Constructing the Loose Terrains: Celebration of Movements in Urban Park Design

Aulia Rahman¹, Kristanti Dewi Paramita²

Department of Architecture, Universitas Muhammadiyah Banjarmasin, Banjarmasin, Indonesia¹, Department of Architecture, Universitas Indonesia, Depok, Indonesia²

Email: auliarahman@umbjm.ac.id

Abstract

This paper discusses the design process of an urban park, exploring the idea of loose terrains and how it may support various urban activities. Architecture as a terrain extends from the existing natural environment, celebrating possibilities of movement, be it up, down, twisting and turning. The idea of looseness provides undefined existence of space, where every corner is a space of possibility that generates various activities in an open way, where people may sit, play, run, and stay depending on the body and minds that define it. The study explores such idea in the design project of urban park at Harapan Mulia, Central Jakarta. The design creates contours and terrains within the park, developing different terrains of elevation which provides a new experience for the visitors. It provides opportunities for various activities, allowing movement between the existing trees that produces different perspectives. Exploring architecture as a terrain extend space and time, providing slowness and triggering the eyesight to explore the topographical space more deeply within the intertwine of nature and the built environment. Instead of a fixed and defined space for activities, architecture becomes a stimulus of possibility, manifesting through the loose terrains of the park.

Keywords: Looseness, Terrains, Topography, Movement, Urban Park Article history: Received: 2025-07-15; Revised: 2025-09-15; Accepted: 2025-09-30

INTRODUCTION

The urgency of this research lies in the effort to explore the idea of loose terrains in the development of urban park. It aims to design a landscape that go beyond simply replication of nature, planting flowers and others, but instead consider how urban park may encourage cultural invention (figure 1), where architecture exist as an event (Tschumi, 2003). There may be challenges to apply such consideration, as our planning is largely based on ideas of order, control, passive, and efficiency (Mazzanti, 2023; Oswalt et al., 2007).

However, the urgency of presenting planning for the unexpected is important as a significant step in supporting urban sustainability, because this kind of design is able to accommodate temporal uses as well as various functions that can change over time. Planning a spatial framework that can absorb user possibilities that cannot be defined at the start but are always developing and changing becomes necessary for a more sustainable development (Oswalt et al., 2007).







Figure 1. Mounds within the landscape give possibilities to people to seat, play or treat because there are no restrictions, and the body can carry out these activities.

Source: Author. 2022

The idea of looseness in spaces aims to give cities life and vitality also allow for the chance encounter, the spontaneous event, the enjoyment of diversity and the discovery of the unexpected (Franck & Stevens, 2007). Through appropriation of people's activities, spaces become "loose", particularly in spaces for which they are not planned or designed; expanding the possibilities of space or resist limitations in design or existing laws. Examples of loose space in urban context can be found

abandoned space, remaining space, ruins or pedestrians, squares, parks, and playgrounds (Franck & Stevens, 2007). Many of these spaces possess particular physical features that invite people to appropriate them for their own uses (Franck & Stevens, 2007). Even the small edges, parapets or other flat surface give freedom to people to use as anything (chair, table, and shelves) (Whyte, 1988) and mounds on the side of the road or passage of train stations can be a place to sit, eat, and trade (figure 1).

Loose architecture go beyond the notion that human is homo faber or man the maker, which will lead to architectural design were according on production, efficiency, and function (Mazzanti, 2023). Instead, looseness in architecture respond to another kinds of human, namely homo ludens or the man who plays, where spaces are not devices of limit and control for user (Mangunwijaya, 1988; Mazzanti, 2023). Loose space focuses on encouraging the user as a creative agent, creating the value of architecture in what events happened and being created in there, not simply the object of architecture itself. Activities that emerge from the interaction with each user, stimulates behaviour and social relations(Mazzanti, 2023). Designed not for the intended function, but for the human actions that can occur within it. Humans are free from the chain of function (Mangunwijaya, 1988).

Loose space is not just only good for people but also for nature, especially in the context of ruin or abandoned place. They can be greener than the city and habitat for urban wildlife because there is no human activities that happened in a fixed and permanent way, creating a disturbance (Rahmann & Jonas, 2014; Schneekloth, 2007). However, the presence of loose space can pose a risk also, with its relaxation of constraints, creating a place of possibilities for many activities that are defined as crimes. Some dumping waste, assault, immoral, vandalism, and so on threats for everyone, wherever they occur, and therefore a balance to secure the space is needed to reduce these dangers (Franck & Stevens, 2007).





Figure 2. Nature gives us the freedom to operate within it. Source: Author, 2022

The study explores the idea of looseness through the spatial quality of a terrain, investigating how it can be applied to architecture. Treating space like landscape that unfolds can provoke loose activities (Seijma & Nishizawa, 2008). In nature there is no intended function (Titman, 2013) because activities and movement are provoked from recombination between body, feature, and terrain (Borden, 1998) (see also Figure. 2). In nature space is not organized in the name of functionalism but by placemaking that encourages people to seek a spectrum of opportunities, thus, nature is a provocative and unrestricted milieu (Fujimoto, 2008). To generate the natural quality, we must try to think topographically in terms of terrain. Topographic design reject paradigm of an object building that sits discretely on the land or integrating man-made form with the earth's surface (Balmori & Sanders, 2011; Frampton, 2007). Connecting between building and city, between interior and exterior, blurring boundaries of space and creates extension of the city (Moussavi & Zaera, 2003). Topographic qualities of space produce variation of space for movement, where the contour provides possibilities that we can provoke. It can be a place for exercise and recreation (Ingels, 2019) or a place for natural urban life to live (Chartier Dalix, n.d.). The terrain is ambiguous, they have different meaning depends on our mind to interpret and body to explore. It's different than the formal shape that create static meaning, limiting our imagination (Yang, 2020).

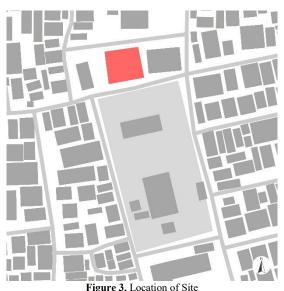
The idea of loose terrains becomes the basis of Harapan Mulia Park design project, an urban park design which aims to provide diversity and possibilities for activity, and become an extension of the existing environment. The park aims to integrate between functions—creating a place to move and

a place to play—producing space of possibilities for users to explore. To do this, new connection can be developed through the setting up spatial variations (Rahman et al., 2023). The program exists as a space for the body to be active and move, not to limit activities. With loose movements, there will be events that occur unexpectedly due to encouraging body movements, without particular rigid order (Koolhaas et al., 2006; Nurjannah et al., 2024; Yang, 2020).

Loose terrains invite possibilities of use within the urban park. Such public places of a city are vital organs that bring together people who do not know each other through intimacy, stopping people to get contact (Gehl, 2010a). Unfortunately in modern development, exploration of public place tends to convey several problems that destroyed the quality of city life, among them are the application of scale and zoning in a limited way (Blake, 1974; Gehl, 2010b). Scale of intimacy is often lost when the planning is conducted from above and also from outside, creating a plan just only for beauty as if we became a bird, losing the human scale that is what we design for (Gehl, 2010a). To provide space for humans, we need to interrogate them through footsteps and body heights (Peal, 2020). Our sensory systems interpreting impression from walking in duration (Gehl, 2010a). Human walk usual speed is four or five km/h, and with that speed we have time to see what is happening in front of us and where to place our feet on the path ahead. When we see something from distance, it takes time before we actually see from the near, in that duration our volume of perceived information increases, and there is plenty of time to assess and respond to the situation (Gehl, 2010a). Designing for human scale requires awareness on how our sensory systems operates within the overall movements.

The idea of zoning creates separation between spaces based on their function, which is commonly applied in buildings, cities, and even the environment to create space that live only a small portion of time and dead on the rest of the time (Blake, 1974). The space become dull due to the loss of the space's ability to absorb possibilities from the user because the design starts from functions so that the spaces become separated based on their function and difficult to reach and explore on human scale. The fixed presence of zones order user to obey the planning of the space—assigning walking area and playing area in a deterministic way. The idea of loose terrain creates reconnection of spaces without strict zoning on a human scale offers an intersection between humans and humans, humans and objects, and humans and their spaces. In doing so, the terrain presents a dynamic space and diversity for the discovery of new spaces at different times (event). Together, density and diversity may stimulate unusual encounters, discovery, a sense of place—even comedy (Peal, 2020).

PROGRAMMING THE URBAN PARK



Source: Modified from OpenStreetMap edited by author, 2025

The project site is in the middle of a densely populated neighbourhood in Harapan Mulya, Central Jakarta. Figure 3 shows that the site, marked in red, lies directly to the north of a public park known as RPTRA (Ruang Publik Terpadu Ramah Anak), a government-initiated public space. The

project location was previously an abandoned government-owned vacant lot (figure 4), which had been neglected for years, allowing wild vegetation to overgrow, and parts of it to turn into an informal dumping ground. Its condition transformed it into a kind of "loose space"—a physically accessible area that remained unmanaged and gave rise to potential illegal activities. In this context, the project is not merely conceived as a new park, but as an extension of the existing RPTRA. However, its approach does not replicate the current park; instead, it treats the site as a dynamic surface—one that can be 'lifted', 'stretched', or 'extended'. Borrowing from the ideas of David Gissen (2010), simple interventions on this terrain can generate entirely new spatial experiences, creating an alternative territory that responds to its surrounding environment in a more active and imaginative way.



Figure 4. The site is abandoned, losing its sense of ownership, and becoming a landfill and overgrown.

Source: Author, 2022

Intersection space

A preprogrammed space designed as a place for a preprogrammed mind, the space become numb or dull and has no spontaneity or discovery to be enjoyed by the human (Cannon & Gianvanni, 2013). A public space is not a catwalk, where you walk just to move towards the destination point without paying attention to surrounding. The park try to encourage people to linger and give more time to understand the space that exists, composed of many different, densely interconnected and overlapping circulation loops or ringy spaces which provide more opportunities to turn and go back when moving through the space and provide encounters in different sequences creates diverse interactions, weakening control over the user and presenting possibilities through movement (figure 5) (Franck & Stevens, 2007). The project aims to celebrate body movement, inviting user to explore through motion that involves ups and downs, twists and turns, enclosure and openings, high and low, and stimulate other haptic sensation (figure 6)—enabling a flexible moving body (Rahman et al., 2023). The scenario adds revelations and understanding of a larger terrain (Corner, 2020).



Figure 5. Left: Interconnected movement, create loops extend space and time. Right: Overlapping things create invention.

Source: Author, 2022

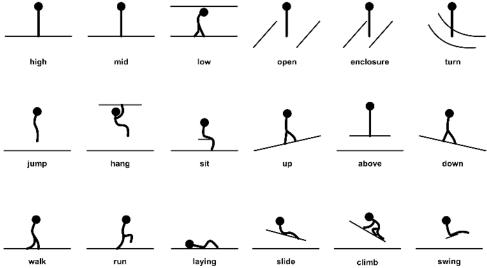


Figure 6. The possibility scenario of movement that can provoke discovery and more understanding of site. Source: Author, 2022

Scenario of Movements

This scenario of the project offers the users to move freely and provide a meeting between humans and their environment rather than strictly regulating it. Figure 7 shows a movement scenario diagram, starting with entry and walking or running as the movement modes. Horizontally, the space will provide three experiences: open, enclosure, and turn/twist. These three experiences are not in sequence but as an offering so that users can have different choices in how their space can be experienced (figure. 7). Then the movement continues with ups and downs, in this way different points of view are created (Schwarzer, 2010). At the same time variations in space are presented between going up and the value of openness. The higher it is, the more closed it will be, but visually it will be wider and vice versa (figure 8).

The up and down movement also creates holes or voids which also provide space that varies from high to low. This vertical experience of space gives each user a different perception which ultimately increases their choice of movement. When the users choose to pass something lower than their height they will lower their heads while walking. In the corners of the park there is also some supporting facilities for other activities such as seating, slides (figure 12), and swings (figure 13). All these parts are positioned amidst the paths that are free for the user to choose.

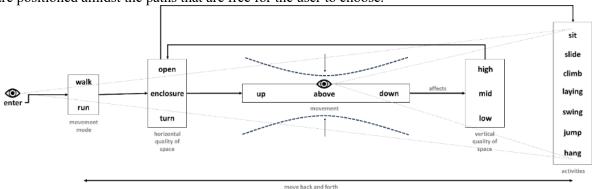


Figure 7. Scenario that allows move back and forth provide possibilities of intersection. Source: Author, 2022

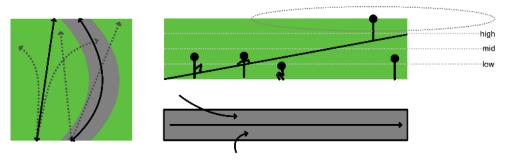


Figure 8. Left: Horizontal experience between the open as a softscape area and the enclosure as a hardscape, movement is also not limited by these two things. Right: The up and down movement also provides the user with the possibility of operating due to variations in the height of the space.

Source: Author, 2022

CONSTRUCTING THE TERRAINS OF THE URBAN PARK

Architecture and landscape as a field of knowledge has been separated since the late nineteenth century, where architecture is intended for the study of buildings and landscape architecture aims to develop an assembly of green spaces around buildings (Balmori & Sanders, 2011). This design aims to focus on the dominance of architecture over landscape but instead provide a relationship between the everyday life in the park as a form of public urban interior (Sparke, 2018). For this reason, there are several stages that will be explained to see how this design flow occurs.

Contouring the Space

Exploring the overlaps between architecture and landscape can generate new ways of thinking not only about form but also about its possibilities, positioning human activities in a way that reinterpret what it means to live with nature (Balmori & Sanders, 2011). Programs are not just about organizing functions (Eisenman, 1996), program can also determine as agenda and program can have reciprocity to the form, when the form configuration on the program we have (Koolhaas et al., 2006). In this case program relies on scenarios and movement that be written down before, so the form is configured by program. This is not vertical extrusion rather undulating ground create spatial relationship between object and subject (figure 9). The form encourages activities or events that happen unexpectedly in the future, this is not designing a form followed function but form that can stimulate the possibilities.

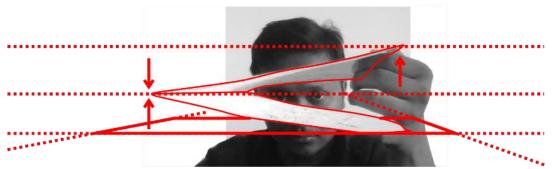


Figure 9. Folding paper as interpretation of surface that connecting to each other, unlike the building which consists of slabs arranged vertically, discontinuing for each surface. This surface is permeable, so they have more connection in activity or vision through the voids. Source: Author, 2022

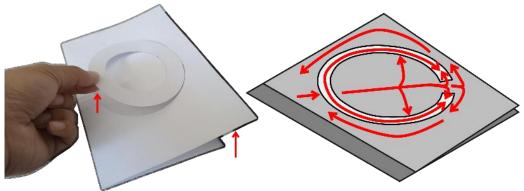


Figure 10. Horizontal or vertical void created potential to move back-forward without disturbing the sequence. Source: Author, 2022

The insertion of void in the middle of the terrain (figure 9, 10) is not just simply exist as a meaningless hole, it presents a relationship between spaces that makes the body more active, in moving, seeing, and understanding (Sparke, 2018). With varied openings inserted, the movement becomes more dynamic, giving a choice of which path to take. It's not based on the destination point but rather the choice of scenario you want to experience—giving an option of a sidewalk experience other than a catwalk. There's no more grass that can't be stepped on. Loops circulation provided by the terrain also creates a dynamic variation of space that we can experience by sitting, walking, going up and down, observing surroundings, etc. There is no intended function where we must operate. Elevation is various and it can be experienced because they are continuous surfaces without separation (figure 11). Like a landscape in nature, this park is ready to be explored. Figure. 13 is also amplified this sequence through section, connection between figure and ground that become one entity.

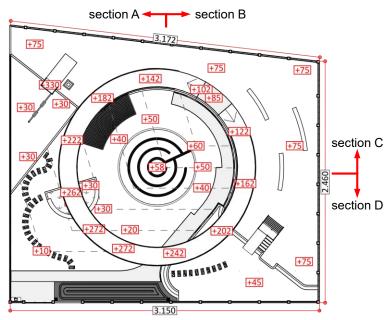


Figure 11. Variation of elevation create a whole continuity. Source: Author, 2022

Minimal Intervention

Considering the possibility of minimum intervention in architecture is a demonstration of intelligence and common sense (Enia & Martella, 2019), where architecture is not only manifest through specific type of form. On this stage the design reimagines the familiar features in park: reinterpreting the slide, swing, and bar so it can be looser than before. Thinking that they are just a vacant surface rather than a name that project an intended a function provides further possibility of diverse activities.



Figure 12. From left to right: slides give activity possibilities, get together while playing, slide dimensions. Source: Author, 2022

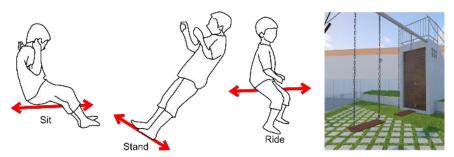


Figure 13. Left: the modes on swing, right: swing style before the plastic came. Source: Author, 2022

For example, in the designed slide of the park, the width is stretched become wider than standard, creating a slanted surface. Figure 12 demonstrate the width and how it can be appropriated as a slanted surface that can be used to slide (go down) or climb (go up) at the same time. It can also become a gathering place that has a different experience. There is also a viewing tower which is challenging to climb and is a sweet spot for observation (figure 14). The bar along the circular ramp creates a place for hanging with different high, and in figure 15 the bar becomes a place to put potted plants by stakeholder. Another important aspect within the park is the absence of signs or symbols that describe the meaning and function of their features. This urban park design aims to provide a different understanding and story for each user through exploring the landscape they experience (Corner, 2014). The connection of surfaces across the terrains demonstrates topological narratives (Yatmo et al., 2017) that can be experienced by the user throughout their movements.



Figure 14. Left: view from the tower, right: fun spot to hike. Source: Author, 2022



Figure 15. The bar becomes exercise spot, under the ramp there are traces of sandals which indicate children playing more challenging and accidentally become plot for plant.

Source: Author, 2022

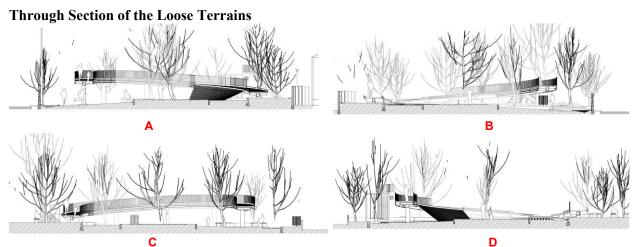


Figure 16. Section from four different views, showing dynamic of space. Source: Author, 2022

Cutting the terrains in different directions will results to the uniqueness of each view because of the dynamic configuration between form and movement (figure 16), where space becomes animated through intersection that allow for interaction. Not only on orthogonal section, the revealed loops of the park give a linear appearance that distorts the grid—unfolded section— (figure 17). The unfolded section of the park that focuses on internal continuity of surfaces. The diagrammatic icon of circulation that explained before becomes literal circulation (Eisenman, 2008). The section also suggests that the real volume in the building is the circular ramp (figure 18). Unfolded section shows continuity of surface and the void as movement access. Overlapping spaces due to the confluence of interconnected paths. This shaped is used to provide a connection not only physically but also mentally, where someone who operates in it will be completely immersed in a feeling of focus and full enjoyment in the process (Sparke, 2018).

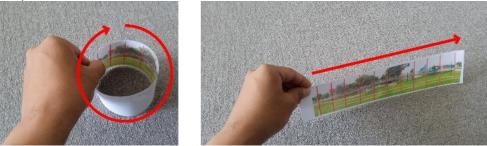


Figure 17. Unfolded section distorts the grid and extend the space and reveal something either connection or movement. Source: Author, 2022



Figure 18. Panoramic image showing unfolded section. Source: Author, 2022

THE PRESENCE OF LOOSE SPACE



Figure 19. Overall view of Harapan Mulia Park that shows topographic variations that connects different levels of space Source: Author, 2022

The creation of loose terrains with topographic variations (figure 19) in Harapan Mulia park, provides a different experience than most existing parks. Various movements occurred, as seen from the amount of grass that was damaged due to the high intensity of use (figure 20) because the ability of human to find the shortest path or route can be trace (Gehl, 2010a). The activities that have occurred have also described how the scenario works, over time there will be new discoveries that will be present using the features that have been created. People say that in the morning this park is usually used by the elderly to walk around the ramp, they even think this park is an elderly park. In the afternoon, children are busy playing and exploring (figure 21). One of the criteria for loose space is that it is related to time, in this design the difference in time gives different meanings to certain age groups, making the space animated beyond commodification, monofunctionality, and control (Groth & Corijn, 2005). The different ways the spaces can be appropriated demonstrates layers of spatial trajectories (Wahid et al., 2021) that enrich the park experience. This looseness of activities is not confined within the boundaries of the park itself; rather, it extends to the surrounding residential context. A notable example is the use of the ramp railing as an anchor point for tying tarpaulin that shades the front area of adjacent houses (figure 22). This illustrates how the physical elements of the park become part of a shared everyday infrastructure, enabling informal interactions between public and private spaces. The blurred boundary reflects a mutual appropriation, where urban design elements support unplanned, lived experiences further reinforcing the idea of loose space as a dynamic and relational condition.







Figure 20. Human traces can be seen from the disappearance of the grass, explain the design is not something that restrictive space.

Source: Author. 2022

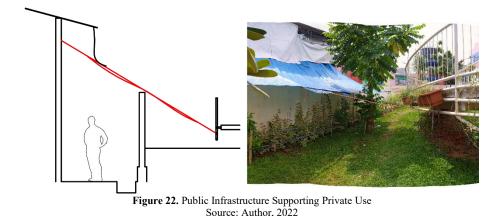
Creating a balance between loose space that is safe for public space becomes necessary as many parks are used as a place to carry out illegal acts, especially at night due to loss of supervision. Previously, this garden design used floodlights which could highlight the garden well to maintain environmental safety, but this design was not approved because it wanted to pursue "beauty", so the garden lights that are we see now are used. Luckily this park is located near security posts owned by residents, so the area is easier to monitor and control if there is an act that harm the environment such as throwing garbage or immoral acts. The growth of tree later in the development will create a shaded area producing a different atmospheric and climatic qualities between ground level and above it (Schwarzer, 2010).





Figure 21. Mostly children, a variety of activities can be carried out because unrestricted movement provides many possibilities for encounters, some are running, observing, communicating, or just to take pictures.

Source: Author, 2022



CONCLUSION

This project-based research shows, architecture and landscape architecture are no longer separate entities but intertwined within each other, creating possibilities of events. Architecture is not only seen as through its buildings and landscapes does not only exist in the leftover space left by buildings. As Bernard Tschumi state of architecture as event (Tschumi, 2003), our focus shifts from creating buildings, to provoking possibilities. Architecture as loose terrain becomes an attention to find another meaning from architecture. Terrain generates a topographic pattern that reflect to qualities of nature (Watson, 2020). The terrain generates possibilities to act and move, creating intersections so that the

space becomes looser without excessive control. It's not a space full of boundaries, where movement is designed for fixed destinations. Instead, the design offers a celebratory space—celebrating movement—where the body tries to confirm and assess the boundaries of the space. For the sake of a sustainable city, it seems we need to think about this, spaces are no longer arranged in an orderly manner which causes separation so that when we try to connect them it becomes something that is forbidden. Future research may reconsider how loose space can be balanced in its maintenance and surveillance, so that the space still offers possibilities as a corridor of freedom but does not become a dangerous space.

ACKNOWLEDGE

The author would like to thank Central Jakarta City Parks and Forest Service for the opportunity to collaborate and contribute in creating sustainable public spaces. The project generates many lessons in how public spaces can be designed and successfully implemented.

BIBLIOGRAPHY

- Balmori, D., & Sanders, J. (2011). *Groundwork: between landscape and architecture*. The Monaceli Press.
- Blake, P. (1974). The Fantasy of Zoning. In *Form Follows Fiasco: Why Modern Architecture Hasn't Worked* (pp. 109–120). Little, Brown and Company.
- Borden, I. (1998). Body Architecture: Skateboarding and the Creation of Super- Architectural Space. In *Occupying Architecture: Between Architect and The User* (pp. 111–125). Routledge.
- Cannon, M., & Gianvanni, M. (2013). Quit the Grey Limbo and Return to Paradise. *Architectural Design*, 83(3), 68–73.
- Chartier Dalix. (n.d.). *Biodiversity School and Gymnasium*. Retrieved September 28, 2022, from https://www.chartier-dalix.com/en/projects/biodiversity-school-gymnasium-boulogne-92
- Corner, J. (2014). Hunt's Haunts: History, Reception, and Criticism on the Design of the High Line, 2009. In *The Landscape Imagination: Collected Essays of James Corner 1990-2010* (pp. 341–349). Princeton Architectural Press.
- Corner, J. (2020). Mind Landscapes: Navigation, Habitat and Imagination. *Architectural Design*, 90(6), 60–65. https://doi.org/https://doi.org/10.1002/ad.2632
- Eisenman, P. (1996). Post-Funtionalism. In K. Nesbitt (Ed.), *Theorizing A New Agenda for Architecture* (pp. 78–83). Princeton Architectural Press.
- Eisenman, P. (2008). Strategies of the Void: Rem Koolhaas, Jussieu Libraries, 1992-93. In *Ten Canonical Buildings* 1950-2000 (pp. 200–228). Rizzoli.
- Enia, M., & Martella, F. (2019). Reducing architecture: Doing almost nothing as a city-making strategy in 21st century architecture. *Frontiers of Architectural Research*, 8(2), 154–163.
- Frampton, K. (2007). Architecture in the Age of Globalization: topography, morphology, sustainability, materiality, habitat and civic form 1975-2007. In Fourth (Ed.), *Modern Architecture: A Critical History* (pp. 344–389). Thames & Hudson.
- Franck, K. A., & Stevens, Q. (2007). Tying Down Loose Space. In *Loose Space: Possibility and Diversity in Urban Life* (pp. 1–33). Routledge.
- Fujimoto, S. (2008). Nest or Cave. In Primitive Future (pp. 22–25). Inax.
- Gehl, J. (2010a). Cities for People. Island Press.
- Gehl, J. (2010b). Sense and scale. In Cities for People (pp. 31–46). Island Press.
- Gissen, D. (2010). Territory: Architecture Beyond Environment. *Architectural Design*, 80(3), 8–13. https://doi.org/https://doi.org/10.1002/ad.1068
- Groth, J., & Corijn, E. (2005). Reclaiming Urbanity: Indeterminate Spaces, Informal Actors and Urban Agenda Setting. *Urban Studies*, 42(3), 361–395. https://doi.org/https://doi.org/10.1080/00420980500035436
- Ingels, B. (2019). CopenHill. https://big.dk/projects/copenhill-2391
- Koolhaas, R., Tschumi, B., Miljacki, A., Lawrence, A. R., & Schafer, A. (2006). 2 Architects 10 Questions on Program. *PRAXIS: Journal of Writing* + *Building*, 8, 6–15. http://www.jstor.org/stable/24328969
- Mangunwijaya, Y. B. (1988). Wastu Citra (Fifth). Gramedia.
- Mazzanti, G. (2023). Efficiency Versus Game: Twilight Spaces for Homo Ludens. *Architectural Design*, 93(4), 62–69. https://doi.org/https://doi.org/10.1002/ad.2955

- Moussavi, F., & Zaera, A. (2003). Yokohama International Port Terminal. El Croquis, 42–83.
- Nurjannah, R., Paramita, K. D., & Yatmo, Y. A. (2024). No rigid order as spatial mechanism to reinventing sustainable architecture. 030026. https://doi.org/10.1063/5.0179639
- Oswalt, P., Misselwitz, P., & Overmeyer, K. (2007). Patterns of the Unplanned. In *Loose Space:* Possibility and Diversity in Urban Life (pp. 271–288). Routledge.
- Peal, T. (2020). Working Place: Constructing Collage as Critique. *Architectural Design*, *90*(1), 66–73. https://doi.org/https://doi.org/10.1002/ad.2527
- Rahman, A., Paramita, K. D., & Atmodiwirjo, P. (2023). Mapping Architecture by Nature: Investigating Rewilding Architecture Design Methods. *Civil Engineering and Architecture*, 11(5A), 2886–2894. https://doi.org/10.13189/cea.2023.110804
- Rahmann, H., & Jonas, M. (2014). Void Potential: Spatial Dynamics and Cultural Manifestations of Residual Spaces. In *Terrain Vague: Interstices at the Edge of the Pale* (pp. 89–104). Routledge.
- Schneekloth, L. H. (2007). Unruly and Robust: An Abandoned Industrial River. In *Loose Space:* Possibility and Diversity in Urban Life (pp. 253–270). Routledge.
- Schwarzer, M. (2010). The Tree Canopy as Blueprint. *Architectural Design*, 80(3), 20–27. https://doi.org/10.1002/ad.1070
- Sejima, K., & Nishizawa, R. (2008). Rolex Learning Center. El Croquis, 172-183.
- Sparke, P. (2018). Introduction. In *Flow: Interior, landscape and architecture in the era of liquid modernity* (pp. xvi–xxi). Bloomsbury.
- Titman, M. (2013). Dualism is Dead; Long Live the Pastoral. Architectural Design, 83(3), 14–19.
- Tschumi, B. (2003). Parc de La Villette. In *Bernard Tschumi* (pp. 42–55). Thames & Hudson.
- Wahid, A. R., Paramita, K. D., & Yatmo, Y. A. (2021). Inscriptions: Narrating the spatial dynamics of the immaterial interior. *Interiority*, 4(1), 43–62. https://doi.org/10.7454/IN.V4I1.87
- Watson, J. (2020). Lo—TEK. Design by Radical Indigenism. Taschen.
- Whyte, W. H. (1988). City: Rediscovering the Center. Doubleday.
- Yang, J. (2020). The Ambiguity of Visual Perception and Cloudiness in SANAA's Architecture. *Architecture and Culture*, 1–18. https://doi.org/10.1080/20507828.2020.1766859
- Yatmo, Y. A., Atmodiwirjo, P., & Paramita, K. D. (2017). Topological Reading of Movement Connectivity in Sensory Integration Space for Autistic Children. *Space and Culture*, 20(1), 24–41. https://doi.org/10.1177/1206331216646060