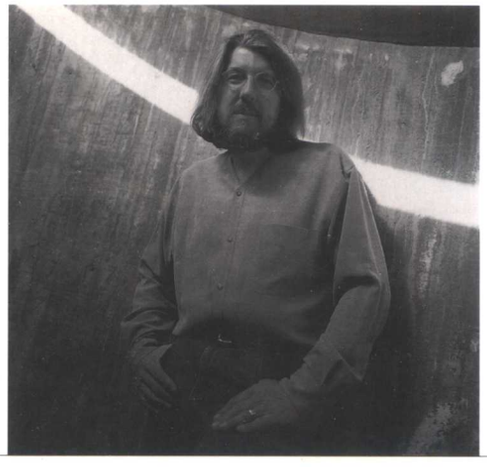
世界著名建筑师系列



本·范伯克尔
BEN VAN BERKEL

威廉.P.布鲁德
WILLIAM P. BRUDER

〔韩〕C3设计　吕晓军　译　张东辉　张少峰　审校

河南科学技术出版社

世界著名建筑师系列

01 弗兰克·欧·盖里　大卫·奇珀菲尔德　埃里克·范·埃格莱特
FRANK O.GEHRY / DAVID CHIPPERFIELD / ERICK VAN EGERAAT
02 安藤忠雄
TADAO ANDO
03 埃马纽埃尔·博杜安 & 洛朗·博杜安
E.& L.BEAUDOUIN
04 维尔·阿雷兹
WIEL ARETS
05 斯蒂文·霍尔
STEVEN HOLL
06 鲍姆施拉格 & 埃贝尔
BAUMSCHLAGER&EBERLE
07 墨菲西斯
MORPHOSIS
08 艾瑞克·欧文·摩斯　查尔斯·柯里亚
ERIC OWEN MOSS / CHARLES CORREA
09 诺曼·福斯特　伦佐·皮亚诺
NORMAN FOSTER / RENZO PIANO
10 彼得·埃森曼
PETER EISENMAN
11 理查德·迈耶　安托尼·普里多克
RICHARD MEIER / ANTOINE PREDOCK
12 本·范伯克尔　威廉.P.布鲁德
BEN VAN BERKEL / WILLIAM P.BRUDER

著作权合同登记号：图字16-2003-012

图书在版编目（CIP）数据

本·范伯克尔　威廉．P．布鲁德／〔韩〕C3设计编；吕晓军译．—郑州：河南科学技术出版社，2004.1
（世界著名建筑师系列）
ISBN 7-5349-3078-2

Ⅰ.本… Ⅱ.①C3…②吕… Ⅲ.①建筑设计－作品集－荷兰－代现②建筑设计－作品集－美国－现代 Ⅳ.TU206

中国版本图书馆CIP数据核字（2003）第088603号

责任编辑　王广照　　责任校对　李淑华
河南科学技术出版社出版发行
（郑州市经五路66号）
邮政编码：450002
电话：(0371)5737028
印刷：深圳兴裕印刷制版有限公司
经销：全国新华书店
开本：635mm × 965mm　1/16
印张：16.5
2004年1月第1版　2004年1月第1次印刷
ISBN 7-5349-3078-2/T · 607
定价：173.00元

世界著名建筑师系列

本·范伯克尔
BEN VAN BERKEL
威廉.P.布鲁德
WILLIAM P.BRUDER

〔韩〕C3设计　吕晓军　译　张东辉　张少峰　审校
河南科学技术出版社

Ben van Berkel

Diagrams and Force-fields / Bart Lootsma 8

Public
Pavilion for the Triennale of Milano 16
Intramural Centre for the Mentally Challenged, SWOZ II 18
Yokohama International Port Terminal 24
Rijksmuseum Twente, Conversion and Extension 28

Office
Congress Hall and Office Building in Düsseldorf 36
Director's Room, Dutch Institute of Architecture[NAI] 40
ACOM, Amersfoort 44
Company Center, Nijkerk 46
Karbouw Office and Works 50
REMU Electrical Substation 62

Residential
Möbius House, Het Gooi 72
Villa Wilbrink, Amersfoort 74

Bridge
Bascule Bridge and Bridgemasters House, Purmerend 82
Erasmus Bridge, Rotterdam 90

Urban Study
The Rubber Mat 98
Saksen Weimar Barracks 100
Zeeburger Island 104
Das Schloss, Berlin 108

William P. Bruder

Of Pragmatism, Poetry, and Place! / William P. Bruder 114
The Architecture of the Outsider / Richard Ingersoll 118
New Phoenix Central Library 132
Riddell Advertising 154
Deer Valley Rock Art Center 168
Temple Kol Ami 180
Cholla Branch Library 194
Mad River Boat Trips 204
CRB Mechanical Executive Offices 206
Townsend Residence Remodel 212
Cox Residence 220
Hill / Sheppard Residence 230
Theurer Residence 242
Murray Residence 250
Platt Residence 258

本·范伯克尔

图解和力场——本·范伯克尔的建筑设计风格／巴特·卢茨马 8

公共建筑 展览馆：米兰艺术三年展参展作品 16

SWOZ II 精神康复中心，阿姆斯特丹 18

横滨国际港口终点站 24

特文特赖克斯博物馆改扩建工程 28

办公建筑 杜塞尔多夫市议会大厅和办公楼 36

荷兰建筑学会会长办公室，鹿特丹 40

ACOM 办公楼，阿麦斯福特 44

公司中心大楼，内伊克尔克 46

卡尔博办公楼和工厂，阿麦斯福特 50

REMU 变电站，阿麦斯福特 62

住宅 麦比乌斯住宅，海特霍伊 72

威尔布林克别墅，阿麦斯福特 74

桥梁 开合桥和护桥警卫室，皮尔默伦德 82

伊拉斯谟桥，鹿特丹 90

城市规划研究 橡胶模垫——尤尼莱弗工业区改造方案 98

萨克森魏玛兵营的城市规划，阿纳姆 100

齐伯格岛，阿姆斯特丹 104

达斯施洛斯项目，柏林 108

威廉.P.布鲁德

论实用主义、意境和场所／威廉.P.布鲁德 114

“局外人”的建筑设计作品／理查德·英格索尔 118

新菲尼克斯中心图书馆 132

里德尔广告代理公司办公楼 154

迪尔瓦利岩画艺术中心 168

克尔·艾米教堂 180

菲尼克斯图书馆乔拉分馆 194

麦德河漂流活动中心 204

CRB 机械师办公室 206

汤森住宅改建工程 212

考克斯住宅 220

希尔／谢泼德住宅 230

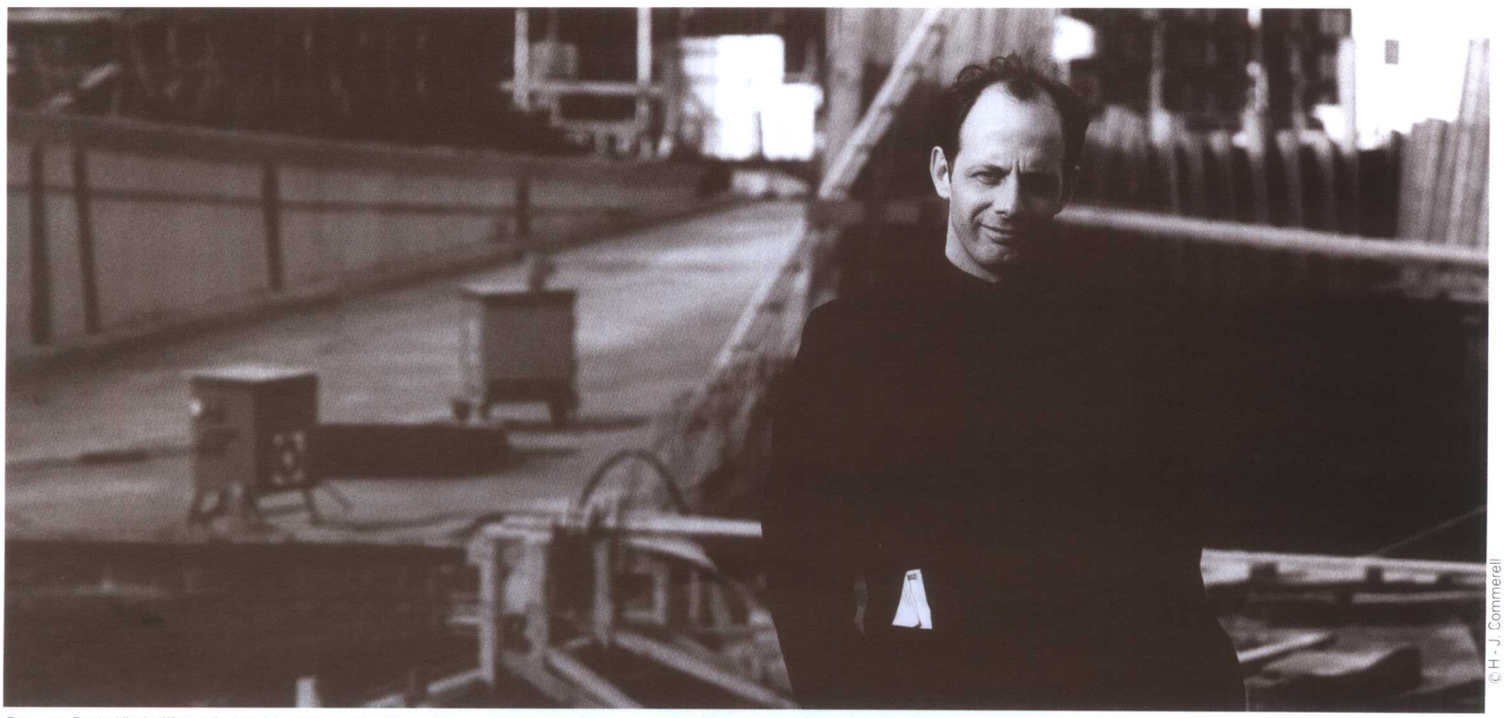
席勒住宅 242

默里住宅 250

普拉特住宅 258

Ben van Berkel

本 · 范伯克尔



© H. J. Commerell

Ben van Berkel [Utrecht, 1957] studied architecture at the Rietveld Academy in Amsterdam and the Architectural Association in London, receiving the AA Diploma with Honours in 1987.

In 1988 he set up his architectural practice in Amsterdam with Caroline Bos. The Van Berkel & Bos Architectural Office has realized projects as the Karbouw and ACOM office buildings, the REMU electricity station, some housing projects, the Aedes East gallery for Kristin Feireiss in Berlin. Recently has been realized the renovation and extension of the Rijksmuseum Twenthe in Enschede, the Netherlands , the 'De Kolk' project in Amsterdam, including offices, a shopping mall and an hotel. Current projects include a new museum for the city of Nijmegen, various housing projects and the Erasmus bridge in Rotterdam [to be completed September 1996] and a bridge in Purmerend. He designed the pavilion of the Dutch entry for the Triennale di Milano, 1996.

Recently he won the competition for the headquarter of the police in Berlin Kopenick.

In addition to building, Ben van Berkel has many activities in the theoretical field. In 1994 he was visiting professor at Columbia University, New York, and visiting critic at Harvard. In 1994-95 he was Diploma Unit Master at the Architectural Association, London. In 1996 he was Unit Master at the Berlage Institute, Amsterdam.

本 · 范伯克尔 （建筑师，1957— ）曾在阿姆斯特丹里特费尔德学院，以及伦敦的建筑学会研读建筑设计，于1987年以优等成绩获艺术学士学位。1988年，他与卡罗琳 · 博斯在阿姆斯特丹共同创办建筑设计事务所。范伯克尔和博斯建筑事务所完成了多个设计项目，包括卡尔博和ACOM办公楼、REMU变电站、一些住宅项目、为柏林的克里斯蒂安 · 菲雷斯设计的艾迪斯东展馆。新近完成的作品有位于荷兰恩施赫德的特文特赖克斯博物馆改扩建工程，包括办公场所、一处购物广场和一座饭店的阿姆斯特丹“德可尔特”项目。正在进行的项目包括内伊梅根市一座新博物馆、各种住宅项目、位于鹿特丹的伊拉斯谟桥（计划于1996年9月完工），以及位于皮尔默伦德的开合桥，他为1996年米兰艺术三年展设计了荷兰参展作品——展出馆。最近，他赢得了柏林克珀尼克警察总局工程项目的设计竞赛。

本 · 范伯克尔在建筑设计之余还从事了大量的学术活动。1994年，他成为纽约哥伦比亚大学客座教授，哈佛大学客座评论员。1994—1995年任伦敦建筑学会的证书部主管，1996年任阿姆斯特丹贝尔拉赫学院的学位部主任。

Diagrams and Force-fields / Bart Lootsma 图解和力场 / 巴特 · 卢茨马

Public 公共建筑

Pavilion for the Triennale of Milano 展出馆：米兰艺术三年展参展作品

Intramural Centre for the Mentally Challenged, SWOZ II SWOZ II精神康复中心

Yokohama International Port Terminal 横滨国际港口终点站

Rijksmuseum Twente, Conversion and Extension 特文特赖克斯博物馆改扩建工程

Office 办公建筑

Congress Hall and Office Building in Düsseldorf 杜塞尔多夫市议会大厅和办公楼

Director's room Dutch Institute of Architecture[NAI] 荷兰建筑学会会长办公室

ACOM ACOM, Amersfoort ACOM办公楼，阿麦斯福特

Company Center, Nijkerk 公司中心大楼，内伊克尔克

Karbouw Office and Works 卡尔博办公楼和工厂

REMU Electrical Substaion REMU变电站

Residential 住宅

Möbius House, Het Gooi 麦比乌斯住宅，海特霍伊

Villa Wilbrink, Amersfoort 威尔布林克别墅，阿麦斯福特

Bridge 桥梁

Bascule Bridge and Bridgemasters House, Purmerend 开合桥和护桥警卫室，皮尔默伦德

Erasmus Bridge, Rotterdam 伊拉斯谟桥，鹿特丹

Urban Study 城市规划研究

The Rubber Mat 橡胶模垫

Saksen Weimar Barracks 萨克森魏玛兵营的城市规划

Zeeburger Island 齐伯格岛

Das Schloss, Berlin 达斯施洛斯项目，柏林

Diagrams and Force-fields - The Architecture of Ben van Berkel
图解和力场——本·范伯克尔的建筑设计风格

Bart Lootsma
巴特·卢茨马

Ben van Berkel's work is exceptionally versatile, ranging from designs for furniture, Interiors and buildings to city development plans and major infrastructure projects. Furthermore he produces a quantity of noncommissioned work in the form of drawings and, together with his partner, the art historian Caroline Bos, he writes essays of architecture criticism and theory for various papers and magazines, a number of which have been collected in the volume [Delinquent Visionaries][1]. In their book [Mobile Forces][2] Van Berkel & Bos place their offices designs in a theoretical context. All these activities combined go to make up a process of continuous research, a 'recherche patiente' in the style of Le Corbusier by which on each occasion different means and an increasingly precise terminology are employed in an effort to approach architecture. Ben van Berkel's buildings are undoubtedly very striking with their elegant formal idiom, their surprising spatiality and sensual use of materials ; in order genuinely to understand them however it is important to realize that they are only moments within a much wider totality that is in constant movement. It is not so much a question of his buildings as objects ; rather Van Berkel's plans originate in a new way of conceiving of the city and an accordingly altered theory of the architect's role in the building process.

In a lecture at the AnyBody congress in Buenos Aires this year Van Berkel said that as early as in projects such as the office building for Karbouw in Amersfoort and the Co Centre in Nijkerk the idea was already inherent that they are in fact replaceable. "As architectural bodies these projects are intermediate rather than objective. The actual body, the envelope form that finally solidified, hardly matters."[3] And in an article in [A+U] Van Berkel compares the design process with the way that waves leave traces of silt and foam behind on the beach while at the same time being themselves influenced by the obstacles they encounter on the beach.[4] His own characterization of his work testifies to an attitude that is both modest and ambi-

本·范伯克尔涉足的设计领域十分广泛，从家具设计、室内与建筑设计，到城市发展规划及大型基础设施项目。此外，他还创作了一批没有被委托的项目的草图，并与他的合伙人艺术史学者卡罗琳·博斯共同为许多报刊撰写建筑评论和理论方面的文章，其中一部分收录在《残缺的幻想》[1]一书中。在《流动的力量》[2]一书中，范伯克尔和博斯从理论的角度阐释了他们关于办公场所的设计理念。所有这些活动构成了一个连续不断的研究过程，这是秉承勒·柯布西耶风格的一种“珍贵的经历”，即在每个项目中使用不同的表现手法和愈加精确的语汇来探讨建筑艺术。毫无疑问，本·范伯克尔的建筑作品以其优雅的造型、别出心裁的空间设计，以及在材料使用上对感觉的注重而引人注目。把他的作品看成是包含在不断发展变化中的比作品本身丰富得多的整体之中的一些片断，对真正理解其作品非常重要。他的设计理念来自于对城市的新构想，以及在建筑过程中引起的建筑师角色改变的理论。

本·范伯克尔在布宜诺斯艾利斯举行的一次会议上讲到，早在设计阿麦斯福特的卡尔博办公楼以及位于内伊克尔克的公司中心大楼时，他就形成了这一观念：建筑是可以取代的。“作为建筑实体，这些工程具有过渡的性质，而非最终的客观存在。这个存在的物体，这个最终凝固的外壳无足轻重。”[3]范伯克尔在《A+U》这篇文章中打了个比方：设计过程就好似海浪，在沙滩上留下淤泥和泡沫的痕迹，同时又受到

tious. Modest because it no longer attributes any eternal value to a building, and ambitious because behind this attitude lies a secrete desire to succeed in understanding a larger whole or at any rate to grasp it to some degree. Rem Koolhaas once used a comparable image of the architect as a surf rider, in uncertain balance on the waves that he has become familiar with due to the specific shape of the coast locally, the tides, the wind, the currents and undercurrents.[5] These new images to denote the role of the architect are something more than just images that herald a new poetry or a new aesthetics such as architects are in search of - though Van Berkel does refer to Virginia Woolf's novel 'The Waves' and to the methods of composition of the French composer Pierre Boulez.[6] If there is any question of a new poetry, it is the product of changes in the character of the city, in the way that architecture comes about and the role of the architect. It is also just as much a result of the changing way in which we look at the world where the philosophy of Gilles Deleuze for instance and changing notions in the physical sciences play an important role at present. Delueze for instance proposes that we should not think of history any longer as something with a beginning and an end, but at most as 'in-between'. This means that we can no longer think in terms of actions that signal a beginning, as though lifting a lever, and which have an inevitable conclusion.[7] To remain upright then it is important to let yourself partially to be caught up in a movement and to operate from out of it like a surf rider, a glider pilot or a dancer.

Although Europe probably lags behind Asia and America in this respect the realization that we have to adjust our definition of what a city is is probably the most crucial change in our thinking about architecture in recent years. It has above all to do with the enormous increase in the sheer size of the city and in its dynamic and unrelenting growth. The city no longer has any beginning or end; it spreads insidiously like a natural phenom-

在沙滩上遭遇到的障碍的影响[4]。他对自己工作特性的描述表明了一种兼具谦虚和雄心勃勃的态度：谦虚是因为不再给一座建筑物附加上永恒的价值；雄心勃勃则因为这一态度的背后隐藏着洞彻一个更广大的整体的愿望，或许至少在某种程度上领悟它。雷姆·库哈斯曾把建筑师喻为一名冲浪者，他因为对本地海岸所特有的形状、潮汐、海风、潮流及潜流相当了解，而可以在熟悉的浪头上保持着微妙的平衡[5]。这些代表建筑师角色的新形象并不仅仅等同于代表着一种新意境，或是一种新美学（比如建筑师们追寻的），尽管范伯克尔的确从弗吉尼亚·吴尔夫的小说《海浪》，以及法国作曲家皮埃尔·布勒兹的创作手法中汲取养分[6]。如果新的意境可能存在的话，那也是城市风貌（在建筑方面）以及建筑师的作用产生变化的结果，也同样是我们世界观转变的结果。在这个世界中，例如吉勒斯·德勒兹哲学，以及对自然科学的不断变化的认识都在当前起着重要的作用。例如德鲁兹就认为，我们不应仍将历史看做是某种有始有终的事物，它更多的是个“中间阶段”。这就意味着我们不能认为某种行为就代表着一种开始并必然导致某种结果（例如举起一根杠铃）[7]。因此，重要的是我们要跳出事情本身，以“处身事外”的方式部分地参与一项运动，就像一位冲浪者、一位滑翔机驾驶员或者一位舞者。

虽然欧洲在对城市概念的理解方面落后于亚洲或美国，但我们已经认识到必须调整我们对城市概念的

enon. The most eloquent description of the new image of the city is undoubtedly that of Rem Koolhaas in his essay 'Generic City' : 'The Generic City is the city liberated from the captivity of center, from the straightjacket of identity. The Generic city breaks with this destructive cycle of dependency: it is nothing but a reflection of present need and present ability. It is the city without history. It is big enough for everybody. It is easy. It does not need Maintenance. If it gets too small it just expands. If it gets old it just selfdestructs and renews."[8] In this stage of its development the city has become a landscape, one of the many sorts of landscapes that cover the earth like a skin. It comes as no surprise then that Ben van Berkel and Caroline Bos chose Tsunehisha's image of Manhattan being flooded by Niagara Falls for the cover of their book. [Delinquent Visionaries].[9] In describing the city of Houston Lars Lerup uses the word 'dross' which he defines as the waste product or impurities formed on the surface of molten metal during smelting. The word however is also used in the meaning of worthless stuff as opposed to valuables or value, dregs. It is a brilliant new metaphor for the city as we see it developing worldwide : the idea of life as a bubbling hot metal with a skin which it breaks through at times. Below there is the original landscape, and above, the new landscape of the media, which we might regard as the steam and vapour rising from the molten mass. Needless to say, the lion's share of the built environment is dross, with a few exceptions where the hot metal breaks through.[10] Lerup coins the word 'stims' for these moments; it suggests stimulation but also the German words Stimme[voice] and Stimmung[atmosphere]. Van Berkel's designs for the Yokohama International Port Terminal and the Triennale pavilion can be thought of then as 'stims' : they are ephemeral, seemingly liquid or gaseous structures in which architecture fuses with media projections in such a way that appearance and reality seem to merge. Van Berkel's more recent urbanistic designs on the other hand still look like a stratified piece of the earth's crust. The design of 1995 for Rotterdam 2015 does not make any statements about architecture, but allows

理解，这或许是近年来我们的建筑理念所经历的最重大的变化。它首先与急速扩张的城市面积和规模有关，城市的变化无始无终，它就像一种自然现象，在不知不觉间扩展。雷姆·库哈斯在《"普通"城市》一文中最为贴切地描述了城市的新形象："'普通'城市是从核心、从自身的紧身衣中挣脱出来的城市。'普通'城市破除了这种消极的依赖性循环，它仅仅是当前需要及能力的一种反应。它没有历史，它的'大'包容一切，予人方便，无须养护。如果空间狭小，它便径自扩展；一旦开始衰老，它便自我毁灭，进行更新。"[8] 处于这一发展阶段的城市成为一种亮丽的景观，是许许多多如皮肤一般覆盖着地球表面的景观之一。

难怪本·范伯克尔和卡罗琳·博斯会选中楚尼依沙拍摄的尼亚加拉瀑布水淹曼哈顿的情景作为《残缺的幻想》[9]一书的封面。拉斯·勒吕普使用"浮渣"这个字眼来形容休斯敦市。"浮渣"指的是冶炼过程中在熔化的金属表面形成的废物或杂质，还意指与贵重物品或具有价值的东西相对的废物，即渣滓。这一比喻可谓新颖绝妙，用来形容我们亲眼目睹的城市的发展再合适不过。生活就好似被覆盖在表皮之下的沸腾的金属溶液，时不时地从表皮之下翻滚上来。表皮的下面是原有的景观，上面是由媒介构成的新景观，我们可把它视作从溶液中升腾而起的蒸汽和烟雾。

毋庸赘言，除了炽热的金属熔液迸裂的局部和片断，大部分建筑环境属于"浮渣"[10]。勒吕普用自造

the city to change and grow like a flexible rubber mat with the aid of a calculation based on statistical prognoses; in the design for the Saksen Weimar terrain in Arnhem a landscape is formed where, on a site with a slight gradient, high-density low-rise development and private gardens are in a relation of equality with each other.
In this new situation the architect is no longer the one who decide, controls and attends to everything. He has to deal with numerous other parties, from the client to the urban designer, from users and residents to the municipal government and he has to comply with numerous laws and regulations. This is also why Ben van Berkel states that "the field of architectural space is too vast for one architect to comprehensively formulate in a new terminology. I would go further and claim that it is now in any case impossible to undertake an architectural project in isolation. Even within the limitations of just one project the architect can no longer practise architecture on his own.
Architecture is changing in a direction where it involves other disciplines in an intensive way. These disciplines, whether they be structural engineering, acoustics, or project management, are not hired in as consultants within a hierarchical structure with the architect at the top.(...) Often it is a primary activity to talk with structural engineers, with other experts. No longer do architects try to dream up the best possible solution alone in the studio, only to have it stripped later on in the process, as more and more essential information trickles down. The information has to be instrumental much earlier on in the process."[11]
Van Berkel then is just as likely to develop a plan on the basis of a detail, a structural principle or an abstract idea as on the traditional analysis of programme and site A good example is the REMU transformer substation in Amersfoort where the whole idea of the project is summed up in a detail of the shell of the building; it is a cross formed of hardwood slats between metal sections that support the aluminium-coloured facing panels.
Starting with this detail, that is the perfect image for electricity and insulation, the rest of the building was

的 "stims" 一词来形容这些片断。"stims" 的意思是 "激发"，但也和两个德语词stimme（声音）和 stimmung（大气）近意。范伯克尔的横滨国际港口终点站和米兰艺术三年展送展作品——展览馆的设计方案可被视为 'stims'：它们是具有流质和气体特征的昙花一现的构造，其建筑式样和材料运用融合在一起，使外观与实体浑然天成。

另一方面，范伯克尔最新推出的城市规划设计看上去依然像一片分层的地壳。他于1995年设计的 "展望鹿特丹 2015" 方案并未力图表现某些建筑理念，而是在统计预测基础上进行的计算，任由城市像块富有弹性的橡胶垫一样变化和扩展。为地处阿内姆的萨克森魏玛地带设计的方案形成了一处景观，在一片坡度平缓的基地上，低层高密度新建住宅区与私人花园平分秋色。

在新形势下，建筑师不再集决策、控制及处理所有事务于一身，他需要应付众多的其他当事人，从客户到城建部门、从用户和居民到市政厅，而且他还需遵循种种法规。由此，本·范伯克尔断言，"建筑空间领域广阔无垠，很难让一名建筑师使用一个新语汇给予全面的阐释。而我想说的是，如今建筑师根本没有可能独立地承担一项建筑工程项目，即使仅仅在一个项目范围内，他也无力独自进行创作。

建筑设计的发展趋势就是越来越多地与其他学科相互渗透。这些学科，无论是结构工程学、声学或

designed as a combination of two apparently solid objects that relate to each other in a way that suggests tension and force.

But no matter where Van Berkel may choose to start out from, he is above all an architect, whose aim is to create a fusion of the various aspects of a commission, from the site to the choice of materials, from the commission through to the construction, meaning and symbolism. Van Berkel's designs are a unique mixture of conceptualisation and expression, of rational considerations and intuitive decisions. He once described this approach in an article about sculpture understood in the context of ambidexterity. Ambidexterity literally means the simultaneous right and lefthandedness of the body, which arises from an organic collaboration of the left and right brain hemispheres, without the domination of either. The ambidextrous artist or designer, according to Van Berkel, shifts 'the emphasis from observation to thought, from metaphor to imagination and from form to structure, with the effortlessness of someone who changes his pen from his right hand to his left, and, writing equally well with both hands, establishes a new focus for the resulting text'.[12] For Van Berkel, however, ambidexterity also has to do with the organic unity of design and realisation.

The way in which Van Berkel draws together the various aspects of a design has certainly changed over the course of time, but one can always identify a moment in the design process when the synthesis of the project is expressed in concise fashion in a diagram. Initially Ben van Berkel's designs were strongly influenced by his own signature. The sketches for his first projects show a striking affinity then with his free work from the same period consisting of series of drawings - most of them small - in which he sublimated experiences, memories and ideas in a highly personal manner. They looked like a kind of short story or, even more, like visual poems with often recognizable images or fragments of images being brought into relationship with each other by means of abstract forms in a

项目管理，并非只处于从属的地位，惟建筑师之命是从。通常情况下，与结构工程师及其他方面的专家商榷是头等大事。建筑师们再也不试图躲在小楼里凭借想像设计出最佳方案；否则的话，随着汇集而来的重要信息，建筑师只能使设计中的方案‘伤筋动骨’。信息应当在设计过程的初期发挥作用”。[11]

本·范伯克尔可能按照传统方法分析项目和选址，但同样也可能根据一个局部、一个结构原理，或一个抽象的概念规划蓝图来进行上述工作，位于阿麦斯福特的REMU变电站就是个很好的例子。该项目的整个构思全部浓缩在建筑物外观的一个细部中：夹在支撑银色饰面板材的金属条板之间的用硬木条板做成的十字结构。以这一细节为基点，设计方案恰如其分地体现出电力与绝缘的特征。建筑的其余部分被设计成由两个外观紧密相连的结构组成的结合体，从连接的方式看，两者象征电压和电流。

但无论范伯克尔首先着眼于什么，他终究是一名建筑设计师，他的目标就是要解决工程所涉及的方方面面的问题：从场地到选材，从承接工程一直到施工过程以及对工程含义和象征作用的解释。范伯克尔在设计方案中独特地将概念化与表现手法、理性的思索与直觉的决断融合在一起。他曾在一篇论述雕塑的文章中描述过这种方法，将它喻为一种“两手同利”的能力，两手同利即同时灵巧地运用左右手的能力，这需要左右大脑的有机协作，不分主从。在范伯克尔看来，善于使用“左右手”的艺术家或设计

hitherto unprecedented fashion.

In the course of time, with the growth of his office and the increasing complexity of his commissions, Van Berkel has succeeded in producing designs that are less and less personal.

Computers play an important role in this process. Van Berkel carried out his first experiments with computers in developing his design for the Erasmus Bridge in Rotterdam, the first sketches of which were still done by hand. Computers make it possible to communicate with all the parties involved from structural engineers to the site foremen on a basis of sharing the same information, so that the complexity of the project does not get out of hand.

The bridge is the first link between the two halves of the centre of Rotterdam and it is also the first bridge that ships coming from the sea have to go under. It is a new symbol for Rotterdam and is visible throughout the city with its height of 139 metres ; it is also a sculpture that takes on a totally different character when seen from many different angles ; it also functions as part of the public space of the city, giving both drivers and pedestrians an extraordinary experience. Its unusual asymmetrical shape is psrtly due to the need to upgrade the southern part of the city that has always had less standing than the city centre on the north bank and in part to the need to display the force-field of the construction in which tension and balance are combined.

The design for the Co Centre in Nijkerk was the first projects in which computers were used right from the start. The computer was fed a mass of information about the site - in the bend of a motorway embankment - and the programme ; the two were then integrated. The digitalized information was then immediately made available for the development of the project in terms of construction and materials. In fact the computer took over the integrating function that Ben van Berkel had previously carried out himself with his intuitive drawings.

That does not mean however that Van Berkel has reduced the work of designing to a purely mechanical,

师会将重点从观察转向思考，从比喻转向想像，从形式转向结构，就像一个人不管右手用笔，还是左手用笔，都能流畅自如地书写。这样一种能力将会使设计方案产生新的关注点[12]。同时，对于范伯克尔而言，两手同利的能力也意味着设计与认知的有机统一。

虽然范伯克尔综合考虑各方因素的方法因时而异，但我们总能在他以图解这种简约形式表现出工程的综合性的设计过程中识别出他的某一特征。范伯克尔的作品具有鲜明的个人特征，他早期的设计草图与他同期的自由作品非常相似，在这些包括系列图样（大部分是小型）的作品中，他使自己的经历、记忆和灵感得到升华，其手法极具个人风格。它们有点像短篇小说，甚至像生动的诗歌，他用抽象的手法，以前所未有的方式将许多可识别的形象或形象片断相互联系起来。

随着业务的扩大，承接的工程日趋复杂，范伯克尔成功地淡化了作品中的个人色彩。

计算机在这个过程中起着重要的作用。范伯克尔在设计位于鹿特丹的伊拉斯谟大桥时（大桥最早的草图仍是手绘），首次尝试利用电脑，电脑使他有可能与参与工程的多方面人员（从结构工程师到工头）共享信息，保持联系，以保证不致因工程的复杂程度而失去控制。

大桥是连接鹿特丹市中心两个部分的纽带，也是第一座可让远洋轮船从其下通过的桥梁。它是该市

abstract activity.

The diagram may emerge straightway from the data fed into the computer, but it can also happen that somewhere in the course of the process of collecting the data a diagram emerges or is deliberately introduced that does not perhaps literally correspond to the plan, but that forms an important reference point for it. Van Berkel & Bos ascribe a wider significance to such diagrams of which they have used a whole collection to illustrate their book [Mobile Forces] which is based on Gilles Deleuze's interpretation of the work of Michel Foucault. In it Deleuze conceives of the diagram as a characteristic, schematic ground plan that coincides with a specific social force field. One such diagram is the panopticon model for a prison that is not only used to achieve an immediate effect - that of making it possible to observe prisoners without being seen oneself - but which also has the aim of imposing a form of conduct on a particular human multiplicity. "The diagram is no longer an auditory or visual archive but a map, a cartography that is coextensive with the whole social field. It is an abstract machine.

It is defined by its informal functions and matter and in terms of form makes no distinction between content and expression, a discursive formation and a non-discursive formation. It is a machine that is almost blind and mute, even though it makes others see and speak. If there are many diagrammatic functions and other matters, it is because every diagram is a spatio-temporal multiplicity. But it is also because there are as many diagrams as there are social fields in history."[13]

The reference diagram for the design of the Villa Wilbrink in Amersfoort was that of a German bunker. The reason becomes clear if we take a good look at the site : it is a brand new residential neighbourhood in which

新的标志性建筑，高达139米，在市区任何地点都可以看到。它同时也是一座巨大的立体雕塑，从不同的角度观看会展示出完全不同的造型特色。它还发挥着该市部分公共空间的作用，这给司机和行人带来超乎寻常的感受。它那独特的对称造型既是出于提升该市南区地位的需要而设计的，又展现出该建筑物结合了张力与平衡的力场。

位于内伊克尔克的公司中心大楼设计方案是第一项从头至尾使用电脑的工程，大量有关场地（位于高速公路弯道路堤处）和项目的信息被输入电脑，然后进行整合。数字化信息在工程开发的施工和选材方面立刻发挥作用。以前由范伯克尔凭直觉绘制草图的工作，现在都由电脑承担，但这并不意味着范伯克尔的设计工作沦为纯粹的机械、抽象活动。

输入电脑的数据会直接生成图像，也可能在集合数据的过程中生成图像，或是虽不能直接生成符合计划要求的图像却也提供了重要的参考价值。范伯克尔和博斯相当重视此类图像，他们把其中相当的一部分用做《流动的力量》一书的插图，此书的依据是吉勒斯·德勒兹对米歇尔·富科作品所作的解释。按照德勒兹的理解，这种图像是独特的图示初步方案，与某一具体的社会力场相吻合。书中有一个图像是一全景监狱模型，它不仅能取得直接的效果——在观察犯人的同时不被发现——而且实现了将一种行为

everybody has been able to realize his ultimate individual dream. In this chaotic context where bad taste and outward pomp prevail Van Berkel chose to build the house partially underground, with the roof functioning as a fifth, sloping facade. This gives the occupants a high degree of privacy while at the same time they can enjoy the fresh air and sunshine in a enclosed patio. The roof of the house and the small garden at the back are covered with shingle such as that which is used on railway embankments, because the client, who is a TV producer hates gardening. A large number of different features converge in this house that together form the basic premises of present-day architecture : the non-place, the architecture and urban design becoming a form of landscape, so that the house is no more than a base that is connected with the rest of the world by an infrastructure of highways and media.

1. Ben van Berkel, Caroline Bos, Delinquent Visionaries, Rotterdam, 1993
2. Kristin Feireissed., Ben van Berkel, Moblie Forces, Berlin, 1994
3. Ben van Berkel, Lecture AnyBody Congress, Buenos Aires, 4 June 1996
4. Ben van Berkel, Caroline Bos, Fluid Mass, A+U 95:05
5. Rem Koolhaas, SMLXL, Rotterdam, 1995
6. See Notes 3 and 4
7. Gilles Deleuze, Pour Parler, Paris, 1990
8. See Note 5
9. See Note 1
10. Lars Lerup, Stim & Dross, Rethinking the Metropolis, Assemblage 25,1995
11. See Note 3
12. Ben van Berkel, Caroline Bos, Ambidextrous Steel Sculptures, Forum 32-04, 1998
13. Gilles Deleuze, Foucault, London, 1988

方式强加给一个特殊人类群体的目标。“图像不再是存储听觉或视觉资料的档案，而是一幅地图，是一门与整个社会力场同域的制图学，是一台抽象的机器。

图像的特性是由其非特定功能和物质决定的，就形式而言，它在内容与表现、推论形成物与非推论形成物之间没有多大差别。尽管它使其他部分具有说与看的能力，它却几乎是一台又哑又瞎的机器。假如它具有许多图示功能和其他内容，那也是因为每个图像都具有时空多样性的特征，还因为历史上存在着同样多的社会力场。”[13]

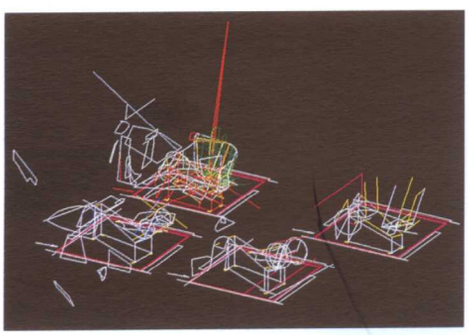
阿麦斯福特的威尔布林克别墅设计方案的参考图像是一个德国式地堡。仔细察看场地，我们就会明白其中的道理：这是一片崭新的居住区，每个人都实现了自己最终的个人梦想，拙劣的品位和肤浅的浮华在这里大行其道。范伯克尔决定将部分房屋建在地面之下，让倾斜的房顶充当第五个立面，这样不仅能较好地保护住户的隐私，同时又能在封闭的阳台上享受新鲜空气和阳光。因为房主（一个电视制片人）讨厌园艺，房顶以及后花园就以铁路路基上使用的小圆石铺成。这所宅院汇集了许多不同的特色，它们共同组成了这座现代建筑：不寻常的空间、建筑物和城市设计共同构成一种景观，而房屋建筑不过是一个基地，通过公路和生活环境这些基础设施与外界相连。

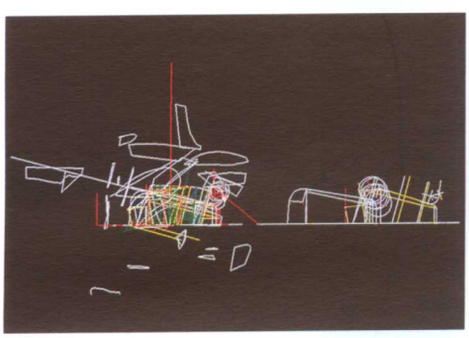
Ben van Berkel

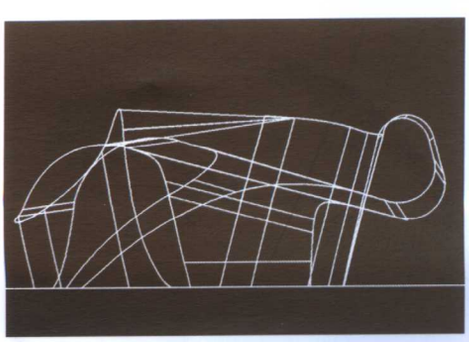
本·范伯克尔

Pavilion for the Triennale of Milano, 1996

展览馆：米兰艺术三年展参展作品







Why a Virtual Pavilion?

The architecture of the pavilion is the culmination of a series of projects developed by our office in which computer techniques were of increasing importance in the design process. The computer entails a new approach to architecture as it negates the prioritization of the object ; aspects of the tactile programme and aspects of the surroundings are thrown in unequivocally. In this sense the computer is indifferent to what it is fed ; all information is equal. As a result internal influences and external forces become the unprejudiced instruments towards the materialization of the project. One of the notable features of a design process steered by CAD is that information changes the output, which changes the input, and so on ; the crux of this type of transvaluation is that everything becomes unfixed, floating or liquid. To us this 'wave-like' process contains the real interest of computational techniques, as is exemplified in the Pavillion.

What Is the Structure of the Pavilion?

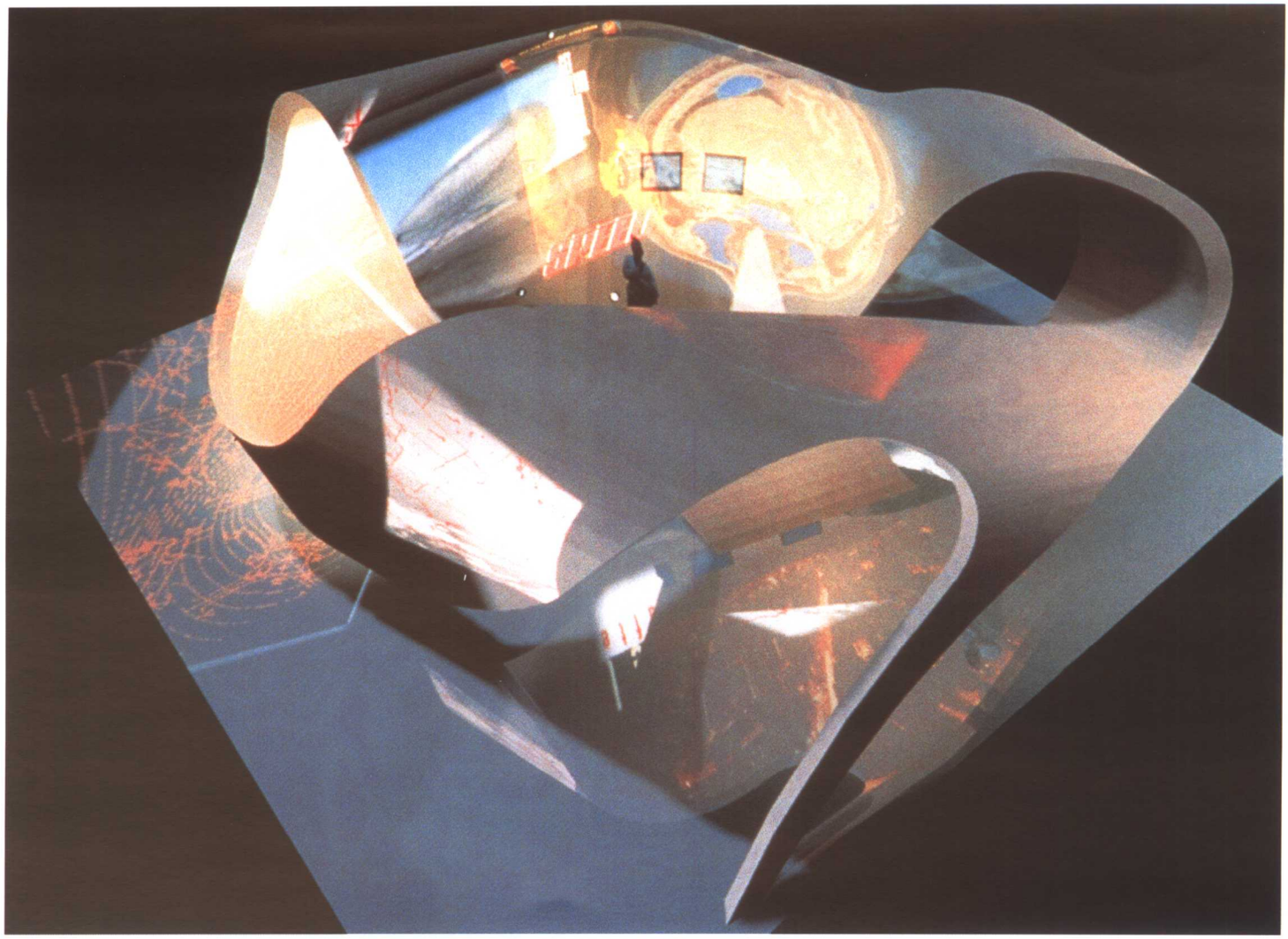
Structuring with the computer sheds a new light on the identity of structure itself. Recently a new view of structures has emerged as process fields of materialisations, based on spatial shifting devices, rather than representing any homogeneous, linear system. Structures are losing their specific, separate properties and are defined more by how they relate to the organization of the whole and how you relate to them ; you zoom in to solids, you fluctuate along evanescent distances, space opens up around you ; any variety of mutations is possible, all unquantifiable, orderless, dimensionless, happening as in a fluidum. This is the type of

为什么设计一个虚拟展览馆？

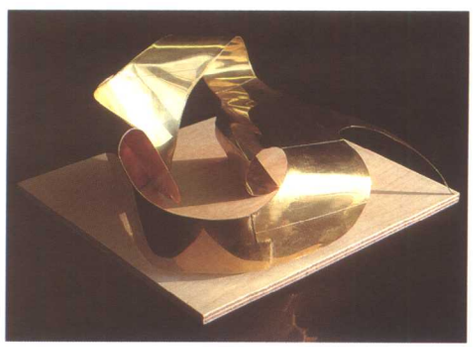
本展览馆建筑体现了该事务所一系列建筑设计的最高水平，而电脑在方案设计过程中起着日益重要的作用。电脑带来了新的建筑设计方法，因为它改变了按照先后次序排列事项这一做法，把具体方案的内容以及环境方面的因素统统考虑在内。从这一角度讲，电脑并不区分输入的内容，给所有信息同等的待遇。因此，项目的内在因素和外部影响对方案的最终形成具有相同的影响力。借助CAD的设计过程的一个显著特点是信息改变输出，而输出又改变输入，如此等等。这种重新评价方式的难题在于一切事情都变得飘忽不定，或者说具有流动或液态的特征。对我们而言，这种“波浪式”过程也正是计算机技术具有吸引力的地方，本展览馆便是一个范例。

展览馆具有什么样的结构？

利用计算机设计结构使人们对结构本身的特性有了更多的了解。最近出现了一种新观点，即结构具有物质化的加工场地的功能，其基础是空间转移手法，而不代表任何具有相同特征的线性体系。结构正逐渐失去其明确、独立的特性，而更多地取决于它们与整个体系之间的关联方式，以及参观者与它们的关联：你忽然接近立体结构，你沿着逐渐消失的距离波动前行，空间在你周围展开。任何变化都有可能，一切事物都不可测量，杂乱无章，无边无际，跟流体中的情形一样。这便是决定展出馆形状的结构。体现着许多不同特点的壳体似的结构没有固定的形状，狭窄的展出空间（9平方米）由此得以扩展。结构是展览馆的载体，它合并数字和虚拟空间，它反映设计内容、组织空间。



structure that shapes the pavillion. The confined room of the exhibvition space, measuring nine by nine metres, is expanded with the aid of the amorphous, shell-like structure which represents many different qualities. The structure is the carrier of the exhibition ; it incorporates a digital and a virtual space ; it reflects projections and it organizes the space.



Architect : Ben van Berkel
Project Coordination : Caspar Smeets
Design Team : Rob Hootsmans, Caroline Bos, Remco Bruggink, Freek Loos, Ger Gijzen