the individual's perseverance multiplies. The Oxford English Dictionary (OED) defines **hunch** as the intuitive feeling that something will (can) happen. We hypothesize that one parameter contributing widely in providing ground for mutual collaboration and proliferation of the **hunch** as an operational intuition is **confidence** – according to the OED: “the mental attitude of **trusting in** or **relying on** a person (team) or thing (structure)”.



Figure 2. Protostructure Workshop. HOUSE 1. 2015-2016: Inside Paris (Image@ALICE)

A crucial dimension of the HOUSE series is the concept of **proto-structure** –“a structure that is ready to receive either alteration in itself, or to accommodate further configurations (...) whose destiny is to evolve (...) engaged in a constant interaction with agents”<sup>15</sup>. It is an operational concept conceived by the ALICE lab and investigated as a PhD research project by Agathe Mignon under Prof. Dieter Dietz's supervision. As an abstract concept, it can be informed by different parameters such as time, materiality or constructive conditions, crystallizing in different manners.

In the HOUSE series **protostructure** is articulated as a balloon-frame timber construct (Fig.2). When time and **protostructure** come together, they act as a catalyst with the program and didactic goals (Fig.3). The concept of **protostructure** facilitate the ALICE teaching team (over 12-15 studio directors) to engage in a **Teaching of Practice** in First Year at the École polytechnique fédérale de Lausanne.

## THE TEACHING OF PRACTICE

When Defending **Knowledge Production from Knowledge Consumption**, in Architecture Universities, A.M. Salama encourages architectural design pedagogy to “be viewed as training toward the manifestation of the ability to **conceptualize**, coordinate and execute the idea of building”<sup>16</sup>. After having taught for four years (2014-2018) as studio director within the ALICE lab, I can ensure that Prof. Salama's expectations for students to conceptualize, project, coordinate and build their ideas, are wholly fulfilled.

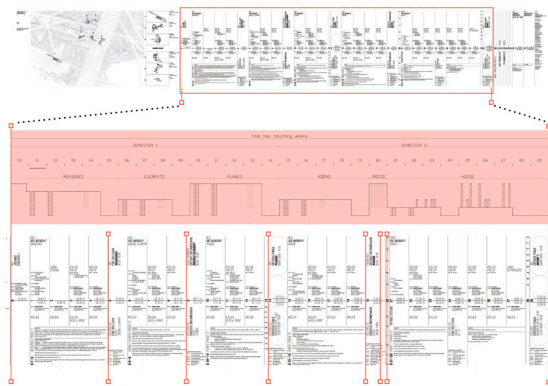


Figure 3. ALICE\_Y1 Teaching Program (Diagram@LPL)

The ALICE First Year Project Design Program is structured in two semesters. The so-called **Technè** (crafts, drawing, model-making and construction techniques) runs along both semesters. Since the very first day, students are bound to work both as an individual and in groups. Meeting in different configurations they naturally understand how much they can learn from each other and the importance of cooperation and negotiation. Operating on different scales, ranging from urban to full-size scale is also a key issue in their training.

Students have 12 hours of Project Design per week, Monday (8) and Tuesday (4). The academic year is structured in five Phases: **MEASURES**, **ELEMENTS** and **PLANES** (first semester), **ROOMS** and **HOUSE** (second semester). At the beginning of each Phase, all Year 1 students gather together for the so-called **Big Monday**. A series of lectures given by Prof. Dieter Dietz and other members of the ALICE Lab –including the Research Team<sup>17</sup>- as well as external experts, structure this 'input day'. The main goal of Big Mondays is diving into the essence of the Phase and contextualizing it within the teaching program. Art, Literature and Philosophy dialogue together to inform the most relevant concepts raised every Phase. Students are also given Technè master classes tackling drawing techniques and model making.

Students learn how to materialize accurate and precise plaster models. From cardboard working to plaster and

water proportions or vibration techniques. They also learn how to manipulate the set of Japanese saws they are provided to work with wooden profiles -1/5, 1/10, 1/20 models- as well as wood assembly techniques in 1/1.

Students develop individual skills. Not only in model making, but also drawing, photography, editing and post-production. Some pop-up as good communicators (expressing ideas and procedures) and negotiators. Surprised by their –many times unknown- skills, normally they enjoy sharing their ‘discoveries’ with their colleagues –and teachers-. This sharing allows their gaining confidence and the ‘know how’ will spread fast. Furthermore there is a number of students from the former year ‘tutoring’ their new colleagues, and working with the studio directors, in addition to ‘student-assistants’ (students in 4<sup>th</sup> and 5<sup>th</sup> year).

It is during the Third Phase –PLANES-, before the Christmas Break, that students are confronted with the concept of **protostructure** – in the form of an interpreted balloon-frame construction. This is an important moment (except for their personal reading of the HOUSE we will refer afterwards) where students work individually. They assimilate its fragility –and strength- while drawing at different scales and building it. The experience of recent years shows that projects resulting from a strong connection between the student’s ideas and the intrinsic nature of the **protostructure** reach a high degree of articulation and detail in building on its genetic code. Furthermore, it is important to note that the precise configuration of **protostructure** provided to the students is different every year, reacting to site and situation specific context of diverse cities and social conditions.

In the ROOMS Phase after semester break every double studio will have a common drawing and model (1/10) of their ROOMS in close interaction with their ‘neighbours’ and the **protostructure** itself. It is now when students begin to experience how the idea of **protostructure** “translates the notion that constructible ground is always a common (...). Therefore, all actors are bound to negotiate between themselves”<sup>18</sup>. In an extended review, students, external experts and the ALICE teaching team will discuss a catalogue of about 100 ROOM projects to decide on the evolution of the HOUSE project based on concepts of ROOMS in each studio.

In the introduction of his book **Together** (2013), Richard Sennett remarks that “by the time children (students) can negotiate the rules for a game (project), they are able to **negotiate** ambiguities and resolve them”.<sup>19</sup> Should we be able to follow this parallelism –between **playing** and **building together**- to the appropriate extent, “the time has come, then, to demystify architecture, to elevate its place in the consciousness of the public and in the daily lives of communities.”<sup>20</sup>



Figure 4. Protostructure Workshop. HOUSE 1. 2015-2016: Inside Paris (Image@ALICE)

It is during the Easter Break that the balloon-frame timber construct, holding the genetic code for the future projects, is built. A team of over 20 students, together with several studio directors responsible of the workshop coordination, consecrate their holidays to build the Common Ground for the HOUSE to happen. Students gain in these intense working days a precious experience regarding construction, prefabrication, time and organization management. Most of these students will become relevant agents in the HOUSE Phase. (Fig.4).

With the ROOMS phase accomplished and by entering the collective HOUSE phase, each person will contribute to the overall project in overlapping but yet specific roles, in such a way that “here, the architect is not just a creator, he is also a craftsman, a producer, an engineer, a manager etc.”<sup>21</sup> During this last Phase, the longest one (weeks 21 to 29), the studios’ become a true workshop. The workshop’s atmosphere exudes confidence, ‘savoir faire’ and complicity, similar to the one opening the Hampton Album (Fig.5) –which re-appears on Richard Sennett’s cover of his book ‘Together’- with six people deeply immersed in their task, while working simultaneously in the construction of a wooden staircase.



Figure 5. Image from The Hampton Album

In most cases it is the students who choose their roles within the team –prefabrication 1/1, model 1/5, transversal coordination with- in the HOUSE, working on site ('chantier'), time and tasks diagrams, construction drawings (Fig.6), architecture plans, sections at different scales ...-. They are also asked to generate one document with their personal and unique reading of the studio project (ROOM) within the HOUSE. This active role entails an apprehending of what building a community means –each being a relevant agent in the pursuit of a common goal- and furthermore, preserves everyone's specific authorship<sup>22</sup>.

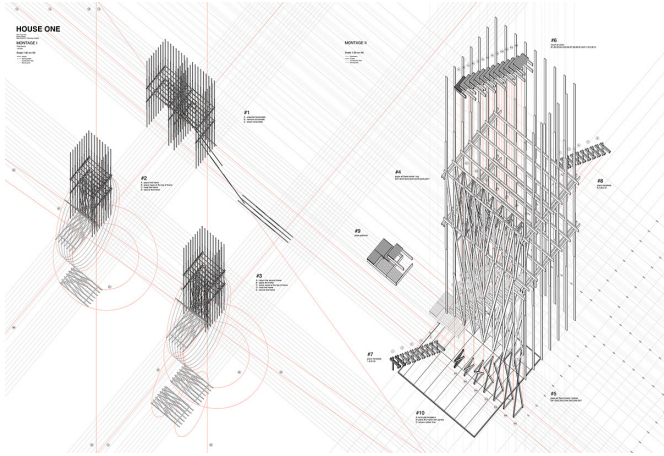


Figure 6. Construction Drawing of HOUSE 1 (Cad drawing@Studio Cabay)

### THE PRACTICE OF TEACHING

Back in 1999, Eileen Bender and Donald Gray pointed out “students learning from each other in groups or teams in and outside a classroom; teachers learning from students; teachers talking to each other about teaching”<sup>23</sup> as **signs** or **certifications of** what they called **the scholarship of teaching**. As remarked by both authors, “the scholarship of teaching is not merely teaching our scholarship. Nor is it simply teaching well”<sup>24</sup>.

Richard Sennett points out the basic distinction between practicing –solitary experience- and rehearsing –**collective experience** -and how “rehearsing drags musical habits into shared consciousness.”<sup>25</sup>. Somehow, we could read a parallelism between students and the ALICE teaching community performing together with musicians concertizing in philharmonic orchestras. This **collective experience** happens within the ALICE Community thanks to “the frameworks we have constructed and how we move within”<sup>26</sup>, thanks to its team’s horizontal structure. A project of this complexity, as a rapidly evolving design venture involving more than 200 authors/thinkers/constructors would not be possible in a top-down organization.

A challenging **studio culture** –where individual **ego** melts in favor of cooperation- and dialogical discourse within this community of students and educators, facilitates **the teaching of practice and the practice of teaching**, leading to intense moments when complicity and confidence unfold and music happens.

### CONCLUSION

Spatial exploration<sup>27</sup> in one-to-one scale becomes a suitable context for “Sennett’s views on cooperation, dialogical discourse, and the necessity for a negotiation of space of cultural diversity”<sup>28</sup>

Developing a **live project as a school subject** -first option stated at the RIBA in 1958- leads to pointed results, not only in terms of technical quality regarding drawings and model making but also with regards to student’s self-confidence and critical spirit. Furthermore, this process has proved to be very successful in forging strong relationships within the students, overcoming differences and disagreements in favor of a **common exploration of the constructible ground**.

The concept of **protostructure** provides a breeding ground both for students and educators **to rely on**, to give –and therefore to receive- their most, to flourish. They also ensure emotional investment and raising values such as “ethical grounding” and “public purposes”, as stated by Ernest Boyer in his Epilogue for **Building Community**<sup>29</sup>. A climate of infection, “necessary for complexity”<sup>30</sup>, can thus inform architecture student’s DNA, being also “a chance for partnerships with other professional schools and academic departments”<sup>31</sup>.

Student’s evolution should be observed over time to understand if building together a “superior unit of work”<sup>32</sup>(Figs.7-8) will have further impact in their Diploma Projects and their professional practice.



Figure 7. Discussion around the 1/5 model of HOUSE 1 (Image@ALICE).



Figure 8. Discussion inside HOUSE 2 (Image@Anna Positano)

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## Notes

1. Erich Fromm, *The Art of Loving: [An Enquiry into the Nature of Love]* (New York: Harper, 1956). p.5
2. Faculté de l'environnement naturel, architectural et construit (ENAC) ; École polytechnique fédérale de Lausanne (EPFL)
3. Dieter Dietz and Daniel Zamarbide, "Drawing for Real. A Quest into the Space of Imagination," in *All About Space Volume 3 Beyond The Object* (Zurich: Park Books, 2018).p.268.
4. Richard Sennett, *The Craftsman* (London: Penguin, 2009). p.165
5. Leslie Martin, "The 1958 RIBA Conference on Architectural Education," 1958.
6. Walter Gropius, "The Theory and Organization of the Bauhaus," in *Bauhaus, 1919-1928* (New York: The Museum of Modern Art, 1938).
7. Dieter Dietz, head of the ALICE Lab and three studio directors enrolled in House 1 project, which can be a good representative of this Wonderland -in constant evolution- come from the German speaking part of Switzerland and have been partially educated at ETHZ. Team members come also from the Valais, Fribourg, Ticino... To sum up, when running the Inside Paris program (2015-2016) and building HOUSE 1 with over 200 Year 1 students and engineer for timber construction -Rémy Meylan-, the ALICE team members were: Swiss (11), Belgian (1), Italian (1), French (1), Spanish (1) and EEUU (1).
8. Martin Steinmann, "Architettura Recente Nella Svizzera Tedesca," in *Architektur in Der Deutschen Schweiz 1980-1990 = L'architecture Récente En Suisse Alémanique = L'architettura Recente Nella Svizzera Tedesca : Ein Katalog Und Architekturführer*. (Lugano: Verlag ADV Advertising Company & Publishing House, 1991).
9. Bernhard Hoesli began teaching at the ETHZurich in 1959, there he directed the first-year architecture design program until 1981. The pedagogy he developed became part of the permanent structure at the ETHZ curriculum.
10. "This empiricism is perhaps the most resonant point about artistic cooperation in a rehearsal (...)" Richard Sennett, *Together: The Rituals, Pleasures and Politics of Cooperation* (London: Penguin, 2013). p. 16
11. Dietz and Zamarbide, "Drawing for Real. A Quest into the Space of Imagination." p.259
12. Please see endnote 5
13. The first Year 1 program dates from 2010. Every year, it incorporates new variations as a result of empirical inputs due to the teaching experiences. Authorship is erased here. Every year new contributions transform this protostructure.
14. Mijail Bajtin (1895-1975), author of *The Dialogic Imagination*, was the first to coin the word dialogic to "name a discussion which does not resolve itself by finding common ground. Though no shared agreements may be reached, through the process of exchange people may become more aware of their own views and expand their understanding of another" Sennett, *Together*.p. 19
15. Joseph AU - Nunez, "Morris Water Maze Experiment," *JoVE*, no. 19 (September 24, 2008): e897, <https://doi.org/10.3791/897>.
16. Agathe Mignon, "Proto-Structure," in *All About Space 2. HOUSE 1 CATALOGUE* (Zurich: Park Books, 2017). p.112
17. Ashraf M. Salama, "A Theory for Integrating Knowledge in Architectural Design Education," *International Journal of Architectural Research* 2, no. 1 (2008): 100-128.
18. Consisting of a group of young architects, researchers, educators and doctoral candidates from Switzerland and abroad working simultaneously on Research, Design Research, and Teaching, in the ALICE Lab, every discipline informs each other.
- 19.
20. Dieter Dietz, "ALICE Y1 An Approach to Teaching Architecture in a First Year Design Studio," in *All About Space 2. HOUSE 1 CATALOGUE* (Zurich: Park Books, 2017).
21. Sennett, *Together*. p.13.
22. Ernest L Boyer and Lee D Mitgang, *Building Community: A New Future for Architecture Education and Practice. A Special Report*. (Princeton, NJ: Carnegie Foundation, 1996).
23. Dieter Dietz, "Exploring Uncommon Territories: A Synthetic Approach to Teaching Architecture," in *Explorations in Architecture / Teaching Design Research* (Basel - Boston - Berlin: Birkhäuser, 2008).
24. "Collective architectural work becomes possible only when every individual (...) is capable of understanding the idea of the whole, and thus has the means to coordinate his independent, even if limited, activity with the collective work" Gropius, "The Theory and Organization of the Bauhaus."
25. Eileen Bender and Donald Gray, "The Scholarship of Teaching," *Indiana University; Research & Creative Activity* XXII, no. 1 (1999).
26. Eileen Bender and Donald Gray.
27. Sennett, *Together*. p.15
28. Eileen Bender and Donald Gray, "The Scholarship of Teaching."
29. "XXX's main focus is space, as suggested by the name to which its acronym refers. The one-to-one scale directly employs the human body as an interactive component of spatial exploration." Dietz, "Exploring Uncommon Territories: A Synthetic Approach to Teaching Architecture."
30. Dieter Dietz et al., eds., *All About Space 2. HOUSE 1 CATALOGUE* (Zurich: Park Books, 2017). P.10
31. Boyer, "Building Community." P.145
32. Donna Haraway, *Anthropocene, Capitalocene, Chthulucene: Staying with the Trouble*, 2014, <https://vimeo.com/97663518>.

33. Ernest L Boyer, "Building Community," in Building Community: A New Future for Architecture Education and Practice. A Special Report. (Princeton, NJ: Carnegie Foundation, 1996), p.146
34. Gropius, "The Theory and Organization of the Bauhaus."