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跨越界限，为人而作——对话董灏、蓝冰可

CROSS BOUNDARIES TO DESIGN FOR HUMAN: AN INTERVIEW WITH DONG HAO, BINKE LENHARDT

采访：史佳鑫
Interviewer: SHI Jiaxin

《建筑实践》编辑部
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在普拉特学院获得建筑硕士学位后，董灏与蓝冰可在纽约工作了几年，之后回到中国安家。在 2005 年创建 Crossboundaries 建筑师事务所之前，他们共同执业于北京建筑设计研究院 (BIAD)。同时也以客座教授的身份执教于北京大学、中央美术学院和清华大学。作为一个拥有国际合作伙伴的设计团队，事务所在北京和法兰克福均设有办公室，设计成员来自全球各国，并在世界各地接受过建筑设计教育的专业培训。

Crossboundaries 致力于通过建筑设计、环境设计和城市更新方案，营造充满活力、生气的生活空间。作品包括爱慕时尚工厂、北大附中系列、“家盒子”系列、聚易快乐成长中心、地处乡村的幼儿园、展厅及办公室项目、西门子改造项目，并与宝马合作建立在中国的第一座博物馆。同时，事务所亦参与理论研究、未来探讨性项目，如城市创者和中国探索家·2018 主题展，并参与第 15 届威尼斯双年展“穿越中国”在意大利和 2018 年北京的主题展等。

After receiving their Master's Degree in Architecture from Pratt Institute, DONG Hao and Binke Lenhardt practiced in New York for several years before making their home in China. In Beijing they both started off in the Beijing Institute of Architectural Design (BIAD) before founding Crossboundaries in 2005. Today they frequently lecture and teach at the Beijing University, Central Academy of Fine Arts and Tsinghua University. Organized as an international partnership, the award-winning office has staff originating from and trained in different parts of the world and operates from Beijing and Frankfurt.

Crossboundaries contributes to a vital built environment through architecture, environmental design and urban regeneration. The firm's portfolio includes Aimer's Lingerie Factory, Chaoyang Future School, Family Box, Soyoo Joyful Growth Center, showrooms and offices in collaboration with Siemens and BMW. The office is also engaged in theoretical research projects such as Citymakers and House Vision, exhibited at 15th International Architecture Exhibition, La Biennale di Venezia, and also in 2018 China House Vision Exhibition.

《建筑实践》(AP) 二位来自不同的国家, 请问各自的教育背景与成长经历对你们的设计有怎样的影响?

蓝冰可 我在德国海德堡附近的一个小镇长大, 在多种美德应用技术大学学习建筑, 那里的建筑学教育重视个性教育, 也偏技术化, 这也是我想去美国的原因。在富布赖特奖学金(Fulbright Scholarship)的资助下, 我前往普瑞特学院(Pratt Institute)继续探索更具艺术性和理论支持的建筑设计方法。2002年, 结束在美国的学习工作之后, 我搬到了中国, 这对我来说是一个很大变动, 因为它基本上是从一个“方向”走向另一个“方向”, 从西方到东方。幸运的是, 我也申请到了德意志学术交流中心奖学金(DAAD), 让我能前往中国并深入学习中国文化。在欧洲、美国和中国的生活和工作经历, 以及三地不同的环境使我能灵活应对现在的工作。这意味着我能面对复杂情况中观点和文化背景各异的人, 找到具有建设性的解决方案, 国际化背景也使我面对各种新的挑战时更有韧性, 采取周全完美的解决方法。最初的几年对我来说非常艰难, 因为它与以往的经历截然不同。但每个国家都有其独特之处, 我正试图汲取每个积极的一面, 并将其融入到设计之中。

董 灏 我在北京白塔寺附近的四合院里长大, 成长过程中所接触的老北京城市空间环境对职业选择也有潜移默化的影响。结束了在北京建筑工程学院(现北京建筑大学)偏向苏式的工程师教育后, 我希望能有跨文化和专业的探索, 于是选择了在纽约的私立艺术学院普瑞特学院继续读研。当时的导师 Jack Travis 对我的影响非常大, 作为非裔美国建筑师, 他所传授给我的不仅是专业方面的

朝阳未来学校 Chaoyang Future School © 杨磊英 YANG Chaoyang



知识, 更多的是如何通过建筑传递文化, 从而让各个族裔和文化融合。纽约城市本身也像一座博物馆, 在当时, 这种跨民族、跨语言和跨文化的冲突与交融对第一次走出国门的我造成了极大的冲击。经过漫长而痛苦的过程, 我逐渐拥有了全新的视野和思考问题的角度, 这至今深刻地影响着我的实践。Jack Travis 对我而言亦师亦友, 我们到现在还保持着密切联系。

AP 最初受到这种不同的建筑学教育与思维的冲击时, 您是以怎样的态度去面对的?

董 灏 西方当代建筑学建立在人本主义的基础上, 而我之前在国内学的建筑技术以及工程学, 是对人类经验传承的研究总结, 是非“人性的”。在教育形式上, 东西方最大的差异在 K12 阶段就非常明显。西方鼓励主动并审视地去判断问题, 而我生于 70 年代, 全盘接受传统的“灌输”式教育, 这种冲击在思维上对我是一种“重创”, 从出发点就和其他同学不一样, 更不用说从逻辑上判断推演整个项目。但我并没有对自己产生怀疑, 而是通过多听多看多思考以及项目合作, 明白了来自世界各地的同学的思维逻辑。美国有着清教徒式的包容开拓精神, 后期我就渐入佳境, 找到了属于自己的位置。

AP 蓝冰可女士, 您在欧洲、美国、中国三地都执业过, 中国对您来说意味着什么? 中国是否改变了您?

蓝冰可 在中国, 每天都有许多有趣的事情发生, 也有许多挑战要面对。这是一个蓬勃发展又随时变化的市场, 也因此有了一个使建筑设计日臻成熟的平台。我们的一些客户非

常有远见, 能够支持我们探索更前卫的概念, 这是一个创新解决方案的积极环境。多年在中国的生活必然改变了我。德国是发达国家, 很多措施都得到了验证并发挥了作用, 但我也确实感受到了一定的局限性, 作为德国人, 我可以用批判的眼光看待自己的国家。德国人有时太不容易变通, 很难接受变化或采纳替代方案, 我比较执着和严格, 但也可以接受某些事情不按我的方式去做, 在中国的生活让我变得更加宽容, 并以积极乐观的态度拥抱持续变化的挑战。在德国, 项目前期要非常准确地考虑和计划所有事情, 之后如果发生变化, 我们会挣扎, 也许会推倒重来。但在中国, 规划和落地几乎是同时进行的, 变化可以更快地被实现, 这意味着在中国工作时, 你必须有更高的灵活性和适应能力。

AP 当时为何选择成立 Crossboundaries? 初衷是什么?

董 灏 事务所成立于 2005 年, 当时我在北京院(BIAD)已经工作了一段时间, 负责中外合作项目, 其间有幸与世界知名商业事务所合作, 如 SOM, Gensler, 也有幸与诺曼·福斯特, 瑞姆·库哈斯等世界大师合作项目。在工作中, 我越来越强烈地感受到东西方差异带来的优势和碰撞。就在 2005 年, 我们参与了宁波博物馆的投标, 得了第二名, 第一名是王澍老师。这个项目给我留下了巨大的遗憾, 也因此清楚地认识到: 空降式的西方优质设计资源, 并不能完全解决中国的具体问题, 这涉及到文化差异和商业利益的平衡。在我看来, 过去的那帮西方大牌建筑事务所+中国团队的合作模式在项目初期有很好的好处, 但一条无法跨越的鸿沟依然存在, 并最终影响了项目的落地。因此, 以这个项目为契机, 我决定独立出来。事务所的名字“Crossboundaries”就是两个英文单词组合在一起, 意思是“跨界”, 跨越国界、专业界限、文化界限。就像我和我的合伙人蓝冰可, 她也是我太太, 我是中国人, 她是德国人。我们团队也保持着一半中国设计师和一半外国设计师, 大家来自不同的成长和教育背景, 形成一种多元化的组合。

AP 目前事务所的规模多大? CB 的工作领域很广, 设计工作跨越的尺度也很大, 你们的工作模式是怎样的? 两个人如何分工?

董 灏 目前我们事务所的规模大概是二十人左右, 拥有不同背景的设计师会带来不同的观点, 使事务所拥有超常规的创造力和活力。对于工作模式, 我们没有分组或是按项目走, 我们希望在跨界的同时突破专业的壁垒。大到街区、建筑单体, 小室内空间、空间中的标识等都是人生活空间的一部分, 它们共同作用于人的感受和行为, 不能用割裂的态度去对待, 因此我们也要求团队内的每一位设计师都能更全面地思考问题。在 2005 年, 早在这种一体化的设计成为业内共识之前, 我们就已经这么去做

了。这种突破边界的、混合的模式是我们的特点, 也是很多客户来找我们的原因。

蓝冰可 我们理解的建筑设计是一个集体协作的过程。一个新的项目从讨论和头脑风暴开始, 包括实习生在内的绝大部分员工都会参与进来, 共同寻找并决定其中一个方向。经过几轮讨论之后, 后续的设计会被分配到小作业, 由我和董灏一起把控设计方向和进度。同时, 董灏负责与客户, 特别是中国客户的沟通、汇报, 在一定程度上可以说董灏主我主内。但当项目进入后期执行阶段时, 我会和一名团队成员去施工现场查验。起初, 作为一名外国人和女性, 克服去现场并与施工方交谈的内心挣扎对我来说是一项挑战, 他们也对我的角色感到困惑, 但是经过多年的磨合, 我们之间似乎达成了共识。以外国家专家的身份在北京院工作的经历也使我对项目过程有了很好的了解, 再加上我对建造知识的掌握, 工人愿倾听、采纳我的建议。这在中国可能不太常见, 但我对此很感激。董灏带来了工作室的许多大项目, 而我也会较多地接触外国项目, 比如宝马中国博物馆。我有幸和董灏一起去做汇报, 也会参与针对建造技术细节的会议。

AP 在多种工作形式、类型背后, 是否有某一个以贯之的想法? 这个想法本身是否正在发生变化?

董 灏 我们相信“我们塑造空间, 而空间也塑造我们”。因此, 事务所致力于为用户级使用者服务, 营造充满活力、生活的空间。同时, 我们也相信世界是大家共同生活的场所, 因此我们追求的是群体的共同利益, 而不仅是建筑师或个人的观点表达。我们的工作范围从城市建筑到平面设计, 从教学到活动策划, 一如我们的名字 Crossboundaries——不断跨界, 开拓涉足的范围。通过开展不仅限于建筑的各类活动和多元对话, 我们也希望以此衍生至更广泛的设计范围。以参与、进步和适应为目标, 不断思考和实践。

AP 为人父母如何影响二位的设计与思考, 尤其在儿童而设计时?

董 灏 我来自于一个非常开放包容的家庭, 父母给我的成长教育与我自己在美国受到的教育有很多相似之处。幼吾幼, 以及人之幼。我希望能将自己的感受与更多的家长、教师分享, 支持他们的理念, 共同让孩子们身心健康地成长为合格的社区公民。在美国时, 我读过约翰·杜威(John Dewey)的书, 他反对传统的灌输式和机械性训练的教育方式, 主张在实践中学习, 并提出“教育即生活, 学校即社会”的口号, 这种中西方教育的巨大鸿沟, 对初到美国的我有颠覆性的启发。而另一方面, 当我自己有了小孩以后, 对孩子心理与成长的需求也有了最直观的感受与经验, 首先是孩子与我们的差异性, 虽然与自己

如此血亲，仍然他自己的个性、节奏和能力；二是我更好地认识儿童作为独立个体的独立性，是他而不是我的“他”；三是认识到儿童的多样性，世界上没有一片叶子是相同的，每个孩子都独一无二。想到我自己的一些关键特质得以形成都是因为父母尊重了我，在儿童建筑设计时，我更强调“尊重”。空间中要“尊重”儿童的差异性、多样性和独立性，这才是设计的出发点。

蓝冰可 我相信，成为一名母亲让我为为孩子而创造的空间更敏感，对现有的儿童空间也有了另一种视角。做北京的第一个“家盒子”项目时，我刚刚成为一名母亲。那时我更主动地想象儿童的视角，当我与小朋友一起坐在地板上，和他们的视线一致时，切实体会到了其与成年人视角的不同。其实现有的很多儿童设施并非为儿童而造，比如幼儿园的把手、窗户等都被设计得太高，为了遵循规范，颜色的使用随意且过度。色彩是创造独特而难忘空间的一种重要手段，但必须有意识地加以运用。所以，所有这些观察让我更加了解孩童们真实的喜好与感知。

AP 在做中小学、幼儿园设计时，有些建筑师认为“落后的规范”和“业主也不知道自己要什么”是最大的问题，对此，你们的看法是什么？

董灏 作为建筑师需要有理解和挖掘甲方的能力，英文中叫“Unspoken Needs”，很多时候甲方不能够认识到自己“真正”的需求，这就更要求建筑师自身的专业度。教育类建筑又区别于其他建筑项目，甲方主体是教育者，而教育者的观点、观念和态度对空间的影响力很强。我们在这方面特别有能力、耐心和视野去倾听、理解甲方，甚至更多的时候是从建筑设计专业的角度去启发甲方。规范是国家为了避免设计中出现伤害事故的法律，法律是最低行为准则，而且规范也在与时俱进。合格的建筑师一定能够以自己的专业能力在规范和设计中找到平衡，我们在这方面实践中很有信心，同时也通过各种渠道机会去影响中小学规范的更新。

AP CB 常常与同一个业主有多个项目的合作，同时业主也支持你们在项目做出新的探索，二位如何与业主建立良性沟通及稳固的合作关系？

董灏 从市场角度来说，是业主认可了我们的服务，但我认为在与甲方的沟通中，最重要的还是展现出我们的专业度。建筑是一个综合性学科，建筑师需要对项目有一个综合预判。冰可作为一个拥有德国教育和实践背景的建筑师，在建筑品质的把控上会提出很多前瞻性的要求。初期业主或许不理解，但项目建成后，就会在实际使用中体会到其中益处，这也帮助建立了我们与业主之间的信任。除此之外，同理心也很重要，要跳出建筑师个人的视角，多从甲方和终极使用者的角度去考虑问题。在设计中不

要制造冲突，而是要找到各方的共同利益点。例如在最近的宝马博物馆项目中，甲方分别是来自德国的宝马总部和中方投资人，虽然他们看似有着各自安全不同的诉求，但其真实想要的东西是一致的，即建造一个拥有自己特点的博物馆。发掘表象背后的物质本质，这才是创新的原始发动机，基于此的形式创新才有其根基。

AP 你们曾参与了一土学校、朝阳未来学校等的改建，与这些教育改革先锋的对话，引发了你们对于目前国内教育建筑的哪些反思？对教育建筑的核心观念是否有转变？

董灏 基于研究，当代人一生中会有 86.9% 的时间在室内度过；剩下 10% 左右的时间即便在户外，更多时候也是在经过设计者改造的空间里活动。因此，人造环境在你现实生活中占据了绝对地位，潜移默化地影响着社群行为。其中，就空间对个人影响力而言，教育场所或许是最为突出的。随着近年来教育领域发生的变革，面对未来的不确定性，越来越多教育者强调终身学习的能力，教育理念从以教师为中心，转向鼓励学生自己探索、求知，他们也希望通过空间设计，激发孩子的积极性，于是今天的教育空间也越来越脱离“标准”。例如在一土学校的设计中，我们在各层教室之外的公共空间中，量身定制了几组形态各异、体验丰富的多功能集成模块，为孩子和老师在教学以外，提供了更多非正式的学习、社交和活动内容。这些从教室延伸出来的小小“半岛”，贴近儿童天性，正面鼓励孩子们爬上爬下、钻进钻出，增加活动量、激发好奇心和探究意识；也在需要时，用尺度更贴近孩子的亲密空间，呵护他们敏感的情绪。

不仅在教育创新的前沿，我们相信所有教育空间都可以朝“以学生为中心”的方向做些改善。在为乡村留守儿童设计一座幼儿园时，我们没有设计一栋常规的多层建筑，而是用若干“小屋”结构分解了幼儿园所需的总体量，并以一片多功能活动场地将“小屋”集结在一起。幼儿园更像温馨小镇的村庄，亲切的尺度带给孩子们熟悉的感觉；趣味空间关系又带来新奇感，引起孩子的好奇心，激发他们的探索欲。人对建筑和需求不仅仅只是避风挡雨，或为各种活动提供场所；人身在每处空间之内都会发生心理活动、情感投射和人际交往。归根结底，空间形态往往是社群组织关系的物理体现。

AP 作为建筑师，你认为当前的教育改革对 K12 教育建筑的设计有何影响？

董灏 2019 年 7 月 8 日，国务院印发首个义务教育阶段教育教学改革方案，《意见》全文 26 条，从培养目标、课堂教学、教师队伍、组织领导等方面，全方位的为全面提高义务教育质量提出了要求。其中，我特别看到《意见》进一步弱化分数，继续提倡“减负”。这说明，在教育模式

中，作业考试模式将被重构，并鼓励“教育+互联网”。在第三部分提到“强化课堂主阵地作用，切实提高课堂教学质量”，这表明单纯的互动式作业及分数都被削弱，那么与这相关的项目或许将被重新定义。这也说明，教育改革将从上至下地改变教育建筑设计，而后者或许也来到了改革的历史时刻。

作为建筑师，我在从业将近二十年的建筑设计中一直强调“建筑设计本质是‘人’，即：空间中人与人、人与空间的关系。教育空间的设计更是如此。教育活动的丰富性，随着教育理念的不断革新得到了充分的发展，而“什么样的空间设计才能满足不断优化教育理念”，这个答案一定需要回到实际教学以及教学活动中每个个体身上去寻找。我们在已完成的道尔顿学院改造设计中也再一次证明了这一点：只有前期全方位、全面地探索国内外教育方式，深入掌握理解教学理念，并认真聆听使用者的需求，经过多轮商讨讨论，才能精确实现从理论概念到平面布局再到空间再造的转化过程。设计成果从教育理念而来，最终回到教学中去，做到了更好地服务于每个个体的教学活动；同时，也实现了将更多空间的使用权归还到学生手中，让学生自主规划他们的自主学习与互动交流的空间，一切学习都是为自我提升，学生总归要走向社会，这才是教育真正的意义所在。

“无限 6”国际学校建设 Infinity 6 Pop-Up School | 白羽 Bai Yu



AP 最近的两个作品，Infinity 6 和深圳锦龙预制学校都在探索模块化空间和工业建造的可能性，这是你们对未来的一个回答吗？

董灏 我认为这些项目仅代表我们对未来学校的一种探索，就当下而言，我们对这两个项目还是满意的。可是，未来学校的标准是与时俱进的，当下它符合我们对未来学校的畅想，同时也留下可能性。我认为装配式建造在未来会得到更多的应用。过去我们认为装配式建筑过度强调标准化而失去了多样性，但现在通过智能化手段，可以在其中兼顾标准化建造和个性化功能定制。关于装配式建造，我们的理解是：标准化与多样化不冲突，我们的设计理念与现代科技相结合，可以使装配式从千篇一律到千变万化。

关于未来学校，我们自己总结了 6 个要点：（1）需提供满足学生个人活动的空间；（2）应有适应多种形式的集体教学的空间；（3）教室内外的空间应该是流动的，以鼓励学生之间的交流；（4）有使学校和周边环境融为一体、开放的开放空间，促进建筑室内外空间中人工与自然的交流；（5）校园空间内材料和色彩设计应符合不同年龄段的需求；（6）学校应被视为一个智慧且不断发展的空间，并利用智能教学、云教学等新的教学方法。

AP 学校是受近期的疫情影响最大的建筑类型之一，未来的一段时期，你们也不得不与之共存。关于教育建筑或是更广泛的人居环境，你们是否有一些新的思考？

董灏 从整体来说，这次疫情可能会极大地影响未来的生活方式。一方面，隔离对居住空间的其他功能需求增加了；另一方面，人们更不愿意出门，但社交的需求依然存在。因此，我认为未来可能会向两个极端发展。这不仅会影响教育建筑，同时对城市规划、商业形态等方面也会有非常大的影响。

就教育而言，网络教学改变了知识传播的介质，其内核却并未发生改变。我最近在清华大学教授的课程也改为网课形式，从中期效果来看，让我有了意外的惊喜：在与学生的互动中，这种线上授课形式，反而激发了学生更加强烈的自主学习探索能力，完全不受空间的束缚，这是我所提到的一个极端。但实际上，人类的社交需求又要求物理空间的存在。其实我们在做 Infinity 6 时就提出学校应该分散分布在城市的每个角落，通过与线上沟通、教学相结合，满足学习需求。

（本文插图由 Crossboundaries 提供）

Architectural Practice (AP) The two of you come from different countries. How does your respective experience of upbringing affect your design?

Binke Lenhardt (Binke) I grew up in Germany, very close to Heidelberg. Before going to the US for continuous education, I studied architecture at the University of Applied Sciences, Dortmund, where the architectural program was very personal, but also very technical, so I wanted to continue studies in America. Then, with the Fulbright Scholarship of mutual understanding I started studying at Pratt Institute in New York to add a more artistic and theoretical approach to my previous architectural education. Moving to China in 2002 after my America experience was quite a big step as it was basically going into the other direction, from the West to the East. Luckily another scholarship, funded by the German Government (DAAD) gave me the opportunity to study Chinese and dig more into the Eastern culture. I feel that my life and work experiences and the diverse environments of Europe, America and China made me very flexible in terms of how I approach work today. This means that I am able to maneuver through complex situations with different opinions and people and find constructive solutions. My international background in addition helps me to be more resilient to all kinds of new challenges and apply a holistic approach. My first year in Beijing was very hard as it was different from any experience before. But every country has its unique features, and I am trying to combine positive aspects of each and bring them into design.

DONG Hao (DH) I grew up in a courtyard house near the White Pagoda Temple in Beijing. I was exposed to the urban environment of Old Beijing while growing up and I believe that had an underlying influence on my career

choices. After completing the Soviet-like engineering education at the Beijing Institute of Civil Engineering and Architecture (today changed into Beijing University of Civil Engineering and Architecture), I hoped to have a cross-cultural and interdisciplinary experience, so I decided to continue graduate studies at Pratt Institute, a private art school in New York. A teacher in the program, Jack Travis, became my mentor and had great influence on me. As an African-American architect, he taught me not only professional knowledge, but more on how to transmit culture through architecture, integrating various ethnic groups and cultures. The city of New York itself is like a life experience. At that time, the multi-ethnic, multi-lingual, and cross-cultural diversity had a great impact on me, who went abroad for the first time. After the shock of the difference, a long and painful process followed. Gradually, I gained a new perspective and angle of thinking, which had profoundly affected my practice to this very day. Jack Travis is still both a mentor and friend to me, and we are staying in close touch.

AP When you first encountered this kind of shock of difference in education, what was your attitude towards it?

DH Western contemporary architecture is built on the foundation of humanism. My architectural studies in China had a technical and engineering focus and were only based on the research of inherited human experience, but they were not human centered in my opinion. In regard to the education, the biggest difference between the Eastern and the Western education is already very obvious during the K12 stage. The Western method encourages the pro-active and analytic approaches to problems, while I was born in the 1970s of China and received the traditional “indoctrinating” type of

education. The shock was a hit on my preset mindset. I felt my starting point was different compared to other students, not to mention my logical judging ability and the concluding of a whole project. Yet, I didn't doubt myself. Through listening, seeing, thinking, and project cooperation, I eventually understood the thinking logic of other students from all across the world. The US has the spirit of tolerance and is open for new ideas, which inspired me a lot and I found my place after a while.

AP Binke, you have worked in Europe, the US and China, what does it mean to you to be an architect in China? Has China changed you?

Binke There are many interesting things happening in China and challenges to face every day. It is a very developing and dynamic market and for this reason there is also a platform where architecture is maturing. Some of our clients have very visionary approaches and support us in exploring conceptual ideas—this is a positive climate which allows for innovative solutions. Living in China for so many years definitely changed me. Germany is a very developed country and a lot of measures are approved and functioning, but I do feel there are limitations. Being German myself, I can be critical about my country. I think we Germans are sometimes not very open and do have difficulties in accepting changes or alternative ways of doing things. I can also be stubborn and persistent, but still, I can accept that certain things are not going to be done in my way. My stay in China made me become much more tolerant and let me embrace the issue of constant change with a positive attitude. A German approach would be to consider and plan everything very accurately before executing the first step of a project; then if changes occur, we would struggle and maybe start to redo it. In China, planning and realizing are almost simultaneous steps. A change can be implemented faster as it is almost anticipated, which means that when working in China you have to be flexible and adaptive.

AP What was your original intention in establishing Crossboundaries?

DH Crossboundaries was founded in 2005, back then I had been working in BIAD for a couple of years, being in charge of international joint projects and programs. During that time, I was cooperating with a lot of global commercial firms such as SOM and Gensler, and was also working on projects led by Norman Foster and Rem Koolhaas. So at work, I felt strongly the advantages but also the conflicts caused by the differences between East and West. In 2005, we participated in an international competition for the Ningbo Museum and won the second prize, the first being Mr. WANG Shu. Being second was a pity, but I also clearly realized that a burst of Western high-quality design resources

cannot completely solve China's specific problems, considering the balance between cultural differences and commercial interests. In my view, the conventional cooperation model of famous Western architecture firms and Chinese teams has its advantages at the beginning stage of a project; but there will remain an insurmountable gap, which eventually affects the project's execution. Therefore, encouraged by the result, we took this competition as a starting point to become independent. Crossboundaries, the name of our firm, is the combination of two words, meaning “crossing a boundary”, overcoming national borders, professional limits, and cultural barriers. Just like it is with me and Binke, my partner and also my wife, I am Chinese, and she is German. Our team also consists of one-half Chinese designers and one-half foreign designers with different upbringings and educational backgrounds—we form a diversified group.

AP What's the current size of your office? Crossboundaries' work field is wide, what's your working set up in the office? How to divide work between the two of you?

DH At present, our office has about 20 people. These are designers with various backgrounds who bring different perspectives, representing our office with strong creativity and vitality. As for the working set up, we do not have fixed teams for the projects. We hope to explore areas beyond our own imagination and profession, so we enjoy the mix. A city block, a single building, a small indoor space, even a sign in a space, etc., these are all parts of the space we people live in. The environment as a whole influences people's feeling and behaviors, which therefore cannot be separately treated. For this reason, every designer of our team is required to think comprehensively and outside the box. Back in 2005, we had already been practicing this integrated design, long before it became popular in the industry. This multidisciplinary and cross-cultural set up is one of our strong characteristics and also the reason why many clients come to us.

Binke We understand the process of design to be a very communal process. When we have a new project, we start with discussions and brainstorming involving a lot of staff members including the interns, to find and decide a first direction. Eventually, after several rounds, the development of the project will go to a smaller team, where Hao and I will constantly check in on the project and its right direction. In the meantime, Hao is engaging with the client and is presenting the idea and its development, which is in particular when it comes to Chinese clients. So, to some extent, Hao is more outside to communicate while I am more in the office. But when the project later goes into the execution stage, I am outside at the construction site, where one or two team members will accompany me to check and decide. At



一土学校的“章鱼”空间
The peninsulas in ETU School
© 杨超英 YANG Chaoyang

the very beginning, as a foreigner and a woman, it was a challenge to overcome the struggle to engage on site and talk to the workers, as they were confused about my role; but after years of doing this, there seems to be a mutual understanding. Also, the time working as a foreign expert in BIAO gave me a very good understanding about the project process, which, paired with my knowledge of construction, makes me confident and workers will listen to me and try to accommodate my suggestions. That might be rare in China but I am comfortable with it. Hao is acquiring a big number of projects for us, and I am more responsible in handling projects related to foreign clients, such as the BMW projects. Sometimes Hao and I will have presentations together, and I then will go to the continuous meetings to discuss the project development and to realize the technical details.

AP Is there a consistent idea behind the various forms and types of work? Is this idea itself changing?

DH We believe that “we shape space, and space also shapes us”. Therefore, the office is committed to serving ultimate users and creating vibrant and lively spaces. At the same time, we also believe that the world is a place where everyone lives together, so we pursue the common interests of the community, not just the expression of the views of architects or individuals. Our work ranges from urban architecture to graphic design, from teaching to event organization, just like our name—Crossboundaries—constantly crossing boundaries and constantly expanding the scope of involvement. Through various activities and diverse dialogues that are not limited to architecture, we also hope to extend to a wider range of designs. Participation, progress and adaptation being the goal, we unceasingly think and practice.

AP How does being parents influence your design thinking, especially when it comes to designing for children?

DH I come from a very open and well-educated family. There are many similarities between the childhood education I received from my parents and the education I gained in US later on. Expand the love within your own family to that of other families. I hope to share my feelings with more parents and teachers, supporting their ideas, and working together to make children healthier physically and mentally and become qualified citizens of the society. While studying in America, I read John Dewey's book. He opposed traditional indoctrination and mechanical training, advocated learning through practice, and proposed that “education is not preparation for life but life itself”. This huge gap between Chinese and Western education was a subversive inspiration for me back in the US. When I became a parent myself, I developed very intuitive feelings and

gained understanding for the psychological developing needs of a child. Firstly, there is the difference between the child and myself. Although we have a blood relationship, my son still has his own personality, rhythm and capability. Secondly, there is to better recognize the child's independence as an individual. Thirdly, there is to appreciate the diversity of children. “No leaf in the world is identical”, and every child is unique and different. In retrospect, I know that some of my key traits were formed due to my parents' respect for me. Therefore, when designing for children, more emphasis should be placed on “respect”. The difference, diversity and independence of children must be “respected” in the space. This should be the starting point of the design.

Binke I believe the experience of being a mother makes me more sensitive to spaces made for children, and I developed another perspective on looking at existing children spaces. When we worked on the first “Family Box” project in Beijing, I was a young mother. That was the time when I imagined more actively the viewing angle of children. When sitting with them on the floor and sharing their eye level, you realize that it is really different from an adult. In existing children facilities, a lot of things are in fact not made for children. For example, in kindergartens, the handles, the windows and many other things are too high as they are not really designed for children. Following the norm, in addition, color is usually randomly used and excessively applied. Color is an important means of creating unique and memorable spaces but it has to be applied consciously. So, all these observations made me more aware of what children actually do like and perceive.

AP In the design of primary and secondary schools and kindergartens, some architects thought that “outdated regulations” and “owners not knowing what they want” are the biggest problems. What is your answer to that?

DH As an architect, you need to have the ability to understand and dig out the client's “Unspoken Needs”. In many cases, the client cannot formulate his “real” needs clearly. This requires the professionalism of the architect and it is also a process. Educational buildings differentiate themselves from other architectural projects in the fact that the clients are mainly educators, and their views, notions and attitudes impose a strong influence on the space. In this regard, we are particularly equipped with the capability, patience and vision to listen and understand the client. More often, we use our architectural design to inspire the client. Codes and building regulations have the purpose to prevent accidents, and these regulations are a base guideline to be followed by. The building code is also receiving updates from time to time. We as professional and qualified architects have to be able to maneuver through the difficulties of the code requirements and find a balance



德尔顿学校改造前后
Dalton School before and after renovation © 杨超英 YANG Chaoying

between regulations and design. Our practice is very confident regarding this aspect and through various channels, we are also influencing the update of primary and secondary school norms.

AP You have multiple project collaborations with the same client, who is in favor of your new explorations on the project. How do you establish a good communication and a solid cooperative relationship with the client?

DH From a market perspective, it is the client himself who has to approve our services, but I think the most important factor in communicating with the client is to show him our professionalism. Architecture is a comprehensive discipline, and architects ought to have a comprehensive understanding of the whole project. As an architect with a German education and practice background, Binke demands a lot of forward-looking

requirements in the quality control of buildings. The client may not understand this initially, but after completion, the benefits will be perceived when the building is in use and this helps improving the trust between the clients and us. In addition, empathy is crucial as well. It is necessary to think outside your own architectural or individual perspective, but more out of the perspective of the clients or the end user. It is more important to find the common interests of all parties, instead of creating conflicts. For example, in our BMW Museum project, the client consisted of a German and Chinese part. Although they seemed to have completely different demands regarding the space, they actually wanted the same, that was, to build a museum with its very own characteristics. To discover the essence of something behind the appearance is the original driver of innovation, and only the innovations based on this pattern have a true foundation.

AP You have participated in the reconstruction of the ETU School, the Affiliated High School of Peking University and the Chaoyang Future School. Has the cooperation with these pioneers in applying the education reform triggered any reflections on how you see the current domestic educational architecture? Has your core concept of educational architecture changed?

DH Based on research, contemporary people spend 86.9% of their time indoors; the remaining 10% of the time, even if outdoors, is more often spent in a space transformed by designers. Therefore, the manmade environment is dominating our lives today, and it has a subtle influence on our social behavior. Among all of them, places of education are perhaps the most prominent in terms of the influence of space on individuals. With the changes in the education field in recent years, facing our future's uncertainties, more and more educators emphasize on the ability of lifelong learning. The concept of education has shifted from teacher-centric to encouraging students to explore and seek knowledge by themselves. Educators also hope to spark children's enthusiasm through space design; therefore, today's education spaces are increasingly improving existing “standards”. For example, in the design of the ETU School, we have tailored several sets of integrated multi-functional modules with different shapes and rich experiences in the public areas outside the classrooms on each floor. They provide children and teachers with more informal learning, social and activity space outside the classrooms. These little “peninsulas” extending from the classroom not only support the natural behavior of children, but also additionally encourage children to climb up and down, get in and out, increasing the amount of activity, stimulating their curiosity and the sense of exploration. When needed, they can also use the more intimate spaces that are scaled down to fit children, addressing more sensitive emotions.

Not only at the forefront of educational innovation, we believe that all educational spaces can be improved towards the “student-centered” direction. When designing a kindergarten for left-behind children in the rural area of Jiangsu Province, we did not design a conventional multi-storey building, but used a number of small sized structures and organized them as a cluster to decompose the overall size of the kindergarten. An open multi-functional activity area in the center is surrounded by the group of buildings, and the kindergarten therefore appears like a scaled-down version of a village. The amiable scale brings children a familiar feeling; the interesting spatial relationship brings a sense of novelty, arousing the children's curiosity and motivating their desire to explore. People's needs for architecture and space are not only for the purpose of providing shelter or creating places for various activities. In fact, psychological activities, emotional projections and interpersonal interactions occur within each space that people dwell in. Ultimately, the spatial form is often the physical embodiment of the community's organizational relationship.

AP As an architect, what impact do you think the current educational reform has on the design of K12 educational architecture?

DH On July 8, 2019, the State Council issued the First Compulsory Education Reform Document. A total of 26 articles of the Opinions provide thorough requirements for comprehensively improving the quality of Compulsory Education in terms of training objectives, classroom teaching, faculty and organizational leadership. Among them, I noticed in particular that the Opinions focus less on the academic scores and target to reduce the homework burden. This indicates that in the education model, the part of homework and examinations will be restructured, while “education + Internet” is encouraged. In the third section it is mentioned to “strengthen the role of the classroom” as a main point, and to “improve the quality of classroom teaching wholeheartedly”, which implies that pure interactive homework and scores will be softened. Then the design criteria for school buildings will have to be redefined. The implementation of the education reform also indicates an important historical moment as a top-down measure. The essence of architectural design, first and foremost, is people, that includes the relationship between people in the space as well as between people and the space.

As an architect, I have been emphasizing this for almost two decades in our practice. The design of educational spaces is even more so focusing on the human being. The richness of educational activities has been improved with the continuous development of educational concepts. The answer to “what kind of space design



2005年Crossboundaries参与的宁波博物馆室内效果展
An interior rendering of Ningbo Museum by Crossboundaries
in 2005 © Crossboundaries + studio berlín

complies with the continuously optimized teaching concept?” must go back to the actual teaching and each individual within the teaching activity. Crossboundaries once again proved this understanding in the completed Dalton College renovation design. The precise translation from theoretical concepts to the plan layout and further to spatial reconstruction could only be achieved through an early multi-faceted comprehensive exploration of local and foreign educational methods, in-depth understanding of the teaching philosophies, and careful listening to the users’ requirements, following rounds of negotiations and discussions. The design outcome reflects the educational concept and eventually returns to the teaching, better serving each student's learning activities. At the same time, in the design, more space was returned to the students, allowing them a place for interactive communication, independent planning and learning. All learning is for self-improvement, and eventually students step into the society—being fit for this is the real purpose of education.

AP Your latest works, Infinity 6 and Shenzhen Jinlong Prefab School are both exploring the possibility of modular space and industrial construction. Is this your answer to the future?

深圳锦龙预制学校
Shenzhen Jinlong Prefab School
© 吴滨山 WU Bingshan



DH I regard these projects as merely a representation of our exploration of future schools, and these two projects are satisfactory for the moment. However, the standard of future schools is advancing with the times. At present, it is in line with our vision of future schools, and it also leaves possibilities for future schools. I think there will be more applications of prefabricated building types in the future. In the past, we thought that prefabrication emphasized too much on standardization and had very limited diversity; but now, standardized construction and personalized function customization can both be catered to through intelligent measures. We have summarized six points we would like to see applied in future schools. (1) It is necessary to provide space for students' individual activities; (2) There should be space for various forms of collective teaching; (3) The inside and outside of the classroom should be a flowing space and spatial experience to encourage communication between students; (4) Openings to integrate the school with its surroundings and to foster the interaction between manmade environment and nature inside and outside the building; (5) The design of textures and colors of the school or campus space should meet the needs of different age groups; (6) The last point is that the school should be conceived as a smart and evolving space, with new teaching methods such as intelligent and online teaching.

AP Schools are one of the types of buildings most affected by the recent pandemic, and we will have to live with it for some time to come. Do you have any new

thinking about educational buildings or the wider living environment?

DH Taking everything into account, this epidemic outbreak may greatly affect the way of living in the future. On the one side, the quarantine has increased the demand for other functions in living spaces. On the other side, even people are more reluctant to go out as the need for socializing still exists. Therefore, I think that the future may develop towards two extremes. This will not only affect educational buildings, but also have a big impact on urban planning and business patterns. With regard to education, online teaching has changed the medium of knowledge dissemination, but its core remains unchanged. The course I recently taught at Tsinghua University has also been changed to online lectures. I think the final results have brought an unexpected surprise. During the interaction with the students, we noticed that this online teaching method has inspired students to develop more abilities to explore and study by themselves totally free of the constraints of space. This is one of the extremes I mentioned above. But truly, the social needs of human beings also require the existence of physical space. In fact, when we developed Infinity 6, we proposed that the future schools should be scattered in every corner of the city, and be combined with online communication and teaching to meet the learning needs.

(All photos are provided by Crossboundaries)

江苏省北沙幼儿园

JIANGSU BEISHA KINDERGARTEN

设计：Crossboundaries

地点：江苏省盐城市

Design: Crossboundaries

Location: Yancheng, Jiangsu Province

幼儿园不仅是孩子的玩土，也是为村民喜爱的社交场所。
Kindergarten is not only a place for children, but also a social place that villagers like. 吴海山 WU Qingshan





呼应江苏平原乡村的原生肌理 Echoing the native texture of Jiangsu plain countryside © 吴昊山 WU Qinghan

建筑师

蓝冰可，董丽

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结构/机电设计

江苏省盐城市阜宁县建筑设计研究院有
限公司

施工单位

江苏省盐城市阜宁县北沙施工队

基地面积

9,648 m²

建筑面积

2,815.4 m²

结构形式

框架结构

设计周期

2015-12-2016.9

建设周期

2017.4-2018.8

近年来，江苏省率先开始在全省推动高质量学前教育的发展，包括教育资源一度欠缺的乡村地区。2015 年，阜宁县政府委托 Crossboundaries 为其下辖的北沙村设计一所中心幼儿园，以缓解当地幼教资源不足的问题。

阜宁县背倚苏北平原，面临苏中水乡，自古崇文重教、尊师厚德，素有“江淮乐地”之称。如今，四季变化的农事仍是当地人主要的生产、生活内容之一。广阔的沃野托举起其上星罗棋布的房屋和其他人工建造物。

前往北沙的一路上，窗外是一望无际的丰饶平原，薄雾笼罩的地平线偶尔被成排的树木和房屋中断。这就是江苏农村大体的面貌：平坦、无边，正如其上的天空一样广袤无边。而一旦你步入村中，一马平川的感觉立刻就被消解。随处可见的高大树木将天空与田野切割成拼贴画般的碎片，通过这些天然“柱面”走向村中农舍时，会有顿悟探幽般的新奇感。村庄周边的林木、而那些被屋顶、砖墙的两三层农舍衔接起来，是那么和谐。

如此景致，就成为 Crossboundaries 设计的北沙幼儿园生长、扎根的微观环境。

“速修村庄”：本次设计的关键点，是对尺度的把控。

我们设计的组团式建筑，用若干“小屋式”结构分解了幼儿园所需的总建筑体量，并以一片多功能的户外活动场地将每栋“小屋”串联在一起。这种室内外密切衔接、高度混合的空间关系，不仅呼应了乡村的原生肌理。对儿童早期教育而言更是十分重要的场所环境。正如“中国当代幼教之父”陈鹤琴所言：“大自然、大社会都是活教材”，儿童需要在与自然和社会的直接接触中、在亲身观察中获取经验和知识。而空间的设计者要为孩子们营造这种环境，创造这些机会。

这座“小屋式”幼儿园更像像小班的村庄，亲切的尺度带给孩子们自小熟悉的感觉；趣味的时间关系又带来新奇感，鼓励孩子好奇探索。来到幼儿园，他们或许首先会注意到中央的主动戏场；随后，当他们漫步到“小屋”之间，就会发现房前屋后到处都是小小的神秘乐园，可以自由在地学知识或沉迷，就像在村里一样。

在附近村镇考察时，我们也曾见到很多典型的“教学模式”幼儿园——端地环境、局限视野的大体量高窟立方体，以及高度重复的单调立面，将一种相对孤立的“都市逻辑”植入了乡村原有的空间语境，像个外来闯入者，而不是让孩子们感到熟悉、自在和温暖的“第二家园”。当地众多留守儿童的父母很多来自全国各地的乡村壮年一样，选择季节性地外出打工，错过了自己孩子成长的大部分时光。所以对于这些孩子而言，幼儿园确实就是他们的第二个家。

探索之乐：二层步道的功能，不仅连通着各个区域，也是孩子们的活动平台。上到二层平台，孩子们的目光会立刻被起伏的坡屋顶吸引，忽有置身山谷的感觉，树冠也几乎触手可及。视角的小小转变，就能使孩子们换一个角度去观察自己周围的一切，拓展他们日常的空间体验。

立面材料选用了本地随处可见的老青砖和白色灰泥，每栋“小屋”的面貌不尽相同。在原屋的底层开设了多处相互对望的方窗，为每栋建筑与每处小庭院之间建立起视觉联系，移步换景，将别处的活动引入视野，形成连续、有趣的室内外关系。

自 2018 年建成以来，这座幼儿园不仅是孩子们的乐土，亦成为村民喜欢的社交场所。父母或祖父母们聚集在此，在接送孩子之余，有了更多融洽的交流。

PARTNERS IN CHARGE

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Andrea Ciccolini, HAO Hongyi

STRUCTURAL / MEP DESIGN

Jiangsu Yancheng Fu'ning Architectural Design and Research Institute Co., Ltd.

CONSTRUCTION COMPANY

Beisha construction team, Fu'ning County, Yancheng City, Jiangsu Province

SITE AREA

9,648 m²

GROSS FLOOR AREA

2,815.4 m²

STRUCTURE

Frame structure

DESIGN PERIOD

2015.12-2016.9

CONSTRUCTION PERIOD

2017.4-2018.8

On the initiative of the local government facing shortage of preschool education in rural area, Crossboundaries was commissioned in 2015 to design a kindergarten for the Beisha Village in Fu'ning County, Jiangsu, the first province in China that has accelerated the development of high-quality preschool education throughout urban and rural areas.

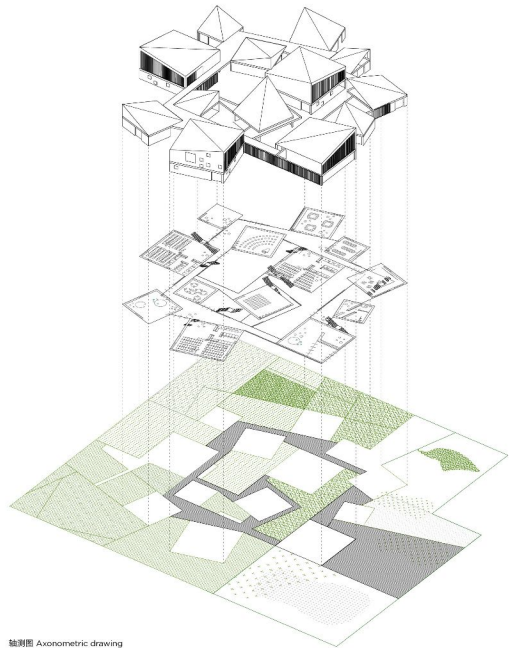
Fu'ning County has been well-known for its tradition of advocating education, culture and morality. Located in-between the North plain and the central water network in Jiangsu Province, the county's seasonal dynamics of agricultural produce still take up most of space and dominate as an activity and as a way of making a living, putting dwellings and all built environment in the background.

Approaching to Beisha, you would be greeted by the endless fertile plain, its horizon deluded by the mist and just occasionally interrupted by the linearly arranged trees and houses. This is how most of rural Jiangsu is: flat, boundless landscape, as infinite as the skies above it. Once you arrive in the village, the

feeling of overwhelming flatness somewhat disintegrates, the skies and soil become just a background collage, sliced in pieces by the tall trees that now dominate the scenery. Approaching the buildings through this natural colonnade feels like a discovery, and a special framework that works well with the small, 2-3 storeys houses with pitched roofs and brick facades.

And it is exactly this setting, the zoomed-in rural landscape of the Jiangsu flatland that the kindergarten designed by Crossboundaries grew from and ultimately belong to.

“Mini Village”: Appropriate scale of the project was a crucial starting point of this design and led us in creating a building cluster for Beisha, with required building volume broken down to house-like pieces, integrated by the central multifunctional open space. This integration of the outdoor and indoor is crucial to the early education environment and innate to the rural context.



轴测图 Axonometric drawing

This Beisha kindergarten functions as a smaller, slightly modified version of villages, of which the scale gives the children a sense of familiarity and the interesting building relationships introduce novelty and encourage curiosity. Entering into the gate, children would first discover the main central space and the overall "settlement" surrounded by the trees and then, as they meander in between the "houses", they discover small, secret places tucked away from the main square, perfect for outdoor learning activities and playing Hide-and-Seek, just like what they always do in the villages.

In contrast, a typical school form, a courtyard enclosed by the prismatic volumes and repetitive facade that blocks off the surrounding and limits the view, with its protective, city logic would be a foreign object in this setting, an intruder in existing context, a symbol of inserted institutional architecture, rather than a place where the children would feel familiar and free, and identify it as their second home. And second home is exactly what the kindergarten for many of these children is, in quite literal sense considering that many young parents of rural area seasonally migrate to big cities for work and miss out on big periods of their children growing up.

Fun of Exploration: In Beisha kindergarten, the second floor pathways are not just connections between areas, they are also combined together into a platform of explorations for children. Once you are up on the second floor platform, your experience is suddenly overtaken by the dynamic slopes of the roofs. The endless plain suddenly feels like a mountain gorge and the treetops are within a hand's reach. This little shift of perspective enables the children to see their surroundings in a different frame and expand their everyday spatial experience.

The materials used for facades are locally available recycled bricks combined with white plaster, creating different faces of each "house". The window placement on the ground floor, with several square windows of the houses facing each other, establish the visual connection between the buildings through the yards, constantly reframing the views and integrating activities and connecting inside with outside.

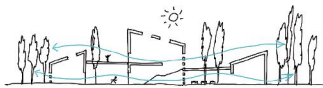
Since its completion in 2018, the kindergarten has become not only a pleasure land for children but an easy gathering place of their communities. Parents and grandparents tend to chat and share more time during sending and picking up their children.



常见的幼儿园形态与乡村环境格格不入
The morphology of common kindergartens are incompatible with the rural environment



乡村肌理塑造出了新形式的幼儿园建筑
The rural texture has shaped a new kind of kindergarten building



底层通透性
Ventilation & transparency on the first floor

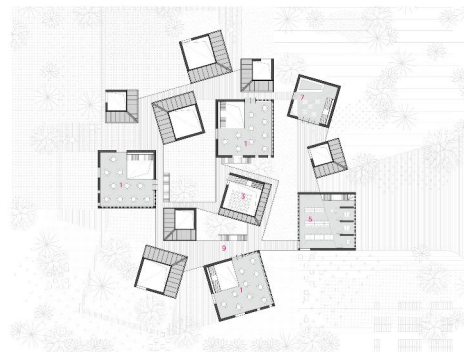


二楼户外建造
Outdoor activities on the second floor



起伏的屋顶如置身山岭，让孩子们换一个角度看周围范围

The undulating roof is like being in a valley, letting the children look around from another angle © 吴靖山 WU Jingshan



二楼平面图 Second floor plan



一层平面图 First floor plan



南立面图 South elevation