

城市中的精神需求 ——东京孤独树洞计划

URBAN MENTAL DESIRE —TOKYO LONELINESS TREE HOLE PLAN

1 被忽视的城市精神需求

纵观人类历史，许多学科的创立与发展都体现了人类需求的不断变化与迭代。不同于其他领域，空间营建学科对人类需求的回应体现在对建成环境的空间梳理与系统组织之上。随着城市化进程的加深，环境问题日益得到重视，保障城市公共健康成为人类的集体需求。

景观设计学建立在人类对城市环境提升与公共健康之间的关系的理解上。今天，公共空间的品质、活动项目的丰富度、绿地率与公园可达性等指标已成为评价一座城市宜居性的重要参考。城市景观对人的精神健康确有积极意义：景观具有调节心情与缓解压力等功能，如康复花园与疗愈景观为例的特定景观类型已被证明对人的身心健康均有积极作用；心理学上的情景治疗理论认为，风景优美的疗养环境具有放松镇静等作用^[1]。

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摘要

当下城市环境建设中对公共健康的关注多集中于生理健康，对精神健康则缺乏系统性与针对性的关注。本文提出从城市公共空间系统入手，透过特定受众群体的选取以及对他们在城市中的精神需求分析，探索以空间设计促进城市精神健康的新可能。“东京孤独树洞计划”以健康本源论为理论基础，提出重新思考并塑造对孤独的积极认知，以此确立应对城市孤独的设计方针。概念方案运用基于情景的研究方法，以“都市树洞”作为一种系统性设计策略，构建“精神基础设施”网络，为城市孤独者提供与自我、与空间、与孤独共处的机会。作为城市新型公共空间，“都市树洞”同时具备公共性与私密性，以东方设计美学创造自然景观与人之间关于孤独的共情，实现对城市群体孤独感的缓解和精神需求的回应。项目通过“私人公共空间”的概念探讨将“一人公园”作为一种未来景观形式的可行性，有望满足后疫情时代公众对公共空间使用的新需求。

关键词

城市公共空间；健康本源论；精神健康；精神基础设施；空间设计；城市孤独；都市树洞

ABSTRACT

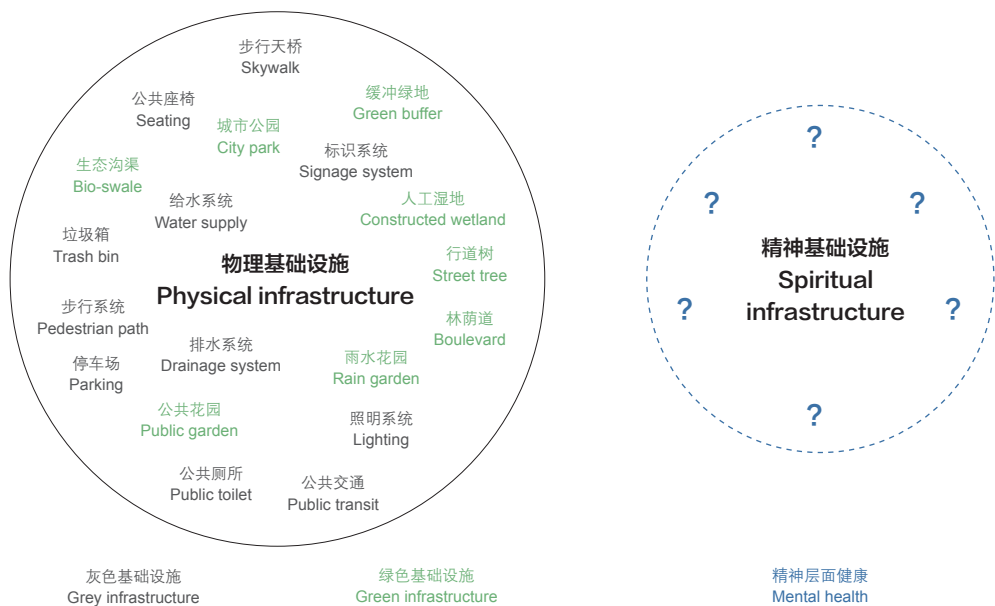
While the current urban public space pays more attention to the physical construction for the promotion of public health, systematic and specific studies on mental health is insufficient. Through the selection of a specified group of users and the analysis of their mental desire, this article explores the possibility of promoting urban mental health by spatial design. The "Tokyo Loneliness Tree Hole Plan" project suggests reconsidering and reshaping the positive perception of loneliness based on the Salutogenesis Theory and proposes a design guideline for tackling urban loneliness. The project utilizes a scenario-based research method to conceive a systematic strategy for establishing an urban "spiritual infrastructure," which offers the lonely individuals a chance to get along with themselves, the space, and the feeling of loneliness. As the new typology of urban public space with publicity and privacy simultaneously, "Urban Tree Holes" create empathy about solitariness between natural landscape elements and humans in oriental design aesthetics, in order to mitigate the urban loneliness and respond to the mental desire. "One Person Park" as an alternative form of future landscape investigating the concept of "private-public space," which might fulfill the new desire of using public space in a post-pandemic era.

KEYWORDS

Urban Public Space; Salutogenesis Theory; Mental Health; Spiritual Infrastructure; Spatial Design; Urban Loneliness; Urban Tree Hole

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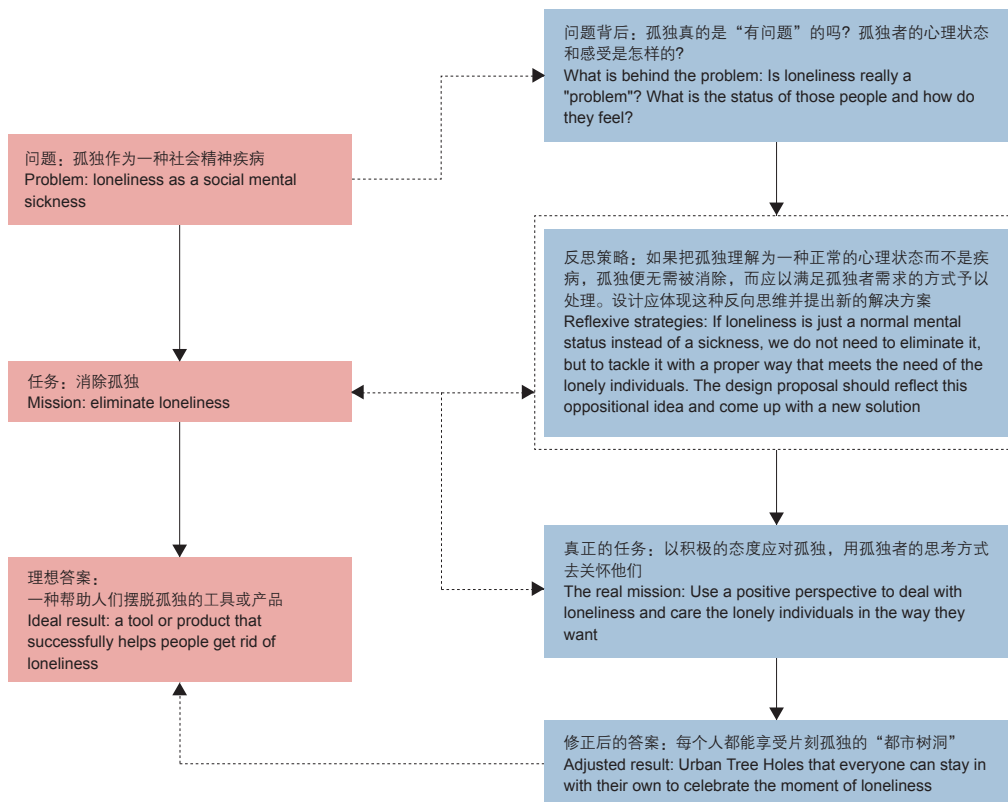
然而，当前城市建设中对公共健康的关注更多集中在生理健康层面。凯文·思韦茨认为，城市空间设计对生活质量提高的意义已被充分肯定，但其对于精神层面的抚慰作用更多地被当作城市设计策略的“副产品”，没有得到充分讨论^[2]，主要体现在两个方面：1) 目前城市公共空间的规划与设计缺乏从绿地系统等宏观尺度上关注公共精神健康问题，疗愈花园等特定类型的景观无法有效应对系统性的问题；2) 公共空间中使用者的精神需求因群体的不同而具有多样性，但一般城市绿地（如公园）具有的精神健康调节功能过于宽泛，无法有效回应人们的具体诉求。鉴于关注精神健康的景观仅见于医疗系统内的花园，尚未拓展至更广阔的城市公共领域^[2]，本文以“东京孤独树洞计划”概念方案为例，提出一种从城市公共空间系统入手，透过特定受众群体的选取以及对他们在城市中精神需求的分析，探索空间设计促进城市精神健康的新可能，并设想一种继灰色基础设施和绿色基础设施之后，系统性的新景观形式——城市“精神基础设施”（图1）。

2 为谁设计与认知孤独

公共空间为公众服务是设计师的共识。然而，把“大众”当成全部个体的合集，会造成对“小众”使用者需求的忽略。公共空间的设计多以典型的大众使用者为对象：他们能自在地在开放场所中进行各种形式的活动，享受与陌生人的相遇和互动。但城市中也存在着另一类群体，他们不希望被打扰，也避免打扰他人，在人流密集的场所会倍感紧张——他们是公共空间中“孤独”的个体，也是公共空间设计中不应被忽略的使用者。

“孤独”（loneliness）一词在西方二元论语境下长期被渲染成一种与“积极交流”“乐于分享”相对立的消极精神或情绪状态。医学社会学家亚伦·安东诺夫斯基提出“健康本源论”（Salutogenesis）概念^[3]，认为现代医学应从过度关注潜在疾病可能对身体产生的负面影响、主张规避风险的疾病本源导向，转为健康本源导向的认知模式，即正视自我的身心健康状态。因为疾病本源导向在社会层面上表现为强调疾病危害性以起到社会警示作用，在个人层面上则表现为注意力过度集中于疾病本身：两者都缺乏对健康复杂性的综合认知^[3]。这与城市中的孤独群体面临的状况相似，即社会强调孤独的危害并主张消除孤独^①，个体也因自身的孤独产生心理负担。健康本源导向模式已被应用于空间营建学科——已有景观学者指出，城市中的景观空间能营造令人愉悦的氛围，使人从心理压力与疾病中获得舒缓^[4]。笔者认为，社会环境应以健康本源导向的理论为支撑，通过空间营建的手法更新人们对孤独的认知，鼓励大众学习与孤独相处（图2）。

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① 本项目参加的国际竞赛主题为“消除孤独”。“消除”一词反映了孤独被看作是一种病症和负面问题。本项目的参赛题目为“从消除到升华”，意在推翻对孤独的负面理解，提出一种新的思考方式。

1. 为应对城市日益明显的精神健康需求，项目提出从灰色基础设施与绿色基础设施到精神基础设施的转向。
2. 项目利用反思策略推导设计概念：孤独是否需要被消除？

1. The project proposes a shift from grey infrastructure and green infrastructure to spiritual infrastructure to respond to the city's increasing desires of mental health.
2. The project uses

reflexive strategies to explore the design concept: Is it necessary to eliminate loneliness?

应“为谁设计”的议题。日本民众在公共生活中自我克制与注意保持社交距离的特质，加之东京地区极高的生活压力与人口密度，导致孤独感渗透在城市的每个角落——在东京，孤独者既是公共空间使用群体里的小众，又是这座城市无处不在的大众。此外，“孤独”在东方文化中作为一种强调与自我相处的美学，在艺术与文学作品中反复出现^②，使得本方案的选题与选址理由更为充分与统一：在一座具有孤独现象与孤独美学的城市，利用空间设计的手法，建立基于健康本源论的孤独认知模式。为此，方案从精神需求层面入手，通过疏导孤独感带来的负面影响，试图为孤独者提供适宜的享受孤独的空间。

项目首先重新思考孤独，并提出对其的积极理解，采用基于情景的调研方法，通过观察、记录、图像转译等手段，描绘出东京各类人群在不同日常情境下展现出的孤独感；接着，分别在城市尺度上构筑“精神基础设施”以为满足东京大众的“精神需求”提供系统性的策略，和在场地尺度上创造一系列以健康本源为导向的、能引发东方式共情的新型公共空间（图3）。

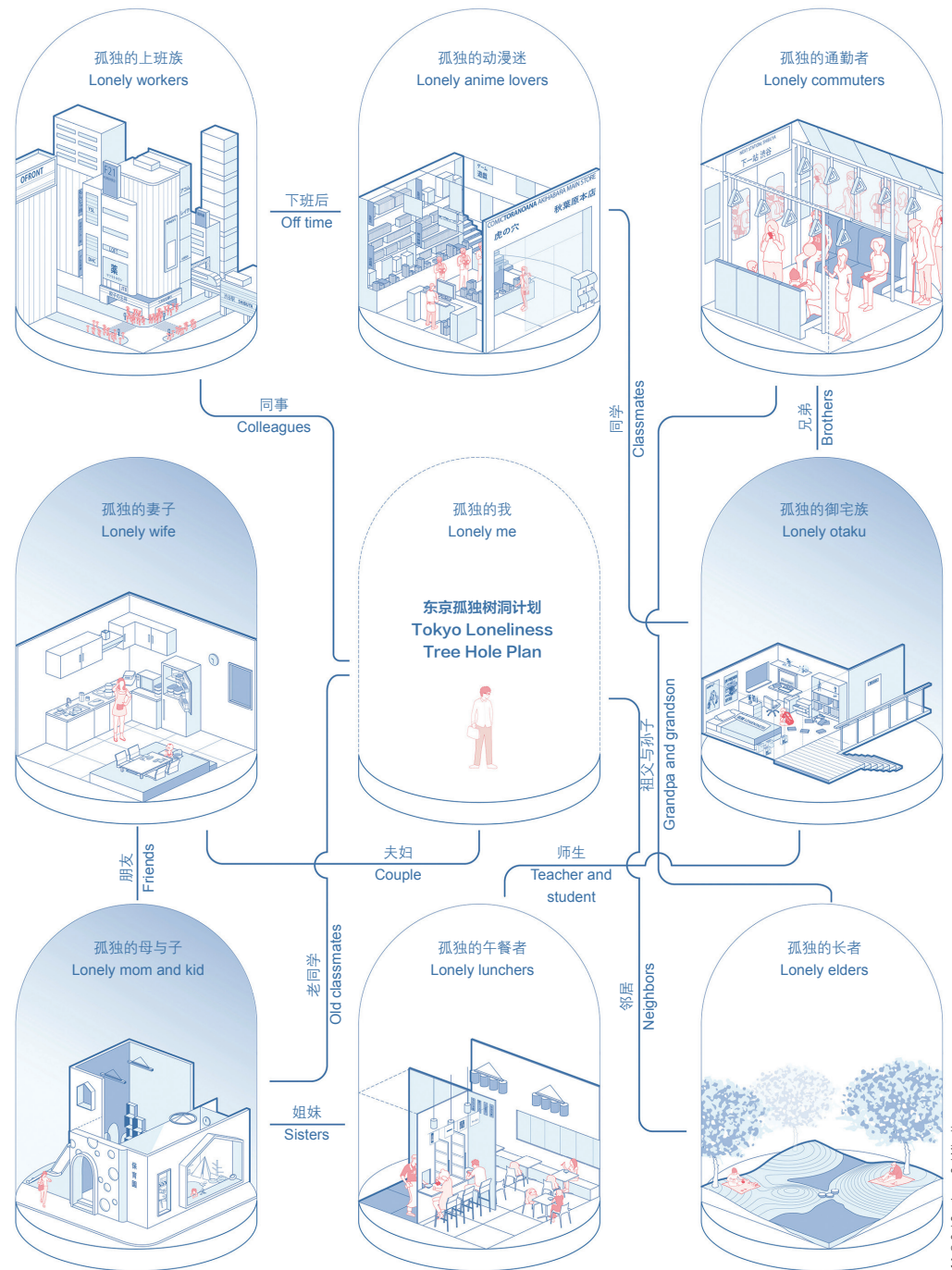
4 都市树洞：人与自然关于孤独的共情

在东京，最困扰孤独者的并非孤独本身，而是社会看待孤独的方式，以及担心自己的孤独影响他人所造成的心理压力。对于这类人群而言，作为排遣孤独的手段，一个独处空间的情绪慰藉作用并不亚于朋友的陪伴^③。因此，他们在面对孤独时更倾向于寻找一种类似“树洞”的交流对象：一种易于寻得、不会直接回应也不会对他人造成困扰的、可以保障私密安全的密闭空间。在这样的空间中，任何人都可以毫无压力地与自我独处片刻，而无需担忧外界眼光。

思韦茨认为一种新的恢复性城市公共空间结构正在形成^④：它们跳脱出传统的大型城市公共空间思维模式，迈向一种由小型空间组成的网状结构；它们可观的数量和高可达性在及时应对精神健康问题上更具优势。“东京孤独树洞计划”提出的正是在东京创造一系列的“都市树洞”，作为一种系统性策略为城市构建出一层由小型嵌入式空间构成的新型精神基础设施网络，为东京孤独者提供一个与自我、与空间、与孤独共处的机会。

项目选择位于东京市中心的涩谷区作为树洞计划的实施场地。一方面，涩谷作为东京生活工作压力最大的城区之一，最能体现东京市民的孤独感；另一方面，东京公共开放空间面积占比仅为6%^⑤，其中建筑密度最大的涩谷区对植入“都市树洞”这类设施有着迫切需求。项目依据不同场地的具体条件，创造了不同的、具有可操作性的树洞空间营造范式，通过激活临街闲置商铺、搭建或利用高层间连廊和开发地下空间三种树洞空间模式，为土地资源稀缺的涩谷区创造新的嵌入式公共空间（图4）。

树洞空间的营造并非令人置身于封闭的环境中，相反，项目利用借景、障景与换景的空间设计手法，为使用者提供了来自自然的“陪伴者”：树、天和水。罗杰·尤里奇曾通过一组针对术后焦虑病人的



② 人们普遍认为孤独感在日本美学与哲学思想中占有重要地位，如在“侘寂”“物哀”等概念中均有体现。

3. 项目利用基于情景的研究方法，展示东京多个孤独的日常场景。

3. A scenario-based research: daily scenarios of loneliness in Tokyo.

4. 项目选取东京涩谷的三种典型空间类型，分别植入“都市树洞”，构建城市精神基础设施网络。
4. The project selects three spatial typologies to insert the Urban Tree Holes in Shibuya, Tokyo, in order to create an urban spiritual infrastructure network.

对照试验，论证了与自然元素为伴有利于人的精神健康^[7]：能透过窗户看到树木的病人在克服沮丧、保持积极情绪、缩短住院时间等方面的表现均优于病房窗外是一面砖墙的病人。而树、天、水作为最常见的自然元素，在高密度、快节奏的城市生活中同样常常被忽略——它们也是城市中另一种无声的孤独者。通过强调与自然共处与对话的孤独美学，项目试图构建自然景观与人之间的东方式共情：人和自然将短暂地“分享”与“交流”彼此的孤独感。

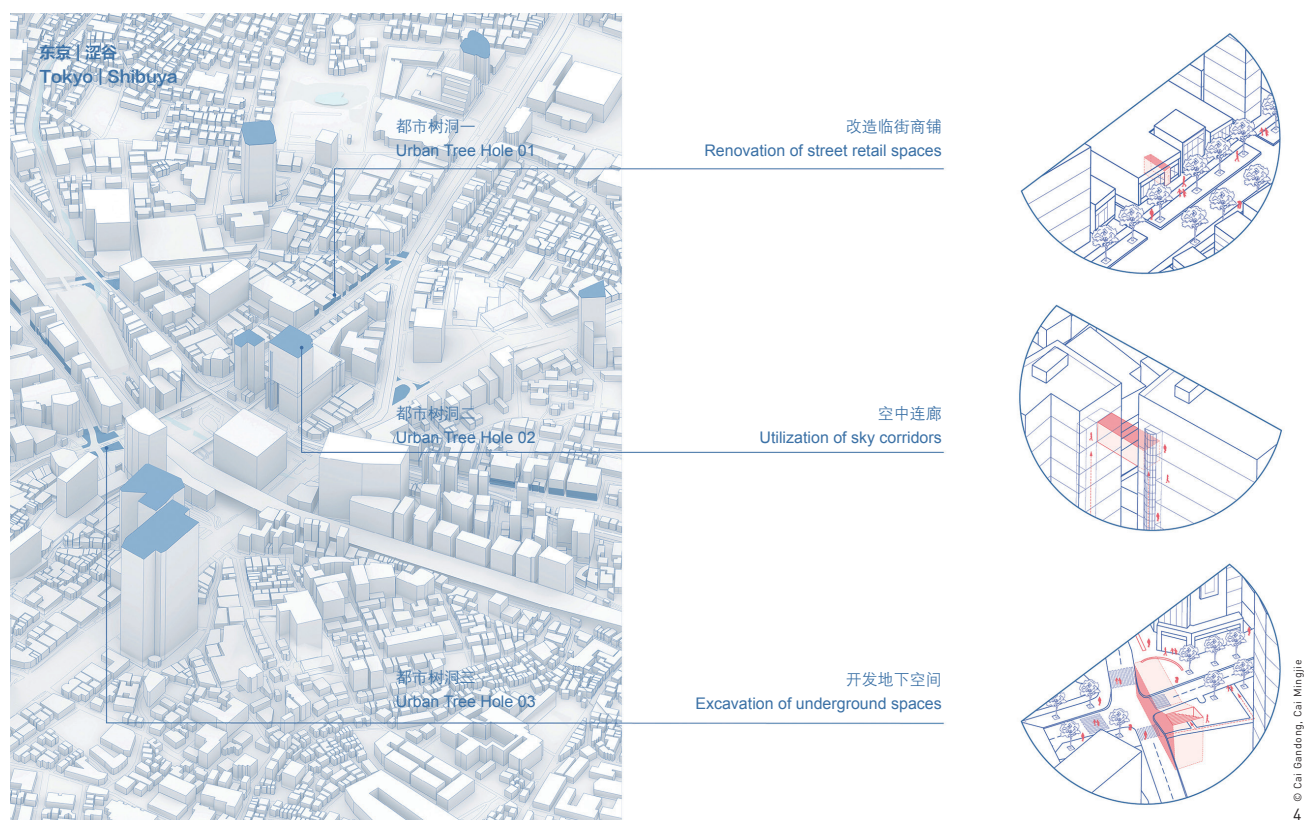
4.1 树洞一：改造临街商铺

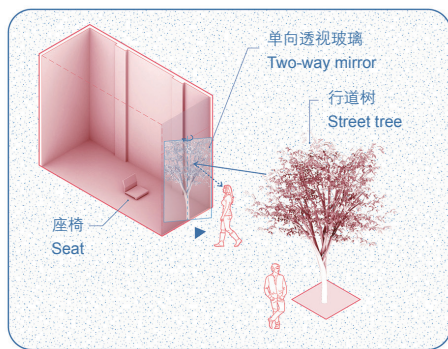
涩谷商业文化活动密度极高的沿街界面具有很大的改造与利用潜力，可在此置入公共空间。树洞一的设计策略着重通过内外空间的切换改变观看方式。利用嵌入式空间的手法改造临街商铺，树洞空间得以消隐于街道之中，从而降低对原城市界面造成的影响。被改造后的立面换上落地式单向透视玻璃旋转门，从外部观看镜面，得到的是自我与城市融为一体的影像；从内往外看，自我与城市通过玻璃分隔，观看者瞬时抽离当下的同时，也重新发现了城市中被忽略的景观。运用借景手法，行道树被纳入树洞空间，成为了孤独遭遇的交流者和情

绪抒发的倾听者。散布于城市又消隐于街道中的临街树洞空间作为新植入的城市精神基础设施，让原本步履匆匆的城市居民获得片刻犹如置身日本禅宗园林中的静观与冥想体验（图5，6）。

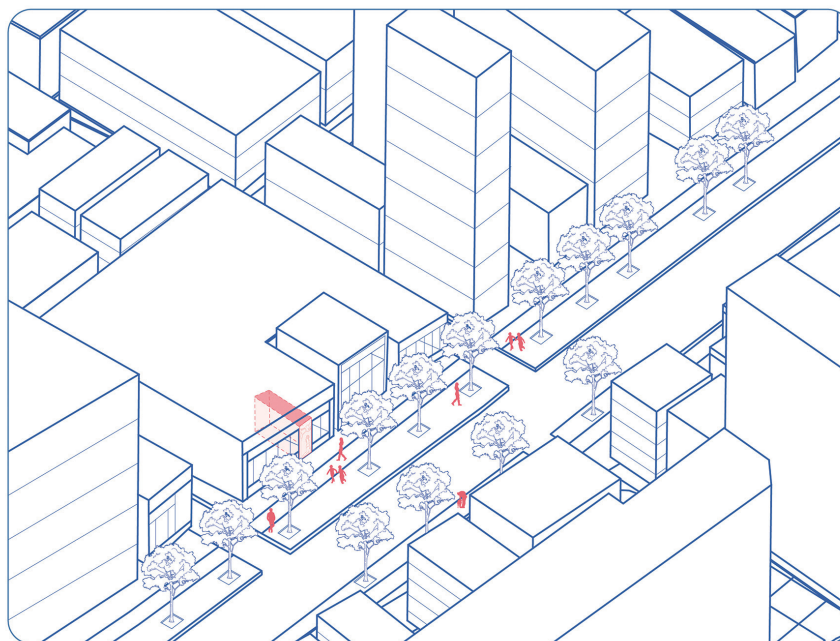
4.2 树洞二：空中连廊

当以电梯为主体的纵向式交通成为高密度城市人群的重要活动方式时，楼群间的空中连廊作为水平连接空间，提升了城市的空中开放性与公共性。天空本是景观的一部分，城市中密集的高楼大厦让人渐渐丧失了仰望天空的原始本能，登上摩天大楼俯瞰城市景致成为都市人习惯的观看模式。树洞二着眼于在林立的高楼之间，通过障景和视线操纵手法增设或利用空中连廊，创造供使用者短暂停留的树洞。一般的空中连廊强调视线的通透性，而树洞二的空间设计则刻意通过墙体遮挡外部景色，仅于两侧的副廊以倾斜镜面将天空反射进来，使得使用者视线聚焦于脚边的镜面。通过一处处架设于高楼之间的树洞构成的精神基础设施，惯于向下“俯瞰”的都市人可在连廊中低头发现本需向上“仰望”的天空，人与被遗忘的天空得以在城市中从物理和心理层面实现孤独共情（图7，8）。





都市树洞一
Urban Tree Hole 01



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5. 从外部观看，单向透视玻璃反射出自己与涩谷繁华的街头；推门而入，镜面变为了通透的玻璃，视线聚焦于街头不易引起关注的行道树。

5. From the exterior, a two-way mirror reflects the image of the user and the cityscape of Shibuya in the background; when stepping inside, the mirror facade turns into a window that helps the user focus attention on an overlooked street tree.

4.3 树洞三：开发地下空间

沿街界面与林立高楼分别占据了城市可视的地面层与高空层，而地下则是城市中不可见的潜力空间。树洞三着眼于涩谷最为繁忙的十字路口下方，通过置入地下公共空间，在闹市中创造一片静谧场所。除地下空间外，树洞三的设计还包括了地面雨水花园。在拥挤的大都市中心，落下的雨水去往何处从来无人关心。此处的树洞空间设计通过收集和过滤城市地表雨水，将被忽视的雨滴汇集、变身为瞩目的地下水帘。同时，水帘能有效隔绝地面噪音，有助于塑造城市中的孤独者与自然之水独处的无声交流场所。从地上到地下，从不被察觉到成为视觉焦点，原本不可见的地下空间与城市雨水，透过换景的手法，变成了城市孤独者在地面之下可视的共情对象（图9，10）。

4.4 都市树洞的使用与管理

除空间设计策略外，东京孤独树洞计划还同时思考：如何通过这一新型公共空间的使用，将享受与孤独共处的心境进行传递，并形成另一层情感共享机制？为此，项目引入了《树洞指南》手册（图11）。手册不仅记录了树洞分布的位置与使用方法，同时拥有使用后留言的功能。作为共享资源与媒介，《树洞指南》可供使用者传递和借阅，记录下自己的故事和心境，成为孤独者集体交流的工具。

另外，为了兼顾空间的公共性与私密性，以及安全与管理问题，项目在空间设计上基于一人使用的尺度，采用分时预约使用制，即同一时段只允许一位使用者进入，营造“一人一时”的场所。“一人一时”保证了使用者能在特定时间内独享空间，而一套有效的预约机制

则使得公众能有序地轮流使用。这种都市树洞为公共生活提出了一种新的可能，但因为其特征与传统的城市公共空间有较大差异，需在后者的使用与管理模式基础上进行创新。“一人一时”的预约制度结合《树洞指南》手册，共同支撑起这种新型未来公共空间的运作模式，使之成为城市中新的基础设施网络。

5 一人公园：未来公共空间的可能性

现代城市空间虽在理论上通过用地性质与土地权属明确划分了公有与私有的界线，但在具体实践中，公有与私有的界线往往十分模糊。目前针对公有与私有模糊性的讨论主要集中在“向公众开放，以填补城市公共空间缺口的私有空间”上^[8]。本文借由东京孤独树洞计划讨论的则是另一种模糊性：通过“一人一时”模式为有独处需求的使用者提供了临时的具有私密性的城市公共空间。因此，本项目提出的“私人公共空间”概念，正是在批判现有公共空间忽视使用者心理与精神需求多样性的基础上，打破公共与私人的固有界线，探讨一种未来可能出现的、具有模糊性的新公共空间形式——“一人公园”。

“一人公园”的概念在本文之前尚未被提出与讨论。“一人公园”与传统的城市公园绿地具有较大差异，主要体现在：1）传统公园仅具公共性，“一人公园”则通过管理实现公共性与私密性的切换；2）传统公园往往占据大面积城市空间，“一人公园”则运用嵌入的方式隐匿于城市已有空间体系中；3）传统公园拥有丰富的景观资源，“一人公园”则通过纳入周边的自然元素作为自身景观资源的补充。

③ 活动由波士顿名家系列与音乐家周韵发起，活动为期10天，分别在波士顿中国城以及坎布里奇的哈佛广场公共空间上举办。

正因为“一人公园”在公私属性及空间形象上的模糊性，使其具有巨大的潜力，成为已有公共空间体系的有效补充^[9]。需要强调的是，“一人公园”并非公共性的倒退，其本质也绝非私人庭院或私有化空间，而是基于公有与共享的一种新的交流模式。

“一人公园”概念虽尚未得到广泛讨论，但对于公共空间中独处功能的探索已有相关案例。美国波士顿曾于2019年举行了一场城市临时公共艺术活动——“一人音乐会”，其在城市公共空间中创造出一处独立空间，以供一名演奏者为一名听众演奏一分钟的音乐会，让使用者拥有一次在公共空间中享受专属一人的音乐体验^③。该项目与“一人公园”概念异曲同工之处在于对现有公共空间的功能所发出的挑战：在音乐广场、户外剧场等鼓励集体参与的功能性空间成为公共景观陈词滥调的今日，是否可能出现一种新的景观形式，允许空间使用者享受一人一时的乐趣？

“一人公园”作为未来公共空间发展的一种可能，在今后的城市空间设计讨论中应得到重视。此外，2020年新冠肺炎疫情（COVID-19）所带来的空间隔离和无接触交流，也促使设计师反思当前公共空间使用的新模式。公共空间过往所强调的开放互动交流与防疫工作提倡的避免物理性接触在行为模式上存在着巨大矛盾。公共空间设计能在多大程度上反映并满足城市居民的身心需求？“一人公园”理念又能在何种意义上丰富与补充关于城市公共生活的研究？

6 设计反思

本文通过一项概念设计实践探讨了公共空间中使用者的精神需求，并以城市中的孤独群体作为研究对象，提出了一套旨在消除大众

对孤独的偏见、为孤独者提供适宜的公共场所的结构性空间改善策略。鉴于其作为竞赛方案的设计性质，树洞空间应当被理解成三种操作原型或介入模式，而非明确指向具体选址和建造技术的落地项目。因此，虽然方案没有详细讨论树洞空间实际投入使用的管理，但其最大的价值在于探讨以心理健康为导向的设计介入城市空间营造的可能性。其次，城市中的心理健康问题远不止城市孤独，在不同城市应对不同的精神需求所采取的策略也应有所差别。但东京孤独树洞计划所引发的思考及提供的思路，具有被日后的公共空间规划设计参考的价值。

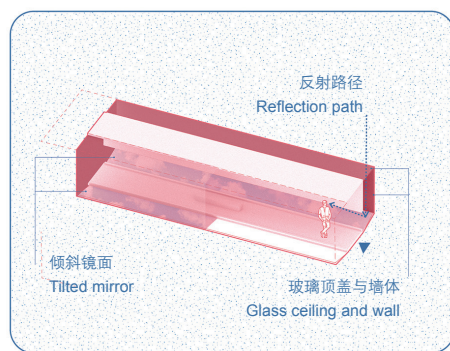
在后疫情时代，越来越多的公众倾向于独处或对聚集有所顾虑的情形下，如何通过设计满足公众生活的新需求——尤其是精神需求——已成为设计师面临的新议题。心理健康应被纳入到一切与市民健康相关的社会政策、系统规划及医疗保健服务当中^[10]，包括城市公共空间与基础设施的设计与营建。日后，更多基于特定时代背景、特定城市与公众需求的思考，将促进在更广阔的地域和更广泛的层面上的讨论和实践。LAF

项目信息

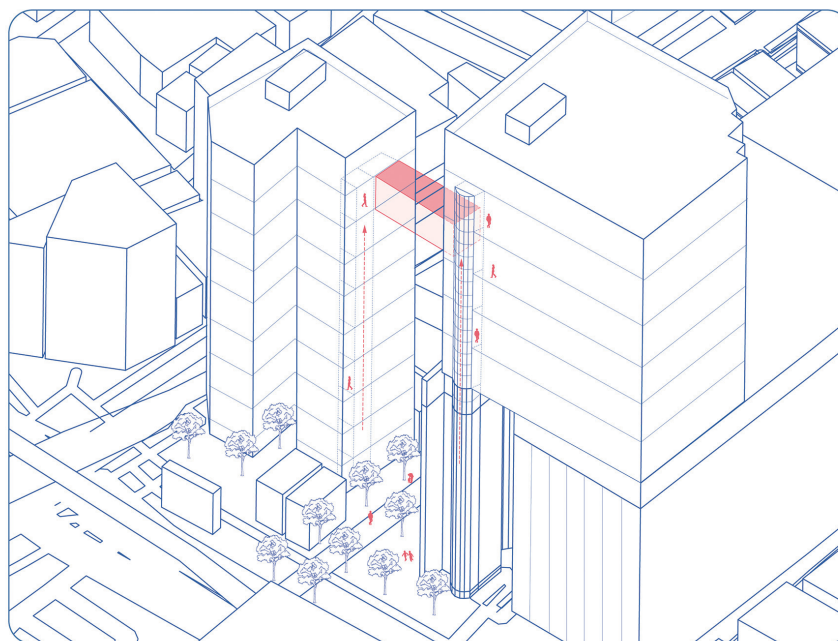
项目地址：日本东京市
设计团队：蔡淦东、蔡明洁
设计时间：2019年4月
所获奖项：消除孤独概念竞赛一等奖



6. 使用者通过玻璃窗上滚动的LED文字及眼前的景象，与涩谷街头无人关注的行道树展开了一场无声的关于“孤独遭遇”的对话。
6. Through the LED text on the glass and the scene in front, the user starts a silent conversation about the experience of loneliness with the overlooked street tree in Shibuya.



都市树洞二
Urban Tree Hole 02



© Cai Gandong, Cai Mingjie

7. 城市的天空被高耸的塔楼所占据，项目利用空中连廊，创造出可供城市中的孤独者与被遗忘的天空共情的场所。
7. The sky of the city is occupied by high-rise buildings; in the project, the sky corridors between such buildings are used to create a place where the user and the forgotten sky would experience an empathetic moment.

1 The Ignored Urban Mental Desire

Throughout history, the development of different disciplines all resonates with the growing and evolving of human desires. Spatial design professions echo with such desires by organizing built environment and managing spatial systems. Environmental issues acquire more attention along with the ongoing process of urbanization, emphasizing the importance of urban public health as the collective desire of all humans.

Landscape Architecture is established on the understanding of the relationship between the improvement of urban environment and public health. Currently, the standard of evaluating the livability of a city relies largely on the quality of public space, green coverage rate, the accessibility to parks, etc. It is well discussed that landscape can accommodate emotion and relief pressure and thus has a positive meaning to people's mental health: healing garden and therapeutic landscape as specific landscape types can help improve users' physical and mental health; the contextual therapy theory in Psychology also acknowledges the function of a picturesque environment in mental relaxation^[1].

However, current urban construction has largely focused on the physical aspect of public health. Kevin Thwaites points out that although the importance of enhancing human life quality through the design of urban space is well understood, the capacity of urban design to help mitigate mental fatigue

seems implicit and may be assumed to accrue automatically as a by-product of other general urban design strategies^[2]. This is demonstrated in two aspects: 1) studies on public mental health through the planning and design of city-scale green space systems are inadequate, and specific landscape types like healing gardens are incapable to tackle with systematic problems; 2) different user groups have variegated mental desires in public spaces which cannot be addressed simply by generic solutions of the design for urban open spaces (e.g., urban parks). The landscape related to mental health is still functioning as a therapy within conventional medicine protocols and seems have not yet extended far into consideration of design in the wider public realm^[2]. Thus, this article introduces the conceptual project Tokyo Loneliness Tree Hole Plan which focuses on a specific user group of urban public space system, and analyzes their mental desires in built environment, in order to explore a new possibility of alleviating urban mental health problems through spatial design by conceiving an urban spiritual infrastructure which is a new systematic framework besides of the grey and green infrastructures (Fig. 1).

2 Design for Whom: the Recognition of Loneliness

It is a consensus to design public space for the public. Seeing the public as the majority of people, however, results in the neglect of the minority and their desires. The design of

- ① This project was the entry proposal of an international competition under the topic "Eliminate Loneliness." The term of "eliminate" reflects the social tendency of seeing loneliness as a disease and a negative issue. The proposal is entitled "From Eliminating to Elevating" in hope of overturning such negative understandings of loneliness, and suggests a new way of thinking.
- ② It is commonly acknowledged that loneliness has an important position in Japanese aesthetics and philosophy, which can be found in concepts such as "Wabi-sabi" and "Mono no aware."

public spaces often focuses on satisfying the typical desires of the majority: those who can freely behave in public space and enjoy the encounter and interaction with strangers. There is another group of people who are reluctant to bother others and unwilling to be disturbed—feeling nervous in crowded places—who are the “lonely” individuals and should not be ignored in the design of public spaces.

In the western binary context, “loneliness” has long been delineated as a negative emotion or mental condition and the opposite of “positive communication” and “sharing.” The theory of Salutogenesis^[3] established by medical sociologist Aaron Antonovsky has promoted the shift in modern Medical Science from the pathogenic orientation model which excessively focuses on mitigating negative impact of potential illness and lowering disease risk, towards the salutogenic orientation model that faces one’s physical and mental health condition positively. At the society level, the pathogenic orientation model emphasizes illness hazards to alarm the public; while at the individual level, it leads to the attention being solely focused on the disease once it is identified: either way lacks a synthetic understanding of the complexity of human health^[3]. This resonates with the situation of the individuals in the city who are suffering from the pressure of being lonely, while the society is indicating the danger of being lonely and the necessity of eliminating loneliness^①. The salutogenic orientation model has been applied in spatial construction, and scholars in the field of Landscape Architecture have pointed out that urban landscape has the potential to offer a pleasurable experience and relief from mental stress

and illness^[4]. Following the Salutogenesis Theory, urban built environment can reshape the society’s understanding of loneliness by encouraging the public to get along with loneliness through spatial design methods (Fig. 2).

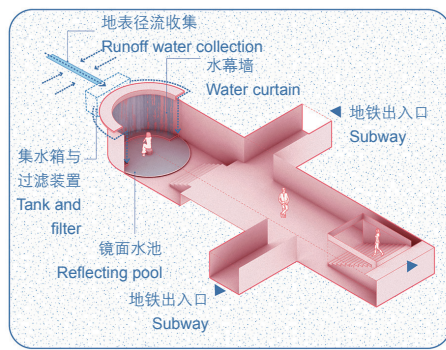
3 Site Selection and Research Methods

Tokyo Loneliness Tree Hole Plan was the first-prize-winner proposal of the Eliminate Loneliness Idea Competition in 2019. The proposal targets the loneliness issue in Tokyo, Japan as a response to the topic of Design for Whom. The behavioral mode of self-restraining and keeping social distance in Japanese’s public life, together with the extremely high living pressure and demographic density of Tokyo, lead to the prevalence of loneliness in every corner of the city—the lonely individuals are the minority of users of public space and the majority of citizens of Tokyo. Furthermore, loneliness, as an aesthetic concept in oriental cultures emphasizing the status of getting along with oneself, has been depicted in lots of art and literature pieces^②. This justifies and unifies both the proposal topic and the site selection: the project establishes a new cognitive mode of loneliness based on the Salutogenesis Theory in a city dominated by the phenomenon and aesthetics of loneliness through spatial design methods. In this sense, the proposal starts from studying lonely individuals’ mental desires and aims at providing comfortable spaces for them to get along with loneliness by mitigating the negative impact of mental status.

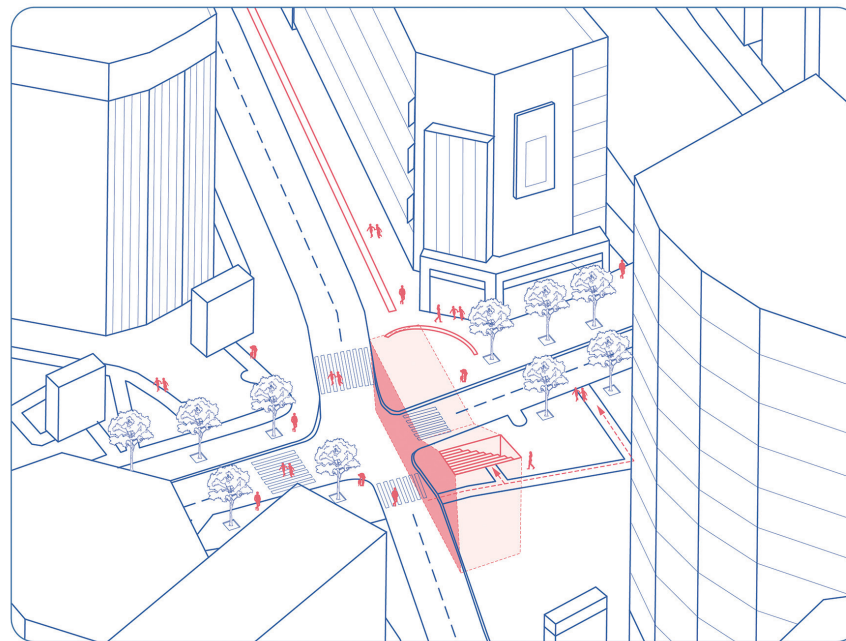
The project reconsiders loneliness and embraces the



8. 当使用者置身于树洞空间之中时，视线设计有意地进行了限制和遮挡，视野中只有通过镜面反射进来的天空，从而重塑了观看角度与观看对象。
8. When the user stays in the Tree Hole, one’s view is blocked while the sky is reflected by tilted mirrors on both sides, which reshapes the viewing mode and the viewing object.



都市树洞三
Urban Tree Hole 03



9 © Cai Gandong, Cai Mingjie

9. 地面雨水花园为城市街道引入可持续水景观。收集的城市雨水将被净化和引流至改造后的地下空间，成为都市树洞里独特的景观元素。
9. The rain garden on the ground introduces a sustainable water feature into the city streetscape. The collected urban rainfall will be drained to the renovated underground space and become a unique natural element in the Urban Tree Hole.

positive meanings of such an emotion. It proceeds with the research in a scenario-based methodology through observation, documentation, and graphic translation of different groups of Tokyo citizens to reveal various kinds of loneliness in the city. The project continues to propose a city-scale “spiritual infrastructure” by providing systematic strategies to satisfy the public’s mental desires, and a series of oriental empathetic places at site scale derived from the salutogenic orientation model (Fig. 3).

4 Urban Tree Hole: The Empathy of Loneliness between Human and Nature

Lonely individuals concern less about the feeling of loneliness per se than the way loneliness is treated by society and the disturbance to others by being lonely. To lonely people, privacy and company is the antidote and a strategy to depathologize loneliness^[5]. In this sense, they might prefer to talk to a “tree hole”: a space that can be easily found around, will not respond to or disturb others, but provides enclosed, safe, and comfortable shelters and refuges, where anyone who wants to spend some time alone can no worry about the outside world.

Thwaites points out that a structure of restorative urban open spaces is emerging^[2]: It moves away from the idea of large discrete open areas to more of a web- or mesh-like structure that links together a system of smaller spaces, whose quantity

and high accessibility in cities have the advantage in tackling mental issues in a timely manner. The project proposes such a spiritual infrastructure network of small “urban tree holes” as a systematic maneuver to provide the lonely individuals in Tokyo with a chance to get alone with themselves, with the space, and with loneliness.

Shibuya, the center of Tokyo, is selected as the site for implementing the plan. On the one hand, as the major commercial center and the most stressful area to live and work, Shibuya perfectly represents the Tokyo loneliness; on the other hand, given that only 6 percent of Tokyo’s urban area is classified as open space^[6], Shibuya with the highest building density in the city is desperate for such “urban tree holes.” The project proposes operative tree hole prototypes according to specific site conditions and conceives three different spatial modes to create innovative public spaces in Shibuya by integrating with street retail spaces, sky corridors, and underground spaces (Fig. 4).

Instead of creating an isolated place for people to stay in, the tree hole space invites accompanies from nature—such as tree, sky, and water—to the users by a sequence of spatial design strategies. Roger Ulrich proved the function of natural elements in elevating people’s mental health level with a comparative research on a group of patients who experience considerable anxiety^[7]: the patients with the tree view had better recovery from frustration, fewer negative evaluative comments, and

shorter hospitalized days, compared with the wall-view patients. As the most common natural elements, tree, sky, and water are ignored in the high density and fast-paced urban life—they are also silent and lonely in the city. By amplifying the loneliness aesthetics between nature and people, the project attempts to establish an oriental empathy: human and nature can “share” and “communicate” the feeling of loneliness temporarily.

4.1 Urban Tree Hole 01: Renovation of Street Retail Spaces

The retail spaces along the streets in Shibuya, where commercial and cultural activities are vibrant, have the great potential to be transformed and embedded in small-scale public spaces. The design strategy of Urban Tree Hole 01 focuses on the way of seeing by switching the interior and exterior spaces. The tree hole spaces are hidden in the urban context by being embedded in renovated stores along retail streets, which minimizes the visual impact of the original urban interfaces. From the exterior, a two-way mirror as the new facade of the renovated space reflects the image of the user and the city in the background; from the interior, the mirror separates the city and the user who escapes away from the world, and obtains a moment to rediscover the overlooked landscape in the city the user is originally familiar with. The design method of borrowing scenery is used to invite street trees which become a companion and listener of the tree hole user. As the new city spiritual infrastructure, the embedded tree hole spaces distributed in the city but hidden in the street context provide citizens with a moment of meditation and a Zen-garden-like experience (Fig. 5, 6).

4.2 Urban Tree Hole 02: Utilization of Sky Corridors

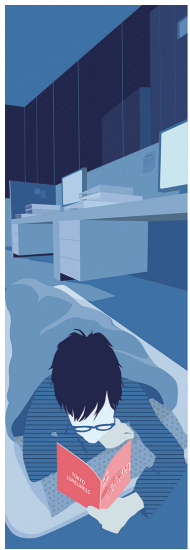
While the vertical transportation mode depending on the elevators represents an important movement in high-density cities, the sky corridors between high-rises offer horizontal connected open spaces for the city, promoting the openness and publicity of the overhead space. Although sky is a part of the cityscape, clustered high-rise buildings make people gradually lost the instinct to look up at the sky—climbing up to the skyscraper and overlook the cityscape becomes today’s normal viewing mode. Through the strategy of obstructive scenery and sight manipulation, the Urban Tree Hole 02 utilizes sky corridors between buildings to offer users spaces to briefly stay alone. Compared with the traditional sky corridor that emphasizes transparency, the Tree Hole’s external scenery is deliberately blocked by sidewalls. Only the sky is reflected by tilted mirrors on both sides of the corridor, which forces the user to focus on the mirrors by his feet. Consequently, a spiritual infrastructure is established through such sky-corridor tree holes built, and the user can look down to meet the sky which should have been found by looking up, where people and the forgotten sky experience an empathetic moment on both the physical and mental levels (Fig. 7, 8).

4.3 Urban Tree Hole 03: Excavation of Underground Spaces

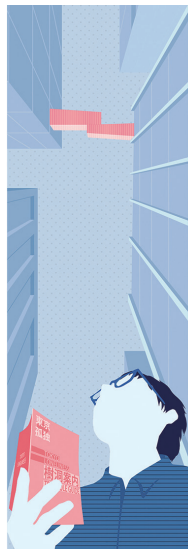
Besides the visible ground and overhead spaces in the city, the invisible underground spaces can also be used to contribute to the spiritual infrastructure. By locating the Urban Tree Hole 03 as the small-scale public spaces below the street intersections



10. 东京本来就是善于开发地下空间的城市，在发达的地下交通与市政基础设施之外，都市树洞成为了东京新的地下精神基础设施。
10. Tokyo is a city with well-developed underground spaces. Besides the underground transportation and municipal infrastructure, the Urban Tree Holes become the new underground spiritual infrastructure of Tokyo.



《树洞指南》手册是一本向导，帮助感觉孤独的人找到缓和心情的空间
The Tokyo Loneliness Tree Hole Guide is the guidebook for finding spaces where people can mitigate the feeling of loneliness in the city



《树洞指南》手册是在城市中寻找和使用树洞空间的必需品
The Tokyo Loneliness Tree Hole Guide is a must-have for searching and using the Urban Tree Holes in the city



感到孤独的人可随时在树洞空间里借阅手册，之后归还以供下一位使用者使用
People who would like to read the guidebook can borrow it from the Urban Tree Hole, and return it back for the next user

© Cai Gandeng, Cai Mingjie
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11. 作为共享媒介的《树洞指南》手册在使用者之间传递，使城市公共生活的情感共享得以实现，城市群体的孤独感也得以缓解。
11. As a collective communication tool, the Tokyo Loneliness Tree Hole Guide is shared among the users. The sharing of public life experience is realized and the group loneliness feelings can be relieved.

in Shibuya, the tree hole space provides a quiet place in the busy city. Except for the underground part, the design of the Tree Hole 03 also includes rain gardens above ground. Since in the center of a highly-dense metropolitan city people rarely care about where the rainfall will go, the strategy for the Tree Hole 03 intends to collect and filter the neglected runoff and transform it into an appealing water feature in underground spaces. The water curtain can also effectively block the ground noise, which helps create a place for users to get along and communicate with the nature element—water. From above ground to underground, from never being noticed to being the focus, the design method of scenery replacement turns the originally invisible city underground and runoffs into visible empathetic objects for the lonely users (Fig. 9, 10).

4.4 The Use and Management of Urban Tree Holes

Besides the spatial design strategies, the Tokyo Loneliness Tree Hole Plan attempts to answer two questions simultaneously: How to convey the comfortable experience of getting along with loneliness, and how to establish a comprehensive and sharing structure among citizens based on this new type of public space? Therefore, the Tokyo Loneliness Tree Hole Guide is introduced in the project (Fig. 11). This guidebook not only presents the locations and instructions of the urban tree holes but also provides a message board for the users to write down and share their stories and experience about loneliness and the tree holes. In this way, users can circulate the Tree Hole Guide and transform it into a collective communication tool for the lonely individuals.

Also, to balance the publicity and privacy and with security

and management considerations, each Tree Hole is designed for one person use, and operated by a reservation mechanism, through which only one user can enter and use the space exclusively at a specific time span—such a “One Person, One-Time” place is created. This effective reservation mechanism allows the public to take turns to use the space orderly. These urban tree holes propose a new possibility for public life which cannot directly apply the use and management mode of the traditional urban public space. Therefore, the “One Person, One-Time” reservation mechanism together with the Tree Hole Guide can support the operation of this new type of public space, which will become the new urban infrastructure network in the future.

5 One Person Park: The Possibility of Future Public Space

While the modern city has a clear definition on public- and private-owned spaces through land use and ownership division, ambiguity exists between the public and the private when it comes to practical issues. Currently, the discussion regarding the vagueness of the public and the private mainly focuses on the space that is privately owned but opens its external areas to the public in order to provide more urban open space^[8]. Alternatively, Tokyo Loneliness Tree Hole Plan proposes a type of space that is public but offers people a temporary and private place for solitary use through the “One Person, One-Time” mode. The concept of “private-public space” aims at criticizing the indifference against the diversity of users’ mental desires in existing public spaces, breaking the banal boundary between the public and the private, and exploring a possibility of future

③ This event, launched by the Celebrity Series of Boston and Musician Rayna Yun Chou, was installed and exhibited in the public spaces of Boston Chinatown and Harvard Plaza in Cambridge for 10 days.

public space with vagueness—the “One Person Park.”

“One Person Park” as a concept has not been discussed before it is mentioned in this project. Its major differences from traditional urban park are: 1) traditional parks are merely public, while the One Person Park can switch between public and private modes through management; 2) traditional parks often occupy a large amount of urban land, while One Person Park is inserted into the existing urban spatial systems; and 3) traditional parks own abundant resource of landscape, while One Person Park absorbs adjacent natural elements as the supplement of landscape resource. It is the vagueness in both the ownership status and the spatial image of One Person Park that makes it a void yet a promised space of expectation in existing public space system^[9]. Far from the retrogression of publicity and going back to the private garden or private owned space, One Person Park suggests a new communication mode on public sharing.

While One Person Park has not been fully discussed yet, the exploration of private use of public space has started. For example, Concert For One, a temporary public art event, was held in Boston, the United States in 2019, which provided a chance for one instrument player and one listener to stay in a solitary space for one minute, creating a private music experience for public space users[®]. This art project echoes with the One Person Park concept, both of which challenge the function of current public spaces: in an era when interactive programs such as music plaza and amphitheater are everywhere and become a stereotype in public space design, can we imagine a new form of public landscape that allows the user to enjoy being alone?

“One Person Park” as an alternative for future public space development should earn more attention in the design of urban spaces. The COVID-19 pandemic urges designers to consider the issue of public isolation and non-contact communication, as well as the new way to use existing public spaces. There is a huge conflict regarding the behavioral mode encouraging the openness and interaction in public spaces and the hygiene protocols avoiding physical touch during the pandemic. To what degree can current public space design reflect and address the physical and mental desires of city dwellers? How can the concept of One Person Park enrich and complement the study on urban public life?

6 Conclusions

This article investigates people’s mental desires in public space through the introduction of a conceptual design project, proposes a set of spatial strategies for eliminating the public’s

prejudice against loneliness, and offers suitable public spaces for the lonely individuals living in cities through the study of different scenarios. As a competition entry, the Tokyo Loneliness Tree Hole Plan brings up three operational prototypes as well as intervention modes instead of specific construction guidance or techniques for any designated site. Thus, the project concerns less with detailed management issues when the tree holes are implemented in reality, than the discussion of its value in exploring mental-oriented design intervention in urban space construction. Furthermore, given that urban loneliness is not the only mental health issue in modern cities, the strategy applied should vary regarding different mental desires. The thoughts and ideas in the Tokyo Loneliness Tree Hole Plan, however, can offer references for public space planning and design in the future.

In the time of post-pandemic, with people’s tendency to stay alone or restrict getting together in public space, how design can fulfill people’s new desire—especially the mental desire—becomes a new agenda for designers. Mental health awareness needs to be integrated into health and social policies, health-system planning, and health-care delivery^[10], including the design and construction of urban public space and infrastructure. More ideas based on specific backgrounds, cities, and public desires should be taken into consideration in the future, in order to promote new discussion and practice in a broader territory and context. **LAF**

PROJECT INFORMATION

LOCATION: Tokyo, Japan

PROJECT TEAM: Cai Gandong, Cai Mingjie

DESIGN TIME: April, 2019

AWARD: First Prize of the Eliminate Loneliness Ideas Competition

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