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BETTER SHELTER

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Dimensions: 5.14 m × 3.15 m × 2.74 m, Area: 17.5 m², **Height**: 3.14 m. **Packing Weight**: 98 kg. **Packing Volume**: 1.5 m³. **Materials**: constructed out of 71 metal pipes and 36 plastic panels. Also includes solar panel and shade net. **Assembly**: to assemble a 'Better Shelter' unit you will need between 4 and 8 hours. And it requires four people to lift the two boxes into place for assembly. Assemble following manual. **Origin**: originated under the guidance of the 'social enterprise' company called Better Shelter, owned by the Housing for All Foundation, established by the Ikea Foundation. **Behaviour**: once constructed, serves as a shelter for displaced people for up to three years. Recommended for five people or fewer. **Habitat**: most likely to be found in areas after a natural or manmade disaster where refugees are living until they can be moved elsewhere. Also found on display in exhibits for temporary shelter and modular design, such as Design Miami/Basel. **Distribution**: scope of distribution yet unknown. Some can be seen in Greece and Macedonia or at the Falkenbergs Museum in Sweden. The United Nations High Commission for Refugees has ordered 10,000 as of May 2015. **Migration**: not yet clear what the migratory patterns of these boxes will be. Depends on the durability of units and opportunities for reuse. **Cost**: one shelter, plus shipping, assembly and preparation of site, costs US$1755.

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THE BOXES OUTSIDE THE BOX

THE 'BETTER SHELTER' IS A BOX DELIVERED IN FOUR BOXES. YOU'LL DESTROY the outside ones and then construct the inside one. The outside ones are for shipping. They seek to be as small and flat and lightweight as possible, while the inside one, when constructed, seeks to be as durable and spacious as possible. This is an important, confounding, and aggravating conundrum that has in many ways driven knowledge production of the Better Shelter unit. These outside boxes are cardboard boxes from Ikea. On the long end of each, there is a sticker with a barcode, arrows to indicate which side should be placed up, and an indication of its weight: nearly 100 kg total. In small isotypes the sticker shows that inside is a panel kit, which, when put together, will be one 'refugee housing unit'. Next to this there is an isotype of a family: one mother and one father, with two children holding their hands. Not a home or even a house, but a unit of housing, for refugees. No other type of housing I can think of explicitly specifies what type of human will live inside it. But this is temporary housing for what is a temporary human type. At least that is the theory.

Many of us have wrestled with these outer boxes on our living room floors, constructing the contents only to be extracting tiny Allen wrenches and jettisoned screws out of thick carpet pile weeks later. The technical term for this box is a flat pack, invented by Gillis Lundgren at Ikea in the 1950s. In Ikea's origin story, the idea of selling furniture in flat cardboard boxes was hatched when Lundgren took the legs off of a table so it would fit in his car.[1] The notion was to sell furniture in parts at cheaper prices, leaving the customer at the mercy of inscrutable assembly diagrams. This saved on labour and shipping costs, and it soon became the iconic innovation of the company.

These flat pack boxes, once sealed at the factory, will then be loaded into an even bigger box, a shipping container. One of the most salient selling features of the Better Shelters is that forty-eight of them can fit into a 40-foot high cube sea container. That forty-eight Better Shelters can fit in one shipping container is essential. By UNHCR estimates in 2015, 59.5 million people are now refugees, and in the previous year an average of 42,500 people daily became refugees, asylum seekers, or internally displaced people (UNHCR 2015). The average number of inhabitants in a refugee camp is 11,400 (UNHCR 2012). This means

that 60 shipping containers of Better Shelters will be needed to construct the average refugee camp, assuming the nuclear family of four drawn on the side of each box. The shipping container thus becomes the modern verdict on good design, considering the logistics of humanitarian aid. With containerisation, the logic of the world is the logic of the box (Klose 2015; Levinson 2008).

THE INSIDE BOX

FIG. 5.2 Interior image of a Better Shelter prototype (source: courtesy of Better Shelter, www.bettershelter.org)

Do not yet discard the outside box. Just flatten it and set it aside for a moment. We'll return to it later. Inside you'll find metal poles, connectors, wires, bolts and screws, and insulated lightweight panels. The shelter is to be constructed by first putting together a frame with the poles and connectors to make the skeletal form of a 188-square-foot rectangle. Then the roof and sides of the shelter are hung on to the frame. The entirety can be assembled in about four hours. Lastly,

a shade fabric, designed to keep the unit cool during the day and warm at night, is fastened over the roof and sides. There is a solar panel for an interior light and a USB outlet in the unit. As of now, each unit of refugee housing comes at the steep cost of $1755 per unit.

This box is making headlines as 'innovative', introducing a modular approach to shelter.[2] It is the product of a partnership between Ikea and the UNHCR, in part because of the company's history with the exterior flat pack box and as part of a broader trend of 'corporate social responsibility' (Rajak 2011). The partnership was motivated by the design dilemma of how to create a lightweight, durable, and easily assembled shelter that can also endure in harsh climates. Ikea is certainly not the only one 'innovating' the tent, however (Mallonee 2014).[3] Nor, despite the use of this signifying term, 'innovation', is there much new about this effort to re-think refugee housing. A quick search of the US patent database for 'temporary shelter' brings back over 500 results. And in fact, almost forty years ago, Fred Cuny, an expert on post-disaster shelter, wrote, 'Let me emphasise this fact: new housing types are not needed. Every relief agency has a file cabinet full of bright ideas submitted by graduate students, industrial designers, and architects, which offer the ultimate solution to the world's housing problems' (Prizeman 2003: 58). And yet tents remain the most ubiquitous form of refugee shelter, due to both their material and design. As we know, refugees can remain in camps for years, and in some cases decades, so tents, which last about six months on average, do not offer adequate longevity as structures. They are also relatively porous and poorly insulated from extreme weather. But tents can easily be purchased online for a few hundred dollars, and cheaper if bought in bulk. They also go up quickly and come down quickly. It is nearly impossible to beat the thrift of a refugee tent. Going back at least as far as the San Francisco earthquake of 1906, the tent has been the iconic shelter of the refugee. It is inexpensive, easy to ship and lightweight; hundreds will fit into a shipping container unit. Made mostly out of polycotton, the average refugee tent can be widely (and often locally) sourced (Zhang 2015). It does not require special parts if it breaks, and it is quintessentially temporary, even if it is inhabited for years on end; that is, if a refugee tent is used long past its expected lifetime, it still never *appears* stubbornly permanent; in its very abjectness and mutability it signals waiting and transition.

THE HOUSE AND THE BOX

With its own set of challenges and constraints, many would point out that temporary housing exists in a separate category than permanent housing, but here I argue that all considerations of temporary shelter are underpinned by enduring ethical and stylistic questions of how similar a home can be to a box, and how close a refugee shelter can be to a home. To consider the implications of these questions, we return first to the exterior flat pack box. Cardboard is indeed one of the most elemental and alarming materials of modern human shelter. It constitutes the iconic material of the homeless in America. When kept in the shape of a box, it provides temporary cover from the elements, while flatted it offers protection from the ground. The image of someone living in a cardboard box frequently accompanies the argument for housing as a fundamental human right: the cardboard box signifies the anti-home.

But beyond the collective agreement about the cardboard box as impoverished material, the idea of a box as shelter becomes complicated as ethical, cultural, and material wires converge and cross. Architects in the International Style movement beginning in the interwar period adopted the box as muse, building almost entirely in squared-off angles and lines. Internationalists eschewed the sentimentality and referential kitsch they saw in the backwards glance of other architectural movements. The house as box was emancipation from the past, unencumbered, shorn of decor. The box rendered the house a riddle of how to maximise functional space and streamline production, while ninety-degree angles conveyed precision, technology, and modernity. As Le Corbusier famously put it, a house should be a machine for living. This new boxy house also transcended geographical space. Through the promise of factory-produced modularity and simple materials such as reinforced concrete, International Style would live up to its name by transcending the local, provincial, and parochial in substance as well as form. And yet following the Second World War, some architects felt they must return to building a different world. Building was not just about reconstruction, but it offered an opportunity for rethinking how the architect should mediate between man and technology. In 1946, Ralph Walker, later president of the American Institute of Architects, expressed concern about these very issues:

> I believe this concept of shelter as a machine, of an architecture of functional
> utility, and of one in which material values are stressed to the omission of all
> else, must bear its burden of question as to whether it too has not contrib-
> uted largely to the brutality of modern man, a brutality so evident in this
> War (Walker 1946: 230).

Walker's critique took aim at the architect as the eraser of the past, but also at
the new technical obsession with materiality. He was sceptical and cautious
about approaching shelter as only a sum of its parts, and imagined a role for
post-war architects in reclaiming a humanity lost in the war. Yet certainly the
era of the technocratic, mass solution had not run its course. As the suburb
began to sprawl its way out across the American landscape in little Levittowns
(Marshall 2015; Jackson 1987), the replicable house had drastically parted
ways with high modernist sensibility, and found mainstream application. By
the 1960s, the house as box signalled white middle class flight from American
cities. The folk singer Malvina Reynolds, on her way from San Francisco to Daly
City one day in 1961, looked out on the mushrooming suburbs and penned her
famous song, 'Little Boxes', an anthem mocking the sameness and soullessness
of the new American future.

In this same post-war world but in a different landscape, Europe was reel-
ing from the destruction of its housing stock. International organisations and
national governments began for the first time to provide shelter other than
tents to foreign nations (Prizeman 2003; Davis 1978).[4] One foray into this
new form of assistance was a joint collaboration between the United States
War Production Board and The New School for Social Research. Under the
leadership of the architect Paul Lester Wiener, the mission of this collabora-
tion was to 'devise and design basic universal parts [for shelter] suitable for
quantity manufacture, capable of production in sufficient quantities to supply
both American and overseas war needs for all the agencies of the government
concerned herewith'.[5] The final product described in a 1945 *New York Times*
article bears a striking resemblance to Ikea's design and ambitions seventy years
later (**FIGURE 5.3**). Wiener's design sought universal applicability through a
'departure from conventional methods':

Instead of being erected from the floor up, the buildings are assembled "from the roof down". In the place of the usual load-bearing exterior walls and partitions, there are "curtain" walls in the form of panels that are "hung" inside the uprights or posts that support the roof, thus leaving virtually all interior space free of encumbrances (Cooper 1945: 1).
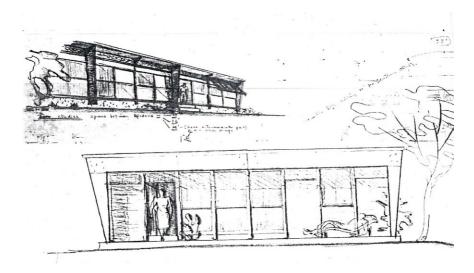

FIG. 5.3 Paul Lester Wiener's design for portable and modular temporary housing (source: University of Oregon, Special Collections and University Archives)

The two-bedroom house created by Wiener – one of a few patented designs in the programme – shipped at approximately 0.9 cubic feet per square foot of floor surface, compared to the 'conventional panelized prefab house, which required two cubic feet of shipping per square foot of floor surface'.[6] Space and weight, as ever, were at a premium.

As far as I can tell, Wiener's housing never went into mass-production under his collaboration with the War Production Board. The project and partnership was terminated in 1944, and Phillip Youtz, Wiener's partner in the endeavour, wrote that the collaboration was ultimately 'a continuous struggle against interference in government by commercial monopolies and cartels, but I feel that it was a very worthwhile piece of war work'.[7] Youtz's comment offers a clue into what stalled the project, which clearly wasn't a failure of design. The obstacles

were part of the political and economic landscape onto which their temporary housing units were to be constructed.

In short, temporary housing represented relief to those displaced and an impediment to others. Consider these three photographs, taken four decades before the war in the aftermath of the 1906 earthquake in San Francisco. The first (**FIGURE 5.4**) is an image of Golden Gate Park dotted with the white peaks of army relief tents.

FIG. 5.4 Earthquake tents from after the San Francisco earthquake of 1906 (source: Wikimediacommons[8])

The second photograph (**FIGURE 5.5**) shows two rows of small cottages. Over 5000 of these temporary houses, known as 'earthquake cottages' were constructed throughout the city after the war. Inhabitants paid $2 rent per month until they had paid off the 10 by 14 foot buildings for $50 (Rafkin 2012).

The third photograph (**FIGURE 5.6**) is an image of four sturdy horses tied to a carriage, towing a cottage through the streets of San Francisco to the site where it would become part of a refugee's permanent new home.

FIG. 5.5 Earthquake cottages provided for some victims of the 1906 earthquake in San Francisco (source: National Park Service, Golden Gate NRA)

FIG. 5.6 Earthquake cottage being moved by horses (source: San Francisco History Center, San Francisco Public Library)

While tents can be folded up and put away until the next disaster, boxes (houses?) can have an altogether different second life. San Francisco's earthquake shacks were carted all across the Bay Area and some of them still exist, over a hundred years later (Landes 2014). Since the San Francisco earthquake, through the long years of the Great Depression, through the New Deal and the Tennessee Valley Authority's experimentation[9] with a 'truckable house' and prefabrication, the permanence of impermant housing always posed a threat to urban planners and the construction industry (Bruce and Sandbank 1943: 13). While the design problem facing Wiener and others after the war may have felt new to the architect, its context was already fraught territory. The challenge of the box was seemingly to create shelter that was not *too* durable to disturb market forces.

The box's potential for re-use and transformation is at the heart of the question of whether temporary housing makes it into the hands of displaced peoples. Tasked with good design, Wiener and other architects purposefully imagined their structures to serve multiple uses. But conversely, the more re-useable a structure was, the more it posed the threat of living too long, becoming a 'slum' and harming the post-war housing industry. It was a question of whether, in the terms of the day, relief and rehabilitation were two separate entities, or if one was a continuation of the other. The United Nations Relief and Rehabilitation Administration (UNRRA), the organisation spearheading the international relief efforts in both Europe and Asia following the war, at one point expressed interest in Wiener's design, but it was also wary of investing in temporary shelter. In a meeting with Wiener the head of the Industrial Rehabilitation Division made clear that the 'UNRRA's functions in liberated territories did not extend beyond a period of six months after liberation, and that all shelter functions [...] would be confined to actual minimum shelter during this six months' period'.[10] The politics of local economics could clearly also play out across continents: temporary shelter was not to disturb local building industries.

The UNRRA's reluctance to use Wiener's shelter reflected a general disconnect amongst architects, aid providers, and local building industries. There was no consensus about what defined a refugee shelter in terms of materials, economies, and temporalities: one man's box could be another man's house. In

Britain for example, between 1944 and 1949 over 150,000 temporary prefabs were built to help with housing scarcities. Cloaking class anxieties in calls for good design and building, people reportedly feared the proliferation of 'jerry-building, tumbledown shacks, caravans, shoddy work, ribbon development, draughts and leaks and everything that's bad in building'. And indeed, by 1964 only 29 percent of the original prefabs had been vacated in England and Wales (Vale 1995: 1–21).

Meanwhile the United States had its own housing emergency as thousands were relocated for wartime factory production. With the Lanham Act of 1940 the government allocated 150 million dollars for building housing and other facilities for those working in the mushrooming wartime defence industry. By 1943, that amount had risen to 1.3 billion dollars and the dwellings designed under the act cost an average of $3,000 (Reed 1995: 12). Rather than create what was perceived as an urban slum problem with temporary structures, wartime housing often moved people outside cities, requiring them to leave when the factory was no longer needed. The Lanham Act also stipulated that, after the war was over, all temporary buildings must be destroyed within two years (or packed up and sent overseas) to protect and promote the private building industry and to prevent 'the creation of "ghost" towns' (New York Times 1945). Perhaps the 'commercial monopolies and cartels' that Youtz complained about were those invested in assuring the post-war need for housing expertise, labour, and materials. These temporary boxes threatened the development and expansion of the new 'little boxes' of post-war American suburbia.

Following the war, as Ralph Walker introspected about the future of his field, the architectural profession was busy becoming a split self. One half relished small-scale design solutions, while the other half took on the mantle of the master city planner. Wiener himself after the war went on to partner with the architect José Luis Sert to create city plans for Bogotá, Colombia; Chimbote, Peru; and Havana, Cuba (Bastlund 1967: 27). The city planner resolutely sought to purge the temporary. One of the loudest critics of temporary shelter was the *New York Post* columnist Charles Abrams, who at the time was a legal advisor to the New York Housing Authority. In one *Post* article regarding wartime housing, Abrams warns:

> Temporary housing has always proved costly and permanent. The "tempo-rary" hovels built after the San Francisco Earthquake and the Galveston flood hung on for decades after the emergency had passed. The recent wartime temporary homes built by the federal government have produced more last-ing slums in America than we have cleared through all our federally aided slum clearance programs (Abrams 1961).

By the time of his death in 1970, Abrams was regarded worldwide as a hous-ing expert, and had been sent on planning missions by the United Nations to Pakistan, Ghana, India, the Philippines, and Bolivia, among other places (Illson 1970: 26). The post-war architect's split self revealed the danger of professional and historical compartmentalisation. When a project merely existed as a design challenge, the larger cognitive dissonance could be quieted but not overcome in the long run.

THE BOX TODAY

Where would a container unit with 48 Better Shelters be unloaded if it were shipped tomorrow? Maybe in Jordan or Turkey to house Syrian refugees (McClelland 2014), or at the Dadaab refugee camp in Kenya, the largest in the world, where over 300,000 Somalis have lived since 1991. Dadaab today is a mix of tents and structures made of other materials such as corrugated tin, tree branches, blue plastic tarps, and cloth.

Maybe the container unit would go to Haiti to compensate for the Red Cross, which has recently come under fire for having built only six permanent houses rather than the 130,000 promised following the 500 million dollars it raised in donations after the 2010 earthquake (Elliott and Sullivan 2015). Without deeply examining the case of Haiti and the Red Cross, this statistic suggests that even when money is ostensibly not an issue, shelter is never as simple as finding a way to put a larger lightweight box inside a smaller one and loading it in a shipping container. Assembling the Better Shelter on site – unfolding the map and accounting for the nuts and bolts and figuring out how everything fits together – mirrors the larger logistical assemblage of refugee housing. It is surely not easy to decide what and how to get where,

FIG. 5.7 Dadaab Refugee Camp, Kenya (source: Wikimediacommons)[11]

and to whom. And yet too often 'logistics' become a convenient scapegoat of deeper questions around humanitarian aid, expatriate expertise, global capitalism, and local realities. Alternatives to the refugee tent have largely spent their lives on paper, not as three-dimensional objects. And yet ironically their design challenge is proposed as distinctly material: a chance to practically design in the real world.

Mid-century European refugees posed a threat to the building industry because they were not leaving: improving their temporary shelter might thus – in the eyes of builders and urban planners – create structures and environments that would slip into a permanent state of decrepitude. Today, both the temporal and the spatial dimensions of being a refugee are more fraught. The 'average' displaced person today is waiting to go elsewhere. No one wants to believe that refugee camps are a permanent destination for those displaced from their homes, and yet many spend major portions of their lives in them. And thus perhaps waiting to be relocated perversely *also* reinforces the logic of the tent. Not just because it is cheap but because it signifies – almost promises to all involved – an end to being a refugee. This is not to argue that anyone would rather live in a

tent, but that its materiality may also tell a story and compel action. The tent can equally function as a cloak of impermanence that conveniently allows persistent inaction: *You see, look. They won't be here for long.*

Will states see these Better Shelters as a threat to the promise of temporary aid and assistance? Should it be a corporation (despite its humanitarian commitments) that benefits from the move to utilise more permanent and secure structures? Why deploy finished shelters and not materials for self-building? Will Better Shelters attract more people to the refugee camps or signal resignation to the permanent status 'refugee' has taken on in the twenty-first century? What if Better Shelter is better than the shelter found in local communities? While design might not always matter as much as designers would like to think, materiality certainly does. And designers and aid organisations are not the only ones who can claim and manipulate materials. As Nasser Abourahme writes in his essay on cement in a Palestinian refugee camp:

> buildings and structures, infrastructural networks, things like electrical wiring, sewage pipework and so on, but also the materials that go into the processes of their assemblage as a camp – cement, concrete blocks, plastic tubing, corrugated tin or zinc sheets (*zinco* in vernacular Arabic) – do not just play an enabling or intermediary role, they mediate action and practice in contingent and often unexpected ways (Abourahme 2015: 203).

Simply changing the materials used to construct shelter, whether this is undertaken in protest by those who seek more permanence or by aid organisations to provide better shelter, will alter more than just the environment of the camp: it will also transform and reshape the politics of being a refugee in localised and contingent ways. Many critiques of refugee housing design focus on the need for context-specific shelter due to differences between climates, cultures and environments, but refugees and their own manipulation of materials also claim ownership to shape their environments.

Since I first drafted this essay in the early summer of 2015, there has been an immense and dramatic surge of refugees across the globe, and indeed the current set of political questions gaining traction as a result is not for the most part regarding how to stop creating refugees but how and where they will now

live. To look back at the post-war experience is not to suggest that history is repeating itself. But it is in part to note that the currently proposed 'innovative' solutions look strikingly similar to their predecessors. The problem still presents itself as the challenge of designing a larger box that can fit inside a smaller box, and making it as cheap and shippable as possible. For the designer this also remains a deeply humane enterprise: how can we offer people displaced from their homes a better and safer shelter? But this is not a problem caused by the paucity of technical solutions or logistical plans. Perhaps the most important continuity to note from the mid-century experience is simply that the box will never offer a solution of its own accord. The design impulse is to think of refugee housing as something utterly separate from a home, a neighbourhood, and even a life more generally. Yet one must consider all the things beyond the flat pack. There is no consensus among or between states, communities, institutions, and markets on what is temporary, nor any agreement about how close a box can be to a house. Even in the course of one's life, these things can be wildly recalibrated.

NOTES

1   http://www.ikea.com/ms/en_GB/about_ikea/the_ikea_way/history/1940_1950.html

2   https://www.youtube.com/watch?t=88&v=Ect-FwtK-84

3   See also: http://www.borgenmagazine.com/eight-designs-refugee-shelters/ and NK (2015), available at: http://inhabitat.com/prefab-friday-shrimp-housing/

4   Davis (1978) writes, 'The whole phenomenon of "donor" provision of shelter is comparatively recent and I have found no evidence of emergency housing (other than tents) being given by one country to another prior to World War II. Therefore, the provision of shelter can be seen as coinciding with the development of aid, rapid transportation, and the growing spirit of internationalism mentioned earlier, and also the continual increases in disaster casualties'.

5   Article 1, Copy of Contract between WPB and the New School for Social Research Box 6 PLW papers.

6   Memo Daves to Wiener, Re: Structures (1946), Box 7 PLW Papers.

7   Youtz to Wiener (5 August 1944), Box 14 PLW Papers.

8   Available at: https://upload.wikimedia.org/wikipedia/commons/d/d6/Camp_in_Golden_Gate_Park_Under_Military_Control_After_the_1906_San_Francisco_Earthquake.jpg

9 The Truckable house was the predecessor to the mobile home. The Tennessee Valley Authority project, created under the New Deal, was originally formed to build eighteen dams along the Tennessee River to prevent the river from flooding and in turn flooding the Mississippi. For the construction of these dams, temporary communities had to be set up. Because the workers often changed location, 'the TVA project is remembered in particular for the contribution that it made to the relationship between factory production and demountability and portability' (Vale 1995: 54).

10 Memorandum on meeting with officials of OPRD and UNRRA (23 May 1944) Box 7 PLW Papers.

11 Available at: https://commons.wikimedia.org/wiki/Category:Dadaab#/media/ File:Refugee_shelters_in_the_Dadaab_camp,_northern_Kenya,_July_2011_ (5961213058).jpg

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ARCHIVAL MATERIAL

PLW Papers (Paul Lester Wiener Papers, University of Oregon)

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