# INTRODUCING HUMANITARIAN CO-HABITATION AS FIRST DESIGN ASSIGNMENT

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## ABSTRACT

Against the backdrop of a global displacement crisis of climate and war refugees, the humanitarian? agenda of architecture and the importance of hospitable refugee reception and multicultural co-habitation cannot be ignored. This raises the question: how could this urgent challenge introduce the social agenda of design during the first design assignment for students starting an architectural education? This appears probably even more significant when understanding how a learning process is particularly remembered through the first and last experiences, as bookends of an educational trajectory. This primacy effect ensures that one will not soon forget the very first design assignment that inaugurates an architectural training programme.

For new students, the Bachelor in Engineering Architecture programme developed a ′starters afternoon as an introduction to its architectural curriculum. For three hours, freshly arrived students work in groups of four on a design assignment for an emergency shelter. Students are asked to design this shelter as a scale model, proportionally guided by a Playmobil figure, and manually constructed with the use of minimal and predefined materials restricted to wooden sticks, plasticine, rope and paper.

Intermittently, and at the end of the afternoon, all models are reviewed collectively with all students and staff members representing diverse architectural fields of expertise. Here, important aspects like form, function, structure, and construction are discussed, and confronted with societal, cultural and political aspects of design. The 'shelter model assignment' introduces thereby co-habitation and reception as important concerns to kick-off the architectural training of future designers.

*Keywords: Co-habitation, care, design education, STEM, design model*

## 1 INTRODUCTION

This paper will underscore the significance of the primacy effect in the selection of a suitable first assignment for new students in architectural design. We reflect therefore on an assignment that introduces co-habitation as a fundamental concern within architectural theory and practice as the very initiation phase and first encounter with design education.

Section 2 will start with a short problem statement. Subsequently, part 3 will explain in a few steps how we arrive at an assignment to design a model for a refugee shelter. After this, we clarify the practical elaboration of the shelter design assignment in section 4. In section 5 we finally evaluate the results of and sketch out possible future steps.

## 2 PROBLEM STATEMENT: HUMANITARIAN DESIGN AT A 'STARTERS AFTERNOON'?

Many colleges and universities welcome their new students at the start of the academic year with a starter's day or even a starters week. On that occasion, a usual aim is to confront candidate-students with the diverse aspects of architectural education. The event serves this way as an introduction to the diverse components and skills of the full programme, while often also inaugurating the first semester courses. Finally, the introduction also aims to inform students about what they might expect to deal with, especially for those who have not yet been able to concretely imagine what the curriculum, or in this case, architectural design, really entails.

At the Faculty of Engineering and Department of Architecture of the KU Leuven, we organise this ′starters afternoon′ as an intensive workshop that immediately invites students to complete a small

design assignment. The assignment is short but profound, geared to raise some of the important structural, technical, and societal questions inherent to contemporary architectural design.

This raised of course the question: what assignment should this be? What should aspirant student be asked to design? Designing what, why, how and for who?

## 3 REFUGEE RECEPTION AS AN INAUGURAL DESIGN ASSIGNMENT?

### 3.1 The Primacy Effect: the importance of the very first design assignment

The primacy effect refers to the tendency for individuals to rely heavily on initial impressions, making first experiences especially influential. This means that in a learning process one will mainly remember the first and last experiences. The primacy effect indeed ensures that the first information sticks better, and hence also 'colours' and influences the memory of information that follows. The regency effect in turn ensures that the very last information is relatively well remembered. One suggested reason for the primacy effect is that the initial items presented are most effectively stored in long-term memory because of the greater amount of processing devoted to them. The first list item can be rehearsed by itself; the second must be rehearsed along with the first, the third along with the first and second, and so on.. [1] Consequently, it appears of principal importance for a training program to carefully consider which design assignment is mobilized to initiate a training trajectory. In architectural education in particular, the primacy effect does not only imply that the first assignment will leave a fundamental imprint in the memory of future architects, but also influence the way in which further educational and professional commitments are processed and perceived.

### 3.2 Refugee shelter as a contemporary design challenge

The above raises the fundamental question: what are the most acute contemporary challenges for architectural design on a global scale? In a context of soaring inequality, ecological collapse and mass-displacement, the perdurance of violent wars, worsened by a planetary environmental crisis, threatens human society at an existential level [2]. Not only human conflict, but also the consequences of global warming, including mounting natural disasters, desertification, and sea-level rise are displacing more people as ever before from their homes and communities [3]. These people displaced in one place often arrive as refugees elsewhere, in search of safe and stable living conditions [4]. Given the resulting growing need for shelter and reception in Europe, and not the least in the Flemish and Belgian context, the design of humanitarian refugee reception spaces such as emergency shelters, surfaces as an exemplary design challenge to confront students in Architectural Engineering with the social importance and repercussions of technical solutions and propositions.



*Figure 1. Frontispiece of Marc-Antoine Laugier: Essai sur l'architecture 2nd ed. 1755 by Charles Eisen (1720–1778). Allegorical engraving of the Vitruvian primitive hut*

### 3.3 The shelter and the 'primitive hut'

The architectural concept of 'shelter' as a foundational building typology is of course rooted in humanity's long-standing search of to make 'home' in the world, relating back to the most primitive

and primordial forms of human construction. In 1753 abbé Laugier published the 'Essai sur l'Architecture' [5], postulating what he called the 'true principles of architecture'. To Laugier, these principles are embodied by 'la petite cabane rustique', human's first house, consisting of four poles, four beams and a roof. For Laugier, all architecture imitates this primitive construction, and conversely buildings are gauged as 'good' architecture insofar they resemble the 'cabane' (Figure 1). So, for Laugier; the primordial architectural conception of 'shelter' serves as the prototype of all constructions, underscoring its importance as a relevant 'entry' into architectural theory and design.

### 3.4 From shelter to dwelling?

In a contemporary echo of Laugier's 'primitive hut', the architectural conception of refugee shelter constructions provokes fundamental questions about minimum protection needs, safety, privacy, construction technique, and so forth. What degree and form of architectural construction is needed to shelter from the elements and from unknown strangers? The shelter thereby incorporates important aspects of architecture like function and construction. But the shelter typology raises also fundamental ontological questions. When does a shelter become a dwelling, and when does a dwelling become home? What is needed to not only provide a temporary 'roof' and protection from the elements, but also accommodate feelings of wellbeing, hospitality, and feeling 'at home' in a space that facilitates, and aids displaced people to rebuild disrupted lives? This way, the design of a shelter provokes some of the most challenging questions that have haunted architectural thinking and design since time immemorial. When does a space becomes a place? How does dwelling turn into living? And how can material form nurture social and societal betterment, or even empowerment?

### 3.5 From building to architecture?

Besides more quantitative constraints like construction and function, also more qualitative facets of design become recognized as important throughout the shelter design exercise. Is the temporary home up to the scale with the provided miniature figure? Is the resulting structure compact, or instead, spacious? What do students think an 'emergency shelter' should aesthetically look like? Does the design model resonate with a certain architectural style? Modern? Traditional? Is it recognizable and in line with certain trends and design paradigms, or rather exceptional and eccentric? How does one ensure that emergency accommodation evokes the desired associations? Which areas are closed off completely and which are left open or transparent to balance security and privacy, or view and light? Does one design a more universal shelter that can be used flexibly across diverse places; or whether and how should it tailor-fit a distinct location? All these and other questions are discussed with the participating students in intermittent and concluding debate moments, offering glimpses and sneak previews of contemporary debates in architecture and design.
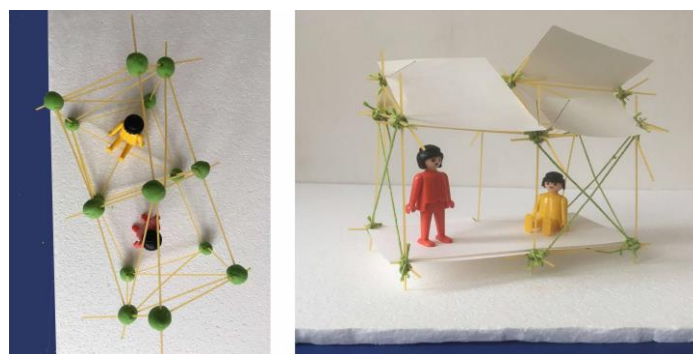


*Figure 2. Example of a doll's house for a Playmobil figure*

### 3.6 A Model for a Refugee shelter as assignment

Collins, Brown and Newman, pointed out that in an optimal learning environment, where students can acquire knowledge and skills in an effective way, tasks should be ordered according to increasing complexity and diversity. In such view, a 'good' design assignment for beginners should entail simple constraints [6]. To safeguard feasibility and avoid over-complication, students are not instructed to design a real refugee shelter, but instead, invited to fabricate a physical scale-model for a doll. Although provoking profound and highly complex questions and challenges, the design of a doll's house combines

manageability with simplicity, while maintaining a playful and experimental atmosphere. The model is small and easy to make with widely available materials like wooden sticks, plasticine, rope and paper. Simplicity is guaranteed  because the students can visually estimate scale-related decisions on the basis of the doll without necessitating actual calculations. (Figure 2) Furthermore, for the assignment of a doll's house, the student is not only the architect, but also the construction labourer, confronting participants with the durability and flexibility, but also the limitations and constraints of certain materials and construction methods [5].

## 4   STARTERS AFTERNOON

### 4.1  Beforehand
At the start of the current academic year, we organised a starters afternoon with an assignment for a model for a refugee shelter. Students were asked to bring basic materials and supplies in advance: sticks (for example skewers), plasticine (type 'Play-doh') , a cutting knife , a 'Playmobil' figure, rope (cotton crochet thread), a cutting mat (A4 or A3), pencil and paper for sketching, scissors, and adhesive tape (Figure 3).



Figure 3. Materials and supplies to be brought by the students in advance

### 4.2  Starters Afternoon: the briefing
At the start of the afternoon students were invited to make a design for a model of a refugee shelter on the basis of a scale model of the 'Playmobil' figure. In a first phase, students were instructed to design and make the structure for a simple 'tent' that could, for example, be used by the figure as an emergency home in an emergency situation. We suggested to use plasticine to create nodes to connect sticks.

### 4.3  First model: constructional challenges
After the first briefing, students started building with the sticks and plasticine. Quite soon, the diverse staff involved challenged them with questions. Do you use the full sticks, or does the length make them bend easily? If you shorten them by cutting them, how do you ensure that you limit the cutting loss? Is cutting loss waste, and economically lost? After some experiments with the plasticine, we suggested that sticks of the temporary house could also be connected with knotted rope instead of plasticine. In reality and on full scale, the sticks could represent wooden beams that can be disassembled without damage after use by using rope instead of glue, which might make the design more circular and sustainable: the emergency village could now even be moved to a new place if necessary.

### 4.4  Secondly: Functional challenges
As soon as the first construction with sticks were made, also functional questions popped up. What facilities should be accommodated in the 'emergency house'? Is only space for sleeping necessary? What if the residents would have to stay longer, perhaps weeks, months, or years? What differentiates the 'shelter' typology from housing, and how do we evaluate that distinction? Also, interrogations of different modalities of living together would automatically emerge. What functional spaces could or should be shared between families? Sanitation? Recreation? Cooking? Education? Relaxation? How much privacy is desirable between families and family members?

We suggested to make simple pieces of furniture to scale in cardboard to test how the emergency home could be furnished. Which functions are the minimum necessary to live in a dignified manner? Can certain functions be shared between different families? Or maybe even between existing neighbours and the refugees to be hosted? These purportedly simple questions aim to trigger in fact more existential questions that pervade contemporary architectural debates about housing norms, density, co-housing, emergency housing and the 'existenz-minimum'.

## 4.5 Finally: Contextual challenges

We finally challenged students also with contextual concerns. How could they think of a form of emergency housing that is universal on the one hand and could therefore be used flexibly in many places; but may also be able to fit-in well in specific places at the same time? For example, how could a number of emergency housing be accommodated on the open area of the school? Which zone and how much surface of the available open area could be designated for this? How many people could be provided a shelter there? This way, the debate is also steered in the direction of significant urbanism and urban planning reflections that inevitably emerge in actual design commissions, and relate to contextual embedding, the relation between private and public realms, circulation, economic costs, but also participation and public opinion as drivers of decision making.

## 5 CONCLUSIONS AND FUTURE?

### 5.1 Debriefing: discussing combined challenges

At the end of the afternoon, all designs were reviewed and discussed together with all the students. Their designs ranged from tents with one small living space to mini houses with several rooms. (Figure 5) Challenges as formulated above were discussed, while also the importance of combined challenges for real design quality were mentioned. (Figure 4) Also, for example, the fact that resources made available for emergency housing are almost always less than the needs in contemporary cities, was debated. The 'challenge' is therefore to design an emergency home that, when applied a specific limited open area, would provide the most 'humane' residence possible, for as many refugees as possible, while at the same time deploying as few resources as possible. Points of debate thus also questioned how certain proposals designed shelter structures as simple/minimal/compact as possible (including through shared functions…), while inevitably having to balance this with an urgent need to provide hospitable and dignified homes for violently displaced populations. Additional discussion focused on building efficiency, including the use and possible reuse of building materials, sustainability, flexibility, etc., while still dedicating attention to living quality and care.



*Figure 4. All designs were discussed together with the students*

*Figure 5. At the end of the afternoon, student designs were reviewed*

## 5.2 Conclusions

The 'shelter model' as a design assignment seems a promising way to confront students with important aspects of the architectural education within the limited time of a few hours. Continuing with similar and variant introductions in future teaching might help to measure the real effect on student learning, exclude a possible overestimation of the primacy effect and compare pros and cons of each assignment. However, in any case, if co-habitation and caregiving are indeed acknowledged as important values for the architectural agenda of increasingly uncertain futures, we argue that it is essential to integrate these core societal challenges into the first design assignments new students are confronted with, as a steppingstone to elaborate on acute global challenges throughout subsequent design assignments and future architectural careers.

## 5.3 Future

This workshop that was conceived and used for new students starting a design education, is now also taken as the basis for a STEM assignment for even younger scholars in secondary schools. That STEM assignment will be used to introduce these youngsters to Science, Technology, Engineering and Mathematics. Together with an introduction to a design experience, that besides purely technical values, also pays attention to the social and societal aspects. On a cosmopolitan scale.

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