



凤凰文库·设计理论研究系列
李砚祖 主编 张黎 执行主编

KLAUS LEHMANN

Design Teaching— Teaching Design



〔德国〕克劳斯·雷曼 著
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要支撑起一个强大的现代化国家,除了经济、政治、社会、制度等力量之外,还需要先进的、强有力的文化力量。凤凰文库的出版宗旨是:忠实记载当代国内外尤其是中国改革开放以来的学术、思想和理论成果,促进中外文化的交流,为推动我国先进文化建设和中国特色社会主义建设,提供丰富的实践总结、珍贵的价值理念、有益的学术参考和创新的思想理论资源。

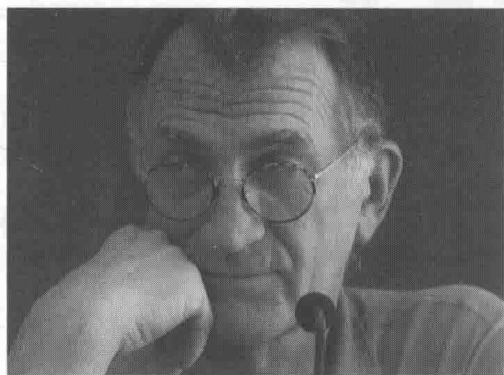
凤凰文库将致力于人类文化的高端和前沿,放眼世界,具有全球胸怀和国际视野。经济全球化的背后是不同文化的冲撞与交融,是不同思想的激荡与扬弃,是不同文明的竞争和共存。从历史进化的角度来看,交融、扬弃、共存是大趋势,一个民族、一个国家总是在坚持自我特质的同时,向其他民族、其他国家吸取异质文化的养分,从而与时俱进,发展壮大。文库将积极采撷当今世界优秀文化成果,成为中外文化交流的桥梁。

凤凰文库将致力于中国特色社会主义和现代化的建设,面向全国,具有时代精神和中国气派。中国工业化、城市化、市场化、国际化的背后是国民素质的现代化,是现代文明的培育,是先进文化的发展。在建设中国特色社会主义的伟大进程中,中华民族必将展示新的实践,产生新的经验,形成新的学术、思想和理论成果。文库将展现中国现代化的新实践和新总结,成为中国学术界、思想界和理论界创新平台。

凤凰文库的基本特征是:围绕建设中国特色社会主义,实现社会主义现代化这个中心,立足传播新知识,介绍新思潮,树立新观念,建设新学科,着力出版当代国内外社会科学、人文学科的最新成果,同时也注重推出以新的形式、新的观念呈现我国传统思想文化和历史的优秀作品,从而把引进吸收和自主创新结合起来,并促进传统优秀文化的现代转型。

凤凰文库努力实现知识学术传播和思想理论创新的融合,以若干主题系列的形式呈现,并且是一个开放式的结构。它将围绕马克思主义研究及其中国化、政治学、哲学、宗教、人文与社会、海外中国研究、当代思想前沿、教育理论、艺术理论等领域设计规划主题系列,并不断在内容上加以充实;同时,文库还将围绕社会科学、人文学科、科学文化领域的新问题、新动向,分批设计规划出新的主题系列,增强文库思想的活力和学术的丰富性。

从中国由农业文明向工业文明转型、由传统社会走向现代社会这样一个大视角出发,从中国现代化在世界现代化浪潮中的独特性出发,中国已经并将更加鲜明地表现自己特有的实践、经验和路径,形成独特的学术和创新的思想、理论,这是我们出版凤凰文库的信心之所在。因此,我们相信,在全国学术界、思想界、理论界的支持和参与下,在广大读者的帮助和关心下,凤凰文库一定会成为深为社会各界欢迎的大型丛书,在中国经济建设、政治建设、文化建设、社会建设中,实现凤凰出版人的历史责任和使命。



Klaus Lehmann

雷曼教授

The book, DESIGN TEACHING - TEACHING DESIGN is written by a German design educator well known in China. As a frequent guest lecturer he has taught at many universities in the PRC from 1985 until now and devotes his bilingual book to the Chinese audience.

The book is intended as an aid to teaching and an encouragement to one's own learning. It is about basics, methodology, educational theory and reflects on cultural differences and global implications.

But most of all, it is intended to offer lively reading to anyone concerned with design and the shaping of our world.

关于本书

本书由一位驰名中国的德国设计教育家编写。作为一位客座教授，克劳斯·雷曼教授从 1985 年至今，数十次在国内多所大学执教。现在他将这本双语教材奉献给广大中国读者。

本书的主要内容包括基本原理、方法论、教育理论以及基于全球化的文化差异的影响。该书作为教学的辅助旨在帮助和激励教学者和自学者。

然而首先，这本书会为那些从事与设计和塑造世界相关工作的人们提供生动的阅读体验。

The absence of a long industrialization process in China means the absence of corresponding cultural awareness. The industrialization in the western world fundamentally had changed the whole social mechanism and awareness. The system of scale production and collective task allocation required people's obedience to the social rules and regulations, but also required people to play their own role and to work in-depth, to do things in a systematic manner. The industrialization in China, though a grand achievement, failed to form its own cultural awareness in the social mechanism. The late mover advantage helped China achieve rapid economic development, but a frivolous and fickle atmosphere also embedded in the society. The enthusiasm on 'how to do' and 'how to be quick' was running too high for people to slow down and think about 'how it should be done' and 'how to uncover, ponder and judge a problem'. The current China is undergoing a turbulence of rapid development since the prudent and progressive approach does not bring good investment return. When the social industrialization is yet to complete, the quick development of information technology society also leads to the process of informatization in the society. The current Chinese society is like a pot of casserole of concepts with the residual awareness of the deeply rooted farming culture, a strong stimulus of industrial culture on objects, and a ponderation overtaste of the representation of information culture.

Industrial Design is going through a major evolution, from forms and packaging as the purpose to function as the subject; from technology as the subject to requirement as the subject; from marketing as the subject to environmental protection as the subject. A 'Green Revolution' is on the way to redesign the design. Design will undertake the 'crucifix' of sustainable development of humanity, to enlighten people that the purpose of design is to serve the requirement. Hence a change of the definition of design is necessary, i. e. the 'designing industry' for the 'shared service design' will be the future direction, to ascend it from 'simple creation' to 'strategic planning', to promote the idea of 'using but not necessarily possessing'. However, a money-driven trend in the design community means commercial promotion and market effect, presenting new challenges to industrial design. Plagiarism and counterfeit is not rare. Kietsh, 'fashion' and luxury products in the name of 'market trend' can be found everywhere. Some designers have descended to

由于中国社会没有经历长时间工业化的进程,也就没有形成相应的工业化的文化意识。西方国家的工业化过程深刻地改变了社会的整体机制和意识,规模化的大生产、集合化的大分工体系是要求人们服从保证体制运转的社会规章制度,又要求人们各自遵守分工职守,还要求人们对于一些事物要深刻地钻研,以静下心来各司其职地、认真真地做一些系统性事情。中国社会的工业化虽然获得了很大的成就,可是社会工业化的文化意识并没有在整个社会运行机制中形成。中国利用自己的后发优势,取得了经济的快速发展,同时也滋生了一些浮躁的心态,人们处于整体的浮躁气氛之中,热衷于“如何做”和“怎样快”,很难静下心来思考“该做什么”和“如何发现、思考、判断问题”。就中国目前的情况来看,静下心来做些事情的投资回报率也不理想,所以整个社会都在快速发展的动荡之中。在社会工业化进程没有完成的时候,信息技术的快速发展又导致社会开始信息化的进程。中国社会如今是一个混杂体,既有根深蒂固的农业文化的残余意识,也有工业文化器物层面的强烈刺激,同时还在玩味着信息文化的表象。

当前世界范围中,工业设计正经历着从以形式、包装为目的,向以功能为主体的演变;从以技术为主体,向以需求为主体的演变;从以商业营销为主体,向以环境保护为主体的演变。人类正经历着一场“绿色革命”,设计被重新设计着……从人类可持续发展的高度审视,设计也将扛起人类社会未来不被毁灭的“十字架”,将需求的本质作为设计的目标——从“造物”转向“谋事”,“提倡使用而不一定占有”,这自然要调整设计的定义,即“分享型的服务设计”的“产业设计——DESIGNING INDUSTRY”是设计的方向。但是当今设计界又被利欲大潮的驱动下,商业促销及市场效应又给工业设计带来了新的挑战。抄袭、仿造亦不

the blind follower of the market, of their bosses, and of the commodity fever... This should be a wake-up call to us: what kind of design of a big developing country like China needs to produce a reasonable and healthy lifestyle for the future?

The survival and development of humanity not mere relies on the basic necessities like food and clothing. It is also about the sweat and callus from our hard work, the contact and understanding with people, the interaction and coexistence with nature, the fun, the sentiment and the emotion of the same pace and mindset during the participation, cooperation, recreation with others and, above all, the respect we have on all that exist. To forget about all these and throw oneself into competition in the hope of a skillful joy is an ignorant and irresponsible madness. After all, any social progress firstly comes with the progress in moral ethnics, in social customs and in political system, all of which belong to the scientific development and cultural advancement. This is the reflection on the development reality of the international community. This is also the reality faced by design.

Having its own intention and extension, design should not be trapped in the disputes between science and art. Design is the discovery, analysis, evaluation and resolution of problems in men's survival and development. Every milestone in human development is the negation of his recognition, and the negation of the 'name' and the 'appearance' human defined from different angles in different levels. New 'category' and 'term' will be created when, at certain stage, the artificial concept of 'category' and 'term' become an obstacle of our understanding on nature and society.

The objective of Design Education is to nurture an ability and intelligence of another kind, to build a 'structure' among concepts, mindset and knowledge system by the integration of science and art and establish a methodology. Design aims to discover, analyze, estimate and solve the issues in human's existence and development. After the establishment of the 'system of targets' of design, i. e. the clarification of 'how to do', all possible means and methods, including scientific ones and artistic ones shall be selected, organized and integrated truthfully and practically. Design is the intelligent

是罕见的现象。而以“顺应市场”为名的媚俗、“时尚”、奢侈产品也层出不穷。一些设计师成为市场的“尾巴”、老板的听差、商品狂欢的助产士……我们不得不反思：中国这个发展中的大国需要培养什么样的、为设计未来合理健康生存方式的设计人才？

人类的生存与发展除了衣食住行用物质享有以外，还有额上的汗、手上的茧，人与人的接触、谅解，与大自然的互动、共生，与他人一起参与、合作、改造、创造时产生的行动节奏、思想协调统一的乐趣、情感、情操，以及对一切存在事物的尊重。忘记这一切，投身于竞争，只期待取巧地获取享受，这是一种无知和不负责的疯狂。要知道，社会的任何进步，首先是品行道德、社会风俗、政治制度的进步，这都属于科学的发展和文化的进步。这就是目前国际社会发展现实反思，也是设计所面临的现实。

设计不应深陷于科学和艺术之争，设计有它自身的内涵和外延，设计是发现、分析、判断和解决人类生存发展中的问题。人类进步的每一里程碑都是对其认识水平之否定，也是从不同角度、不同层次对已制定的“名”、“相”的否定。当“分类”、“命名”这个人为的、阶段的观念阻碍我们认识自然和社会时，人类就会创造新的“分类”和“命名”。

设计教育是培养另一种能力和智慧——整合科学和艺术从观念、思维方法、知识到评价体系之间“结构”的方法论。设计是发现、分析、判断和解决人类生存发展中的问题。当设计的目标系统确立时，即需要怎样做的时候，就该实事求是地选择、组织、整合各种可能的方法和手段，科学手段和艺术手段都包含在内。设计是人类第三种智慧系统，其组成的子系统或要素含有科学和艺术。设计是人类为主动适应生存环境等外因系统从而进化形成的一个“新知识结构系统”，是人类重组

system uniquely possessed by humanity, whose 'sub-system' or 'elements' consists of science and art. Design is a 'new knowledge structure system' evolved from the 'system of external factors' such as man's adaptation to the external environment. It is human's 'intelligent creation' by the restructuring of survival structure.

The most distinctive feature separating mankind and other creatures is the ability to transform nature and create a second nature of 'artificial things', i. e. the social system of mankind. However, every invention, development and progress that mankind has achieved are made possible in the social context of that time, while humanity's material civilization of different nations, region, climate and times conform to the same laws of 'survival of the fittest' and 'a place for everything', and go through the same process of metabolism from production, circulation, operation and destruction in the social system. No creation or invention of the mankind can disobey this law, which is why we say 'men's creation of things is by the imitation of nature'.

Product is not just simply living goods or commodity in daily life; it is also a 'mirror' of the social relation and way of living at that time. The image of the product tells us who we are, how we survive, and how different we are. Product is the carrier of corporate activity, a reflection of men's spiritual culture and the objectification of humanity.

The complexity of design also shows in another dimension. Everyone is using the phone, but how different they are in terms of the appearance, the user interface and the ringtones! These objects are not just 'functional' products any more. As the outcome of the society, the time, and the culture, they enter the world of meanings and the world of emotions as symbols. The difference between all people is transformed into the difference between objects; the diversity of individuals (groups) is transformed into the diversity of products. The categorization of people is reflected in the categorization of objects. Products and corporate image are the best carrier for people's needs to pursue the externalization of novelty, variation and ego.

Besides the value of use and exchange, product is bestowed the value of

生存结构的智慧性“创造”。

人类区别于其他生物之最重要的特点是能改造自然,创造“人为事物”这个第二自然——即“人类的社会系统”。然而,人类社会的物质文明的每一发明、发展、进步无不寓于当时人类社会这个大背景之中,不同民族、不同地域、不同气候、不同时代的人类物质文明依然遵循“适者生存”、“各得其所”的规律,在人类社会系统中的生产、流通、使用、销毁等全过程中新陈代谢。人类的发明、创造不可能违背这个规律,这也是我们常说的“师法造化”的道理。

我们发现“产品”不仅仅是简单的生活用品或商品,它其实是当时所处社会关系、生存方式的一个“镜像”。产品形象在诉说着我们是谁,我们如何生存,以及我们之间的不同。产品是企业活动的载体,已成为人类精神文化的投射,是人类主体的客体化。

设计的复杂性还体现在另一个维度上。大家都在使用着手机,可从造型到界面再到铃声又是多么的不同啊!这些物已经不仅仅是“功能性”产品,它还是社会性、时代性、文化性的产物,通过符号象征进入了主体的意义世界与情感世界。人与人之间的差异被转译为物的差异;个人(群体)的丰富性被转译为产品的丰富性;人群的分类体系投射于物质的分类体系。人们在追求着新奇、不同或自我的外化,产品和企业形象正是这些需求最好的载体。

产品在使用价值与交换价值之外,还被人为地赋予了“符号”价值。符号价值表达着社会化的“企业形象”,物在诉说着我们是谁,我们如何经营、发展,以及我们之间的不同;表达了企业的社会地位,或它所存在的独特的经营理念、方式和文化。社会差异被“物化”,或称为“物化”了的社会关系。如果我们想了解一个企业是如何经营的,最好的办法就

‘symbol’ by men. The value of symbol expresses the socialized ‘corporate image, the social stance of the company, or its unique philosophy, approach and culture, while the object tells who we are, how we operate, develop and vary. That is to say, the social difference is ‘materialized’, or the ‘objectification’ of social relations. To know how a company operates, the best way is to understand its product image. ‘Product image’ is the social and cultural outcome that enters the world of meaning and emotions into the society as symbols.

We must teach the students to have correct design idea and strong design mentality, and that pure reliance on the skillful technique does not lead to successful design. Becoming a good designer is not only about professional knowledge and design technique, but also about the exercise of thinking and method during design practice. One work object shall not be viewed as a reference to categorize discipline or a professional area. But rather, we should guide students to creatively understand and summarize the issues from the outside to the inside, from one point to another, to practically and truthfully comprehend one case by the inference of other cases; to choose the target system of the matters under the actual context of the actual people or group, to truthfully and pragmatically select the technique, form, structure and marketing approach. Only by mastering the ‘theory’ that is not void, bluffing or derailed from the practice can we get rid of the current status of domestic processing industry, and escalate from ‘introducing’ to ‘digesting’, so that we can clarify the relations between the product type and quality; understand the gravity between design and production; comprehend the relations of innovation and brand, to truly embrace industrial design into our economic system, thus to improve the efficiency of China’s economic development and the stamina of companies, and ultimately provide us a foundation to build the civilization of Chinese style.

‘Design Basics’ is the anchor point of the design discipline, the basis of the ‘basics’; secondly, ‘Design Basics’ is an effective way to integrate professional design courses and knowledge such as the basics of form, the principle of functions, the basics of material, structure and technique etc. Moreover, ‘Design Basics’ is also the course of the ‘key’, in which the

是去读懂企业的产品形象。“产品形象”是社会性、文化性的产物,通过符号象征进入了社会主体的意义世界、情感世界。

身在高校作为工业设计的教师,我深深地感到,我国工业设计的落后,迫使我们必须先从认识上抓住设计的目的、目标系统是什么这个问题,然后才能知道如何培养学生和在职年轻设计师具备正确的设计观念、良好的设计心理素质,使他们懂得仅靠技术纯熟是不能使设计走向成功的。不仅要从专业知识和设计技巧方面来培养人才,更重要的是在设计实践中抓思维和方法训练。不是把某一个工作对象作为学科或者专门化的分类依据,而是引导他们创造性地由表及里、由此及彼、实事求是,举一反三地认识问题,归纳问题。根据真实的、实实在在的人或人群在实实在在的环境条件下所做的“事”之目标系统,“实事求是”地选择技术、选择形态、选择结构、选择营销方式。只有掌握了这种不是空洞的,不是虚张声势的,不是脱离实践的“理论”,才有可能尽快摆脱目前国内加工工业体系的状态,尽快从“引进”步入“消化”;尽快明确产品品种与产品质量的关系;尽快明白设计与生产之间的比重;尽快了解创新与品牌之间的关系;真正使中国的工业设计进入到我国的经济体制中来,从而提高我国经济发展的效率和企业的后劲,在这个基础上才有条件建立我们中国式的文明。

“设计基础”首先是整个设计学科的立足基点,是基础的“基础”;其次“设计基础”是整合形态基础、机能原理、材料基础、结构基础、工艺基础等课程知识与专业设计课程的有效途径;另外“设计基础”还是“钥匙”课程,其设计思维方法的训练贯穿于造型设计练习的始终,也是发现、分析、判断、解决问题能力训练的过程,是专业设计程序与方法训练的预习,是掌握系统论素质的准备,是理解“工业化社会机制”概念的实

exercise of design thinking runs through the whole process; the capacity of problem discovery, analysis, estimation and resolution can be trained; the professional design process and method training can be previewed. It is the preparation of mastering the system theory, the implementation of 'industrialized social scheme'. It is also the starting point to nurture the imagination of 'integration of knowledge and structure', and the experiment to make sustainable adjustment of industrialization.

Teachers should teach students the principle and elements of models, understand why the form exists; learn the logical relations of forms, its meanings and implications; grasp the dialectical relations of mutual-constraint, interaction and interdependency among modeling elements. Teach students use the principle of form composition according to its characteristics, location and circumstance; emphasize the ecology and sustainability of artificial form; truthfully restructure the elements of 'models' according to its actual condition to achieve the restructure of different 'objectives' (functions), thus to integrate into a new system, create new requirement and develop 'new species.' Restructure the elements of model, and achieve 'the innovation of knowledge structure' under the 'limitation' of recognition, is the essence of 'design' and the meaning of 'design thinking'. Teachers should nurture students' correct thinking method by using the principle of science and art; train their association-thinking in the process of discovering, analyzing, summarizing, and estimating problems, and allow them to coordinate assorted conflicts and limitations by using the elements such as principle, material, composition, technique and visual etc., so that they can propose 'modeling' ideas and master the ability of problem-solving comprehensively, truthfully and practically.

The application of design thinking process (phenomena and representation, conception and essence, appearance and abstraction, complexion and simplicity, association and creation, solution and evaluation) should be emphasized in the interaction between teaching and learning; students should know the basis and principle of modeling, the application of material technique, the rule and the research process of modeling. They should also have the capability to observe, analyze and summarize forms and grasp the