

一个容纳成长与改变的框架

Life's Net: A Framework for Growth and Change

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摘要 位于波尔多城郊佩萨克（Pessac）的现代Frugé s总部（QMF）在其建成数十年以后开始翻修。QMF创建于19世纪20年代，这50个供工薪阶层居住的单元房具有精炼的现代风格，以4种不同的建筑格调呈现。但居民很难接受设计师崇尚的机械美学，他们在入住不久就开始自行改建。虽然很多建筑师认为这是对QMF建筑的亵渎，但是另一些人却发现这是一个灵感的来源。1970年，Lima建筑了试验房屋PREVI，他把体现在佩萨克建筑中的活力和自由无序发扬光大，现在拉丁美洲很多非正规住房也具有这种风格。一群知名建筑师为居民设计了PREVI建筑的结构框架，具有自升、承担增长的荷载和随时间进行结构变换的功能，这在当代引发了人们对于十字小组和代谢派的讨论。几十年后，Chilean group Elemental在其设计的公共建筑方案中融入了相似的构想，其主设计师Alejandro Aravena把这个策略称为“以房屋形式建设基础设施”。本文对上述项目进行了讨论，并对它们带来的经验教训以及对于未来方案的潜在启迪进行了关注。

关键词 房屋 非正规 成长 改变 可变性 框架

序言

1953年夏在普罗旺斯埃克斯举办的国家现代建筑协会第九次大会上，Alison和Peter Smithson共同提出了黄金巷住宅方案，这个构思明确体现了人本主义，对象征权威主义的雅典宪章式的城市化构想提出了挑战。Smithsons'展示了由Nigel Henderson及其朋友与同事提供的照片，照片上孩子们快乐地在伦敦东端贫民窟的街道上玩耍。Henderson的照片歌颂了“随遇而安式的生活”，因其丰富美丽的未经润饰的生活场景而引人关注。Smithsons及其十字小组成员崇尚这种元素，并认为这是雅典宪章式的城市化构想中所缺乏的，那种抽象化的构想仅仅把城市分为四种功能：居住、工作、娱乐和交通。对于十字小组来说，社会学、人类学和生态学的领域对于建筑和城市化的实践是至关重要的，由此他们提出了理想化的论断：“生活在程式化的四种功能间滑落”。

基于这种关注生活的人本主义观点，提出了建筑作品建立的基础应当是对于人类群体和人建关系整个问题的审视与反思，这对价值观是个冲击。很明显，战后时期的社会正在经历着重大的变革，不断增加的变动性、飞速的技术进步和传统社会结构的转型都催化孕育了社会的变化。如果为了迎合新涌现的居住形式，建筑和城市化理论都着力在塑造相应环境上下功夫，那么我们的城市会变成什么样子？

19世纪60~70年代见证了一些激进的城市化尝试，对放大城市环境生长与改变的可能性也进行了探讨。随着时间而改变是所有城市发展的必经之路，这些尝试对可能会活跃在城市化进程中的建筑进行了展望。Peter Cook设计的“插接城市”（1964）预见了如下模式框架：人们生活在一个个移动的“豆荚”里，在城市变换的技术网络的支持下，豆荚能被插在任何地方。Kenzo Tange提出的“东京计划”（1961）设想横跨东京湾建造一个能容纳千万居民的巨大结构，他的计划基于满足人们对快节奏生活及交流的需要，他把城市描述成“依赖于成长和改变这一无尽循环的有生命的组织，这种组织形式能有效地对城市流动及功能变更做出反应”。

PROLOGUE

At CIAM's ninth congress, held in Aix-en-Provence in the summer of 1953, Alison and Peter Smithson presented their Golden Lane Housing Project, a scheme explicitly intended to offer an anthropocentric counterpoint to what was perceived as the sterile authoritarianism of Athens Charter urbanism. The Smithsons' presentation included images by Nigel Henderson, their friend and associate, who had photographed children happily playing in the streets of London's East End slums. Henderson's images glorified 'life as lived', beautiful and rich in its unpolished reality, an element the Smithsons and their like-minded colleagues amongst 'Team X' found lacking in Athens Charter urbanism's reductive characterization of the city in terms of four functions—dwelling, work, recreation, and circulation. For Team X, the fields of sociology, anthropology, and ecology were of critical importance to the practice of architecture and urbanism, and these concerns led them to idealistically assert that "life falls through the net of the four functions" (Smithson 1991: 9). With this anthropocentric viewpoint focused upon 'life', there was also a recalibration of values that called for architectural production to be founded upon "an examination of the whole problem of human associations and the relationship that building and community has to them" (Smithson 1993: 241). It was clear that societies of the post-war era were experiencing momentous change, catalyzed by increasing mobility, accelerating technological progress, and the transformation of traditional social structures. If the disciplines of architecture and urbanism were to be focused on shaping environments in response to new, emergent patterns of dwelling, what were our cities to become?

The 1960's-70's bore witness radical urban proposals—designs such as those of Archigram, the Metabolists, and Constant projected fantastic visions of urbanity, and one theme that emerged amongst others was the possibility of amplifying urban environments' ability to grow and change. While it is self evident that all cities indeed transform over time, these proposals envisioned architectures which actively engaged the process. Peter Cook's Plug-In-City (1964) envisioned a framework with mobile living pods which could be inserted anywhere within an urban network of technological transformability. Kenzo Tange's Plan for Tokyo (1961) imagined an immense structure spanning Tokyo Bay which would house ten million inhabitants. His project was predicated on the need for evermore speed and communication, and he imagined the city as a "living organism subject to a continuous cycle of growth and change... a form of organization responsive to dynamic patterns of urban flow and changing function" (Ockman 1993: 325). And Constant's New Babylon (1959-74) offered a vision not only of an alternative urban structure but also of an entirely new social and ethical order, one which would unfold in a massive structure spanning the Earth's surface, and within which humanity would live in an

Constant的“新巴比伦”（1959–74）项目不仅给出了可替代城市结构的构想，而且其中运行的是完全崭新的社会与伦理秩序，生活在其中的人们会感受到激励与改变无所不在。

虽然这些巨型结构的构想已经或将要继续影响建筑界，但是项目在实现方面并不理想，所倡导的提供成长和改变的城市框架的思想自然也就得不到落实。Kisho Kurokawa设计的位于东京的中银舱体大楼（1970）可能是它们留存的作品中最为著名的一个。大楼由两个服务核心筒组成，其上附带很多生活舱，在这样的设计下，仅仅移动一些螺栓就能任意拆卸、废弃和更换新的改进舱，整个过程类似于生物细胞的生长、存活和繁殖。但这只是建筑师的设想，事实上这些舱从来没有被更换过，并且大楼只是对“把建筑建成成长与改变的框架”的构想进行了一小步的延伸。但我们可能还会有其他更成功的实现这一构想的例子。

第一幕：期待不可思议之事

1924年，一个法国工厂主Henry Frugé雇佣了Le Corbusier为工人进行房屋开发，这就是人们熟知的位于波尔多郊区佩萨克的现代Frugé总部（QMF）。Frugé阅读过Corbusier的文章，Corbusier表达的在现代房屋建设中采用新的施工技术、材料和标准化模式的想法让Frugé很感兴趣。客户对于建设廉价工人住房的需求和Corbusier倡导的简炼的机械美学似乎不谋而合。

根据客户表示的意愿，QMF“被当作一个试验场，Le Corbusier能在其中把理论变为现实，并且将其发挥到极致”。楼板布置或多或少是标准化的，所有的设备、构件及细部在安装时都遵循泰勒时尚风格，这是量产建筑的一个实践。最终，Corbusier的设计成品是一个拥有130个房间，以6种房屋形式呈现的居民点。由混凝土、钢筋和玻璃结构构成了完美的几何体量，上面点缀有Le Corbusier标志性的绸带状窗户和屋顶平台，整体建筑没有任何装饰。建筑师坚持在结构上使用圣洁白，但最终还是同意了客户把立面涂成不同颜色的意见，以便吸引更多潜在的买家。但QMF的决策者们认为很多人会对这个建筑要表达的现代主义美学感到陌生，他们甚至在营销手册上写道“在QMF，对外表的第一印象并不总是令人愉快；但是体验过就会慢慢对这些简单而又纯净的建筑产生依恋，并且不久之后，你会发现那些雕塑和装饰不再复杂笨重，而是变得更加美丽”。但事实证明这只是一厢情愿。

QMF在居民入住之后不久就开始改变（图1），人们分割空间、合围天井，把屋顶平台改造成坡屋顶，填充了带状窗户，并对建筑立面重新进行了喷漆和装饰。虽然不乏一些具有艺术性的改

endless environment of complete and perpetual stimulation and change.

While these ‘megastructural’ proposals have and will continue to impact architectural discourse, the realization of projects which exemplify their theme of providing an urban framework for growth and change has not been particularly common. Kisho Kurokawa’s Nakagin Capsule Tower (1970) in Tokyo is perhaps one of the most obvious and best known examples of their legacy. The tower consists of two service cores with attached living capsules, designed such that with the removal of just a few bolts any capsule could be disconnected, discarded, and replaced by a new and improved capsule—a process intended to be analogous to the growth, life and reproduction of a biological cell. But despite the architect’s intentions, none of the capsules have ever been replaced (Vanderbilt 2008: 179) and the tower has amounted to little more than a representation of the idea of architecture as a framework for growth and change. We are, however, not without other and perhaps more successful examples of this theme’s realization.

ACT I: EXPECT THE UNEXPECTED

In 1924 the French industrialist Henry Frugé hired Le Corbusier to design a worker’s housing development, to be known as the Quartiers Modernes Frugé (QMF), at Pessac, a suburb of Bordeaux. Frugé had read passages of Corbusier’s writing in L’Esprit Nouveau and was intrigued by the architect’s ideas on embracing new constructive techniques, materials, and modes of standardization in the production of modern housing. The client’s need for affordable workers housing paired with Corbusier’s stripped-down ‘machine aesthetic’ seemed a perfect match, for both agreed that if they “wished to offer the houses to the public at the lowest possible price, [they] could not afford to spend money on any unnecessary luxuries” (Boudon 1972: 9).

As per the client’s explicit wishes, the QMF “was to be regarded as a laboratory, in which Le Corbusier would be able to put his theories into practice and carry them to their most extreme conclusions” (Boudon 1972: 2). Floor plans were to be more-or-less standardized, and all fixtures, components, and details were to be installed in Taylorist fashion, an exercise in serial production. In the end, Corbusier’s design produced a neighborhood of over 130 dwellings, distributed amongst six housing typologies. The concrete, steel, and glass structures were composed of pure geometric volumes, equipped with Le Corbusier’s requisite ribbon windows and roof terraces, and were devoid of any sort of decoration. While the architect argued for the structures to be rendered a pristine white, he eventually consented to the client’s desire to paint the facades different colors to appeal to prospective buyers. Yet still, those behind the QMF understood that its modernist aesthetic would offer an unfamiliar vision of dwelling to most, and they even went so far as to state in a marketing brochure that at the QMF “the external appearance is not always pleasing at first sight; but experience has shown that the eye very soon grows accustomed to these simple and pure forms and, before long, finds them more beautiful than the complicated and cumbersome forms found in sculptures and ornaments” (Boudon 1972: 17). But in reality this proved little more than wishful thinking.

Shortly after its occupation by residents, the QMF began to change (Figure 1). Spaces were partitioned, patios enclosed, terraces covered with pitched roofs, ribbon windows in-filled, and surfaces were repainted and adorned with ornaments. While some of these alterations were aesthetic, many others were meant to better adapt dwellings both to the environment and residents’ ways of life. Roofs over patios were constructed to accommodate for leaks, terraces

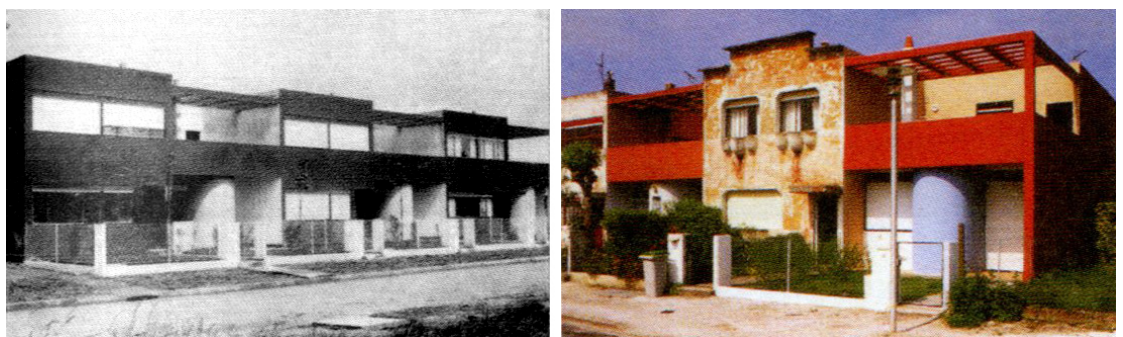


图1 位于Pessac的QMF住宅1926年（左）和1982年改造后（右）

动，但更多的改动是为了让建筑更融入环境并方便居民生活。天井上修建了屋檐便于排水，合围天台来扩大房间内部面积，用更小巧的空隙窗代替带状窗户来增加私密度和维修方便性。QMF的居民大部分都很贫困，通过政府项目以很低价格或免费获得了居住权，不久之后这个居民点就陷入了无人维修的境地。

居民们普遍认为Corbusier的设计是完全失败的，需要进行设计变更；另一方面，一些建筑界的人把QMF对建筑进行的翻新看作是衰败。事实上项目被批评的一面可能正是它最伟大有力的一面。包含在建筑师结构体系边界之内的外部空间使建筑的合围与装饰变得简单易行，不加装饰的建筑外立面成为居民展示个性随意装饰的空白石板。建筑被QMF改造后的样子并不是建筑师在设计时要表达的初衷。Le Corbusier为居民提供了一个折衷的框架以便把房间数压缩到最少，这是个未完成的结构，可以作为满足未来居民需求的可发展变化的骨架。Le Corbusier对QMF进行的改造“抱怨”到：“对的永远是生活，错的永远是建筑师。”但是如果生活总是对的，那建筑师为什么不能合作呢？

第二幕：结构化的非正规性

在拉丁美洲，非正规住房既是一个无处不在的现象又是一个疑难的问题。房源不足和贫困使数以百万的居民自己建造房屋，建筑地点和建筑材料都是唾手可得，这导致了私建社区的出现。这些社区缺乏必要的配套服务，让居住者生活在疾病与不安全的环境里。但正是得益于这些非正规住所，居民能够根据个人所需改造居住环境，并在社区紧密的环境里编织巨大的社会网络。有人曾认为非正规住房的这些特点帮助塑造了拉丁美洲的文化组成。毋庸置疑的是，尽管这些社区资源匮乏，但却每天都充满了无尽的活力。

1965年，秘鲁政府和联合国共同成立了一个合资公司，在利马城郊开发大型试验性房屋工程，这就是人们熟知的PREVI项目（图2）。项目要开发超过1 500个寓所，而目标将是3倍的数量。首先，住房对于低收入家庭采取低价政策，以替代他们的非正规住房。其次，为了把当地技术及文化底蕴和先锋派的奇思妙想相融合，建筑团队吸纳了超过40位建筑师，其中一半是秘鲁人，剩下的都是国际知名的设计师，包括建筑师James Stirling，Fumihiko Maki，Kisho Kurokawa，Aldo Van Eyck和Christopher Alexander，公司有Candilis，Josic和Woods，其中一些是十字小组的成员。最后但最重要的是，PREVI房屋项目被认为是能够兼容非正规开发思维的组织结构，它既能确保符合相应的健康与安全规定，又能发挥“自主改造”的精髓。

在PREVI的项目中，房屋不再只被当作一个物体概念，而更加类似于一个过程。设计“着眼于实用主义、经济性和与利马当

were seen as ‘wasted space’ and enclosed to expand the interiors, and ribbon windows’ were replaced with smaller, more traditional apertures that provided for both increased privacy and greater ease of repair. The residents of the QMF were for the most part poor and secured their dwellings at little-to-no cost through a governmental program, and before long much of the neighborhood fell into a state of disrepair.

Figure 1: Dwellings at Pessac before (1926) and after (1982) renovations. Almost universally, residents considered Corbusier’s design an utter failure that demanded alteration, while on the other hand those in the architectural community condemned the QMF’s transformation as a process of desecration. Curiously, the very facets of the project that were criticized, may in fact have been its greatest strengths. That exterior spaces were incorporated within the bounds of the architecture’s structural system made their enclosure and modification an easy proposition. That facades were devoid of ornament made them blank slates for residents’ personalization. That the QMF was altered to such an extent was an unintended product of its architecture’s design. In his reduction of dwellings to the absolute minimum, Le Corbusier offered residents a neutral framework, an incomplete structure that served as an armature for the growth and accumulation of future development specifically tailored to the needs and desires of residents. About the QMF’s modification Le Corbusier once remarked that “it is always life that is right and the architect who is wrong.” But if life is always right, then why shouldn’t the architect play along?

ACT II: STRUCTURED INFORMALITY

Throughout Latin America, informal housing has been both a ubiquitous and problematic phenomenon. Lack of sufficient housing and extensive poverty have led millions to construct their own dwellings on whatever land available and with whatever materials can be found. This has led to the emergence of extensive squatter communities that often lack proper services and leave their populations in both unhealthy and unsafe conditions. And yet, in the informality of these settlements, residents benefit from being able to easily adapt their surroundings to their needs and to be in close proximity to large-scale social networks within the community’s dense environment. One might argue that these aspects of informal housing have helped render it a Latin American cultural institution. There is little doubt that while such communities are lacking in some respects, the barrios, campamentos, and favelas of South America are replete with the gritty vitality of everyday life.

In 1965, a joint venture was launched in collaboration between the Peruvian government and the United Nations to develop a large experimental housing project in a suburb of Lima, to be known as PREVI. The development was to consist of over 1500 dwellings and its objective was threefold. First, the housing was to be low-cost for low-income families, provided as an alternative to informal settlements. Second, to meld local technical and cultural knowledge with the imagination of the avant-garde, the project would bring together a team of over forty architects, half of them Peruvian and the remainder a collection of foreign designers of international renown—James Stirling, Fumihiko Maki, Kisho Kurokawa, Aldo Van Eyck, Christopher Alexander, and the firm Candilis, Josic, and Woods amongst others—some of whom were members of Team X. And last but most important, PREVI housing was to be considered an organizational structure within which informal development could proceed, one that would insure its meeting of proper standards of health and safety, while harnessing the virtues of “self-managed transformation” (Garcia 2008: 32).

At PREVI the notion of a house was conceived not as an object, but rather as a process. Designs were “focused on practicality, economy, and

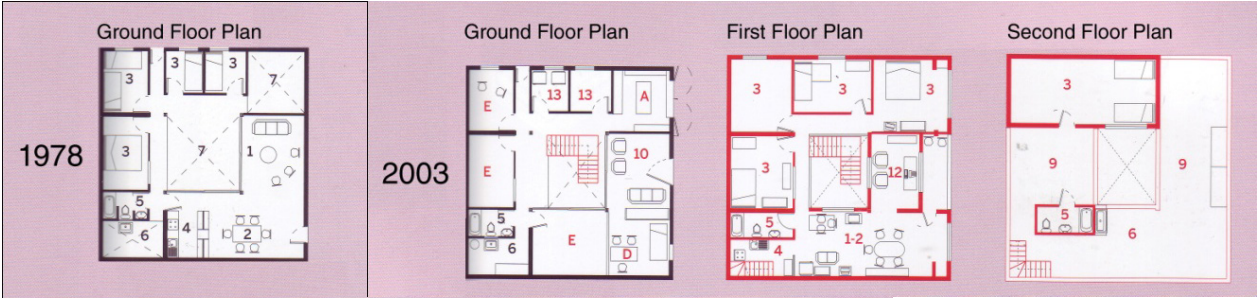


图2 PREVI寓所的平面布置图（James Stirling设计）。红线表示居民的扩建（Garcia-Huidobro, Torriti和Tugas绘制）

地资源、劳动力及环境的协调性”，所有的寓所表层都有空余的可建空间。重要的是，虽然每个项目都被建成一个结构与服务核心以满足最低的居住需求，但是项目也可以向寓所四周或以加高楼层的方式进行扩张。这个思想在20世纪末繁荣的房屋建设期并不是独树一帜的，但在PREVI的付诸实施却是空前的。Herman Hertzberger设计的Diagoon房屋允许内部空间适当扩充，UN Studio设计的位于Almered 活动房屋采用额外的预制模型能够增加25%的空间利用，而PREVI的一些寓所把空间扩大了200%~300%之多。更进一步，PREVI提供了由超过50个设计师设计的26个不同的户型，这些户型从使用之时起就可供扩张。单楼层结构慢慢发展成了多楼层公寓楼。单排的千篇一律的房屋改头换面，发展成了有条理的街景。在这个简略的公共房屋框架下，诞生了一个有活力、有层次的居民区。

在PREVI几十年的使用周期内，除了寓所值得称道外，James Sterling的设计也非常值得一提。他精于讲究四方布局及注重外部庭院设计，这种设计提供了足够的通风采光构造，被认为很好地解决了建筑在体量扩张中遇到的问题。在另一个Zamora居住案例中，原始方案是为单一家庭设计单层寓所，后来逐渐扩大成为一个包括小商店、诊所和律师事务所等商铺在内的3层结构，这样，原来的一个不起眼的单一住户寓所就转变成了商住两用的建筑。在PREVI，这种案例并不稀奇，而是普遍存在。

PREVI房屋项目总体来说是成功的，但也有瑕疵。原始的施工质量有专业人士监督保证，有很大的安全度和可靠性，而住户在其后的改造施工就不一定了。一些建筑的非结构构件在经历过低劣的施工质量和过大的荷载之后产生破损，对整体环境产生很大的负面影响。PREVI的设计团队最初保证在居民区设立技术中心为居民提供建筑维护及扩张策划方面的指导，以保证建筑改造质量，但遗憾的是，政府并没有兑现承诺。

谈到PREVI项目的开放性，此工程不仅仅具有内部空间的灵活布置性或一系列小房屋适度扩张的可能性，而且它更像一个有趣的研究项目。项目最初的创意是为寓所的扩建提供一个空间及物理框架，这和原始结构的边界相去甚远，这种理念由于整个社区的巨大规模而又发生了改变。PREVI并没有把一种完整的建筑形式强加于居民的生活模式之上，设计者们给居民提供了一个可供非正规住区发展的有序基础，让居民主导自己的生活，并随着时间的增长而自主翻修和新建寓所。Le Corbusier的那句陈述以“生活永远是对的”这个事实开头，而PREVI的建筑师们从一开始就承认这一点。

第三幕：半间房屋

Elemental是建筑师Alejandro Aravena的工作室，由智利的天主教大学和COPEC石油公司联合投资建立，旨在创造并承接具有公共及社会影响的项目。在2003年，智利的一个政府机构Chile Barrio下达了改善国家贫困地区居住条件的决定，与Elemental洽谈并希望其在智利北部的Iquique城承接一个政府公建房的开发项目。

选址在人们熟知的Quinta Monroy，占地54 000平方英尺；位于城市中心的一块空地，在那里密集地排布着容纳150个家庭的非正规房屋群，可以想象生活条件之差。项目预算被严格控制，用于地皮、环境开发和施工的费用每个寓所只有7 500美元。Elemental事务所把PREVI的开发看作是一个开创性的先例。

appropriateness for local resources, labor and environmental realities in Lima” (Garcia 2008: 17), and all dwellings were produced with a surplus of buildable surface area. Essentially, each project was constructed as a structural and service core that would initially satisfy the minimum requirements for dwelling, but support unit expansion either into the area surrounding the dwelling or through the construction of additional stories. While this strategy, referred to by some as the provision of “slack space”, is by no means unique within the larger context of late 20th century housing, the magnitude of its implementation at PREVI does seem somewhat unprecedented. Where projects such as Herman Hertzberger’s Diagoon Houses have provided for modest increases in interior volume, and UN Studio’s Flexible Housing in Almere allows for the addition of prefabricated modules to provide for 25% gains, some dwellings at PREVI have expanded their volume by as much as 200-300%. Further, PREVI offered twenty six different housing typologies, designed by those amongst a group of over fifty architects, all of which provided for extensive expansions that have since been realized. Single storey structures have developed into multi-storey apartment buildings. Monotonous rows of houses have transformed into textured streetscapes. And within this stark framework of public housing, a vital and layered neighborhood has grown.

Over the decades of PREVI’s life in time, one of the more highly sought after dwellings has been that designed by James Sterling. His design, square in plan and centered on an exterior courtyard, has proved particularly well suited to expansion due to the ease of providing sufficient access to light and ventilation as building massing is increased. In one case, that of the Zamora Family, the original one-storey dwelling for a single family was gradually expanded into a three-storey structure that incorporated tenant spaces—a small shop, clinic, and legal office—transforming what began simply as a humble, single-family house into both a dwelling and a significant source of income. At PREVI such adaptations have been the norm rather than the exception.

While PREVI housing has by most accounts been a success, it is not without problems. While the quality of the original construction was carried out by professionals and properly executed to provide for resident’s safety, the same cannot necessarily be said for dwellings’ growth over time. Some additions have suffered from both poor construction quality and overcrowding which negatively impacts the environment. Originally, the PREVI design team stipulated for the provision of an on-site center for technical assistance where residents could seek guidance in maintaining their homes and planning expansions, and this might have helped avoid problematic outcomes, but unfortunately the Government never put the center in place as planned.

In terms of its ‘openness’, PREVI housing makes for an interesting study as rather than providing solely for the flexible configuration of interior spaces, or the modest expansion of a small set of houses. Its primary strategy was to provide a spatial and physical framework for the expansion of dwellings far beyond the bounds of the original structure, and this was mobilized at the scale of an entire neighborhood. Instead of imposing a completed form upon the patterns of residents’ lives, PREVI’s designers provided them with an ordered foundation for informal development, granting their lives as lived the authority to guide the growth and emergence of their dwellings over time. While Le Corbusier stated after the fact that “life is always right”, the architects of PREVI admitted it from the start.

Figure 2: Plans of a dwelling at PREVI designed by James Stirling. Resident additions are shown in red. Drawings by Garcia-Huidobro, Torriti, and Tugan.

ACT III: HALF A HOUSE

Elemental, the office of architect Alejandro Aravena, was formed as a joint venture by the Catholic University of Chile and the oil company COPEC with the mission of creating and undertaking projects of public interest and social impact. In 2003, Chile Barrio, a governmental agency charged with the task of improving living conditions in the nation’s poorest areas, contacted Elemental with the proposal that they undertake a social housing project in Iquique, a city in the north of Chile.

The site, known as the Quinta Monroy, was a 54,000sqft parcel in the center of the city, occupied by 150 families in a dense informal settlement where, as could be expected, living conditions were poor. The budget for the project was extremely limited—only \$7500 per dwelling for land, site development and construction. Elemental looked to PREVI housing as a precedent.

Aravena felt the budget would only allow them to build half a house of proper quality and size per family, so Elemental’s strategy was to design the housing

Aravena认为预算只够建设满足每个家庭质量和面积大小需求的一半，所以Elemental团队的策略是把房屋设计成一个提供有关用途的开放系统和一个整体上的完整结构，但只对每个公寓的一半空间进行建设。Aravena认为建设这另一半房屋对一个家庭来说是很困难的，这需要居民花费时间和精力在空间分隔及内部装饰上，这给了居民按规制要求建设或按实用需求建设的空间。

Elemental不只把Quinta Monroy项目看作是简单地居民建房，还是为居民提供一个摆脱贫困的引擎，因为房屋的扩张可能带来很多关联的聚集价值、评估资本的手段，也可以抵押房产获取贷款来开展小额生意。这个构想借鉴了PREVI的成功经验，也吸收了一些教训。

Elemental团队在设计过程中一个重要的品质是通过不同手段来积极融入社区。设计开始阶段设计师与居民共建了创意坊，和居民一同讨论理念和创意；给儿童展示基本寓所单元的图画，询问他们对未来住房的期望。Elemental和居民一同订制了严格的建筑条例来指导建筑装修，社区选出了一些代表来执行和监督条款要求。在这个过程中，居民也对单元扩张和维护的合适模式给出了建议。最后，Quinta Monroy的开放性还考虑到了一个细节，即在很多案例中，居民的老房子拆毁后的废料还会在新居之中进行使用。

毋庸置疑的是，Quinta Monroy项目的成功在于和当地社会文化保持紧密联系。因为居民们已经习惯于自主动手，项目中体现的自主组织建造的策略对居民们来说既熟悉又实用。更进一步的是，由于受到低成本和最小化寓所数量的限制，在发达国家的标准下，居住环境的等级较低，但是如果理解了其过程和实质，那么可以认为居住环境的改善程度是惊人的。由于Quinta Monroy的居民仍旧生活在贫困中，我们必须比较Elemental与类似社会公建房项目的每户造价。鉴于此，我们认为提供一个能够成长升级的半成品建筑设施要比提供一个完整的建筑要好，在Quinta Monroy实现的一些东西真的很令人称道（图3，4）。

as an open system providing utilities and a solid structure for the whole, but enclosure for only half of the volume of each dwelling. Aravena saw this as the most difficult half of a house for a family to build, and the rest—partitions, interior finishes, and the remaining enclosure would be left for families to build on and by their own time and means, allowing both for customization and pragmatic growth. Aravena has dubbed this process “infrastructure as housing”.

Moreover, Elemental saw the Quinta Monroy project as more than simply providing residents with homes, but also as offering a vehicle to help residents overcome poverty, whereby a home’s expansion might be a means of accumulating value and accessing capital by property improvements or using it to secure a loan to start a businesses. This strategy clearly draws upon the successes of PREVI, but Aravena and his team did well to learn from some of its failures as well.

An important component of Elemental’s process was their active community engagement by various means. Workshops were held with residents early on, and the concepts and strategies were discussed with them so that would understand the designers intentions. Children were given drawings of the basic dwelling unit, and asked to imagine what their homes might become over time. In coordination with the residents, Elemental developed a strict building code to guide modifications, and the community elected a team of representatives to enforce the agreed upon requirements. Throughout this process, residents were also advised on suitable modes of unit expansion and maintenance. And finally the Quinta Monroy’s ‘openness’ took on an additional dimension, as in some instances even fragments of the residents old, disassembled dwellings were re-incorporated into their new homes.

The success of Quinta Monroy is, without doubt, intimately connected to its social and cultural context. As residents were accustomed the do-it-yourself mentality of squatters camps, the self organizational strategies employed at Quinta Monroy were both familiar and pragmatic. Further, with the requisite low cost and reduction of dwellings to the absolute minimum, the living conditions provided seem low by the standards of developed nations, but if understood in context, the degree of improvement is striking. While the residents of Quinta Monroy still live in poverty, one must compare the result of Elemental’s effort to alternative social housing projects produced for the same per-unit cost (Figure 4). In this light, it becomes clear that in providing infrastructure for housing to grow within and upon rather than a finished product, what has been achieved at the Quinta Monroy is something truly extraordinary.

Figure 3: Quinta Monroy before and after resident’s additions.



图3 居民改造前和改造后的Quinta Monroy居民区



图4 位于Iquique郊区的典型公建房（左）和Quinta Monroy项目（右）的比较

后记

这里讨论的每一个案例最终的建筑方案都是在生活本色和中性的框架结构之间的折衷。这是对“生活是建筑作品最终的评判者”思想的致敬，当然这一思想也会否定很多建筑师的创意灵感。建筑师无法参与最后的方案定夺，无法影响最后的结果，而我们必须承认建筑作品不仅是一个物体，更是一个随着时间慢慢展开的画卷。

在佩萨克的项目中，我们发现很多情况下居民都潜在地具有改造环境以满足生活需求的冲动，如果建筑本身允许他们这么做，那么他们就会做出改造。在这种情境里，最重要的环节并不是对内部环境的重新布置，而是存在于Corbusier设计的原始结构边界内的空间（如平台、车棚等类似附着物）允许内部空间容量的大范围扩张。这种灵活性不仅仅便于空间的重新组织，并且可增强在重新利用时的适应性，而且通过内部空间容积的增加，使寓所增值的可能性持续增加。

PREVI项目最大的成功之一就是借鉴了QMF这一优点。我们看到“自主改造”很好地和第三世界环境相匹配，如果规划合适，单元的成长程度可能比很多人想象得要大很多，而且这提供了价值上获得巨大成长的潜能，这是公建房很重要的一个意义。有时可以把公建房项目比作购买一辆新汽车，当你开出停车场的一刹那车子就贬值了，但在PREVI或是Quinta Monroy的项目中却完全相反。但即使是在这些成功的案例中，如果不对房屋的成长改造进行有效管理和指导，也同样会出现问题。

由此看来，Elemental在Quinta Monroy进行了一个重要的成功尝试：密集社区入住率能够极大地促进基于时间和成长程度策略的公建房项目的成功。通过让居民积极参与设计过程，并为之提供公寓扩建指导，能让居民感受到对项目的真正归属感。因此，任何涉及如此大规模的自主工程的提议都应当建立在与社区居民的有效联系的基础上，并让有关人员为未来的发展提供指导。

我们还应当从这些例子中看出，房屋扩建的质量往往很低，当然第三世界国家居住条件的改善不可否认，但是我们不禁要问，如果在居住标准和环境管理更为严格的发达国家，这些建筑策略会有多大效用？但看起来，Elemental似乎给了我们希望。在发达国家里，更为重要的是居民应当与有经验的专业人士保持紧密的联系以获得改扩建方面的指导。可以预见到，在不远的将来，一群学生或志愿者指导居民进行公寓改扩建的施工过程就和已存在的人居工程或Auburn乡村寓所的情况一般不二。

这里探讨的特别是包括PREVI和Quinta Monroy在内的项目都为我们提供了有价值的信息，在其中讨论了开放式住房的可能性、内部空间的重新规划和基于时变方法的结构“生长”。这不仅为居民提供了一个增加自有房屋附加值的机会，而且增长了居民为保持家庭需求和建筑的步伐协调而进行扩建的能力。这些例子启示我们，建筑本身是为人而建，以上讨论的建筑构思都让我们更加认识到了房屋作为容纳成长与改变的框架这一可能性，同时房屋还是支撑新的生活形式出现的骨架，房屋作为一种建筑类型和我们居住在这个世界上的生活方式互相影响与作用，而彼此两者都在相互探索中达到了最大程度发展。（译/方朔）

Figure 4: Comparison between typical social housing in the outskirts of Iquique (left) with the Quinta Monroy project (right).

EPILOGUE

In each of the cases here discussed the ‘final’ architectural result emerged from the interplay between life as lived and the neutral structures within which it unfolded. This deference to ‘life’ as the final authority in architectural production, will seem in opposition the impulse of many architects. In their inability to shape the final result, if there even is such a thing, a level of control is removed from architect’s hands, and one must accept that such a work of architecture is less an object and more a process unfolding in time. But what is to be learned from this?

At Pessac, we’ve seen that the impulse of residents to modify their surroundings to fit their needs lies latent in many situations, and if the architecture supports it, modifications are likely to be made. The crucial component in this situation, however, is that beyond reconfiguring internal layouts, the voids within the bounds of Corbusier’s initial structure—terraces, carports, and the like—allowed for volumes of interior space to be significantly expanded. This sort of flexibility does more than simply allow for spatial reorganization and adaptability in cases of reuse. It provides for the possibility of substantially increasing the value of a dwelling by growing its interior volume.

Capitalizing on this aspect of the QMF, was one of the greatest successes at PREVI. Here, we’ve seen that the strategy of “self-managed transformation” is particularly well suited to third-world contexts, and that the degree of unit growth possible, if properly planned for, may be far greater than many would propose. Again, this offers the potential for an extraordinary growth in value, a particularly important realization in relation to public housing. Often, public housing projects can be compared to buying a new car—as soon as you drive off the lot, its value quickly depreciates. This has not been the case at either PREVI or the Quinta Monroy, where residents’ structures have served as a vessel for the accumulation of value. But even in these successful cases, if growth proceeds unregulated and unassisted, it is inevitable that problems will arise.

And herein lies an important realization of Elemental at the Quinta Monroy: that intense community involvement can greatly contribute to the success of a time and growth based strategy for housing. By involving residents throughout the process and offering them guidance and guidelines in the expansion of their dwellings, they were able to engage residents and make them feel truly invested in the project. Houses weren’t simply given to them, but rather residents played an active role in their homes’ production, serving as a source of intense pride and allowing them to truly take ownership of their dwellings. Thus, it seems crucial that any proposal that employs such an extensive strategy of self-managed construction should surely establish some organizational entity to both engage the community and provide guidance in matters of future growth.

Still, it is important to acknowledge that as can be told from these examples, the quality of expansion seems almost inevitably low and, while we’ve seen undeniable improvements upon living conditions in third world contexts, it is questionable how effective these strategies might be in developed nations where standards of living are higher and regulatory environments are more strict. But again, it would seem that Elemental’s approach offers hope. In developed contexts it would be all the more important to provide residents with guidance, maintaining a close dialog with qualified professionals to guide them in their dwellings’ continued construction. And one can envision scenarios where groups of students or volunteer workers might assist residents in carrying out the work to expand and change their dwellings, not unlike existing programs such as Habitat for Humanity or Auburn’s Rural Studio.

The projects here discussed—PREVI and the Quinta Monroy in particular—offer valuable examples of the possibilities open housing, beyond the reconfiguration of interiors, to the true growth of structures via time-based methods. Not only does this offer an increased opportunity to accumulate value in one’s home, but also provides for a home’s ability to expand in step with the needs and means of a family. Examples such as these serve to remind us that we build above all else for people, and the strategies here discussed offer possibilities for conceiving of housing as a true framework for growth and change, an armature that supports the emergence of patterns of life as lived, and an architecture that both shapes and is shaped by our ways of dwelling within the world. **AT**