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The Layers of Time

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摘要 / 本文呈述的主要观点包括：时间决定了建筑形态的主要顺序，以及景观、街道、建筑、房间和各个细部的实际情况和意义。对于一个经过设计并得以施工建造的场所来说，时间并不是一种偶然属性，而是对场地的基本结构和意义至关重要的因素。时间在建筑的不同空间中不断流动和静止，本文在此对时间的三个维度——世界时间、项目时间和体验时间——进行了讨论。通过考虑建筑或景观的材料、空间顺序和位置，对建筑的过去、现在和未来之间的相互联系进行了探讨。所有这一切又包含两部分的含义：我们的生活都被记录在我们所生活的空间中，而真正记录着一切的却是时间。

关键词 / 运动；质量；预测；记忆；投射

Abstract / The basic thesis of this paper is that temporality gives access to the primary order of architectural topography and thus to the reality and meaning of landscapes, streets, buildings, rooms, and their details. Time is not a contingent attribute of the places intended in design and realized through construction but a key to their essential structure and significance. Three dimensions of temporality are discussed: the time of the world, of the project, and of the experience, as it moves through and comes to rest in a work's several spatial situations. The interconnections between prior, present, and future appearances are discussed, in consideration of a building or landscape's materials, spatial order, and location. All of this is set out in a two-part argument: that the stories of our lives are recorded in the spaces of our lives, and that this recording is essentially temporal.

Key words / Movement; Qualification; Anticipation; Recollection; Projection

每个建筑都有一个属于自己的故事，这个故事讲述了建筑的历史，也证明了其存在的意义。而历史正是由这样一个一个的故事碎片所组成。

——《天与地》，安塞尔姆·基弗

1 建筑时间性的三个维度

尽管我们倾向于把建筑理解为一种空间艺术——这一点固然没错——但与此同时，我认为我们也应该清楚地认识到，时间性的条件和因素对建筑而言同样重要。建筑中所蕴含的不止是一两种时间维度，而是三种。这三种不同维度的时间同时存在，虽然并非同步发生，但却不可分割。

第一种维度是世界时间，既包括大到承载了环境变化的年年世世，也包括我们日常生活中的日日夜夜。这类时间存在于建筑对时间的抗衡、经受时间的洗礼，以及随岁月而发生的改变中。建筑的很多细节不仅能够预见外界环境的影响，并且能够唤起人们对外界环境的关注：百叶窗、雨水收集器、移动式家具等。世界时间也在建筑表面留下了痕迹，建筑外表的变化既反映出建筑所经受的来自外界环境的破坏，也反映出时间对于建筑

的馈赠。一座建筑如同一本日历，所有的方方面面——虽然并非刻意设计——为建筑的过去提供了一份可视化的记录，也为建筑的未来提供了一个方案。

建筑所蕴含的第二种时间是项目时间。“项目”（project）一词的词源意味着变化，更具体地说，是“向前迈进”的意思；“projectum”指的是“向前投掷”。这里的重点不在于变化的方向，而在于变化的速度；这里所说的时间不是项目开发的短短几天或几个星期，而是项目所涉及的学科知识的建立和发展所需的几十年，甚至几个世纪。即使是在高度现代化的今天，我们仍会讨论很久以前建筑师就已讨论过的几何图形和建筑元素。当路易斯·I·康提出那个著名的问题：“勒·柯布西耶，你看我现在的表现如何？”时，他清楚地知道自己在那段历史中的地位。学科在不断地传承与发展，时代对建筑作品提出了新的要求，同时要求设计师的作品能不断地推陈出新。与世界时间相比，项目时间可能会很慢，就像一部编年史。此外，世界时间遵循着某种发展模式，而项目时间通常迂回地向前发展。项目时间所包含的要求和预期能够促进包括项目的开发、设计、施工过程，以及居住情况和使用情况，甚至

Each building has a history created by its own fiction and need to demonstrate its philosophy of existence. That fiction is part of the debris of history.

— *Heaven and Earth*, Anselm Kiefer

1 The Three Dimensions of Architectural Temporality

While we tend to think of architecture as a spatial art — which indeed it is — I believe we should also see that temporal conditions and considerations are no less important. There are neither one nor two kinds of time embodied in buildings, but three; three distinct chronologies that co-exist, non-synchronously, yet indivisibly.

First is the time of the world, including the calendar of environmental change and the schedules of daily life. This time can be seen in the work's defenses, allowances, and accommodations, those preparations that anticipate the play of ambient forces and recall it: shutters, rainwater collectors, moveable furniture, and so on. World time is also apparent in the modifications to the work's surfaces, markings that attest to its sufferings and show its enhancements. All of these figures — none of which was designed to signify — provide a visible record of the project's past and a proposal for its future, as if the work were a calendar.

The second sort of time that exists in built works is the time of the project. The word's etymology suggests change; specifically, forward movement; “projectum” means “thrown forth”. It is not the direction but the pace of change that matters here, not the days and weeks of the project's development, but the decades, even centuries, through which the disciplinary knowledge has been built up and changed. Despite our modernity, we still discuss geometries and elements that concerned architects ages ago. When Louis I. Kahn famously asked “Le Corbusier, how am I doing?” he acknowledged his standing within this history, the disciplinary inheritance that not only posed specifically architectural problems, but required his own work for renewal. By comparison with the time of the world, the time of the project can be very slow, like a chronicle. Further, while the first follows probable patterns, the second often advances by detours. This

time comprehends the needs or desires that prompted the project, the work of design, also the phases of construction, then of inhabitation, of use, and even misuse, leading to deterioration and destruction. All of that should be included in the time of the project.

More purposeful and much quicker is the third kind of time, the time of experience. This sort of movement is paced by one's passage through a built work. It involves all the accelerations, delays, and lingerings that occur between and within a building's several settings. Low risers and long treads, for example, slow one's approach from a forecourt to a facade. Prospects framed by parapet walls, however, quicken connections between roof terraces and mountains — an example is the famous roof terrace of Le Corbusier's Unité d'habitation in Marseilles (Fig. 1). Every work has a structure of sequences that stage the sense of its spaces, giving the whole ensemble characteristic rhythms, which are apprehended by the body as much as the mind. A key alternative here is between succession of settings and their simultaneity.

1. 勒·柯布西耶于1952年设计的马赛公寓屋顶露台。
1. Le Corbusier, Unité d'habitation, roof terrace, Marseilles, 1952.



可能导致建筑衰退和破坏的对建筑的滥用在内的各个阶段。这一切都应当体现在项目时间中。

第三种维度的时间——体验时间则更具目的性、发生得更快。体验时间需要在建筑中移动才能体会。它包括发生在建筑之间以及建筑内部的各种环境中所有的加速、延迟和逗留。例如，矮而宽的台阶会减缓一个人从前院走到建筑正面的步伐。柯布西耶设计的马赛公寓的著名屋顶露台则是另一个很好的例子——低矮的护墙所围合出的景致缩短了屋顶露台和山脉之间的距离，更快地建立起了人与山之间的联系（图1）。建筑内部不同的空间序列结构营造出不同的空间感，并决定了整体的建筑空间节奏，这种节奏需要身心同时去体会才能感受。其关键就在于建筑内部的不同环境之间虽然存在次序，但它们共同存在、同时发生。

2 通过时间了解空间：空间的故事

我们的故事都记录在我们生活的空间里。当然这些故事是随时间展开的。哲学家保罗·利科曾指出，正因为有了记述，人类才由此产生了时间的观念。正如文化通过书本得到记载和保存，文化记忆通过建筑变得具象，并与建筑共存。在现代，生活中——社会规范、家庭结构、政治立场等——充满了各种变化，建筑在我们实际生活中的方向意义和稳定意义就显得尤为重要。与文学作品、电影或广告等形式有所不同的是，建筑给人的感觉是安静的、悄无声息的。但这并不意味着建筑所处的纷繁的环境会削弱它给我们带来的“安适”或“安

2. 弗兰克·劳埃德·赖特于1910年设计的罗宾别墅。
2. Frank Lloyd Wright, Robbie House, 1910.



宁”的感觉。表面看来，虽然这种静态的体会似乎与建筑的时间维度相互矛盾，但也只有在变化和移动的体验中才能体会建筑的“静”。因此，静止和运动，或永久和变化是一枚硬币的正反面。当代建筑思潮的主要任务之一就是传达“时间中的永恒”这一概念。

人们按照不同的速度或步伐在建筑空间中穿行。有些空间能够压缩时间，将下一个场景提前呈现。有些空间则会延长时间，将下一个场景的出现推迟延缓。如果你参观过由弗兰克·劳埃德·赖特设计的建筑，并感受过他的入口空间序列设计，就能感受到设计者似乎刻意延长了入口空间，这种做法使你对入口区域的关注不亚于对建筑内部的向往（图2）。入口空间的设计不仅节奏缓慢，并且紧凑而低矮。这种空间设计决策所呈现的结果令人印象深刻。当到访者花费超出预计的时间才到达建筑内部时，眼前豁然开朗的空间就显得非比寻常：屋顶的高度是走廊高度的两倍，宽敞的内部空间以一种意想不到的方式展现在眼前。当你到达大厅，就能够看到通往其他空间的通道，每一条通道都拥有各自延缓、加速、到达和离开的节奏。以上一切表明，理解或设计建筑时间性的方式之一就是建筑内部的空间性着手。

我们还可以将建筑视为“时钟”。直至今日，我们仍然可以通过投射在建筑表面上的阴影来推断时间。这种时间推断方式在机械时代之前是非常常见的。但即使在现代，人们依旧会从建筑中感知自然的时间。建筑内部的设备都能够反映出天气、季节和气候的变化，其兼具实用和表征的功能。建筑的功能不仅在于为我们的生活提供清晰的空间感，并且能够为我们的生活带来时间感。

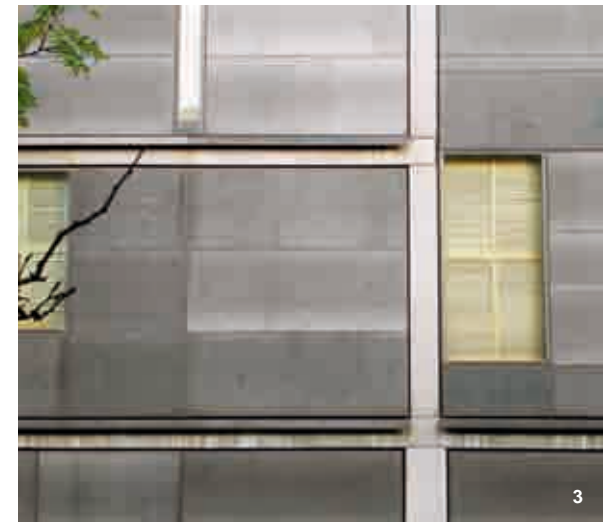
3 从未停止的审核，只因建筑主体从未停止改变

建筑空间的流动同样适用于建筑的材料和建造中。建筑构造的故事——即关于建筑存在于时间中的叙述——包括三个章节，或者说三个阶段：预审、审核和重审。所有被选择用于建设的材料都是因为其各自的“天然”属性，无论它们是来自大自然，还是来自专门制造材料的工厂。被选作建筑材料则意为通过“预审”，这些材料将被运送到施工现场，随后通过施工技术得到改造（切割、调整、成型、抛光等）。经过以上步骤后，意味着这些材料已通过“审核”，可作某些特定目的之用。一旦建设工程结束，人们开始入住后，这

2 Knowledge of Space through Time: Spaces as Stories

The stories of our lives are recorded in the spaces of our lives. Stories, of course, unfold in time. The philosopher Paul Ricoeur once observed that time becomes human through narration. In much the same way that literacy is both cultivated and preserved in books, cultural memory obtains legible shape in buildings, persisting as long as they do. In an age such as ours, when so much in life seems in flux — social norms, family structures, political allegiances, and so on — the power of architecture to give practical affairs orientation and stability is especially important. Unlike literature, film, or advertising, architecture performs its signifying role rather quietly and unobtrusively. But this fact does not diminish its capacity to allow us to feel “at home” or “at rest” in its many and varied settings. While experiences of being at rest would seem to annul architecture’s temporal dimension, this aspect of a work can only be understood in contrast to experiences of change and movement. Thus, rest and movement, or permanence and change are two sides of the same coin. One of the key tasks of contemporary architectural thought is to grasp “permanence in time”.

Progress through a building can follow different speeds or paces. Some configurations compress time, accelerating what has been anticipated. Others arrangements extend it, delaying what had been imagined to lie ahead. If you go to a building designed by Frank Lloyd Wright and pass through the entry sequence it seems as if the architect had insisted on prolonging the approach, orienting you as much to the vicinity as to your principal destination (Fig. 2). Not only is the space slow, it is tight and low. Still, the consequences of these decisions are striking. Having been confined for longer than one might like during the approach, arrival is extraordinary: the ceiling is twice the height of the corridor and the wide interior opens in a way you could never have imagined. Once you are in the main hall you see other passages leading to other ensembles of spaces, each with its own delays, accelerations, arrivals, and departures. All of this is to say that one way of thinking about or working



3. 路易斯·I·康于1969-1974年设计的耶鲁大学英国艺术中心。
3. Louis I. Kahn, Yale Center for British Art, 1969 1974.

with temporality in architecture is through the spatiality of movement.

The building can be understood as a clock. Still today we can tell the time of day by studying the shadows cast on an architectural surface. Obviously, this was common before the age of mechanical time pieces. But even now we look to buildings for a sense of natural time. All of the equipment installed into buildings to respond to changes in weather, seasons, and climate serves both practical and representational functions. Architecture’s task is not only to provide our lives with a clear sense of where we are, but also when we are.

3 Continual Qualification: the Building’s Body Never Stops Changing

What is true of spatial movement is also true of a building’s materials and fabrication. The story of architectural construction — the narrative of a building existing in time — unfolds in three chapters or stages: pre-qualification, qualification, and re-qualification. Materials are chosen for construction because of the qualities they possess “by nature”, no matter whether they are found in the open landscape or a warehouse of manufactured

些建筑材料将或出于偶然，或出于设计本意地在使用过程中得到“重审”。其目的旨在使建筑材料能够更加充分地满足不断变化的需求。

尽管我按照顺序介绍了这三个章节，或各种材料的变化，事实上它们是相互重叠、相互交错的——预审与重审是同时发生的。然而，我要强调的是，这个过程是无止境的：虽然过程非常缓慢，可建筑材料一直在不断地变化着。建筑材料本身并无质量可言，其质量由材料所处的特定的情况所决定，包括形成方式（天然或人造）、建造方式（湿或干）、使用方法（计划内或不可预见），以及环境（光照、氧化、环境湿度、曝晒脱色、染色/受污等）。能够理解并做到这一点非常困难，因为我们总是教条地、不变通地执着于“材料本身”。一个特定的建筑元素和其暴露环境条件之间的相互作用显示了它们各自的演变趋势或可能性。这就是材料的质量并不由其自身决定——因为材料存在于变化的环境之中——并且会随时间而改变的原因所在（图3）。

4 时间中的材料

各种外界变化——天气、使用、事故、修缮和改建——都在建筑表面留下了历史的烙印。这些印记也会引发未来类似情况的陆续发生。举例来说，当你走近一栋古老的建筑，踏上门口的每一级台阶，你可以清晰地看到几个世纪以来，其他人也沿着同样的路径，走到楼梯的中间——例如，前人也曾跨过同样的楼梯平台，并在入口台阶上稍作停顿。在你之前的无数步伐，不仅打磨了这些石块，并以“踏凹”的形式重塑了石块的形态（图4）。这些痕迹是从前在此地发生的各种活动的最好证明，同时也是时间留下的痕迹。从中仿佛能够看到前人的兴趣所在、去往的方向，以及他们彼时的想法。

5 能够追忆往昔、预期未来的设计

建筑永远处于不断的变化中，部分单体建筑，比如场所，在一定程度上是由它们“逝去”和“尚未”发生的历史所决定的。建筑是存在于时间中的事物，它的持久性就在于它们是不不断变化的。

设计发展的首要任务就是认识到这种来自过去和未来的影响，项目总是建立在过去的专业和文化背景基础之上，而其发展则取决于未来无法预期的变化。路易斯

· I· 康曾经将关于这类探寻的设计称之为“第零卷”^①或“第负一卷”。设计课上的每一个问题对于学生和教师而言，都是一次重新开始的机会。我们要重新审视对于事物的固有认知，对未来的期望并不是生搬硬套地复制过去，而是要在我们清晰的认知中发掘出我们还不清楚的问题。对于未来的展望取决于对过去的回首。这类研究的目的可被称之为对“开始的开始”进行研究。尽管这类初始先于一切的开始，但对这类初始的探究能够预示未来。出于这个原因，路易斯·I·康也将这种初始称为“永恒之初”，在永恒之初的那一刻的自然，才是对人类而言真正的自然。他说，“我试图带着对未来的预测来审视我的设计”。康认为正是那些尚未说的、尚未完成的未来“赋予了人们生命的火花”。但我要再次强调，这里所说的是“康的建筑”，也就是康的使命是由那个特定城市中的特定时期所赋予的。我们必须根据建筑的具体情况——选址、项目、结构类型等——展开设计。随后将会产生不可避免的矛盾：对初始的探索是在当前的背景下展开的。建筑的研究、设计和建造都应在具体情况下具体分析。在相同的背景下，对于初始的探索能够预测未来，而这种未来只有在时间中才能找到答案。LAF

4. 英国威尔士大教堂
4. Wells Cathedral, UK



^① 路易斯·I·康曾说：“我收藏了关于英格兰历史的书籍。我喜欢书中描述的残忍。我共有8卷书，而我只读了第一卷。但仅仅是这第一卷也令我常读常新。然而，我真正想读的是尚未写出的‘第零卷’。历史不可能始于它已然存在之时——我对已经开始、正在开始和将会开始的万事万物的初始都充满尊敬。”

elements. As found, they are “pre-qualified” for the purposes of building. But once they have been delivered to the construction site they are then modified through construction techniques (cutting, sizing, shaping, polishing, and so on). Through these means they are “qualified” for particular purposes. And once the work of construction has been finished, once inhabitation begins and then continues, those same materials are “re-qualified” through use, also by accident, sometimes on purpose, in order to fulfill changed needs more adequately.

Although I have presented these three chapters or kinds of material change in sequence, the truth is they overlap or interlapse — the same forces that pre-quality also re-qualify construction materials. Yet, my main point is that this process is without end: the building’s materials are continually changing — even if they do so slowly. Qualities do not exist in themselves, they always emerge in specific situations, of formation (natural or artificial), of construction (wet or dry), of use (planned or unforeseen), and of acclimation (illumination, oxidization, saturation, bleaching, and staining). This point is difficult because of our dogmatic, although moralizing, commitment to “the things themselves”. The interactions between a given element and the conditions of its appearance disclose the tendencies or potentialities of each. This is why qualities do not exist in themselves — they exist in the world — and why they change over time (Fig. 3).

4 Materials in Time

All manner of ambient phenomena — weather, use, accidents, additions, and alterations — saturate the building’s surfaces with traces of what happened in the past. These marks also serve as invitations to comparable events in future. For example, when you approach an old building and walk up its entry steps you can plainly see that for centuries others have followed the same path, up the center of the stairway, for example, short-cutting the width of the landing, pausing on the arrival step. Not only have the steps of hundreds before you polished the stone, but they have reshaped its profiles, “dishing” the

treads (Fig. 4). Traces of this kind testify to movement and therefore time. Implied in that record are human interests, orientation, and desires.

5 Design Involves both Recollection and Anticipation

Continuance without change is impossible in architecture, and individual buildings, like places, are partly defined by the “no longer” and “not yet” of their history. Architectural reality appears in time, works last because they change.

The primary task of design development is to acknowledge this backward and forward movement, the project adheres to the professional and cultural conditions that preceded it and its dependence on future transformations that cannot be anticipated. Louis I. Kahn once called the design of this sort search for volume zero or minus one^①. Each problem in the design studio was an opportunity for students and teachers to begin again, to reverse the roles of the clear and the obscure, not to make the second the preamble to the first but to discover what is unclear in what seems so obvious. Moving forward depends on going backward. The target of this kind of inquiry can be called “the beginning of the beginning”. While radically preliminary, this kind of start anticipates its end. For this reason he also called the beginning an “eternal confirmation” that reveals what is natural to man. “I try to look at my work”, he said, “with a sense of what is forthcoming”, the yet not said and yet not made, for that, he advised, is what “puts the sparks of life into you.” But again, the subject matter is “his work”; which is to say, the set of tasks he was given in those days, in that city. There can be no approach toward an architecture apart from explorations of the concrete problems of a particular building — its location, program, kind of construction, and so on. Here, then is the unavoidable paradox: the search for beginnings unfolds in the midst of current conditions. Research, design, and construction find their foothold in the middle of things; but in that same context the seek beginnings that anticipate ends, which can only be known, of course, in time. LAF

^① Louis I. Kahn said, “I have, in my place, books about English history. I like the bloodiness of it. I have one set of eight volumes. I read only the first volume, and of that only the first chapter, in which each time I see something else. But really, I am interested only in reading Volume Zero, which has not been written.... History could not have started in the places they speak of.... Of all things, I honor beginnings. I believe, though, that what was has always been, and what is has always been, and what will be has always been.”