

Architecture beyond measure

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Received: September 20, 2025

Accepted for publication: October 6, 2025

Abstract

The ever whelming evolution humanity and its consequent metamorphosing aesthetics translates into a landscape of fragments which, at times, lack articulating resorts meant to ease their intervention in the existent context and even meant to contribute to the sense of cultural convergence through time. The apparent fractures of our environment constitute a direct reflection of the scarcity of introspection and profound understanding of the context. Early years of education in architecture are crucial to students' in their endeavor of assembling a geometrical, experiential and semantic repertoire of architecture. This paper presents a method of mending the fractures of the built landscape through education, implemented in the 2nd year students' summer practice, which has, as a study object, Romanian architecture, tradition and culture. The method, entitled *architecture beyond measure*, has, as main objective, the exercise of a measuring survey of an architecture object, representative to traditional and cultural values. Until 2019, the practice had been traditionally carried out in the Village Museums of the country. In recent years, the practice encompassed the experience of surveying places which bear less of a museum character and bring their user into the equation of study and survey. Results have thus been reaching new forms of understanding, expressing and engaging tradition into the contemporary discourse.

Keywords: survey, drawing, tradition, education

Introduction

The 2nd Year's summer practice consisting of a measuring survey acts as a catalyst between all the theoretical notions provided in the first two years of architectural education and the empirical knowledge gathered through personal observation and experience of the student. This moment comes across as crucial in a point of building a personal process of understanding and creating architecture, but also in the journey of refining one's critical discourse.

In its accustomed manner, the practice is usually hosted in a setting which speaks relevantly about Romanian culture. The exercise invites students to approach the survey project with introspection and search for meanings, reasons and even latent potential. The practice has been hosted so far in Village Museums ("Bucovina" Village Museum of Suceava, "Astra" Museum in Sibiu, from 2015 to 2019). Restrictions about the pandemic years configured an interesting rendition of the 2020 – 2022 summer practice, which was carried out at home, each student having, as a task, to survey their own home (personal flat, parents' or grandparents' home) or on campus grounds, surveying the university's faculties. In order to enhance the practice experience by bringing traditional architecture values and the richness of such a place together with the dimension of "being inhabited", during 2023 and 2024, the practice took place at "Oașa" Monastery – a place profoundly rooted in traditional values, provided with a very particular community of religious nature. The 2024 practice edition invited students from Poland to take part in the exercise of surveying together with the Romanian students from the Faculty of Architecture in Iași. The 2025 practice edition was held in Iași, through collaboration with the Central University Library and the National Museum of Literature of Romania. Studying architecture through measuring surveys has proven to be an efficient instrument for improving and growing a

personal process of architecture. Surveying has a significant impact on the design process for architecture students in numerous ways which prove to be vital to architectural education and growing both a community and its architecture in a sustainable manner with regards to perception and memory (Petrovici. 2020). The educational layers of a measuring survey refer to: understanding architecture in situ, adapting and approaching errors in real-life construction, correlating visual understanding with dimensions and quantities, understanding architecture in its cultural, political, economy and social context, appropriating local and traditional ways of building and inhabiting architecture, understanding its use, geometry and particularities through its users and observers and their manner of “using” architecture in daily life and, nonetheless, searching for creative and contemporary ways of conveying architecture to the general public.

Literature Review

Examples of grasping the understanding of a place rely both on descriptive and biographical writings which focus on architecture and science related to the surveying of traditional and historical architecture. The joint volume entitled *Casele vieților noastre* [The Houses of our lives] (A. Bittel, A. Blandiana, A. Pleșu, A. Ralian, B. Cioculescu, D.C. Mihăilescu, G. Liiceanu, G. Tabacu, H.R. Patapievici, I. Pârvulescu, M. Ghițescu, M. Pillat, R. Paraschivescu, T. Radu, V.I. Stoichiță, 2014) showcases how geometrical particularities appeal to memory and perception, reflected in the authors’ remembering. On a broader scale of urban observation, *Izvoare și popasuri*, (George Matei Cantacuzino, 1977) is a lecture meant to train the eye into capturing the essence of urban landscapes through drawing. *Thinking Architecture*, (Peter Zumthor, 2006) and *Atmospheres* (Peter Zumthor, 2008), as well as *The Poetics of Space*, (Gaston Bachelard, 1994) convey a consistent lesson in understanding the intangible

dimensions of places, further explaining the meanings and intimate relation between geometry and the socio-cultural context. *Arhitectura Populară Românească* [Traditional Romanian Architecture] (Grigore Ionescu, 1957), *Arhitectura românească veche* [Historical Romanian Architecture] (Cristian Moisesescu, 2001) and the iconic work entitled *Istoria arhitecturii în România* [The history of Architecture in Romania] (Gheorghe Curinschi Vorona, 1981) provides key aspects in understanding Romanian traditional architecture, essential into managing and putting together a measuring survey.

Methodology

The last 10 years of summer practice have offered 4 diverse experiences, according to the place hosting the practice: the Museum Village, the personal home/University, the Monastery and the city of the Faculty of Architecture. Each of these experiences provided insightful aspects of how aspects of the place and its users shape the architectural education of the students through a survey.

Apart from the pandemic experience, the practice unfolds in a similar manner. The starting point is usually provided with a guided tour of the place subjected to survey, which usually takes place after gathering and formulated initial observations, essential to questioning why and how certain aspects respond to users' needs and should be showcased in the final drawings. The measuring takes place in the first week of the practice and makes use of measuring instruments, which include photogrammetry and other digital methods of exploring architecture, as well as existing drawings and surveys of the place which can reveal how the space was altered in time. This stage is supervised, as some parts may be more difficult to reach and require creativity in measuring. The second week is mostly dedicated to representation. During the practice, conferences complete the

program with subjects and speakers holding strong interests in local architecture tradition and culture. After engaging into dialogues with the community, students are offered the view of specialists regarding the key aspects of traditional or local building, thus completing the image of the place with testimonials from both subjective and scientific points of view. Working in teams of 6 to 10 students, students are expected to turn in 5 types of resulting work: the survey drawings (which dimensions provided on tracing paper, draught sketches of the measuring phase; scale differs depending on the scale of the object, but should include drawings of site plan, floor plans, a minimum of 2 sections, all the facades, exterior and interior perspectives, 1/10 and 1/5 details); the photographic study; the physical model (it is mandatory to have detachable objects, capable of explaining the structural body and offering views of the interior); the digital model and digital drawings; the sketches.

Every year, the design task includes fast sketches not only of the measured objects, but of both natural and urban instances – the scenic medieval streets of Sibiu's old town, the fortresses of Suceava and Alba Carolina have made the subject of this exercise meant to train the future architect into identifying the main geometric, visual and semantic particularities of the built environment, deliver an intelligible drawing within minutes and enrich the architecture and spatial mental library. In order to offer a complete experience of studying architecture, the practice consists of a sum of activities which are meant to expand the act of a measuring survey to a complete immersion into the subject. If the surveys bear a more technical approach to the architectural analysis and the keenness to subordinate the graphic expression to the general layout agreed upon with the team, the sketches conceive a more artistic view, prone to graphic interpretation and experimentation, where certain elements of the drawing might be augmented in order to deliver the author's

impression on the drawn subject, as opposed to accurate dimensions captured in the survey.

Even if done by hand, surveying gathers precise measurements and detailed information about existing structures, sites, or environments which are often off-the-beaten track of 90° degrees and straight line drawing. This eases the students' perception into aspects of real-life practice, training them into discerning the scale of the detail depending on the size and the purpose of the drawing. It also trains students to encompass ambiguity and approximation as a stage of study and also of the creative process (Frunza, 2021). Accurate data ensures that the design is based on real-world conditions, reducing errors and mismatches later in the project, as teams of students are confronted with blending their measurements and drawings into one coherent survey. Detailed drawings and models help in understanding spatial relationships, existing constraints and opportunities, while correlating observations with dimensions. This trains the ability to faster correlate alterations of space and dimensions and their impact on perception in later design processes. As most projects done in study years rely little on site visits and in situ documentation of similar spaces, the 2nd year students' summer practice is one of the key moments in which students enrich their mental visual library of architectural references. More than that, as most practice stages are carried out in Romania, the practice constitutes a key moment to connect with the local culture of architecture, a fact which plays a fundamental role in more pertinent design responses when confronted with designing local architecture.

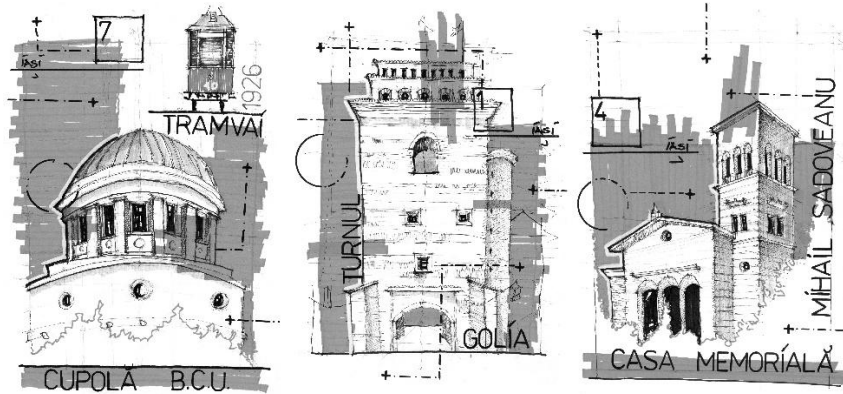
Results

The four experiences of summer practice have enriched the methodology of the survey discipline, adding layers of pedagogy

which help improve the education of architecture in the first years of study. The practice in a Village Museum has the premises of a rich study trip for observing, photographing, sketching, measuring, describing, drawing, and immersing into the character of the place, infused with Romanian traditional architecture showcasing houses, churches, mills and other technological traditional constructions. Pandemic years restricted access to such places, but highlighted the importance of studying a place which functions in a less museified manner, and is rather actively used. The final result was less infused with spectacular details of Romanian traditional architecture, but the exercised enticed a rhetoric process of introspection and inquiry from the students' part, igniting a genuine and profoundly personal journey of building a critical discourse and exploratory hermeneutics of the landscape of inhabiting places today. The result showcased a genuine landscape of the architecture of the home in the 21st Century. A valuable layer was the capturing and conveying an image of the act of inhabiting, how ritual and cultural aspects alter the abstract notion of space. This is an essential lesson in linking theoretical and academic notions to neighboring environment and even personal space. The practice at the Monastery enriched the study with the irreplaceable layer of "surveying" the users view of the place in situ. The Monastery bears the heterotopic character of a self-managed place, in which people and buildings come together in an impressive mechanism that is intimately connected with traditional Romanian spirituality and perennial cultural values as well. The 2025 edition of 2nd year students' summer practice was brought in the city of the students' faculty, in a quest of studying how personal knowledge of the place (both objective and subjective) contributes to the act of surveying. The 2025 edition was marked by the collaboration with the Central University Library in Iași and the National Museum of Literature of Romania. Students had, as survey subjects, the main building of the Library and

several memorial houses which belonged to writers that lived in Iași. Bearing the connection of both the Library and the memorial house to the world of paper, students crafted their models mostly from white paper and clay.

Fig. 1 Sketches of the Central University Library of Iași, the Entrance Tower of Golia Monastery and the house of "Mihail Sadoveanu", author: Sandu George Teofan



The quality of the sketches has visibly grown in the last decade of summer practice. Two tendencies can be observed: students have chosen either very iconic instances of architecture, as seen in Fig. 1 or unique details of the beaten track. One of the key observations about traditional architecture was the use of local materials. In order to convey this understanding, students working on the model of the old wooden church from Oașa Monastery gathered fir cone scales found on the ground in the vicinity of the church which were then used to convey the shingles of the church corresponding to the 1/50 scale of the model. The advantage of carrying the survey stage in Iași was that of benefitting the knowledge of moments in the day in which the light renders the volume in a more spectacular manner, which is especially remarkable in sketches from the 2025 practice, for example in Fig. 2.



Fig. 2 Sketches of the "Mihai Ursachi" House, window on Cuza Vodă Street and house on Copou Alley, author: Denis Mațuev

The experience of working with international students broadened the view on traditional architecture. Traditional architectures in Romania and Poland share similarities, reflecting their geographical proximity, similar cultural influences and historical connections, similar use of materials such as wood, clay and stone, well-suited to their climates and contributing to an image well-integrated into the context. Wooden architecture is prominent in both regions, especially in rural areas. This includes wooden buildings with intricate craftsmanship, such as carved window frames and decorative motifs. Both Romanian and Polish traditional buildings often feature steeply sloped roofs, practical for shedding snow and a common feature of rural and mountainous architecture in both countries. Both worlds incorporate decorative carvings, painted motifs, ornamentation on facades, windows, and doors. The urban setting of Sibiu and Alba Iulia appeared more familiar and similar to Polish landscape than the one in Iași, as the historical layer of urban architecture in Iași lacks the continuous built front that is more specific to the western and central part of the country, as well as central Europe. In rural and mountainous Romania,, Orthodox Christian traditions heavily influence architecture, as seen in the design of churches. Poland also has significant Catholic

influences, but in certain regions (like Podlachia), Orthodox traditions are present, leading to similarities in religious architecture styles. Sketches of Polish students were especially remarkable through their grasp of detail, as seen in Fig. 3.

Fig. 3 Sketches of houses in Sibiu, author: Julia Sroczyńska, view from the Bridge of Lies in Sibiu and the wooden cross on on the Fetița Peak, in the vicinity of Oașa Monastery, author: Sebastian Grajner



Discussion

The 2nd Year Practice is placed in such a moment in a student's chronology of becoming an architect in which the study of individual housing is complete, having worked on projects placed in both imaginary and real plots, mostly with imaginary beneficiaries. Their knowledge of universal and local history is conveniently adequate, such that this experience blends all this knowledge into a valuable synthesis of understanding, immersing and then reproducing a representation of a place in all its dimensions: physical, aesthetical and cultural. At times, the drawings appear as a means of beautifying instances of architecture which bear the scars of time and neglect from community and authorities. In fact, similar to other initiatives, the act of beautifying representations of architecture and instances of the city is meant to raise awareness on the forgotten beauty of historical architecture in the perception of both the community and the

authorities (Marinache, 2020). Yet, the act of inhabiting a city is different than the act of visiting the same city, as the hometown is associated with routine, while being a tourist detaches the perception. With this premises, bringing the 2nd year students' summer practice to Iași after experiencing the survey study in a different location (even a different region) was crucial to students in managing both roles - as visitors and inhabitants of their city. Having as example the surveys done by their colleagues in Suceava, Sibiu and Oașa, students were better able to detect which details and particularities are unique and relevant to render an explanation of a place.

Conclusion

The 2nd Year Practice is an outstanding experience which reconnects historical and traditional knowledge about architecture with the younger generation of architects. Having understood the impact and implications of dimensions as direct experimentation set in a profoundly local context, architecture, young students will further build on this very contextualized set of visual mental references, training them for the complex process of designing architecture that responds gracefully to its context. As each generation has access to the work done by the previous ones, one might observe the continuity and growth process from one year to another, appointing new and more subtle and mature means of conveying architecture and its layers through a measuring survey. More than that, the act of surveying valuable fragments of architecture acts as an engine capable of rendering historical data in a contemporary, attractive and relatable manner. This is, of course, the starting point of gathering a resourceful library which can be put to further use in research, education and even touristic developments. In terms of the collaboration with the Village Museums, the Central University Library and the National Museum of Literature of Romania, the ever-growing

interest translates into “collecting” the artistic visions of multiple generations of students. These visions later find their way into touristic and advertising materials which have a bidirectional scope: that of conveying the presence of the studied object to the public through a fresh, contemporary envisioning and that of growing a community and the interest among the youth in activities of institutions dealing with Romanian culture.

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Arhitectura dincolo de măsură

(rezumat)

Evoluția copleșitoare a umanității și estetica sa în continuă metamorfoză se traduc într-un peisaj de fragmente care, uneori, duc lipsă de mijloace articulate menite să faciliteze integrarea lor în contextul existent și chiar să contribuie la sensul convergenței culturale de-a lungul timpului. Fracturile aparente ale mediului nostru construit reflectă direct lipsa introspecției și a înțelegerii profunde a contextului. Primii ani de educație în arhitectură sunt cruciali pentru studenți în demersul lor de a construi un repertoriu geometric, experiențial și semantic al arhitecturii. Acest articol prezintă o metodă de reparare a fracturilor peisajului construit prin educație, implementată în practica de vară a studenților din anul al doilea, care are ca obiect de studiu arhitectura, tradiția și cultura românească. Metoda, intitulată „arhitectura dincolo de măsură”, are ca obiectiv principal exercițiul de realizare a unui relevu de măsurare al unui obiect arhitectural reprezentativ pentru valorile tradiționale și culturale. Până în 2019, practica s-a desfășurat în mod tradițional în muzeele satului din țară. În ultimii ani, practica a inclus experiența relevului unor locuri cu un caracter mai puțin muzeal, care implică utilizatorul în ecuația studiului și relevului. Rezultatele au atins astfel noi forme de înțelegere, exprimare și integrare a tradiției în discursul contemporan.