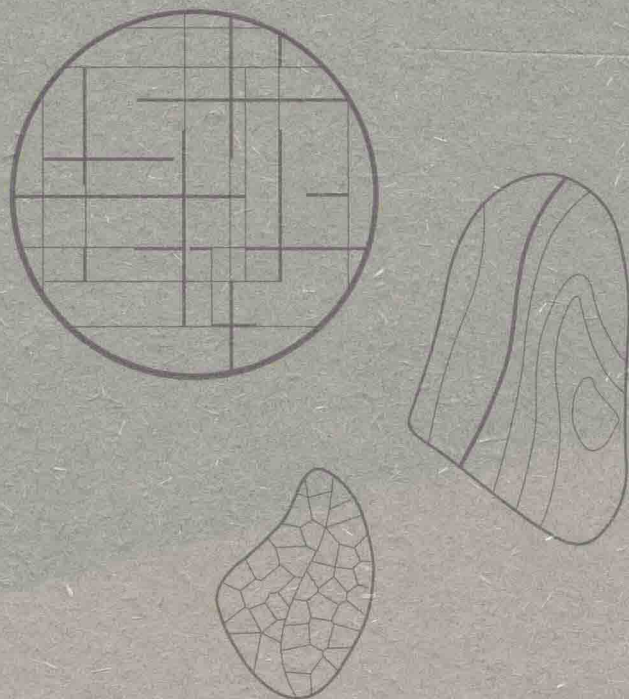


蔓·设计

Organically-Permeated Design

王振军 著



自然场力 / Natural field force

有机物态 / Organic state

深层次建构 / High-level construct

中国建筑工业出版社

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蔓设计

文 / 王振军

关键词：蔓；蔓延；蔓设计；有机；有机物态与有机建构；自然场力；浅层次与深层次的建构；拓扑心理学；有机建筑与新有机建筑；建筑的可持续性

一、概念提出的背景及其涵义

1.1 问题的提出——理念与方法

对于大多数建筑师来说，职业生活就是这样，眼看着整天忙忙碌碌，人就像在生产线上一样，图纸在一套套地发出去，城市却一天天地在平庸中沉落，而你被无尽的、各式各样的纷扰包围着，什么也做不了，只能拿着心中偶像的作品集发愣，或者等待着一场逃离。

2009 年成立工作室以来，我就一直在设想从此摆脱上面所说的状态，不再像往常做常规项目那样，而可以进入一种研究、思考而后实践的状态，全情投入、从容不迫地去完成自己喜欢的项目，不太容易被紧迫的时间和其他因素所打断，从而能把对项目的哲学思考、建筑学意义上的追求完全贯彻到项目的全过程，实现一个个完成度相对较高、较少存在遗憾的作品。由此，我开始琢磨是否有一个更凝练的说法用以秉承，同时能够把这种诉求清晰地表达给团队甚至甲方。

带着这个问题，在一次工作室的务虚会上大家进行了一番讨论。首先就有同事发言，“好的设计一定是在放松的、深入的状态中循序渐进的，但又不是简单的慢慢设计，在目前的中国设计生态下，原本也不允许建筑师慢慢地做设计”。“慢”字进入了讨论的话题中，的确，我们不可能慢慢地设计，但是需要让理念蔓延或者说延伸到始终的设计。经过 20 年高速发展城市建设，“快餐式”的设计出来的建筑充斥着城市各个角落，城市需要我们拿出更高完成度的作品、客户也希望我们拿出较以往更加精致的成果，并且我们内心也渴望精雕细琢出无愧时代的作品，以期能在未来更高水准、更严酷的市场竞争中赢得尊重。

提到 m à n 延中的“m à n”字，在新华字典中有曼、漫和蔓三种说法，分别意味着直线、平面和立体三种扩展状态，毫无疑问，立体化的“蔓”更能贴切地表达建筑师的想法。

“蔓”呈现的有机物态和生命力恰如其分地与工作室一直以来所秉

持的、以赖特为代表的有机建筑理论为发端而又不断被丰富的有机建构理念相契合。

由此看来，“蔓设计”的确很贴切地表达了工作室对建筑创作在理念和态度上的诉求。

1.2 蔓设计的涵义（全书文中提及的“蔓设计”同书名“蔓·设计”）

1.2.1 蔓 —— 有机物态与有机建构—— 一种理解自然、看待自然、介入自然的态度和方式，一种设计哲学。

这的确不是一个新概念，而是一个从赖特以来被不断丰富的理论。当我们俯瞰每个项目的基地，或仔细观察其中的一树、一叶、一石的纹理，不难发现其中充满了自然力的和谐统一。世上的一切技术和艺术形成皆可从自然界的各种生物存在形式中推演出来。但是人类却总自诩为世界上最完美的结构，总苛求世界上的一切事物都完美起来，尤其在今天，人类的能力已无法控制地膨胀起来，使这种追求完美的欲望变得更为强烈。

建筑作为人类活动的一种产物，充分地反映了人类的这种活动规律，城市和建筑这种人工物态正是人类在不断追求和探索完美中发展起来的。不幸的是建筑和城市在显示人类力量和伟大的同时，当下结果却并不令人满意，建筑这一人工物态和自然环境越来越呈现出矛盾和对抗，而且这种对抗还在呈现出加剧的状况。自然创造了人类，人类又创造了建筑现代化的城市以及现代生活。但不幸的是，现代生活使我们越来越远离了自然并招致对自然的无数曲解，其结果是使我们失去机会来把握这一能量的本质。

法国科学家克洛德·阿莱格尔(Claude All è gre)在《城市生态，乡村生态》一书中写道：“……现在的人类必须明白，开采的时代结束了，展现出来的是一个管理与保护的时代，对抗的时代过去了，



图 1：自然场力

展现出来的是和睦的时代。”

（1）“蔓设计”的有机建构理念

毫无疑问，人类又到了需要认真审视建筑与自然关系的时候。建筑哲学上出现了“回归自然”的热潮，但有两个倾向值得我们警惕，一是有的建筑师随意套用钱学森的“山水城市”，无论什么规模建筑都直接处理成山水样子的做法，二是肆意冠以“绿色建筑”“建筑节能”的名号。

“蔓设计”的有机建构理念崇尚立体化地去实践我们与自然的这种相处模式而不是表象化的模仿（也许一个方盒子在某地某时是有机的）和机械化填充，因为大自然本身就是一个极为复杂而有机的系统，出于成本和情感的原因建筑师应继续发挥人类简化和抽象的本能。因此基于有机建构理念的“蔓设计”就应是一个面向未来的、开放的、不断丰富的理论系统。

（2）自然的有机物态和人工的有机物态的共同特点——多元、有机、深层次、系统性

①有机的涵义：首先是指形成一个复杂的实体，该实体的整体比各个单独的部分更为丰富，而各部分也具有因其参加了整体才有生命的特征。其特点是整体性和生命性。

②有机物态关系的定义：物态之间应该是各具个性，而又共存于某种因素的联系之下。如自然物态在各种场力（包括阳光、风、雨、雪、热、冻、地球引力、地震力等力）的作用下所呈现的有机状态，也指一种有机物态自身发展的规律（生、老、死、再生）（图1）。

③人工物态（建筑）作为一个后来者，一旦介入自然界就应该与自然界已有的有机物态发生关系，这种关系处理的质量取决于建筑师，需要建筑师借助自己的知识、灵感和智慧去进行，从而与既有物态保持一个有机物态关系而不是生硬或疏远的关系。

（3）建筑的可持续性概念的厘清

- ①这不是一个口号，它主要强调思想和技术，是一种全面的建筑观，不是一个建筑流派思想，不纯粹强调形象和风格。
- ②既要考虑当下又要兼顾未来的项目全生命周期。
- ③它是指项目建设完成的全过程，而不仅仅指设计阶段。
- ④始终要思考怎样借助自然的恩惠，对一切自然资源加以充分利用。

1.2.2 蔓设计方式——一种持续地将设计理念贯穿项目始终的工作方式

（1）蔓设计，不是慢设计，是蔓延始终的设计——设计理念贯彻始终的思考、工作方式和手段。

（2）蔓延全过程：从策划、规划、单体方案、初步设计、室内设计、景观设计、施工图绘制、施工监控等全过程贯彻。

（3）蔓延全手段：从二维到三维、从平面化图纸到立体化模型……全方式的推敲与优化。

二、分析与思考

2.1 心理因素与有机物态关系

2.1.1 拓扑心理学（Topological Psychology）的启示

提到人与环境的关系问题，必须应涉及拓扑心理学创建人德国心理学家勒温（Kurt Lewin）提出的公式 $B=f(PE)$ ，认为行为（B）等于人（P）和环境变化系数（E）的函数，有些事物吸引人，具有引值（正的原点值），是人所愿意接近和取得的；有些事物排拒人，具有拒值（负的原点值），是人所不愿意接受或拒绝的。

2.1.2 如何从建筑建构关系的基本构成特点出发来满足人的心理需求，以及心理因素对物态关系反映的复杂性与不定性的诉求，是我们在创作中要思考的问题。局部应尽可能强调其应有的特性，而整体上强调

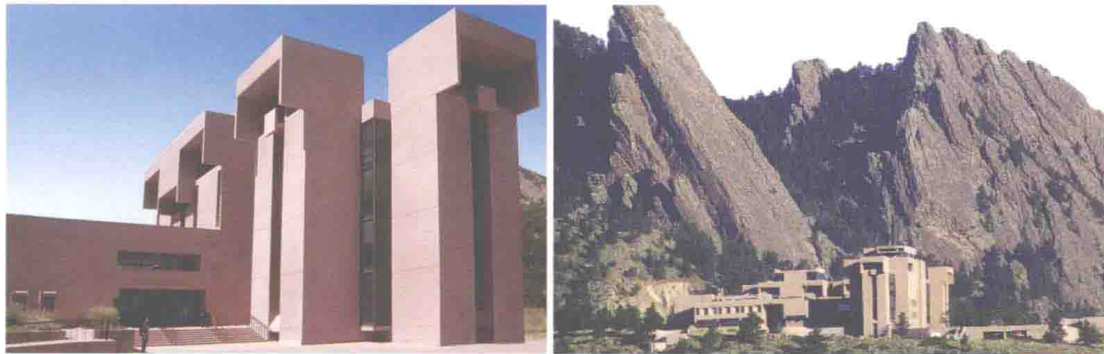


图 2：美国国家大气研究中心（建筑师：贝聿铭）
（图片来源：美国国家大气研究中心官网）

相互间组合关系和排列方式，也就是我们这里所说的建筑建构关系上的有机物态关系。

2.2 对现在与将来要解决的问题的探讨

2.2.1 现代主义方盒子的局限性及其解体模式

人类对自然物态简化抽象的本能和技术的进步使这种能力达到了极限，而现在需要回归去追求有机物态。

（1）解体模式产生的必然性

由“现代建筑原则”而导致的千篇一律及有机物态带给我们的启示，建筑的确具有开始多元化的必要性，科技和思维的发达更是为这种多元化带来保证。各种原则带来统一的同时也与科技和思维的发达带来的多元化相矛盾、与丰富的自然界相抵触，人类渴求自身真正永远置身于流变的、美好的有机物态关系之中。

（2）从有机物态关系考察所想到的问题

有机物态关系产生于自然场力、人类改造环境的能力及心理因素产生的场力的高层次、多方位的结合。据此，建筑设计应是，在寻找维系因素（各种场力）并思考未来发展变化的前提下强调个性。我们的创造只有维系在这种场力中才会有活力。贝聿铭先生当年设计美国国家大气研究中心时的做法就是一个范例（图 2）。为了了解基地，他曾携带睡袋在基地过夜并开车在沿途附近的印第安岩石构造遗址考察，从而为设计汲取灵感。西扎（Álvaro Siza）的博阿诺瓦餐厅（图 3）通过对场所特有的地貌和微型地理学的形式构成进行提炼，建筑的平面、体量和屋顶形式源于对布满岩石的海角场地的细致研究。他的建筑能让人强烈地感受到是从其场所中抽取出的各种向量的自然场力集合并相互作用的结果。

（3）对传统的地方建筑和对自然简单化模仿倾向的批判

由于科技水平落后，传统的地方建筑是完全屈从于自然场力的一种被动消极的适应，需要在其中注入当代科技的能量加以改进，例如现在有些建筑师搬来几十年前的生土做法来充当设计的噱头，这种既浪费人力又损耗土地资源的做法令人错愕。而形式化地对自然物态的模仿更是对有机物态建筑的误读。这种“强人所思”的做法是一种“机械式的”“浅层次的”创作态度。

2.2.2 对中国建筑发展的思考

（1）当今及未来建筑的建构关系应是主动、积极的有机物态关系的建构。当今先进的技术和高度发展的哲学使我们有能力去剖析各种有机关系的产生、变化和发展，并积极思考怎样使其交融于建筑。

（2）对转换“场力因素”的思考

利用不同基地“场力因素”的变换，创造积极、主动的、丰富的、具有有机物态关系的建筑。思考原则虽然一致，但由于基地的千姿百态，不必担心设计成果会趋同。

（3）深层次有机物态关系的思考

今天的人们已经具有透过表象观察事物的内在关系及规律的能力，甚至达到从“客体”到“精神”的超脱，而人类的这种能力展现在建筑创作上，就是对建筑建构关系深层次的思考，也就是在追求产生深层次的“物态效应”的场力因素影响下的有机物态关系。

2.2.3 对中国建筑设计的议论

（1）中国当下的建筑乱象。建筑作品的首要服务对象不再是客户而是公众和社交媒体，每一个试图在舆论中生存的建筑师将受到考验，建筑从未像今天受到关注，可谁也不知道这意味着什么？“……建筑师只是设计风格的印钞机……建筑学的评价体系变得诡异而且不可捉摸，建筑师既可是巫师也是道士，建筑师的观念只是房地产的炼

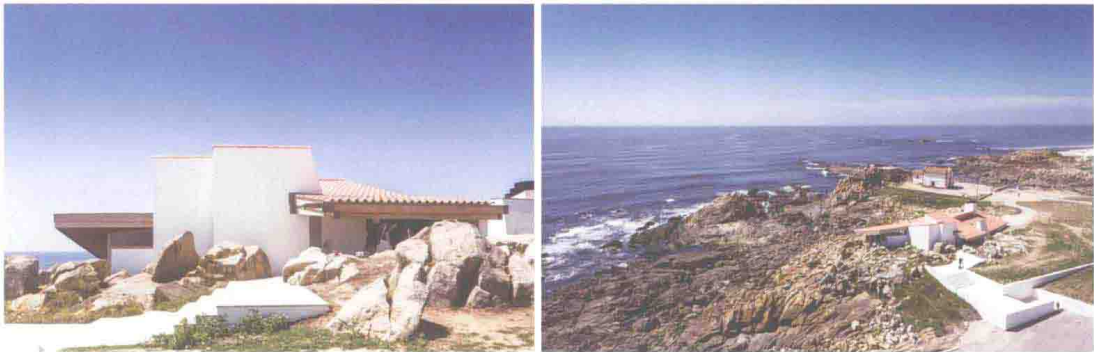


图 3：博阿诺瓦餐厅（建筑师：西扎）

金术”，“当众多建筑理论家相信建筑形式的不确定性是新建筑的潜在因素时，同样多的时尚元素也将在建筑中使用来诠释时代的意义”。

（2）只有中国人才能创造中国人自己的建筑，我们自己应立足当代去造就具有现代感、对当代中国社会变化做出回应的中国建筑。目前，中国当代创作的一些建筑作品确实呈现出“以他人之新为新”、“鹦鹉学舌”的现象，技巧和手法固然重要，但由于缺乏理念和原则，长此以往会使自己永远停留在技法的层面，而最终迷失在西方的评判标准中。造就当代中国建筑的责任还是在中国建筑师的肩上。

（3）建筑学的真正创新还未到来，因为还没有一种普遍知识主宰我们。但建筑学的基石至今未动，我们仅处在语言创新和手段创新的时代。地方（域）主义解决不了普遍问题，所以是虚假的地方（域）主义。

2.3 对赖特（Frank Lloyd Wright）的有机建筑和戴维·皮尔森（David Pearson）的新有机建筑的思考

2.3.1 两者理论比较

赖特的有机建筑理论	戴维·皮尔森的新有机建筑理论
1930 年代提出	1980 年代提出
1 强调建筑与自然的和谐统一	1 强调为人而建造
2 建筑自身的有机生长	2 有机建筑是自然能量流动的结果
3 相较于古典建筑的突破	3 不断融合又再生的轮回之旅
缺乏对人、自然及建筑关系的哲学探索	还有待进一步充实

赖特把有机建筑冻结和关入了静止的时空观里而没有进一步发展。这个在其城市作品的应对中显得与环境格格不入。本质都是一样：对

自然的崇尚和对生命的礼赞。

2.3.2 希望它不是一个口号，不应停留在表层的形式和视觉效应追求上。

2.3.3 有机建筑理念整体上表现出一种“复归”的趋势，但这种复归不是简单的还原，而是在更高层次上的否定之否定的发展。

三、结语

工作室提出的“蔓设计”的概念是受外在及内在因素启发而产生的关于设计理念和工作方式的工作室层面的哲学总结和思考，在此很难说清楚这一总结是先后于行动。希望它的提出能够在现在如此多元和混乱的设计思潮中，为整个团队带来创作上更为清晰、自由并且坚定的指向，并使之成为设计理念的思想动力和源泉。它的内涵还有待同仁们进一步地去发展、丰富、充实和完善，并将它化作一种习惯融入、蔓延到每个建筑师设计生活的全过程当中，最终做出具有较高完成度的、与固有环境一起构成有机物态的建筑作品来。

写出来是为了厘清世事，也是为了澄清自己的困惑，更是为了在纷杂的建筑江湖中不要乱了我们自己的方寸。把“蔓设计”梳理到这里，心中好像清爽了很多，感觉自己的职业生涯好像又要重新开始。

2017.8.30 于北京五路居

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Organically-Permeated Design

Text / Wang Zhenjun

Keywords: tendril, permeate, organically-permeated design, organic, organic state and organic construct, natural field force, low-level and high-level construct, topological psychology, organic architecture and new organic architecture, sustainability of architecture

I. The Context in which the Concept is Proposed and Its Implication

1.1 The problem introduction – idea and method

For most architects, the professional life is just like this: they rush and rush so much all the day that they seem to be on the production line, drawings are released set after set, yet the city is sinking down in mediocrity day after day. However, besieged by all sorts of distractions, you can simply do nothing but stare blankly at the works collection of your idol, or wait for a flight.

Ever since the establishment of WZJ Studio in 2009, I have been imaging that I am able to get rid of the foresaid status from then on. I wish, instead of being indulged in undertaking conventional projects as usual, that I am able to enter a status of research and thinking preceding practice, in which I am able to be fully devoted to, and to take my time accomplishing my favorite projects, without being easily disrupted by stringent time and other factors, under such circumstances it is more likely for me to carry all my philosophical reflection on projects and architectural pursuit throughout the entire process of the projects, in a bid to accomplish works with relatively higher degree of completion one by one, leaving less regret behind. For this purpose, I have been considering whether there is a brief and refined term to follow. Meanwhile, I can clearly convey the appeal to my team, and even the clients.

This question is discussed by the staff of the Studio at a meeting on matters of principle. A colleague of mine suggests that a good design must be accomplished progressively in a relaxed and indulged status, yet it does not just mean a slow design. In the current design ecology in China, architects are not allowed to do design slowly in the first place. "Slow" becomes a topic of discussion, indeed, it is impossible for us to do our design work slowly, but we need to deliver our design that enables us to permeate or stretch the concept throughout the whole design process. After 20 years of speedy development in urban construction, buildings designed in snack-styled manner dominate every corner of the city. Meanwhile, the city requires us to come up with works of a higher level of completion. Likewise, our clients also hope that we deliver submittals that are more delicate than our previous works. In addition, we yearn, from the bottom of our hearts, to carve out works that are worthy of the times, in order that we could win respect in more fierce market competition in the future.

As for the "mǎn" in "mǎn 延" (that is, to permeate or stretch), there are three words, "曼", "漫" and "蔓", according to the authoritative Xinhua Dictionary, referring to the status of extension in the linear, planar and stereoscopic dimensions, respectively. It is unquestionable that the three-dimensional "man(蔓)" is the right

character to pertinently express the idea of an architect.

The organic state and vitality presented in "蔓" (meaning a tendril vine as a noun, and to permeate in three-dimensional manner as a verb) are in perfect conformance with the concept of organic construct that the Studio has been following since establishment, that starts with the organic architecture theory represented by Frank Wright, and that has been constantly enriched.

By this token, "organically-permeated design" perfectly expresses the Studio's appeal in terms of concept on and attitude to architectural creation, indeed.

1.2 The implication of organically – permeated design ("蔓设计" mentioned in this book is the same with "蔓·设计" in the title)

1.2.1 Permeated – organic state and organic construct – a manner and attitude to understand view and intervene in nature, a design philosophy.

Indeed, this is by no means a new concept, but it is a theory that has been enriched constantly since Frank Wright. When we overlook every project site, or carefully observe the texture of a tree, a leaf and a stone, it is not difficult for us to find that they are full of harmony and unity of the identical natural force. All the techniques and art forms in the world can be derived from the existence forms of various creatures. However, humans always claim to have the perfect structure in the world, and demand everything in the world to be perfect, especially in the current time, when human capabilities have swollen uncontrollably, which makes the desire to pursue perfection even more vehement.

As an outcome of human activities, buildings fully reflect the laws governing this kind of human activity, and cities and buildings, as an artificial state of matter, have developed in human's pursuit for, and exploration of perfection. Unfortunately, buildings and cities, while displaying the strength and greatness of humans, also exhibit unsatisfactory status of development: as an artificial state of matter, buildings appear to be in contradiction and confrontation with natural environment, and the confrontation tends to exacerbate. Nature creates humans, who in return create buildings and modern cities and modern urban life. Modern life, unfortunately, alienates us from the nature more and more, which incurs countless misinterpretations of nature, and consequently, we miss the chance to grasp the essence of the energy.

French scientist Claude Allègre writes in *Ecologie des Villes, Ecologie des Champs (Ecology of Cities, Ecology of Countries)*, "... The contemporary humans must understand that the era of mining has ended; what is before us is an era of management and preservation. The era of confrontation is over; what is ahead of us



Fig. 1: Natural Field Force

is an era of harmony. "

(1) The organic construct concept in "organically-permeated design"

Undoubtedly, it is high time that humans need to earnestly examine the relations between architecture and nature. There is a surge of interest in "back to nature" in architectural philosophy, but we should be vigilant against two tendencies: one is that some architects mechanically apply the concept of "city with hills and waters" proposed by Qian Xuesen: as a result, hills and waters are applied indiscriminately regardless of the scale of the building; the other is that "green building" or "energy-efficient building" is labelled wantonly.

The organic construct idea in "organically-permeated design" advocates that we apply this pattern of getting along with nature in the all-around way, instead of imitating superficially (a square box might be organic at a certain place in a certain time) or filling it up mechanically, as nature itself is an extremely complicated and organic system and architects should intuitively employ human capacity to simplify and refine for the reasons of cost and emotion. Therefore, the "organically-permeated design" based on the organic construct concept should be a theoretical system that is future-oriented, open, and constantly enriched.

(2) The common features of the natural organic state and artificial organic state—diversified, organic, high-level, and systematic.

① The implication of organic: first it refers to a complex entity, the entirety of which is richer than every separate component, and each component is characterized by the feature that it would become organic just because it joins the entirety. So the typical attributes are entirety and property of life.

② Definition of organic state relations: each state of matter has its own distinctive individuality yet they co-exist in relation with certain factors, e.g. the organic state of matter presented by the natural state with the effect of various field force (including sunshine, wind, rain, snow, heat, freeze, gravity, and seismic force, etc.). It also refers to the law governing the self-development of an organic state of matter (that is birth, aging, death, and rebirth). (Fig. 1)

③ As a late-entrant, the artificial state of matter (buildings) should be related with the existing organic state of matter in the nature once it is involved in the nature; the quality of the relations depends on the architects: it requires the architects to leverage their knowledge, inspiration and wisdom to handle the relations, so that it maintains organic state relations, instead of stiff or isolated relations with the existing state of matter.

(3) Clarification of the concept of architectural sustainability

① This is not a slogan. As it primarily emphasizes thought and technology, it is an

overall outlook on architecture, rather than the doctrine of an architectural school, as it does not stress image and style.

② Both the current moment and the future of the whole project life cycle should be taken into consideration.

③ It refers to the whole process of the project from planning throughout completion, not just the design stage.

④ You need always consider how to make full use of all the natural resources with the grace of nature.

1.2.2 Organically-permeated design — a way of working that persistently applies the design concept throughout the project

(1) Organically-permeated design is not slow design, but the design that applies the philosophy all the way round — the way and means of thinking and working that carries the design concept throughout the design process.

(2) Permeating the whole process: it applies throughout the whole process, in programming, planning, scheming for an individual building, preliminary design, shop drawing design, interior design, landscape design, field service, etc.

(3) Permeating all the means — scrutinizing and optimizing in overall modes, from planar to 3-dimensional, from plane drawings to 3-D models ...

II. Analysis and Consideration

2.1 The relations between psychological factors and organic state of matter

2.1.1 The revelation of Topological Psychology.

When it comes to the question of the relations between the person and environment, we must refer to the equation $B=f(PE)$ developed by Kurt Lewin, a German psychologist who founded Topological Psychology. It states that behavior (B) is a function of the person (P) in their environment (E). Something attracts persons with attractive value (positive atomic value), which is what people are willing to approach and obtain; something rejects persons with rejective value (negative atomic value), which is what people are reluctant to accept or reject.

2.1.2 The issue that we should take into consideration in our design creation is how to meet men's psychological needs from the fundamental structural features of constructive relations of architecture as well as how to meet the needs of the complexity and uncertainty of state to matter relations reflected in psychological factors. The distinctive features should be stressed in local areas, but on the whole the focus should be on composition relationships and arrangement pattern, i.e. the