

设计的“为”与“不为” ——围绕幼儿游戏空间设计的思考

DESIGN TO NOT DESIGN —THOUGHTS ON THE DESIGN OF PLAYING SPACES FOR YOUNG CHILDREN

1 儿童游戏空间设计的内在张力

欲望是促使设计发展的动力之一。西方现代设计史奠基人尼古拉斯·佩夫斯纳从艺术的角度建构了设计的历史框架^[1]。此后，将设计等同于艺术、关注设计师个人成为了对待设计的主流态度。阿德里安·福蒂对此种视角进行了批判：他继承了希格弗莱德·吉迪恩“去设计师化”的视角^[2]，揭示了除设计师以外，经济和社会的需求对推动设计



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摘要

设计师与使用者之间的博弈是典型的设计内在张力，如何平衡这一矛盾是所有设计共通的课题。因作为实际使用者的儿童长期处于被代言的状态，儿童设计中内在张力的平衡问题则更为复杂。这要求设计师在平衡自身表现欲与社会需求的同时，还需要反思儿童需求被代言背后的集体无意识。本文有意选取与学习“相对立”的“游戏”入手，以幼儿游戏空间设计为切入点，借鉴发展心理学和人类学的相关研究，讨论设计中内在张力的平衡问题。本文试图通过探讨儿童“为何游戏”和“如何游戏”这两个基本议题，揭示幼儿心理发展中游戏的作用及此阶段游戏的机制，提出设计“无为”的重要性。最后以“育先于教”为设计理念的日本COBY育儿园设计做延伸讨论，为儿童游戏空间的设计提供参考。

关键词

设计内在张力；幼儿心理；游戏；人格发展；人类学；松散材料

ABSTRACT

To all kinds of design, the negotiation between the expression of designers' idea and the representation of users' desire is a typical internal tension of design. Particularly, the balancing of the internal tension of the design for children requires sophisticated solutions, because the needs of the actual users are often (mis-)represented by the desire of their parents. Therefore, in addition to satisfying social needs, the designers should also recognize the collective unconsciousness of adults who express on behalf of children. Taking the studies in Developmental Psychology and Anthropology as reference, this article focuses on playing, instead of knowledge acquisition, and discusses the balancing of the internal tension of the design of playing spaces for children, especially for the preschoolers. This article aims at revealing the role of games to children's psychological and intelligence growth, as well as their game playing mechanism, by answering two questions: why do children play games and how do they play? By illustrating a case study on the playground design of the COBY Preschool in Japan, the proposed concept of "design to not design" is expected to inspire the design of children's playing spaces.

KEYWORDS

Internal Tension of Design; Psychology of Children; Game; Personality Development; Anthropology; Loose Parts

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发展具有巨大作用^[3]。从设计师到经济社会要素的驱动，设计史的不同视角都传达出同一个观点：欲望——个体的创作欲抑或是广义的社会性需求——推动了设计的发展。

设计史观层面的争论从侧面揭示了设计本质中包含的内在张力，即设计师的志向意趣与广义的社会语境下的需求之间常存在紧张关系。在公共设计中，这种内在张力通常表现为设计师与使用者——少数与不确定多数——之间的博弈。长期以来倡导使用者本位的设计哲学与方法正是源于对设计本质的反思和探索。

产业社会以来，设计成为人类实现欲望的方式之一，设计中不同欲望的冲突与调和亦是人类塑造未来的“生产（production）过程”；人类还有一种更为“原始”的通向未来的方式，即人类的繁衍。设计是人类的生产过程，而儿童则是关乎人类自身的“再生产（reproduction）过程”——可以说，针对“儿童”的“设计”对于塑造未来有极其重要的意义。

儿童设计中内在张力的平衡问题十分复杂，因为作为实际使用者的儿童长期处于被代言的状态，他们的需求通常被其监护人的欲望投射所取代。“儿童”不是先验的客体，其观念建构是认知发展与文本创作的历史产物^[4]，这意味着人们对于儿童心理发展的认知是具有局限性的。然而，在社会生存竞争背景下，人类的欲望总不免失控。以“爱”之名的投资与消费成为支撑现代社会运转的巨大引擎。在给孩子的“更好未来”的人生“设计”里，“教育”成为了“爱”的代名词，但却通常仅是无视个性与主观能动性的知识“填鸭”。这种将知识学习作为幼儿教育的主要内容的观念暴露了成年人对儿童心理发展阶段与个体差异的认知不足。因此，要求设计师在平衡自身表现欲与社会需求的同时，还需要反思儿童需求被代言背后的集体无意识。

1 Internal Tension of the Design of Playing Spaces for Children

Desire is one of the drivers of design. Nikolaus Pevsner, founder of the history of western modern design, built the historical framework of design from the perspective of Art^[1]. Since then, design is viewed as a practice of art and designers have gained unprecedented attention as design works. Following Sigfried Giedion's call to “remove the designers' subjectivity in design”^[2], Adrian Forty criticized this phenomenon that, in addition to designers, economic and social demands also play a key role in the development of design^[3]. Nevertheless, all these perspectives share a common ground that desires—individual creativities or social needs—promote the progress of design.

The conflicting perspectives mirror the internal tension between designers' will and social needs which is the nature of design. To public design works, this tension is often exemplified as the negotiations between the designers (the minority) and the users (the uncertain majority). As a result, an initiative on user-oriented design philosophy and methodology formed based on long-term reflection on and exploration about the internal tension of design.

Design has become an approach to fulfill human desires in industrial society. The conflicts and reconciliations among various desires of design represent a “production process” through which the human beings create the future. Meanwhile, humans retain the other “primitive” way that leads to the future—reproduction, and children therefore manifest the “reproduction” of human beings ourselves. In other words, the design for children is crucial to the (re-)production of our future.

In the designs for children, the needs of the actual users are often (mis-)represented by the desire of their parents, which complicates the balancing of internal tension. “Children” are not the pre-existing objects, and conceptual construction of “children” is the result of cognitive development and text production^[4]. In other words, the current knowledge about the psychological development of children is limited. However, under the huge pressure of competitiveness in the modern society, parents' desires for a stronger survival and growth of their children manipulate their investment and consumption activities under the name of “love.” Knowledge education and skill training take over the job of “designing” a “better future” for children, regardless of children's individuality and initiative. The adults who view knowledge acquisition as the main tasks of child education overlook the characteristics of different stages of children's psychological growth. Therefore, in addition to satisfying social needs, the designers should also recognize the collective unconsciousness of adults who express on behalf of children.

本文有意选取与学习“相对立”的“游戏”入手，以学龄前幼儿^①（下文简称幼儿）游戏空间设计为切入点，借鉴发展心理学和人类学的相关研究，讨论设计中内在张力的平衡问题。本文试图通过探讨儿童为何游戏、如何游戏这两个基本议题，揭示幼儿心理发展中游戏的作用及此阶段游戏的机制，为儿童游戏空间的设计提供参考。

2 为何游戏？

发展心理学奠基人之一的爱里克·埃里克森将弗洛伊德对于性心理发展时期的划分扩展到了整个生命周期，将人的生涯分为8个发展阶段^②，并提出每一阶段人格形成的核心课题^③。人格建设是一个循序渐进的过程，前一阶段的心理建构会对后一阶段产生影响。幼儿处于个体社会化的初始阶段，他们通过与家庭以外的世界产生交集开始自发地探索如何与他者建立关系，并通过外界的反馈对自发性行为进行抑制与调整。

幼年及学龄前期又被称为“游戏期”，游戏在此阶段的个体社会化过程中具有重要作用^④：游戏不仅仅是幼儿与他者建立社会关系的媒介，同时也是学习自我调试的重要途径。伴随游戏形式愈发复杂，幼儿的社会化程度也不断深入^⑤。心理学家让·皮亚杰指出，幼儿最显著的心理特征之一是自我中心主义（认知阶段的特征，而非道德判断）^⑥。与学龄儿童开始学习遵守规则、服从更为外在的社会规范不同，幼儿并未形成“纪律”（一般性约束）观念，又因其认知中自我与他者（客体）未能分化，因此常表现出难以接受不同的观点和立场，对自我的抑制只能在个体化的调试经验中逐步建立。游戏便是重要的经验来源之一。

与学龄儿童相比，幼儿的游戏常见多个游戏团体并存，多层游戏并行交叉。此类游戏围绕游戏规则建立展开（即到底怎么玩），没有明确的终点^⑦。游戏规则建立的过程即是游戏过程本身，也是个体社会化与自我调试的探索。探索过程会影响信任、安全感等基本情绪的建立。比如，游戏中的争吵——“我想要那个玩具，可是他给我玩，我去拿他打了我”——这个看似平常、监护人常介入调停的摩擦，恰恰是幼儿体验挫败，从中学会抑制自我、协调社会关系的重要环节^⑧。

Taking the studies in Developmental Psychology and Anthropology as reference, this article focuses on playing, instead of knowledge acquisition, and discusses the balancing of the internal tension of the design of playing spaces for children, especially for the preschoolers^①. It aims at revealing the role of games to children's psychological and intelligence growth, as well as their game playing mechanism, by answering two questions: why do children play games and how do they play? The author's thoughts are expected to inspire the design of children's playing spaces.

2 Why to Play Games?

Erik Erikson, one of the founders of Developmental Psychology, divided one's life journey into 8 stages^② based on the stages of psychosexual development proposed by Sigmund Freud, and proposed the core task of each stage^③. One's personality progressively develops—the psychological building of the preceding stage influences that of the following one. At the initial stages of their life, preschoolers establish ties with others by interacting with the world outside family, and adjust their spontaneous behaviors based on the responses from the surroundings.

Infancy and pre-school stages are also known as the “game stage”—literally, games play a crucial role to the socialization of young children^④. When playing games, children get contact with others and adjust themselves at the same time. As the games become increasingly complicated, children's socialization level promotes^⑤. Psychologist Jean Piaget pointed out that egocentrism is a major psychological characteristic—rather than in an ethical sense—of preschoolers^⑥. Unlike the school-age children who learn to follow rules and obey social norms, preschoolers have no idea about “disciplines” (general constraints); Having difficulty in objectifying the other, they can hardly accept the disparities in viewpoints and positions. Therefore, they can only gradually inhibit their egos upon their own experience, such as playing games.

Compared with the school-age children, games for preschoolers often take place where several groups take interactions at different levels. These games are mostly about establishing the playing rules (how to play) but without a definite end^⑦. For children, the process of establishing rules is the game itself, where they learn to socialize themselves and primary emotions such as trust and sense of safety would be fostered. For instance, children often quarrel in games (like tussling for toys), and the parents usually intervene; however, in such conflicts, preschoolers would experience frustrations and learn to constrain themselves and negotiate their social relations^⑧. Quarrel in games should thus be viewed positively, and adults should let the

① 对于人类发展阶段存在着多种年龄划分，本文中，“学龄前幼儿”指3-6岁的儿童。同时，本文提倡人类发展阶段的年龄划分不应绝对化，而应从人格发展的全周期出发，思考儿童的心理需求。

② 8个发展阶段对应年龄段约为：婴儿期（0-1岁）、幼年（1-3岁）、学龄前期（3-6岁）、学龄期（6-13岁）、青春期（13-20岁）、成人早期（20-40岁）、成人中期（40-65岁）和老年期（65岁至死亡）。

③ 幼儿初期常见的是独自游戏的形式；3岁开始出现平行游戏，即在一个时空下多人同时游戏，但游戏伙伴之间缺乏互动；4岁后联合游戏的形式逐渐增多，即在平行游戏基础之上出现游戏伙伴之间偶尔的对话和交涉；5岁后游戏形式进一步发展，形成协同游戏，即游戏中幼儿进行对话沟通，并形成不同的分工，领导者与被领导者的角色出现，群体内部开始产生地位区分。

④ There are different standards to define the stages of human development. In this article, preschooler refers to the kids aged between 3 and 6. In addition, the author holds that the stages of human development are not definitely defined by age; it needs to emphasize children's personality development and psychological needs as a whole.

⑤ Roughly, 8 stages are babyhood (0 - 1 year old), infancy (1 - 3 years old), pre-school (3 - 6 years old), school (6 - 13 years old), adolescence (13 - 20 years old), early adulthood (20 - 40 years old), middle adulthood (40 - 65 years old), and senior (65 years old and above).

⑥ Babyhood and infancy kids are used to solitary play by themselves; Kids usually start parallel play since 3 years old, i.e. several kids play in a same space at the same time with no interaction with each other; joint play since 4 years old, i.e. dialogues and interactions take place among the children occasionally; cooperative play since 5 years old, i.e. children communicate with each other and play different roles including leaders and followers, which implies the disparity of the social groups of the children.

④ 与此相对, 学龄儿童开始参与有规则的竞技类集体游戏(比如球类), 由此建立基于目标的竞争协同性关系, 关注的重点由如何游戏转向游戏的结果(胜负优劣)。

⑤ 该工作坊是“身体游戏”项目中的一环。这一结合了研究和产品开发的项目由丹麦科学、技术和发展部资助, 希望通过设计新的游戏空间, 吸引孩子更多地参与户外活动, 以解决日益严峻的儿童肥胖问题。受邀参与工作坊的孩子们可以利用一些素材和小道具, 自己动手制作他们喜欢的玩具。设计师希望借此提炼出孩子们喜欢的游乐设施的物质形态(或特征), 而参与工作坊的孩子其实并不在意自己搭建的玩具形态。

④ The school-age children start to take part in competitive games with clear rules (such as ball games), and develop the goal-based competitive-cooperative relationships, where children care more about the result of the game (win or lose), instead of the game process.

⑤ The design workshop was part of the Body Games Project, sponsored by the Danish Ministry of Science, Technology and Development. The project was launched to encourage children's outdoor activities through the design of new game playing spaces, in order to decrease childhood obesity. Children at the workshop were encouraged to make toys with materials and props. The designers hoped to get inspired for the design of the physical shapes (or characteristics) of playing facilities from the forms of children-made toys that were however less cared by the children themselves.

因此, 幼儿游戏中的争吵应被看作是一种积极的行为, 应该给予一定的空间让孩子们自行消化。比如, 日本文部科学省颁布的《幼儿园教育纲要》中就指出, 幼儿对人的信任及谅解是在与对方产生摩擦并克服摩擦的过程中逐步形成的, 幼教人员需要在这个基础上对幼儿进行引导^[9]。

经由心理学对游戏行为原点的探索可知, 游戏是幼儿社会化的媒介。一方面, 幼儿通过多重而流动的游戏动态, 建立和调整多样的社会关系; 另一方面, 幼儿在对社会关系的调试中保证相对自我的调试空间, 从而保证基本情绪的建构。

3 如何游戏?

理解游戏在幼儿社会化中的重要作用可以帮助设计师建立一种设计哲学。前文提到, 幼儿难以为自己的需求发声, 这其中一个重要原因是孩子们常常无法形成清晰明确的、逻辑化的表达。基于人类学视角观察儿童如何进行游戏, 有助于设计师更好地理解儿童需求, 从而形成更明确的设计方向。

人类学家梅特·贾尔斯加德与唐·欧特指出, 游戏的本质是儿童对于其社会关系的调整, 这也印证了发展心理学的观点。通过对儿童参与的设计工作坊的观察与访谈^⑤, 贾尔斯加德与欧特进一步指出, 设计师和使用者(儿童)在对游乐设施及游戏本身的理解上存在巨大差异^{[10][11]}: 对于设计师而言, 游戏设施意味着形态的表达, 是一种静态的物质实体; 游戏是在这个物质实体存在后发生的行为。而对于儿童而言, 比起最终的外观形态, 游戏设施的搭建过程更为重要; 游戏是这个物质实体被创造的过程本身。

设计的内在张力于此显现。于设计师而言, 游戏存在事先的规则, 游戏的物质性体现于规则的实现; 于儿童而言, 游戏不存在先验的规则, 儿童对于物质(游戏设施)的需求是情景化的。在设计幼儿游戏空间时, 若设计师只关注如何“提供”一种外在的物质化的组合, 并以此为先决条件预设幼儿游戏空间, 那么设计很有可能与幼儿游戏的本质背道而驰。因此, 如何保证游戏设施的可变通性, 以适应和触发更动态、多样的游戏内容, 是设计师需要解决的核心问题。

综合前文可得, 游戏是幼儿社会化的媒介, 情景化的游戏过程是幼儿的核心需求。前者指明了游戏空间作为社会空间的定位: 1) 保证

children deal with it on their own. According to The National Curriculum Standard for Kindergartens released by the Ministry of Education, Culture, Sports, Science and Technology in Japan, children's trust and forgiveness form during the negotiation and resolution of conflicts, where teaching staff need to guide children when only it is necessary^[9].

In short, regarding the psychological understanding of games, games are the media of socialization for children: On the one hand, children establish and adjust their ties with the world in the dynamics of multiple game playing; On the other hand, they learn to have an independent space for self-adjustment, which ensures the building of primary emotions.

3 How to Play Games?

Understanding the role of games in the socialization of children helps designers build a design philosophy. As mentioned above, children are often represented by the adults because they cannot clearly express their needs in a logical way. By observing how children play games from the anthropological perspective, designers would better understand the needs of children and then to inform the development of the design of children's playing spaces.

According to anthropologists Mette Kjaersgaard and Ton Otto, games are in essential to help children adjust their social relations, which echoes the ideas of Developmental Psychology. After observing and interviewing children's game playing in a design workshop, Kjaersgaard and Otto further pointed out that the designers and the users (children) have sharply different understanding about playing facilities and games^{[10][11]}. For designers, playing facilities are the static results of design expression of forms, and they define the games what would take place in the place. While, children care more about the building process of playing facilities, which per se is the game to have fun.

The internal tension of design thus comes into being: In the eyes of the designers, there are pre-set rules for games, and games are manifested by following the rules; However, for children, games do not have definite rules, and their needs for playing facilities are manifested by the situatedness of the game. Therefore, if designers merely focus on providing combinations of playing facilities and defining the use of the playing spaces for children accordingly, the design would betray the essence of games. It is the time for designers to respond to the requirement that how to improve the flexibility of playing facilities to accommodate and trigger diverse game forms for children.

As games are the media of children's socialization, playing spaces should be designed to 1) ensure the diversity of games and encourage children's social interactions, and 2) ensure

游戏的丰富性以激发多样的人际交往；2) 保证最低安全距离以消解人际矛盾。后者进一步提示了游戏空间在空间组合与物质材料的运用上可能的方向：1) 开放与迂回兼容的空间层次与流线；2) 可变性强、富于参与的流动性游戏设施。

上述观点支持了松散材料在幼儿游戏空间设计中的应用。“松散材料” (loose parts) 概念由西蒙·尼科尔森首次提出，指儿童可以以操作、转化和创造的材料；这些材料可以帮助儿童构建自我引导的游戏，为他们提供表达创造力的机会^[12]。尼科尔森的定义是描述性的，且相关研究中对松散材料的概念也未达成严格的定义，但它们都共同认为，松散材料是开放式的、互动式的、具有无限操作可能的天然或人造材料^[13]。与松散材料的互动^⑥可以激发幼儿的创造力和想象力，通过自由地探索各种组合，启发儿童主导游戏，对儿童的社会和情感能力培养起到积极作用^{[14]-[16]}。

然而，当前大多数研究的重点在于游戏中松散材料具有何种效用，以为幼儿游戏空间的设计提供思路。但本文旨在强调设计的根本出发点，即回到儿童游戏的需求机制进行设计，而不是仅仅因为某种材料具有某种效用就简单进行模仿。比如，沙地是常用的天然松散材料，但如果缺乏对游戏社交空间（共享与庇护）的关照，而仅是照本宣科，那便陷入了另一种“固化”的思路，而背离了“松散”材料运用的初衷。正如前文所说，当设计师以能力教育与效用为前提来讨论“游戏”时，设计的内在张力可能已经失衡，儿童真正的欲望难以得到关照。

幼儿教育旨在培养人生存的基础力^[17]，需要对儿童的游戏行为进行观察，根据幼儿特点进行引导。例如，对于太过于在乎游戏胜负的孩子，可以给他橡皮泥等松散材料，引导其享受与粘土对话的游戏过程，并从自由的自我表达中获得肯定，弱化“与他人比较”在自我肯定中的比重。对那些容易陷入独自的、固化的游戏的幼儿，需要引导其观察其他伙伴的游戏或参与群体游戏。

4 案例研究：“育先于教”的幼儿园

笔者由上述设计方向首先联想到的是一块简单的场地，其中有一些沙子和植株——仿佛也不需要设计师做什么。从某种意义上说，

children's minimal safety distance to resolve interpersonal conflicts. Also, situatedness is the essential to children's games, which suggests the new possibilities of the spatial combination and material selection in the design of playing spaces, including 1) open, meandering spatial layers with flexible movement lines, and 2) elastic playing facilities that encourage children's participation into games.

In terms of material selection, the ideas above all confirm that loose parts are beneficial to the design of playing spaces for children. First proposed by Simon Nicholson, "loose parts" refer to the materials that children can use to freely manipulate, transform, and create, offering children with opportunities to express their creativity^[12]. Including Nicholson's description and other relevant studies, there is no widely agreed definition of loose parts, but existing research confirms that the loose parts are the natural or man-made materials that can be used for open and interactive playing, without operation limitations^[13]. The interaction with the loose parts^⑥ would contribute to development of children's creativity and imagination: by exploring various combinations, children would dominate the game, which helps foster children's social and emotional abilities^{[14]-[16]}.

However, most studies on loose parts focus on the benefits in games and suggestions on the design of playing spaces. This article concentrates on children's psychological needs for games and criticizes the designs that simply imitate the material selection of certain loose parts which have specific benefits. For example, sand is a commonly found natural loose parts; however, if designers simply prepare sands for children but overlook the design of social spaces (e.g., for sharing and sheltering purposes), children's playing with the sands would little help with their personality development. As mentioned above, when games are prepared for ability and skill training, the internal tension of design is out of balance, failing to meet the true needs of children, the users.

Young children education focuses on the fostering of fundamental abilities^[17]. It requires adults to observe children's game playing behaviors and to provide guidance accordingly. Loose parts, like plasticine, help the kids who are emulative in games enjoy the interaction with the parts, to get self-recognition from free expression, instead of through comparison with others; for the children who tend to play games alone, watching or joining others and group games should be encouraged.

4 Case Study: A Kindergarten that Puts "Fostering before Teaching"

Following the design framework directed above, the author thinks of a space with sands and plants, as if there is no need for

⑥ 与松散材料的互动包括实验探索和游戏性的互动。

⑥ The interaction with the loose parts includes children's explorative and entertaining activities.

- ⑦ 在日本育儿的入园幼童年龄为1~4岁。但本文反复强调引入年龄划分并非为了严格区分儿童，而是希望引起读者对人格发展的全周期观念及每个发展阶段特点的重视。COBY育儿园项目的合作景观设计师为松尾刚志。关于COBY育儿园的更多信息，请参见TDSTUDIO建筑设计事务所官方网站。
- ⑧ 引自2020年3月26日笔者对津岛晓生的采访。

- ⑦ Children at Japanese kindergartens are 1 to 4 years old. Again, the author holds that children's personality development should not be defined by age; Designers need to recognize children's personality development as a whole and take the different characteristics of each stage into consideration. The landscape designer of the COBY Preschool is Takeshi Matsuo. Please visit the official website of TDSTUDIO Architectural Office for more information about the Kindergarten.
- ⑧ Quoted from the interview with Toshio Tsushima on March 26, 2020.

1. COBY育儿园的设计运用了石头、木材、构筑物等素材，为儿童打造了自由的游戏空间。
1. The design of COBY Preschool uses rocks, wood, and building structures to create a free playing space for children.



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对于幼儿空间而言，设计师的欲望应让位于儿童的自然之欲，最低限度的介入——即“无为”的设计——也许不失为一种理想。但在设计产业化运营的当下，资本总需要“有为”的设计来回馈。这是产业社会的游戏规则，也是欲望推动设计发展的逻辑。平衡设计内在张力，需要处理的是资本对于“有为”的期待，以及幼儿人格发展对于“无为”的需求。本文以日本建筑师津岛晓生主持设计的位于日本东京小平市的COBY育儿园^⑦为例，对其幼儿空间“育先于教”的设计理念进行论述。该项目设计细节中的“为”与“不为”，让本文的跨学科思考有了更具象的落笔。

园长希望建造一所“不太像幼儿园的幼儿园”，以避免那些游戏规则固定的玩具与形态刻板的空间禁锢孩子们的天性。津岛认为，在“育先于教”的设计理念中，“教是从知识出发的，是寻求标准答案的模式化的人才培养；而育是以人之初的天性烂漫为出发点的，是允许孩子们犯错、以孩子天性的自由成长为目的的……幼儿园的目的是培养人的基础力，而不是学习知识及规则，那是小学以后的课题^⑧。”这与将幼儿园看成学前预科班的观点形成了鲜明的对比。

本文着重介绍COBY育儿园设计的两个特点：游戏空间的室外景观设计中“游戏的自由与释放天性的结合”，以及建筑设计中“空间的多变与行为的触发”。结合前文中提出的设计方向，这两大特点诠释了三个设计重点：1) 发挥非具象的松散材料能够激发儿童自主游戏、人际交往的作用；2) 在有限的空间内创造多重流线，流线既是游戏设施的一部分，同时也创造出独处与共享之间可变的空间距离；3) 空间

any work by designers. In a sense, the design of playing spaces for children should invite the kids to access nature with minimal spatial interventions, i.e. “design to not design.” Meanwhile, in the modern industrial society, the satisfying of the desires of capital propels the advance of design. In this sense, balancing the internal tension of design requires not only to satisfy the expectations of “design” from the investor but also the needs for the personality development of young children through the “design to not design.” By illustrating the design concept of COBY Preschool^⑦ in Kodaira, Tokyo whose main buildings were designed by Japanese architect Toshio Tsushima, this article elaborates on the idea of “fostering before teaching” in the design of the playing space of the kindergarten. The details in the design might inspire inter-disciplinary ideas.

The preschool principal envisioned a “kindergarten that is not look like a generic one” that usually adopts the toys with definite playing rules and the fixed spaces with little help to children’s free play. Tsushima explained the design concept of “fostering before teaching” that “teaching starts with the knowledge and the patterned cultivation of talent training; fostering, on the other hand, values the innocence of young children, allowing them to make mistakes and grow up freely and happily.... Kindergarten is a place to help build the fundamental abilities for young children, rather than to learn knowledge and be disciplined, which is the programming focus of elementary school and beyond^⑧.” This philosophy sharply contrasts with the idea that equates kindergarten education with pre-school preparatory programs.

This article expounds on two design ideas of the kindergarten: the outdoor landscape design adopted a combination of playing facilities allowing children to enjoy freedom and release nature in games; and the architectural design values the variability and diversity of space and the initiation of behavior. The design ideas are both embodied by: 1) using loose parts to encourage free play



的可变性与多功能性，既可提高空间利用效率，也激发了儿童自由使用空间的潜能。

和日本的很多幼儿空间一样，COBY育儿园的占地面积并不大。因此在室外游戏空间的处理上，设计师需要尽量丰富空间体验。设计团队没有采购成型的游戏设施，而是运用石头、木材、构筑物等素材，打造自由的游戏空间（图1）。石头和木条还用来构成挡墙；石缝中细细的流水成了天然的玩具；“用途不明”的透明构筑物为孩子们发明新游戏提供了契机。低矮的石墙保证了视线的通透，不仅可供儿童互相观察，也方便幼教人员对其进行引导；墙体的曲线造型增加了空间丰富度，也保证了幼儿自我调试的安全距离，实现了空间共享与独处的平衡。在有限的户外空间中，石墙与园外的墙体融为一体，弱化了育儿园内外的边界感，让游戏空间视觉体验更为开阔。园内超越具象和常规的物质空间组合虽然简约质朴，却为儿童在游戏过程中的创造性与参与度提供了最大的自由（图2）。

在建筑设计方面，为丰富室内空间的流动与变化，COBY育儿园内鲜有固定的空间隔断。与中国幼儿园中常见的摆满睡床的午睡空间不同，在午休时间，孩子们抱着各自的被褥在活动区的地板上铺开躺下，醒来后再一同整理；过道与空地同时也是游戏空间和音乐课的课堂。此类多功能分散空间成为了幼儿交流互动的催化剂。层楼之间的玻璃墙体不仅实现了视觉统一，同时也扩大了对幼儿的安全监护视域（图3）。

COBY育儿园设计曾获得2013年度日本儿童设计奖，评审委员会对

and interpersonal interactions; 2) creating multiple movement lines in the limited spaces to serve as part of the playing facilities and to define the intimate and public spaces; and 3) improving the flexibility and versatility of the space to meet multiple utilization demands and catalyze children's spontaneous activities.

Like many other playing spaces for children in Japan, COBY Preschool occupies a small area. The designers were asked to enrich the spatial experience of the outdoor playing space. They did not employ the prefabricated playing facilities, but used rocks, wood, and building structures to create a free game space (Fig. 1). A series of low walls were made with stones and wood bars, where the water running in the cracks among stones becomes the natural toy for kids, and the transparent structures with “undefined purposes” allow children to invent new games. The low stonewall ensures unimpeded views, allowing children to observe each other and teachers to guide when necessary. The curve styling of the walls enriches the spatial layout and provide adequate safe distance for children's self-adjustment by outlining the spaces for sharing and intimate moments. In the limited outdoor space, the stonewalls are visually integrated with the boundary of the kindergarten, creating a broader vision of the playing space. Different from generic design of kindergarten, the spatial design of COBY Preschool conceives simple combinations of physical elements which encourages children's creativity and engagement at the greatest extent (Fig. 2).

In terms of architectural design, to ensure the flexible use of indoor space, the kindergarten adopts few of fixed walls. Different from most Chinese kindergartens where the living and napping areas are separate, the activity area can temporarily turns to napping area in COBY Preschool when kids there make the bed and nap on the floor and then returns back after their waking up. The passages and open spaces are also used for games and music classes. The spatial design encourages children's communication and interactions. A series of glass walls guarantee the safety supervision of teaching staff (Fig. 3).

COBY Preschool won the 2013 Kids Design Award of Japan. The jury highly recognized the design of the playing facilities: “This design features an original set of playing facilities on the playground. In an urban kindergarten with limited space, this design ingeniously creates a playground where each child can find his / her own way to play.”

5 Conclusions

Taking reference from the studies in Developmental Psychology and Anthropology, this article explains why do

2. COBY育儿园的物质空间组合虽然简约质朴，但却极大地激发了儿童在游戏过程中的创造性与参与度。

2. The spatial design of COBY Preschool conceives simple combinations of physical elements which considerably encourages children's creativity and engagement in games.

- ⑨ 获奖信息参见日本儿童设计奖官方网站。
- ⑨ Please visit the official website of Japan Design for Children for more information.



3. COBY 育儿园内多功能分散空间成为了幼儿交流互动的催化剂。
3. The flexible spatial design of COBY Preschool encourages children's communication and interactions.

园内的游戏设施设计给与了高度的评价：“本设计的特点是在操场内设计了一组原创的游乐设施。在场地有限的城市幼儿园里，巧妙地创造了一个空间，让每一位孩子都能找到属于自己的玩耍场所。”^⑨

5 结语

本文借鉴游戏心理学和人类学的相关研究，通过探讨儿童为何游戏、如何游戏这两个基本议题，揭示学龄前幼儿心理发展中游戏的作用及此阶段游戏的机制，提出回归幼儿需求的设计哲学，并通过强调“松散材料”对儿童游戏与心理发展的重要性，进一步明确在平衡儿童设计内在张力中“无为”设计的重要性。

需要强调的是，“无为”并不是简单的不作为，而是知晓所为极限后的“知而不为”；“无为”并不是单纯的空白，而是蕴含可能性的意图留白。设计内在张力的平衡问题虽无通解，但“无为”作为设计师对自我权力的内省，可为所有尝试提供基础。LAF

children play games and how do they play, to demonstrate the role of games to children's psychological development and the game playing mechanism. It highlights that the design of children's playing spaces needs to emphasize the growth characteristics of young children and the use of loose parts. Finally, the design philosophy of “design to not design” is proposed.

It is worth noting that “design not to design” does not mean to do nothing; it is about leaving possibilities—rather than simply creating empty spaces—after knowing the limits of design. There is no one-fits-all solution to the balancing of the internal tension of design, where the concept of “design not to design” helps designers to re-examine their power in design and encourages new insights for future explorations. LAF

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