Politecnico di Torino

Architecture for Sustainability

Designing as if writing:
Narrative, space and dwelling in video

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***Author Statement:**

This thesis uses AI only to enhance the accuracy and coherence of the English translation. The structure and content of the thesis were independently completed by the author under the guidance of the supervisor.

Abstract

Taking video games as an emerging spatial medium, this thesis examines how they reshape contemporary urban planning and design. It traces the shift from two-dimensional interfaces to three-dimensional open worlds and the parallel deepening of their cultural presence, arguing that games have moved from disposable entertainment to a "socio-spatial laboratory" for experimentation and expression. Drawing on game-studies theories, the study takes narrative as its entry point and sorts the generative logic of game worlds into temporal structures (string-of-pearls, branching, theme-park and building-block models) and a spatial paradigm of the open world, focusing on how system design mediates the tension between rules and freedom.

Empirically, the discussion centers on the Chinese open-world game *Genshin Impact*. Situating it within the industry's trajectory from imitation to profit-driven and then content-oriented development, the analysis examines the construction of the continent of Teyvat—especially the region of Natlan—through terrain, architecture and settlement form, connective spaces and social organization. This reading shows how cultural imagination, narrative structure and player agency are translated into inhabitable and "writable" virtual environments, and how the game map combines a string-of-pearls main storyline with theme-park-style open exploration.

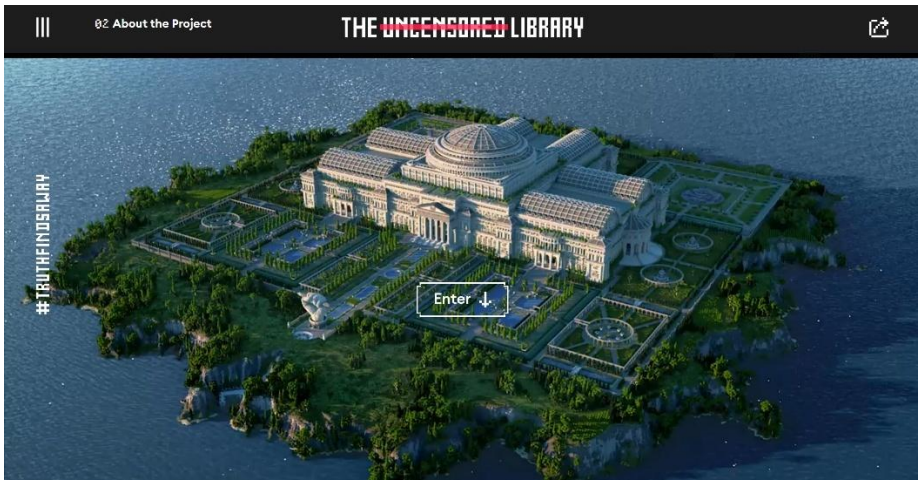
Turning back to urban reality, the paper proposes a conceptual move from the "simulated city" to the "narrative city" and the "generative city". It outlines a design framework that uses generative logic to define an open yet bounded layer of rules and institutions, narrative logic to organize legible terrains, paths, nodes and landmarks, and simulation logic to implement differentiated communities and polycentric public spaces. In this view, the city is understood as an open system continuously co-authored under constraints, turning planning from a finished object into an ongoing process and public participation from formal consultation into everyday co-creation.

CHAPTER 0：Video Games and the Fabrication of Urban Reality

0.1 Video Games and the Design of the Reality

Video games, as the emblem of contemporary entertainment culture, have increasingly permeated every aspect of our daily lives. Although their history appears brief and youthful compared with other human technologies, the continuous evolution of technology and the deepening of cultural connotations have driven a profound transformation: from the early two-dimensional interfaces of pure entertainment products to the complex, socially meaningful three-dimensional virtual worlds of today. They have long surpassed the realm of mere interactive play, becoming spaces that can be experienced, contemplated, and even inhabited.

In 2020, Reporters Without Borders launched The Unce within Minecraf, transforming a free virtual sandbox into a politically charged space of dissent and memory. The project cleverly leverages Minecraft's architecture and openness to bypass state censorship, presenting banned journalism and suppressed reporting to readers who might otherwise be unable to access it in their home countries. By embedding these texts within a monumental neoclassical library built from millions of blocks, the project turns a popular commercial game into a decentralized, globally accessible infrastructure capable of resisting traditional forms of digital control. It redefines the game environment as a public sphere in the Habermasian sense—a space where civic communication, resistance, and critical engagement can occur beyond the constraints of traditional media channels.



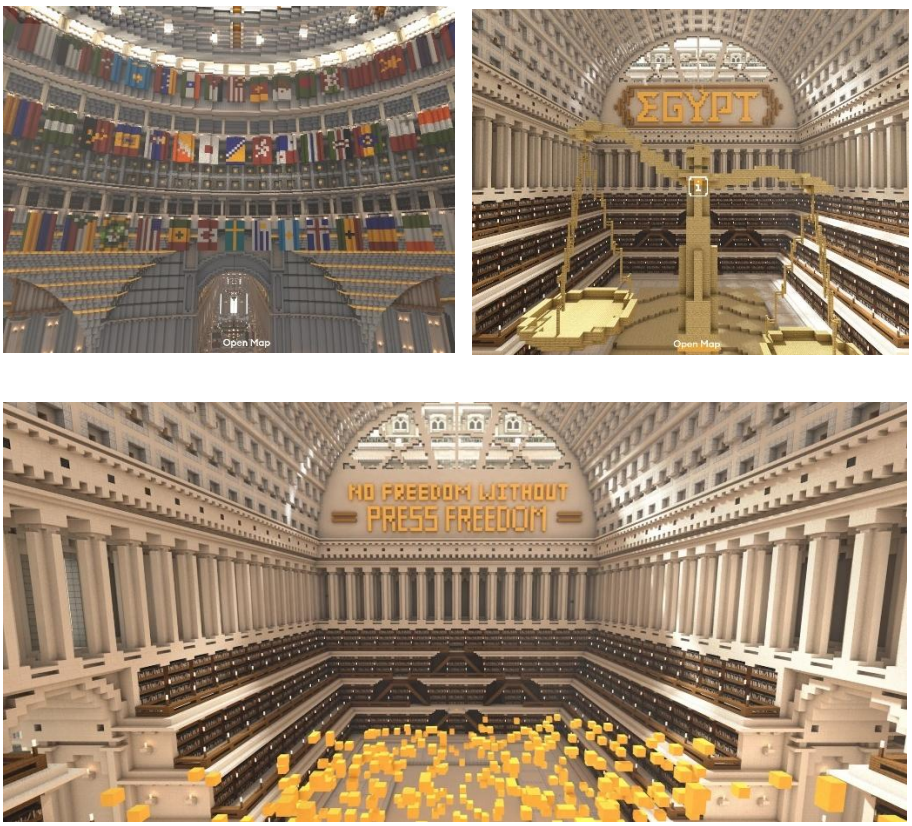


Figure1. The Uncensored Library built within Minecraft. The official website introduces the project's original intention: Providing access to independent information to young people around the world through a medium they can playfully interact with. Journalists from five different countries now have a place to make their voices heard again, despite having been banned, jailed, exiled and even killed.

Another good example is Total Refusal's "How to Disappear" (Total Refusal, 2020), which similarly demonstrates how contemporary games can transcend mere entertainment to become a medium of critical reflection..This 20-minute film, created using in-game cinematography within Battlefield V, eschews the adrenaline-fueled spectacle typical of digital warfare and instead focuses on the rarely highlighted figure of the deserter—systematically prohibited by the game's mechanics, where any player attempting to leave the battlefield is automatically "executed." Under the strict rules of enforced combat, Total Refusal explores the question: "How can one 'refuse war' and 'disappear' in a world that only permits fighting and death?" By foregrounding this forbidden act, the short film exposes the coercive structures embedded in virtual environments and mirrors the ways real-world institutions suppress disobedience, pacifism, or refusal. Its pseudo-documentary narration transforms the game world into an analytical space in which the logics of militarism, obedience, and algorithmic control can be critically examined. In doing so, How to Disappear shows that video games not only simulate conflict but also provide a framework for reflecting on the political, ethical, and social conditions that shape contemporary life—demonstrating that virtual worlds

are not escapes from reality, but powerful sites for understanding and contesting it.

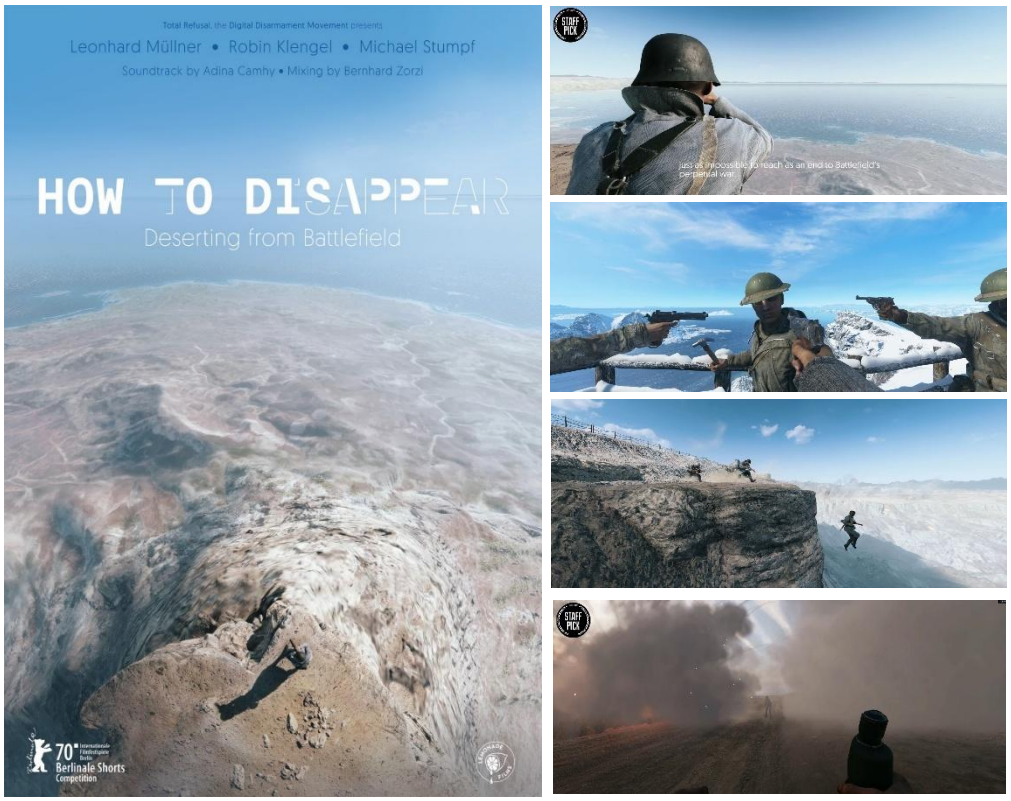


Figure2.An anti-war movie in the true sense of the word, How to Disappear searches for possibilities of peace in the most unlikely place of an online war game. It's a tribute to disobedience and desertion - in both digital and physical-real warfare.

These examples illustrate that video games have long transcended the domain of entertainment consumption, emerging instead as new socio-spatial laboratories. They offer us a renewed lens through which to reconsider the relationship between space and society, while also providing a metaphorical framework for rethinking the "generative logic" of urban design. The rapid, multidimensional evolution of video games within a relatively short period, I argue, can be explained through two interrelated dimensions: technological transformation and cultural permeation.

0.1.1 Technological Transformation

From the early days of arcade consoles to the current forms on computers and mobile devices, video games exhibit a clear trajectory of what may be called a movement from the tangible to the virtual.

In early titles such as Tetris (Pajitnov,1984), the player's experience was strictly confined to a single plane. At that time, pleasure arose from rhythm and reflex

rather than from any spatial immersion—the game space merely served as a background for action.

With the progress of information technology, however, the production of video games has become increasingly sophisticated and realistic. Modern games engage not only sight—with refined 3D imagery—but also hearing, through elaborate music and sound design, and even touch: the rhythmic, patterned operations of a keyboard or touchscreen generate muscle memory and a sensory pleasure that verges on physical response.

As the ritual boundary between "real" and "virtual" grows blurred, the player's bodily and mental engagement paradoxically becomes more intense and tangible. Immersion and freedom have thus become the highest pursuits of the medium today. Players shift from passive control to active exploration—they can walk, climb, jump, interact, and even create within the virtual world. Moving from adapting to the world toward transforming it by their own actions, players experience a genuine sense of freedom granted by the game itself.

For this reason, open-world design has rapidly become the dominant paradigm of contemporary games. To make this virtual life feel more authentic, designers continually refine the world's details: day-and-night cycles, climatic variations, social systems, geographical formations, and so on. These mechanisms endow the game world with a self-sustaining internal logic. The player's activities have accordingly expanded—they are not merely playing but inhabiting the world: travelling, working, communicating, constructing, even organizing communities.

The evolution of video games is, in essence, a process in which the player's sense of participation and control is constantly strengthened. In this regard, the relationship between games and the real world grows ever closer, for both are concerned with how humans coexist with space and how they live between order and freedom. This, ultimately, is the most vivid manifestation of the movement from the tangible to the virtual.

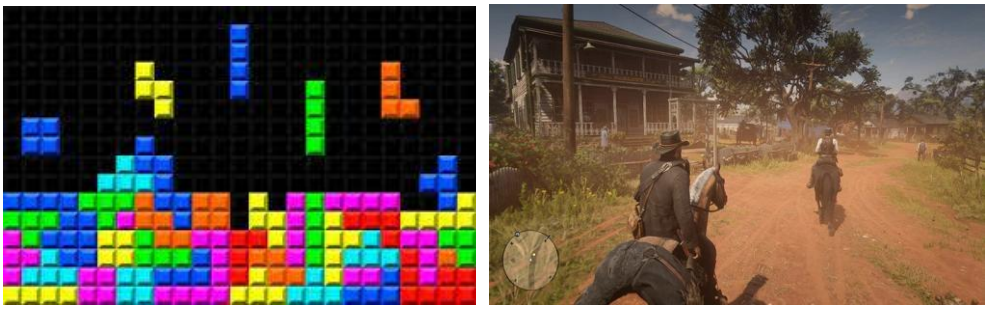


Figure3. A visual comparison between Tetris and Red Dead Redemption2(Rockstar Studios,2018)

0.1.2 Cultural Penetration

In contrast to the technological revolution lies a subtler yet equally profound transformation—the deepening of culture. This shift is closely related to how both players and designers pursue quality and meaning within their works. In the beginning, people were content with the simple pleasure of watching the falling blocks in Tetris disappear on the screen. Later, in an effort to rationalize the player's goal, ambitious designers began to embed stories within games, giving Mario's endless journey of collecting coins a legitimate purpose—to rescue the princess.

Just as technology opened up new dimensions of freedom and expression, it also enabled the construction of complex, immersive worlds. When players encounter a more sophisticated and believable virtual environment, they naturally begin to wonder what might happen there. Why not, then, fully utilize such a world and bring it to life through storytelling? This, I believe, marks the true birth of game narrative.

Gradually, ever grander stories began to inhabit the virtual realm: fairy tales, personal desires, social allegories, philosophical meditations, and more. The game thus became a kind of laboratory of thought, a vessel for reflecting on the past, the present, and even the imagined future. Within its simulated spaces, players could enact chapters of existence that reality itself could never allow.

From a technological perspective, the development of games has indeed moved toward ever-greater realism. Yet from a narrative perspective, the evolution points in the opposite direction—toward transcendence, abstraction, and imagination beyond the real. Perhaps this is why games today no longer merely originate from reality, but in turn exert a growing influence upon it.

Figure4. Super Mario Bros(Nintendo,1985): Mario successfully rescued the princess after completing the level

0.2 The Latent Inspirations of Games for Urban Design

From the two dimensions of innovation discussed above, it becomes evident that video games today have evolved into a new kind of spatial artifact. When players perform a series of three-dimensional operations in a virtual world, the *spatial logic* they experience parallels, in many ways, that of real cities and architectural environments. Such spatial models do not replace reality; rather, they serve as its mirror and extension. The activities that players engage in—exploring, planning, socializing, constructing—constitute a re-enactment and reflection of urban life itself.

The following sections outline several aspects in which games reveal potential insights for urban studies and design.

0.2.1 Simulated Cities

The virtual worlds of games are often modeled after reality, but not through simple replication. Instead, they are selectively reconstructed and idealized through deliberate design choices. This process preserves the logic and cultural symbols of real spaces while simultaneously experimenting with new forms of social operation, functional division, and cultural interaction.

Within such spaces, the relationships and mechanisms experienced by players can be understood as performative models of an ideal city—frameworks that allow us to reflect on and reinterpret real-world urban culture and social phenomena. For instance, in virtual environments, distinct cultural groups may coexist while maintaining their unique identities, collaborate through functional interdependence, or converge and interact spontaneously within shared public spaces.

These scenarios enable designers and researchers to observe how different social structures and spatial strategies function under controlled conditions, thus providing theoretical references for real urban design—particularly concerning multicultural coexistence, public-space formation, and mechanisms of social interaction. In other words, the virtual world is not merely a venue for entertainment and experience; it serves as an idealized laboratory for urban culture, social order, and spatial systems, offering new conceptual ground for innovation in the design of real cities.

0.2.2 Spatial Narratives

The rise of open-world games has given birth to a new cultural paradigm in which space itself becomes narrative.

Titles such as Genshin Impact (miHoYo,2020) and The Legend of Zelda: Breath of the Wild (Nintendo,2017) interweave global cultures, systemic rules, virtual societies, and player behaviors into dynamic worlds where stories are no longer

bound to linear text. Instead, narratives emerge naturally from exploration, interaction, and decision-making. Each voluntary act of movement or pause constitutes a new writing of meaning upon the landscape.

In this sense, the game presents a playable narrative space, where genuine emotion and memory take root within a digital geography. The structural logic of such open worlds resonates profoundly with the idea of the narrative city: both regard space as a medium for meaning-making, and both integrate individual participation, mobility, and experience into broader cultural storytelling.

Through digital design, games reanimate the legibility and inhabitability of the city, prompting us to reconsider the narrative potential of urban form. The city, like the open-world game, is not merely a physical setting for movement but a cultural text—one that can be perceived, told, and co-created through collective experience.

0.2.3 Urban Participation

Perhaps the most direct demonstration of this idea can be found in city-simulation games, which mirror the logic of urban planning itself. The genre originated with SimCity (Naxis, 1989), a groundbreaking simulation that invited players to construct and manage their own virtual cities. Rather than providing linear objectives or narratives, the game presented a set of systemic rules—zoning, taxation, transportation, pollution, and citizen satisfaction—within which players could freely experiment. Each decision, such as placing a road or adjusting a tax rate, produced visible feedback that rippled across the city's ecology: industrial zones affected pollution and employment, while infrastructure influenced population growth and traffic flow. The city thus evolved as a dynamic, self-regulating organism shaped by the player's interventions, revealing the delicate balance between governance, economy, and environment.

What made SimCity revolutionary was not its graphical realism, but its procedural realism—the way it simulated urban complexity through interacting systems. It taught players to think like planners, recognizing that every design act participates in a network of cause and effect. Later titles such as SimCity 2000 (1993) and SimCity4 (2003) expanded this model with layered infrastructure, regional economies, and social indicators, gradually transforming the game into a platform for systemic experimentation rather than mere entertainment. In this sense, SimCity became an early cultural rehearsal of participatory urbanism: players were not simply building cities but engaging in continuous negotiation between order and emergence.

Figure5. Gameplay interface of SimCity 2000. The construction panel on the left displays various urban modules—including water, electricity, infrastructure, and road planning—through which players can design and manage their own cities. The player's objective is to balance the city's overall economy and the citizens' well-being, constructing a functioning urban system that operates smoothly. The process of keeping such a complex city running provides a strong sense of accomplishment, much like assembling a vast, dynamic set of building blocks.

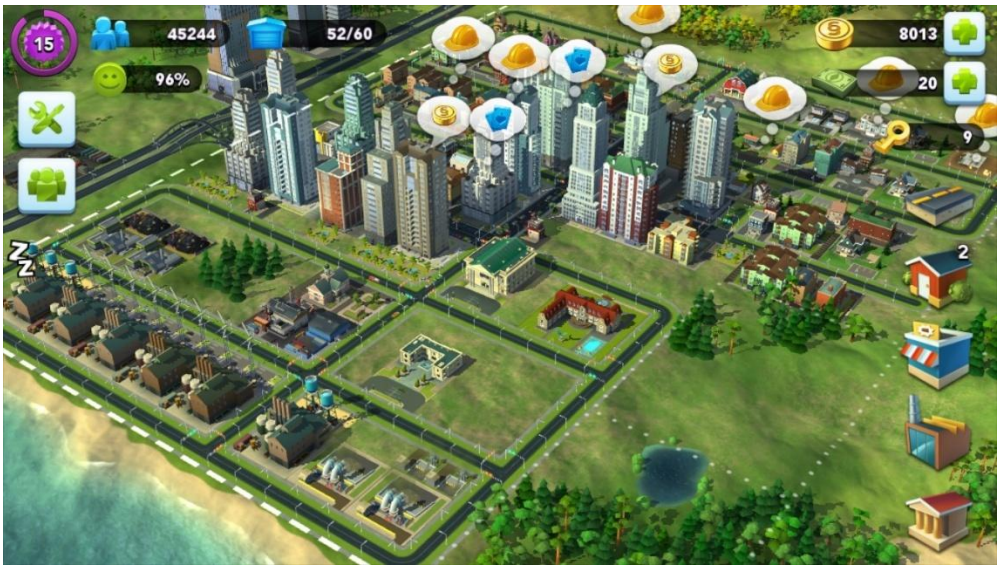


Figure6. Gameplay interface of SimCity BuildIt. The image displays the citizens' needs within the game. If their demands remain unmet for an extended period, the city's happiness index decreases, leading to a slowdown in urban development.

More recent successors such as Cities: Skylines (Paradox Interactive,2015) continue this tradition, providing more sophisticated simulations of social, economic, and

ecological systems. Yet the underlying philosophy remains the same—within a rule-based framework, players act as both designers and citizens, shaping the city's identity through their cumulative decisions. Compared with narrative-driven games, this type of simulation offers a closer analogy to civic participation itself: a digital rehearsal of how urban life is collectively constructed through countless individual choices.

Figure7. Figure. A Chinese player sharing the process of building his city on YouTube. The video documents the entire development process—from route planning, infrastructure construction, and landscape planting to population growth and urban prosperity—culminating in a fully functioning city designed in the form of a traditional Chinese "Taiji".

Setting aside construction-based games as a special case, let us look deeper into the essence of modern game design. As discussed above, the highest aspiration of contemporary games lies in granting players as much freedom as possible. To achieve this freedom, designers intentionally minimize their own control over the experience, employing branching and non-linear narratives to weaken the game's dominance over the player's actions.

Although every scene and event is ultimately grounded in predetermined code, the autonomy of player participation allows individuals to choose their own paths

of exploration. Each act of play, each small decision, becomes a thread woven into a unique adventure—an emergent narrative authored through participation itself.

Now, if we habitually project this logic back into the reality we are accustomed to, we might ask: does a similar mode of autonomous and participatory creation also exist within real cities? Could residents, through their everyday practices and spatial improvisations, weave their own narratives of urban space? In posing such questions, we may unconsciously place games and reality in opposition. Yet perhaps the relationship between the virtual and the real is no longer one of separation. The ways we act, build, and collaborate within video games are increasingly rewriting our perception of physical space—hybridising the digital and the material, and transforming how we imagine, experience, and design the city itself. Games are no longer merely metaphors that inspire urban design; they have already become part of the city's living narrative.

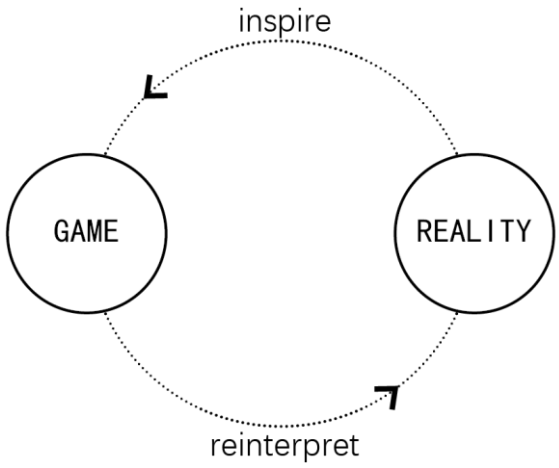


Figure8. Reality inspires games, while games in turn reshape how we perceive and design reality.

0.3 Summary

Video games have become one of the key media through which we can understand the dynamics of cities and culture. They are no longer mere products of entertainment and consumption, but rather generative arenas for urban society, cultural formation, and also for urban planning and design strategies definition. By examining the narrative logic and spatial composition of video games—particularly three-dimensional works endowed with rich cultural significance—we may reapproach the core architectural and urbanistic concepts of space, narrative, and participation from a new perspective.

To do so requires stepping beyond conventional modes of architectural and urban thinking, and delving instead into the constructive logic of the game world itself.

This study therefore takes “narrative”—one of the central principles of game design—as its primary point of entry, focusing on Genshin Impact, a landmark of Chinese open-world game design, as its core case study. Through an analysis of the game’s world-building, cultural expression, and spatial design logic, it seeks to uncover how games construct worlds that are realistic yet distinct from reality. Finally, the discussion returns from the virtual to the real, asking what insights such a work may offer for the rethinking of urban design in contemporary cities.

CHAPTER 1: Designing Constraints: The Governance of Time and Space in Game Worlds

Before turning to Genshin Impact, it is necessary to first understand the formative logic of the game world itself. Much like the real world, the virtual world is also constituted by both time and space, which together determine how players perceive and act within it. This chapter unfolds along these two dimensions.

The temporal dimension represents the unfolding of gameplay experience—the player's actions, the progression of narrative, and the generation of events all occur through the continuity of time. Here, this process will be referred to as game narrative. The spatial dimension, by contrast, corresponds to the generative logic of the virtual world—how games, through three-dimensional structures, terrains, and environmental organization, shape the spatial order of experience.

For this purpose, I will take as a point of departure the genre that most fully embodies spatial openness and structural complexity: the open-world game. Through a dual analysis of time and space, this chapter seeks to reveal how games reconstruct the orders of existence and perception within the virtual realm.

1.1 Game Narrative

1.1.1 Novels, Films, and Games

A story is composed of a sequence of events, while narrative refers to the way in which those events are presented and communicated to an audience.

As early as Aristotle's time, the Poetics defined the classical three-act structure of narrative, dividing a story into three parts: the beginning (the exposition and the initial conflict), the development (the intensification of the conflict), and the ending (the resolution of the problem).

This structure remains visible across a wide range of narrative media—novels, films, and even games.

Later, mythologist Joseph Campbell, in his monumental work The Hero with a Thousand Faces (Campbell,2008) ,further elaborated the archetypal pattern of the hero's journey:

> *"The hero ventures forth from the world of common day into a region of supernatural wonder (departure); fabulous forces are there encountered and a decisive victory is won (initiation); the hero comes back from this mysterious adventure with the power to bestow boons upon his fellow man (return)."*

Campbell divided the hero's journey not only into the traditional three acts but also into seventeen distinct stages. Not every story necessarily includes all seventeen stages, nor do they always appear in the same order; some narratives focus on only one or two, or rearrange them to produce different effects.

However, these classical narrative models represent only the tip of the iceberg when it comes to storytelling in video games. Modern game narratives have evolved into far more diverse and participatory forms, offering players experiences that transcend the boundaries of linear storytelling.

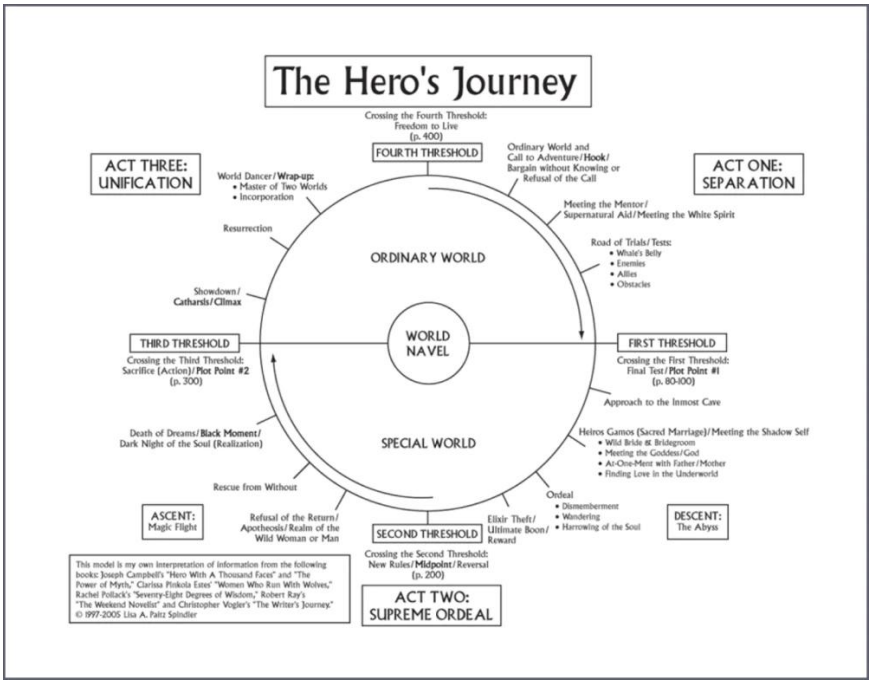


Figure9. The Hero's Journey: A narrative formula proposed by mythologist Joseph Campbell, widely applied across various story types and dramatic structures.

From a literary perspective, video games are regarded as a new form of storytelling—one that succeeds the novel and the film.

Unlike cinema, games employ interactivity to free the audience from passively receiving the progression of a plot, granting them instead the ability to choose and thereby to alter the direction of the story. At this point, the player no longer occupies the role of a spectator seated before the screen, waiting for events to unfold; they become, rather, an actor within the narrative itself.

Every action—whether fighting, socializing, triumphing, or dying—reshapes the growth of the virtual character and the evolution of the virtual world. In doing so, the player establishes a genuine relationship with the digital realm, engaging with

it not as an observer but as a participant whose decisions carry narrative and ontological weight.

1.1.2 The Debate on Whether Games Require Narrative

Although narrative has now become one of the principal labels through which people perceive games, the question of whether games need narrative remains a long-standing controversy within academia. Throughout the history of game studies, scholars have formed distinct camps around this issue.

Representing the extreme anti-narrativist position, Markku Eskelinen argues that games and narratives should be completely separated (Eskelinen,2001). As he famously put it:

> *"People can easily distinguish between narrative, drama, and game without any help from academic theory. If I throw you a ball, I don't expect you to start telling a story. Yet when games—especially computer games—are theorized, the field is immediately colonized by literary, dramatic, and film studies."*

Eskelinen insists that games must preserve their own distinct characteristics rather than being absorbed into other disciplines. Indeed, non-narrative games do exist in reality; the so-called consumptive games mentioned earlier focus primarily on gameplay mechanics and interactivity. Eskelinen further argues that narrative in games functions merely as a marketing tool, lacking any genuine academic value. For him, studying the mechanics of Tetris is far more meaningful than studying its nonexistent narrative components.

But can we therefore claim that narrative within games is entirely useless?

If we turn to real-world play, many traditional games already exhibit narrative qualities: Eagle Catching Chicks, Tag, and other playground games all embody what might be called modular narrative models. According to Henry Jenkins, these games share structural similarities with video games; the only difference is that digital games exchange the physicality of outdoor play for the expressive potential of rendered, surreal worlds.

Janet Murray takes an opposing stance. She argues that market evolution has already proven that the future of games fundamentally lies in their narrative dimension. Narrative, she suggests, enhances interactivity, strengthens player agency, and produces emotional resonance (Murray,2011). As she famously wrote:

> *"The computer is the most representational medium ever invented—a medium for modeling worlds. We must make all storytellers fluent in this new language; to make the medium mature, we need a Shakespeare for the netizen age."*

Thus, even though the history of games began with non-narrative forms, we cannot deny the meaningful role narrative plays in enriching the player's experience.。

1.1.3 The Conflict Between Narrative and Interactivity

This study does not attempt to resolve the above debate directly. Rather, it seeks to reflect on a broader phenomenon revealed through it—the inherent tension between interactivity and narrative in games.

One of the defining features of game narrative is precisely its interactivity and immersive quality. Yet, as Jesper Juul points out, interactivity also makes narrative construction more difficult(Juul, 2021). The reason is clear: increased interactivity grants players the ability to make free choices at every narrative node, thereby influencing the course of the story. This enhances the player's sense of control—but it also undermines one of the essential sources of drama.

In traditional narrative art, emotional resonance arises from the irreversibility of events. In games, however, if players can simply reload a save and redo their choices, the emotional impact of the story becomes greatly diminished. Thus, as interactivity increases, sustaining a coherent and emotionally powerful narrative becomes ever more challenging. This explains why most games handle critical story moments through non-interactive cutscenes. If players were allowed unrestricted control during these sequences, it would inevitably weaken the immersive effect of the narrative.

Juul also notes that human culture has long admired the notion of the "infinite work"—a text that can be reread endlessly without losing its appeal(Juul, 2005). In traditional, non-interactive media, this defines high literature as opposed to disposable "popular fiction." Yet in video games, the situation appears inverted: the less narrative a game contains, the higher its replayability. Once a game incorporates a fixed story, its replay value tends to decline. After all, once players know what happens, repeating the same story holds little meaning.

It follows, then, that game narrative cannot be understood simply as the transplantation of linear, non-interactive storytelling into an interactive and exploratory medium. Rather, it involves a continual negotiation between interactivity and narrative coherence. While narrative undeniably enriches the gaming experience, the essence of a game still lies in its playability. Even a title centered on storytelling must maintain a minimum level of interaction—otherwise, it would become indistinguishable from a visual novel. Game designers, unlike writers, cannot devote themselves solely to telling a story; they must also consider how the player reads and enacts that story, and above all, how to make that reading process engaging.

1.1.4 The Problem of Boundaries and Narrative Guidance

Compared with novels and films, video games are a medium in which narrative boundaries are extremely difficult to control.

In two-dimensional media such as literature, the author can easily determine what the reader is allowed to see. The reader simply follows the words on the page—living, like Truman in The Truman Show, within the constructed world—without ever glimpsing the inconsistencies or voids that lie beyond it. The same principle applies to cinema: the director controls what is shown through the camera lens, and conceals what must remain unseen. No viewer ever perceives the nothingness outside the frame, because those unseen areas hold no meaning within the work itself.

In games, however, such "concealment" becomes remarkably difficult. Once players step from a two-dimensional screen into a three-dimensional space, they gain a freedom that approaches that of reality. Curiosity drives them to explore every possible corner of the world—unless they are prevented from doing so. As a result, game designers must impose certain mechanical limitations: setting stamina limits to restrict how long a player can run; disabling vertical climbing to prevent them from escaping the designed world; constraining camera rotation to avoid exposing the backstage of the illusion.

Some clever designers disguise these boundaries through world-building—placing fences or natural obstacles at the world's edge, sometimes even adding a sign that reads "Area inaccessible beyond this point." Others, more pragmatic, simply install invisible "air walls." They would rather sacrifice a degree of realism than risk losing the player to the void beyond.

Yet not all players obediently follow the designer's rules. In fact, many take pleasure in breaking them. Players actively search for bugs or exploit programming glitches to slip through invisible barriers and peer into forbidden zones. At that moment, their interest shifts from inhabiting the story to escaping it—a situation that few designers would welcome.

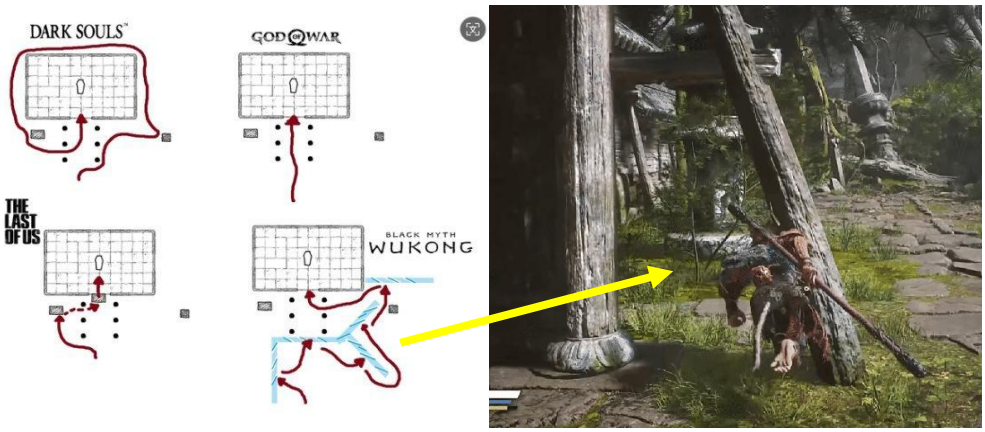


Figure10. The image on the left shows player-drawn flowcharts of entering a building in four different games, created to mock the numerous illogical invisible walls in Black Myth: Wukong. The image on the right shows

the in-game interface of Black Myth: Wukong, where invisible walls between pillars prevent players from passing through, which is unreasonable.

Thus, one of the most intricate challenges of game design lies in constructing a narrative stage whose boundaries feel natural and legitimate, so that players do not perceive them as artificial constraints. The ability to keep players engaged, guiding them to act in alignment with the designer's intent, has therefore become one of the central principles of modern game design—commonly referred to as "guidance" or player direction.

This concept, in fact, parallels path planning in architecture and urban design, where spatial cues and environmental affordances subtly guide users' movement and behavior. Yet, as the discussion above suggests, games rely far more heavily on such guidance than architecture does; the very coherence of their virtual worlds depends upon it.

1.2 Types of Game Narrative

Within the field of game theory, the categorization of narrative forms varies considerably, and there exists no single universal standard or absolute truth for game design itself.

This chapter primarily draws on Jakub Majewski's theoretical framework (Majewski,2003) , which identifies four major narrative models: the Beads-on-a-String Model, the Branching Model, the Theme Park Model, and the Building Blocks Model. Together, these four patterns illustrate the evolution of game narrative—from linear storytelling toward open and emergent structures.

1.2.1 The Beads-on-a-String Model

The Beads-on-a-String model is one of the most commonly used narrative structures in video games. It describes the entire narrative as a sequence of predetermined nodes—"beads"—arranged along a single thread.

Under this model, a game's script can be transplanted directly into the gameplay with minimal obstruction, embedding a linear storyline beneath the surface of interactivity.

Structurally, the overall narrative remains linear, leading to a single ending. Each "bead" represents a fixed narrative unit. Although players are granted a degree of freedom within each bead—moving, exploring, and triggering sub-events—they ultimately cannot alter the direction of the overarching plot.

Game designer Jane Jensen describes this model as follows: every major story event can be visualized and treated as the beginning of a bead. Within each bead,

players can freely drive various developments, which may appear non-linear to some extent. However, when they attempt to complete the bead, both the player's and the narrator's available choices sharply decrease, leaving only one path leading to the next bead. In many cases, the connection between beads takes the form of non-interactive cutscenes—the most common means of linking narrative units together.

Figure11. Simplified diagram of the "pearl necklace" narrative model.

Because of its clear and linear structure, this model aligns particularly well with the classical three-act narrative form. As a result, it is often preferred for game adaptations of films or literary works. For instance, Indiana Jones and the Last Crusade (Lucasfilm Games,1989), adapted from the 1989 film of the same name, employs this quasi-linear narrative structure. The game is divided into several cities—New York, Venice, and a number of German towns. Within each city, players can move freely and solve puzzles in a non-linear order. Yet certain key tasks must be completed before they can proceed to the next city.

This approach is frequently adopted in adventure or simulation games, where storytelling plays a dominant role. A clearly articulated narrative arc allows for the gradual depiction of character growth and the unfolding transformation of the game world.

Figure12. "Indiana Jones and the Last Crusade", the game adapted from the film of the same name.

At times, however, designers interweave other models between beads to enhance player freedom. For example, in the Indiana Jones game, during the escape from Germany, players can choose between stealing a biplane or sneaking aboard a zeppelin. Although these choices lead to different sequences, the narrative soon converges again into the dominant beads-on-a-string framework.

Hence, the Beads-on-a-String model is remarkably flexible. It can function as an overarching narrative template, capable of incorporating other structures within its framework. Virtually any narrative structure or storytelling technique available to video games can be accommodated within this model.

Nevertheless, its defining emphasis on storytelling often results in less attention to gameplay mechanics during development. Yet many games with lighter narratives still operate on a beads-on-a-string foundation. Most games are divided into a series of levels or missions, each functioning as an individual bead. The gameplay within levels provides interaction and challenge, while cutscenes between levels supply the connective narrative tissue.

In short, the beads-on-a-string model remains the most accessible and widely applicable narrative structure for video games. However, when misused, it can create a disjunction between story and gameplay, resulting in a fragmented or conflicting experience. As Poole aptly notes:

"It would be rather strange to ask an athlete to read a chapter of a novel between two rounds of competition."

1.2.2 The Branching Model

In contrast to the Beads-on-a-String model, the Branching Model designs the story to diverge in multiple directions rather than unfold linearly. The narrative still begins from a single starting point, but when the player reaches certain nodes in the game, they must decide what to do next. The story then continues along one of several possible paths until it reaches another point of choice.

This model places greater emphasis on player agency—the ability to determine the direction of the plot. Every choice made by the player triggers different events and outcomes. The structure resembles a tree, or, in more complex cases, a web of interwoven possibilities, where each branch represents a distinct narrative thread shaped by the player's decisions.

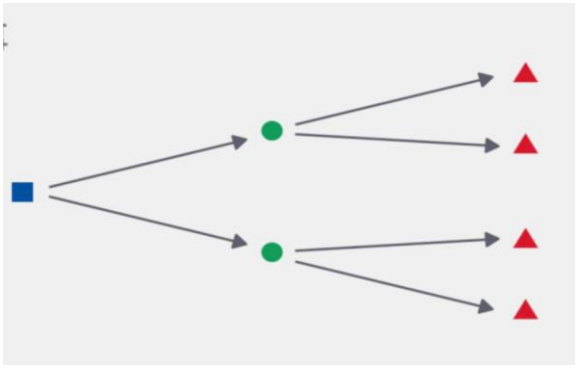


Figure13. Simplified diagram of the branching narrative model

Many different mechanisms can be used to realize branching structures—through gameplay mechanics, cutscenes, or scripted events. Moreover, such choices are not always immediately visible to the player; it is entirely possible for a decision to be made without the player's conscious awareness.

For instance, a player might choose to confront an enemy at a particular moment, only to face that same opponent again later—this time under more difficult circumstances. In some cases, distinct branches may later converge, leaving the player with only one viable path to complete the game (excluding endings in which the character dies). Some games even feature death sequences that present an obituary summarizing the character's life—an alternative form of ending, though players can often reload and return to the story thereafter.

The strength of the Branching Model lies in how its rich interactivity narrows the emotional distance between player and character. Because every major decision is made directly by the player, the character's fate appears to rest in the player's hands. In practice, of course, these choices remain limited to the possibilities predesigned by the developer; yet within that framework, players still experience a strong sense of personalized authorship.

A representative example of this model is Detroit: Become Human (Quantic Dream, 2018), an interactive narrative game that allows players to control three android protagonists—Connor, Kara, and Markus—while exploring ethical and emotional conflicts between humans and artificial intelligence in a near-future Detroit.

At key moments, the story branches based on the player's decisions, allowing each choice to influence subsequent events and endings. Each playable character faces moral and emotional dilemmas, and certain decisions may even lead to their permanent death.

By placing control of the narrative progression directly in the player's hands, the game transforms choice itself into a central mechanic, vividly demonstrating how the branching structure enhances immersion and individualizes narrative outcomes.

Figure14. The storyline in Detroit: Become Human generally presents a branching structure that radiates outward from a single starting point.

However, the Branching Model is not particularly favored by game developers. In the 1980s, it was the standard structure for text-based adventure games, since adding an extra story path merely required writing additional lines of text. But as text adventures were gradually replaced by graphic adventure games, the inclusion of multiple routes and endings began to demand additional voice acting, animation, and cutscene production—dramatically increasing development costs.

Moreover, from the player's perspective, only a small subset of "completionist" players are motivated to replay the game repeatedly in order to experience every possible branch. Most players lack the patience to revisit the same content multiple times. As a result, large portions of narrative material often remain unseen, effectively turning production effort into wasted resources that never fully materialize in player experience.

Fundamentally, the Branching Narrative Model seeks to disrupt the linear, beads-on-a-string flow by allowing players to actively intervene in and reshape the story. In essence, it increases narrative complexity along the temporal dimension. At times, player choices may affect the difficulty of gameplay—making progress easier or harder—while at others, they directly alter the story itself, even permitting multiple distinct endings or paths to completion.

This added narrative complexity, however, comes at a steep price. The cost of developing a branching narrative far exceeds that of realizing the same story through a beads-on-a-string structure. Moreover, the story itself often suffers from fragmentation due to the limits of descriptive coherence, and maintaining continuity across sequels becomes increasingly difficult.

Therefore, a fully realized branching structure—one that offers meaningful choices at every major narrative node—is practically impossible to achieve. Most games employ branching techniques only in a limited and localized manner, using selective decision points rather than a fully divergent network.

1.2.3 The Theme Park Model

Compared with the Branching Model, the Theme Park Model increases narrative complexity along the spatial dimension.

In this structure, the linear narrative chain of the previous two models is completely dismantled—the "beads" are scattered throughout the world. Instead of generating continuous narrative branches as the game progresses, players are allowed to freely explore the environment, encountering and activating different narrative entry points distributed across the game space.

The core gameplay in this model revolves around freedom of choice: at any given moment, players are presented with multiple optional challenges, none of which are strictly required for completion. Thus, the focus shifts from following a prescribed story to the freedom of exploration and self-directed action.

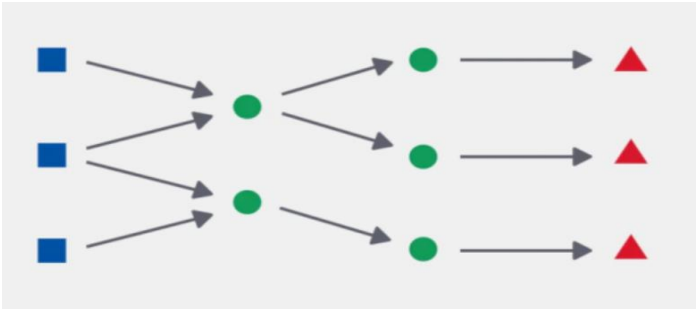


Figure15. Simplified diagram of the theme park narrative model.

Role-playing games (RPGs) are particularly well-suited to this model, as their narrative design emphasizes personal character development within a vast, open world filled with interactive possibilities. Players interact with various non-playable characters (NPCs) to complete quests centered around their avatar, deepening emotional connections while also gaining a better understanding of the world's underlying lore and structure.

At the same time, RPGs emphasize character progression, offering multiple developmental paths. By completing side quests and auxiliary missions, players acquire resources that improve their character's abilities—whether related to combat, social interaction, or lifestyle skills.

From this perspective, the Theme Park Model aligns naturally with the growth systems typical of RPGs. For example, in the Japanese RPG The Legend of Zelda: Breath of the Wild, players begin at the center of the map. They may choose to confront the final boss directly in the central region, or freely explore the four surrounding areas to defeat the elemental Divine Beasts, thereby weakening the

final enemy before the ultimate battle. The order of these challenges is determined entirely by the player.

Figure16. The map structure in The Legend of Zelda: Breath of the Wild. The figure illustrates the potential paths players may take as they explore outward from the central region.

However, the Theme Park Model is rarely implemented in isolation. Complete nonlinearity tends to produce a sense of non-urgency—if every subplot is optional, players may lose their motivation to engage with the narrative at all.

As theories of player guidance suggest, when players lose sight of a primary goal, even an abundance of available choices can paradoxically lead to decision fatigue and disengagement. For this reason, games of this type usually retain a main storyline as the central axis of linear exploration, while the branching nodes function as side quests.

Nevertheless, the non-compulsory nature of this structure allows players to shape their experience in highly individualized ways. They are not required to complete the main quest in order to explore the side content. It is therefore common, for example, to see a "hero" who ignores the mission to rescue the princess and instead spends hours visiting villages to play cards with local residents—an emblematic expression of player agency within an open narrative framework.

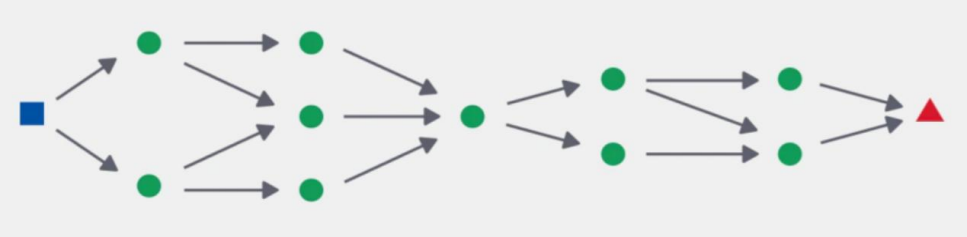


Figure17. The figure shows a composite narrative model, which demonstrates that although it consists of multiple internal branches, the overall structure still follows the framework of the pearl necklace model.

This freedom, however, greatly increases the workload for designers. Because each node operates semi-independently rather than as part of a tightly linked sequence, every node must function as a self-contained narrative unit.

Design teams therefore need a rich reservoir of narrative material, while ensuring that each individual story remains consistent with the overarching worldbuilding and thematic coherence of the game universe.

1.2.4 The Building Blocks Model

The boundary between the Building Blocks Model and the Theme Park Model is relatively fluid, as both allow players to create their own stories to a certain extent.

Game designer Sid Meier, when describing his work Civilization, noted that the key difference between Civilization and more conventional narrative-driven games lies in the distribution of decision-making (Meier,2020):

> *"In most games, the designer makes all the important decisions and leaves the unimportant ones to the player. In Civilization, the designer makes the unimportant decisions, and the player makes all the important ones." Thus, such a game resembles a set of building blocks that players can combine in any manner they wish.*

In games built on this model, players take on a godlike role rather than embodying a single character. They are not simply acting within the world—they are shaping the world itself.

For example, in Civilization, players must make strategic decisions each turn for the development of their civilization: expanding territories, waging wars, advancing science, and cultivating culture.

The model's appeal lies in enabling players to construct their own unique historical narrative from a diverse set of modular elements—assembling a personalized civilization from the blocks provided by the game's system.

Figure18. The game interface of Civilization VI(Firaxis Games,2016). Within a limited grid-based map, players determine the expansion points of their civilization, development routes, and the behavior patterns of each unit.

Furthermore, the true value of this model lies in how it compels designers to reconsider a fundamental question: who is the real author of a game's narrative?

If, in the Beads-on-a-String and Branching models, the story belongs purely to the designer; and in the Theme Park model, the narrative becomes a collaborative creation between designer and player; then in the Building Blocks Model, the story belongs entirely to the player.

Take Death Stranding (Kojima Productions,2019) as an example. Although the game includes a main storyline to provide orientation for players who seek direction, its greatest achievement lies in how its story emerges from player interaction. The designer merely established a rich and engaging system of mechanics, while players, through these systems, create their own delivery routes.

The shortcuts they construct along the way can, in turn, assist other players. This mutually beneficial and symbiotic form of play mirrors the dynamics of a real world—each individual within it generates their own unique narrative through action.

From a gameplay perspective, this model exemplifies what is often called emergent design: the designer defines only the logic and rules of the building blocks, and players freely create diverse outcomes within those constraints.

In this process, players are capable of producing unanticipated content—stories and structures that even the designer could not have foreseen.

Figure19.In Death Stranding, facilities built by players in their individual worlds can be shared across the network. The image shows a scene where a player crosses to the other side of a cliff using a bridge constructed by another player. This system creates a unique form of interaction between players.

1.3 Open-World Game

It is necessary to discuss the concept of the open world separately because the evolution of modern games has essentially followed a trajectory from linear, beads-on-a-string narratives toward more open forms such as the Theme Park and Building Blocks models. The open-world genre stands as the quintessential representation of open narrative design, helping us directly observe how the most popular contemporary games employ narrative structures.

At the same time, the open-world game—by using an expansive three-dimensional environment as its narrative medium—has become the game form most closely resembling reality. This makes it particularly valuable for establishing a bridge between the spatial storytelling of architecture and urbanism and that of digital game design.

1.3.1 The Problem of "Definition"

Open-world games have become the emblem of open-ended narratives. For players living in 2025, the term open world is almost impossible to ignore. Visit any major gaming platform, and titles such as GTA V, Assassin's Creed: Origins, or PUBG will prominently display the open world label beneath their descriptions. The term has even become a marketing buzzword, often misused by opportunistic developers who assume that simply giving players a sandbox to roam in qualifies as an open world.

Despite its ubiquity, however, the term remains poorly defined—a paradox that raises an important question: why has "open world" become so widely used, yet so rarely understood?

The difficulty of defining the open world lies in its fundamentally different design logic compared to traditional games. As Ulrich Götz observes:

> *"When developers design most games, they first determine the core gameplay and mechanics, and only then build the supporting systems and elements around them." (Götz,2021)*

In other words, traditional games follow a gameplay-centered design principle: the development process begins with the core mechanic, and from it branches outward into systems, levels, and narrative. Every design decision ultimately serves the player's central interactive experience.

By contrast, open-world design operates in reverse. Designers begin by defining the world itself—its goals, logic, and governing rules—before selecting the gameplay mechanics that best fit within that framework.

This means the open world is not born from a specific gameplay idea, but from the act of worldmaking. Designers first ask: What kind of world do we want to create? — whether a historically grounded setting or a fully imagined fantasy realm—and only afterward determine what players can do and how they can play within it. This "world-first, gameplay-second" design paradigm makes open-world games a world-centered model rather than a gameplay-driven system.

Consequently, open-world games exhibit far greater complexity and inclusivity. As the same article points out, the genre "integrates a wide variety of mechanics, playstyles, and game elements," allowing players to "set their own goals and create their own sense of challenge and achievement." Within such vast virtual environments, multiple gameplay modes—exploration, survival, combat, construction, storytelling, and strategy—can coexist and interact dynamically.

Thus, the open world functions less as a single genre and more as a meta-structure capable of containing multiple genres and experiences within one coherent system.

Traditional methods of classifying games, which rely on gameplay typologies—such as shooter, role-playing, or puzzle—therefore fail when applied to open-world design. The essence of the open world lies not in any one mechanic, but in its player-driven openness: within a set of narrative and systemic rules, players can explore, act, and create freely according to their own intentions.

This design philosophy allows open-world games to transcend the conventional gameplay-centered taxonomy and evolve into an integrated spatial experience that unites narrative, systems, and technological form—a structure that most closely mirrors the complex, lived reality of human environments.

1.3.2 The Difference Between Open Worlds and Reality

The logic of spatial construction in open worlds and in reality differs fundamentally. In real cities, urban planning prioritizes public purpose and survival efficiency, serving the collective needs of all inhabitants. The form of a city is constrained by natural geography, climate, resource distribution, population density, and patterns of economic activity. Road networks must ensure traffic efficiency; building height and density must balance land use with the needs of habitation; and the distribution of public spaces reflects a balance between social structure and lifestyle. The formation of real-world space is thus the result of negotiation and compromise—it seeks sustainable order amid the constraints of nature and society.

By contrast, the virtual space of open worlds bears no obligation to sustain real social functions. Its purpose is not to accommodate citizens or maintain urban operations, but rather to serve the player's experiential engagement. Topography, architecture, and environment are designed entirely around the player's perception and action, aiming to create a coherent, explorable, and interactive experience. A mountain might function as a natural line of sight; the placement or form of architecture might correspond to mission rhythm or visual pacing; even a winding path might guide exploration or imply narrative meaning. Every element in the game world thus has a design intention—it exists for experience. Even in GTA V (Rockstar North,2013), though the city is modeled on Los Angeles, the designers modify reality for the sake of playability: roads are widened to allow smoother driving, and changes in elevation are exaggerated to heighten visual variation..

Figure20. The city roads in GTA V are wider than those in real life and feature numerous slopes and elevations.

Hence, extending these reflections further, two sets of relationships can be distilled:

- the distinction between collective and individual forms of spatial agency;
- the contrast between socio-natural orders and narrative–mechanic orders in the production of space.

The distinction between collective survival and individual experience suggests two fundamentally different conceptions of spatial agency. In real cities, agency is distributed across institutions, infrastructures, and social groups; individuals participate only partially within a dense network of constraints. By contrast, in game worlds agency is radically concentrated in the player: the spatial order is calibrated around a single embodied subject whose movement, perception, and decisions form the core of the world's functional logic. In this sense, the individual in a virtual environment does not simply inhabit space, but activates it—space becomes meaningful only through their presence and action.

Similarly, the contrast between socio-natural order and narrative–mechanic logics reveals two different ontologies of space. Real cities emerge from slow, accumulative processes shaped by climate, topography, economy, and political negotiation. Their form is sedimentary, marked by historical layering and the inertia of material systems. Game spaces, however, are teleological: they are built backward from an intended experience. This means that order in games is synthetic and purposive—terrain is sculpted to create legibility, tension, revelation, or immersion. Where real cities grow through contingent adaptation, game worlds evolve through intentional orchestration.

Yet the deeper implication is not opposition but resonance. As digital environments refine their capacity to model behavior, emotion, and navigation, they expose aspects of spatial experience that real cities often obscure—how movement generates meaning, how visibility structures power, how density shapes emotion, and how rules choreograph interaction. Game worlds thus do not merely contrast with reality; they thematize its hidden mechanisms. And in doing so, they offer a valuable mirror through which urban designers can rediscover the experiential, narrative, and affective dimensions of physical space.

1.3.3 Interpreting "Freedom"

As Bernard Suits eloquently observes in The Grasshopper: Games, Life and Utopia (Suits,2014), the essence of playing a game lies in the "voluntary attempt to overcome unnecessary obstacles." He suggests that play is not a spontaneous act of freedom, but a deliberate self-limitation. The player willingly accepts a set of artificial rules that restrict more efficient means of achieving the goal, precisely because such voluntary constraint gives rise to meaning and purpose. In this sense, the existence of the game depends on the player's conscious decision to be bound, and freedom, paradoxically, does not mean the absence of restriction but the

ability to act meaningfully within it. True freedom, therefore, is not boundless—it is structured, conditional, and self-aware.

This notion of "freedom within constraint" provides a crucial philosophical foundation for understanding the open world as a design paradigm. Contrary to the common assumption that "open world" simply means unlimited scope, an open-world game is not an endless, lawless space, but a systemically generated universe that operates under specific rules, parameters, and internal logic. When players enter such a world, they are not released from constraint; rather, they are granted a form of situated freedom—a kind of agency defined by the world's structure. Every act of exploration, construction, or creation must conform to the governing logic of the system, yet these same rules simultaneously provide the conditions for freedom to exist. The limits of the world define its edges, but also give shape to the possibilities within those edges.

This tension between rule and freedom is vividly embodied in the design of open worlds. In traditional games, rules serve primarily as restrictions that guide and control player behavior, whereas open-world design reverses this logic: it strives to produce freedom through the intelligent use of limitation. The designer's task is no longer to dictate what the player must do, but to construct a world in which the player can discover what they are capable of doing. Every law of physics, every interactive mechanism, every behavioral response of an NPC becomes a potential medium for freedom. Within these constraints, players probe the boundaries of the system, experiment with its logic, and occasionally subvert its structure. In doing so, they participate in a form of creative negotiation with the rules themselves—a process that transforms limitation into experience.

From this perspective, the open world is not merely an expansion of physical space, but a procedural manifestation of freedom. Its essence does not lie in its size or realism, but in how its systems transform rule-based structure into meaningful choice. With advances in technology—from dynamic physics engines to AI-driven narrative systems—freedom has become increasingly computable. The world can now react to player behavior in real time, allowing every decision to leave a tangible mark upon the evolving system. Thus, freedom in open worlds becomes something experiential, traceable, and co-created—a process that is constantly redefined through interaction rather than declared in abstraction.

Ultimately, the significance of the open world lies not merely in providing a stage for action, but in posing a deeper question to both designers and players: within a world made of rules, how can freedom become real? The open world answers by revealing that freedom emerges through rules, and creativity finds its form within constraint. It invites the player to engage not as an omnipotent being outside the system, but as an active subject within it—one who willingly accepts boundaries in order to rediscover what it means to act freely.

1.4 Summary

This chapter has examined the constructional logic of the game world through the dual dimensions of time and space. From the temporal perspective, the analysis centered on narrative, revealing that gameplay is not a passive reception of events but a dynamic process of co-creation, continuously shaped through the player's actions. Over time, the story is not merely told—it is experienced, rewritten, and embodied through participation.

From the spatial perspective, the discussion focused on the open world, illustrating how virtual environments are conceived not as static settings but as constructed worlds—designed through the orchestration of terrain, architecture, and pathways to provide structures of perception and exploration. Unlike real cities, which exist to sustain collective life, the spatial logic of the virtual world serves the individual's experiential engagement. Its order is not governed by infrastructure or economics, but by the affective and interactive sensibilities that define immersion.

Time thus grants games their narrative direction, while space provides form and situated experience. Together, they establish an interdependent relationship in which the player both moves through and constructs meaning within the world. Through this synthesis, the game emerges as a unique spatiotemporal art form—one that can be traversed, inhabited, and lived.

CHAPTER 2: Designing a World to Be Inhabited: Genshin Impact

This chapter takes the Chinese video game Genshin Impact as a primary case study to examine how the dual structure of time and space discussed earlier is realized within a specific virtual world. The analysis begins with an overview of the historical context of Chinese video games, offering a concise introduction to their evolution and distinctive characteristics. Understanding this background provides crucial insight into Genshin Impact's underlying design philosophy and narrative orientation.

After establishing this foundation, the discussion proceeds to an in-depth examination of the game itself—beginning with its geographical and cultural framework, then moving toward an analysis of how players experience narrative through spatial engagement. Through this exploration, the chapter aims to uncover how Genshin Impact, particularly in its representation of "Natlan", translates cultural imagination, architectural order, and player agency into a coherent experience of time, space, and meaning.

2.1 A Brief History of Chinese Video Games

2.1.1 The Emergence of Single-Player Games Through Imitation

In the latter half of the twentieth century, video games were first introduced to China primarily in the form of arcade machines and a handful of domestically produced imitation home consoles. In 1983, Nintendo released the Family Computer, better known as the Famicom (FC)—one of its most successful consoles, with global sales exceeding sixty million units and dominating over ninety percent of the American and Japanese markets. However, the FC was never officially imported into China. This absence created a substantial market gap, quickly seized upon by Chinese manufacturers. Some developed rental-based business models, others attempted to produce "original" Chinese consoles, but most opted for direct imitation. Among them, the Xiao Ba Wang (Little Tyrant) console became the most successful example.

At that time, companies like Xiao Ba Wang epitomized the early Chinese gaming industry—swift in identifying trends, adept at imitation, and aggressive in market expansion. Although innovation remained beyond reach, imitation allowed fledgling developers to survive and grow within a chaotic market, marking the embryonic stage of China's console gaming development.

Around the year 2000, multimedia computers began spreading rapidly across China. The number of players surged, and the domestic game market expanded accordingly. For the first time, Chinese developers possessed the technical and economic foundation to create games independently. Studios such as “Object Software”（目标软件）emerged as pioneers, emphasizing game quality and promoting the ideal of producing “games of our own,” even aspiring to bring Chinese games to the global stage.

One of their landmark works, Prince of Qin (Object Software,2002), set against the late Qin Dynasty, became the first game to embed Chinese cultural and historical elements into its narrative and worldbuilding. The game’s sophisticated design—featuring multiple branching quests, rich character dialogue, and profound cultural symbolism—earned wide acclaim from Chinese players. It marked the first genuine attempt by Chinese designers to integrate a distinctively Chinese value system into gameplay.

Had this trajectory continued, the Chinese gaming industry might have evolved along the same single-player development path as Japan and the United States. Yet, this optimistic progress was soon stifled. Within just a few years, the combined forces of piracy and government regulation dealt a decisive blow to the domestic game industry, abruptly halting its creative momentum.”

Fgure21. Prince of Qin is an action role-playing game set in the late Qin Dynasty of ancient China, telling the story of Prince Fusu’s quest to uncover the truth behind the First Emperor’s death. The game represents one of the earliest attempts by Chinese developers to express cultural heritage through video games.

The Proliferation of Piracy

When Prince of Qin received widespread critical acclaim, its developer, Object Software, found itself paradoxically struggling with severe financial difficulties. The company's crisis stemmed from two main factors: first, its pursuit of high production quality dramatically extended development time and raised costs; second—and far more destructive—was the pervasive piracy crisis that dominated the Chinese market.

At the time, China's copyright law was both underdeveloped and poorly enforced, creating an environment where piracy posed an existential threat to the entire cultural industry. The renowned writer Yu Qiuyu, in the preface to Notes from the Mountain Studio, recalled how brazen counterfeiters would even call authors directly, urging them to release new books and offering "financial support" so they could pirate more quickly. The profit model was simple and ruthless: a pirated CD production setup cost less than 10,000 RMB, yet could burn 2,000 to 3,000 discs overnight. Even with a margin of just a few cents per disc, pirates could recoup their investment within a week.

During the late 1990s, the golden age of Chinese single-player games, sales of pirated titles exceeded legitimate copies by a factor of ten or twenty. To compete, game developers had no choice but to slash prices repeatedly, but even then, they could not rival the rock-bottom prices of pirated disks. According to a 2002 report by Popular Software magazine, a game selling 10,000 legitimate copies generated less than 40,000 RMB in profit—a devastating figure that eroded developers' morale and suffocated the industry's creative drive.

The Game Console Ban

In June 2000, the Chinese government issued a pivotal policy titled "Opinions on Strengthening the Regulation of Electronic Game Venues." The document declared a complete ban on the production, sale, and operation of game consoles, ostensibly to prevent youth addiction. This "game console ban" (游戏机禁令) lasted for thirteen years, from 2000 to 2013, profoundly shaping the trajectory of China's gaming industry.

The official reasoning cited concerns over the social disorder caused by the rapid spread of arcade halls, but at its core, the policy reflected a deep societal misunderstanding of games. Under the influence of the "electronic heroin" moral panic, video games were stigmatized as "spiritual opium", and became synonymous with juvenile delinquency, addiction, and academic failure. In March 2000, a provincial political delegate openly declared that "arcades have become breeding grounds for problem youth," urging the government to take "decisive measures." This conflation of localized social issues with the entire industry laid the ideological groundwork for the nationwide prohibition.

The consequences were far-reaching. The ban halted the development of console gaming in China and forced domestic companies to pivot toward PC-based online games, which remained relatively unrestricted. In retrospect, this policy shift inadvertently set the foundation for China's dominance in the online gaming market, steering the entire industry toward the model that defines it today.

2.1.2 A Commercially Driven Online Game Market

In 1998, the South Korean company Actoz developed the online game Legend of Mir (WeMade Entertainment,1998), which entered the Chinese market in 2000 under an operating contract with Shanda Interactive Entertainment. At a time when China's online game offerings were scarce, Legend of Mir attracted tens of thousands of concurrent players within its first week of public testing. The game was a massively multiplayer online role-playing game (MMORPG) that adopted a time-based payment model using prepaid cards.

Its distinctive feature lay in enabling numerous players to share a persistent virtual world in which they could develop their own characters and build relationships with others. The core gameplay revolved around player-versus-player (PvP) competition, rewarding victory with prestige and rare equipment drops. From a commercial standpoint, this design stimulated rivalry and comparison among players, effectively encouraging them to spend long hours grinding—an ideal outcome for time-charged business models. The financial success of Legend of Mir quickly inspired a wave of imitators, establishing MMORPGs as the dominant genre in China's online gaming landscape.

From a design perspective, this shift marked a profound change in what players were actually purchasing. They were no longer paying for narrative or artistic content, but rather for social experience. In the early 2000s, as the internet began to take hold in China, players valued the interactive and communal aspects of games even more than gameplay depth or story. Online games became digital social spaces, where friendships, team quests, and competitive battles substituted for content richness. Consequently, many developers prioritized social prestige and monetized competition—ensuring that high-spending players could gain visible advantages and social recognition, while the overall quality of design became secondary.

A Shift in Business Models

In 2006, the Chinese company Giant Interactive Group revolutionized the market with its MMORPG ZT Online (Giant Interactive,2006), introducing the now-ubiquitous "free-to-play with in-game purchases" model. Players could enter the game without buying time cards, but could purchase virtual goods and premium services—such as leveling resources and power boosts—to enhance their gameplay experience. The free entry barrier attracted a massive player base, but also removed the age filter, leading to widespread youth addiction and impulsive

spending. This phenomenon reinforced the public perception of games as socially harmful, deepening societal hostility toward the medium.

From a business standpoint, however, the free-to-play model maximized revenue. To sustain profit, designers made paid items increasingly tempting, amplifying competitive imbalance and cultivating psychological pressure to spend. Players were subtly manipulated into constant comparison and perpetual grinding, turning gameplay into a form of digital labor. While high-paying users enjoyed an inflated sense of achievement—the primary revenue source for developers—non-paying players were relegated to supporting roles, serving as foils or metrics of superiority for wealthier users.

Fgure22. The game interface of ZT Online (The Journey). The dense clusters of players gathered on the map highlight the highly social nature of this type of game.

In essence, the “free-to-play + microtransaction” model democratized access to gaming but also commodified the player experience. Games like ZT Online exemplified how players were “voluntarily” transformed into instruments of corporate profit. This profit-driven environment entrenched the microtransaction model as the core of China’s game economy, fostering an industry saturated with low-quality but highly lucrative online titles.

Despite its exploitative structure, ZT Online remains a nostalgic symbol for a generation of Chinese players. It represented the dawn of mass digital connectivity—a virtual arena where people who had never touched the internet could meet, compete, and, in their own way, experience a new kind of collective belonging.

The Mobile Gaming Era

As the mobile era arrived, China's gaming industry transitioned smoothly from browser-based games to mobile platforms. However, due to the technical limitations of early smartphones—restricted in both graphics capability and processing power—mobile games were initially unable to match the expressive depth or functional complexity of PC titles. Gameplay had to become simpler, faster, and more casual, catering to a broader demographic that included nontraditional players. The era of highly demanding, time-intensive games gave way to short, accessible experiences that fit into fragmented daily schedules. Yet the commercial foundation of the industry—"free-to-play + in-app purchases"—remained unchanged, merely evolving in its methods of monetization.

A new generation of social media giants, most notably Tencent, leveraged their massive user ecosystems to dominate the mobile gaming market. By converting their social platforms into distribution channels, these companies could promote games directly to existing users, lowering marketing costs and ensuring rapid adoption. Unlike the earlier MMORPG era, where profits depended on a small group of heavy spenders, this phase introduced a volume-based revenue model: by reducing individual spending expectations and relying on sheer user numbers, companies achieved equal or greater profitability. This shift also pushed mobile games toward fairer and more accessible PvP systems, emphasizing quick participation and universal appeal. As a result, mobile games became truly mass-market entertainment, playable by users of all ages and backgrounds.

In contrast, smaller developers without built-in user networks turned to advertising-based revenue models. These games integrated third-party ads directly into gameplay—encouraging players to watch advertisements in exchange for rewards such as power-ups or extra lives. The approach relied less on in-game purchases and more on player engagement as an advertising commodity, turning attention itself into a form of currency.

Together, these two monetization paths—social ecosystem integration and ad-based revenue—defined the early mobile gaming economy in China. While neither prioritized artistic innovation, both succeeded in maximizing accessibility and profitability, setting the stage for the ubiquity of mobile games that now dominate China's digital landscape.

2.1.3 The Shift Toward Cultural Export and High-Quality Game Production

The License Approval System

In 2018, the Chinese government reinstated the game licensing system, a policy aimed at implementing "total quantity control" over online games. This meant a significant reduction in the number of new game licenses issued each year. The decision effectively eliminated a large number of low-quality, pay-to-win titles

that had previously dominated the market, forcing developers to rethink their production strategies. Under this new regulatory environment, companies were encouraged to pursue innovation and cultural depth, marking a turning point from purely commercial operations to content-driven creativity. It was within this context that high-quality narrative games such as Genshin Impact, developed by miHoYo, emerged as emblematic of a new era in Chinese gaming.

The Rise of "Content-Oriented" Games

Content-oriented games are those that attract players through high-quality production, distinctive artistic style, immersive storytelling, and emotionally engaging music and voice performance. They appeal to players not through compulsive monetization, but through the inherent charm and depth of their content. During the height of Japan's anime boom, Genshin Impact was designed to capture the attention of anime-influenced audiences by shaping its characters within the "two-dimensional" aesthetic. To emphasize each character's individuality, the developers refined both the narrative and the visual design—down to the details of costume and personality. In order to sustain a continuous flow of new characters, the designers built a world capable of housing them: a comprehensive worldview organized into regions, each with distinct cultural and geographical identities. Constructing such an expansive open world required careful regional planning and the seamless integration of gameplay into exploration. Each region was given a unique cultural foundation, showcasing local traditions through design, architecture, and music. This approach extended beyond the game itself—players' affection for virtual characters spread into real life, as seen through the commercial success of merchandise and cross-media collaborations, turning fans into voluntary promoters of the game.

It is clear that content-oriented games demand a complete production team. From creative design and animation to voice acting, music composition, and post-production, every step is essential. Such projects inevitably require substantial investment. However, the success of Genshin Impact has led the industry to reconsider the importance of quality in game development and to acknowledge that high investment can indeed yield equally high returns.

Fgure23. The main city area of "Liyue," the in-game nation in Genshin Impact inspired by China. The game embodies rich and authentic elements of Chinese culture.

In 2024, a new Chinese single-player title once again propelled the nation's gaming industry into a transformative era. On August 20, 2024, the highly anticipated domestic masterpiece Black Myth: Wukong was officially released, achieving over 1.5 billion RMB in total sales across all major platforms—Steam, WeGame, Epic, and PlayStation—on its launch day alone. The game presents an innovative reinterpretation of Journey to the West, one of China's four great classical novels. By incorporating historical architecture, traditional aesthetics, and poetic sensibilities drawn from Chinese culture, it achieves a seamless fusion between China's profound cultural heritage and modern interactive technology. Utilizing a chapter-based narrative structure, Black Myth: Wukong invites players to embody "The Destined One," embarking on a perilous westward journey filled with trials and transformations. Along the way, players encounter deities, demons, and mortals whose stories reveal a rich tapestry of myth and humanity. Through this reimagining, the game rekindles global fascination with Eastern fantasy, achieving a rare synthesis of artistic creation and cultural resonance.

The significance of this work lies not only in filling the long-standing void within China's single-player game market but also in fulfilling a cultural mission—to reinterpret, preserve, and share Chinese tradition through digital media. Black Myth: Wukong thus opens a new chapter in the international dissemination of Chinese culture and marks a milestone in the evolution of China's gaming industry, proving that cultural authenticity and technological innovation can coexist within a world-class artistic form.

Fgure24. A promotional image of Black Myth: Wukong. The scene is inspired by the episode of Sun Wukong's rebellion in Heaven from the classic Chinese mythological novel "Journey to the West".

2.1.4 Summary

The brief history of Chinese gaming seeks to illustrate the industry's transformation—from its early stage, when commercial profit, market share, and economic return were the primary objectives, to its current phase, where the focus has gradually shifted toward cultural heritage, artistic expression, and social value. This transition reflects a growing emphasis within Chinese game development on cultural depth and refined content quality. Therefore, by analyzing the contemporary Chinese game Genshin Impact, we can gain a deeper understanding of how modern games embody and construct narrative expression as both a cultural and experiential form.

2.2 Introduction of Genshin Impact

2.2.1 Background Overview

Genshin Impact is a cultural game built upon the micro-cores of world civilizations. From the perspective of game classification, it belongs to the genre of open-world, role-playing games with an anime-inspired art style. Over the course of five years, the game has continuously expanded its world through updates, presenting players with a vivid and dynamic new realm — Teyvat. This is a vast continent composed of seven nations, each representing a distinct cultural and philosophical system.

The inspirations for these nations span across global civilizations, drawing from China, Japan, Germany, Egypt, Persia, India, England and France, as well as elements of ancient Greece and Rome, Africa, Latin America, Oceania, Northern Europe, and

Russia. The stylistic spectrum of the game ranges from medieval traditions to futuristic science fiction, forming an immense and multifaceted narrative both in scope and depth.

At its core, Genshin Impact borrows from real-world cultural archetypes to construct a story about humanity's resistance against destiny (the Heavenly Principles) and the pursuit of truth through will and faith. It is, in essence, a symbolic world narrative that transcends geographical and historical boundaries—an allegory of civilization, belief, and the eternal struggle between divine order and human freedom.

Nation (Element)	Real-World Inspiration	Theme	Key Features	Cultural Traits
Mondstadt (Anemo)	Medieval Western Europe	Freedom	Gothic spires, timber-framed houses, windmills	Poetry,harp music, 'free city-state" concept,dragons/
Liyue (Geo)	Multi-dynasty China	Contracts	Glazed tile roofs, Huizhou architecture, Zhangjiajie peaks, Guilin karst landscapes	Dragon symbolism, jade culture, commerce
Inazuma (Electro)	Edo-Meiji Japan	Isolation	Torii gates. shrines, Mount Fuji, wisteria fields	Kimonos, Noh theater, folklore
Sumeru (Dendro)	Ancient India + Persia + Islamic	Wisdom	Dravidian temples, Persian domes, rainforests/deserts	Scholarly conflicts
Fontaine (Hydro)	Steampunk France	Justice	Versailles fountains, Art Nouveau, underwater zones	Legal themes, opera
Natlan (Pyro)	Mesoamerican + West African	War	Amazonian tribes, pyramidal temples	Tribal coexistence
Snezhnaya (Cryo)	Russia	(Unreleased)	(Unreleased)	(Unreleased)

Fgure25. Summary of the locations and themes of the seven nations in the continent of Teyvat (this version of the game map was taken from July 2025, when Snezhnaya had not yet been released).

2.2.2 Expressive Orientation

Compared with GTA V, which reconstructs a deeply immersive version of Los Angeles through the collage of cultural symbols, Genshin Impact takes a rather different approach to cultural expression. Its essence does not lie in the literal transplantation of objective history into a virtual setting, but in "viewing the world from another perspective" and exploring the idea of "possible histories."

A Chinese Perspective on the World

Because of cultural boundaries, every civilization tends to interpret the world—and its relationship to others—through its own habitual lens. Yet this limitation paradoxically gives rise to diversity in how humanity describes itself. The brilliance of Genshin Impact lies in how it transcends the stereotypical frameworks of cultural hegemony, instead adopting an equitable, Chinese-centered perspective that extracts and reinterprets the beauty of different cultures. Through its evolving narrative, the game offers imaginative yet meaningful resolutions to real-world conflicts, depicting a world that resembles reality while maintaining a distinctive difference. In this sense, Genshin Impact can be viewed as China's unique response to global culture.

Examples of this worldview appear throughout the game. The first nation, Mondstadt, draws inspiration from medieval Europe and presents a seemingly traditional "hero versus dragon" tale. However, beyond the familiar fantasy motifs of knights and churches, the nation's institutions are subtly reimagined through a more secular and humane lens. The ruling bodies are no longer distant theocracies but benevolent stewards of the people. The central theme—"freedom and the responsibility it entails"—is embodied by Mondstadt's deity, Venti, who transfers divine authority to humanity itself. This narrative carries echoes of Daoist philosophy, particularly the concept of "wu wei er zhi" (无为而治) — governing through noninterference, which advocates harmony between governance and natural order.

Another example is Fontaine, inspired by Anglo-French culture. While its surface aesthetics evoke detective intrigue, romantic opulence, and the elegance of Art Nouveau, its deeper narrative reframes Western biblical themes—particularly the stories of Adam and Eve and Noah's Ark. The nation's deity, Focalors, upholds a human-centered philosophy, reconstructing the notion of "original sin" into a new worldview where the true justice of gods lies in the preservation and flourishing of human existence.

Possible Histories

The term "possible history" refers to a hypothetical reconstruction of reality—what the world might have become if key historical moments had unfolded differently. The Chinese-inspired nation Liyue, for instance, envisions an alternate China that

never closed its doors to the outside world. Sumeru draws from the intellectual zenith of Islamic civilization, presenting a land where wisdom and knowledge guide collective advancement—a vision of progress in which the enlightened (rainforest scholars) uplift the marginalized (desert tribes). Natlan, meanwhile, reimagines Latin American civilizations that history once labeled "primitive" or "barbaric." Instead of repeating colonial stereotypes, the game portrays Natlan as a land of prosperity, openness, and unity, reviving the democratic ideals of the Iroquois Confederacy, where balance and consensus governed political and spatial order.

2.2.3 Core Themes

If one word could summarize the essence of Genshin Impact's entire world, it would be "unity." This unity encompasses the bonds between individuals, the harmony among nations, and the reconciliation between humans and gods. Though conflicts and friction inevitably arise from differing beliefs and ambitions, each narrative ultimately converges toward a shared resolution—when confronted by a common enemy, all civilizations set aside division, transcend mortality, and journey together toward the boundless stars. This reflects a deeply Chinese philosophical ideal: "Long live the great unity of the people of the world."

Furthermore, Genshin Impact offers an innovative answer to the question of how games can convey culture. Perhaps it is not merely about creating a virtual world filled with cultural symbols, but about crafting a unique world-view shaped by one's own perspective of reality. Each civilization within the game represents a slice of the world, and only when these slices are seen together can humanity perceive a fuller, more truthful picture of existence. In this sense, the game's highest value lies in its ability to mirror, reinterpret, and expand upon reality itself.

2.2.4 "Natlan" in Genshin Impact

Given the immense cultural scope encompassed within Genshin Impact, this chapter will focus solely on one of the seven nations — Natlan — as a representative example through which the game's cultural expression can be examined.

According to interpretations shared by lore researchers and linguistically inclined players within the Genshin Impact community:

"The name Natlan is etymologically linked to the Aztec civilization, derived from the Nahuatl language, the lingua franca of the Aztec Empire. In Nahuatl, the suffix '-tlan' commonly appears in toponyms to indicate proximity, meaning 'place near···'. Therefore, Natlan can be roughly translated as 'the place near Na.'

As for the prefix 'Na,' its meaning remains debated among fans. The most convincing interpretation suggests that Na also comes from Nahuatl, where it

serves as a first-person pronoun, meaning 'I' or 'me.' Consequently, Natlan can be loosely understood as 'My Land.' This interpretation aligns with the thematic essence of Natlan — a land defined by its heroic spirit of unity, resistance against invasion, and devotion to homeland and legacy." (Paul, 2024)

From this, we can infer that Natlan's central theme revolves around solidarity and the defense of one's homeland, an adventure narrative rooted in Latin American cultural archetypes.

There are two main reasons for selecting Natlan as the object of analysis:

First, Natlan represents a fusion of diverse cultural sources, drawing inspiration from indigenous civilizations across pre-Columbian America, Sub-Saharan Africa, and Oceania, thus covering an expansive range from the Eastern to the Western Hemisphere. Unlike other regions in the game that are based on a single cultural prototype, Natlan stands out as a uniquely syncretic civilization, allowing us to directly observe how Genshin Impact integrates a multitude of traditions into a unified, federative world. Moreover, thematically, Natlan most explicitly embodies Genshin Impact's overarching philosophical core — unity in diversity.

Second, the dominant cultural framework of Natlan is drawn from Mesoamerican civilizations, particularly the Aztec and Maya cultures, which share intricate mythological and symbolic interrelations. Many of Natlan's key concepts are deeply influenced by Mesoamerican cosmology and theology. What makes Genshin Impact's portrayal distinctive is its use of modern narrative logic to reinterpret ancient civilizations — presenting them not as relics of the past, but as living, evolving entities situated on the same stage as the modern world. This interplay between ancient myth and modern sensibility offers a fascinating case study in how digital media can reimagine premodern cultures through contemporary design.

Fgure26. Map of the Natlan region. Its eastern part connects to the desert area of the nation of Sumeru.

2.3 The Construction of the World

2.3.1 Landform

Topography is the player's first sensory encounter with an open-world game. The geographical design of Natlan draws primarily from the characteristic landscapes of Latin America — volcanoes, canyons, waterfalls, and serrated mountains. These distinct natural forms define the continent's primary scenery and establish the player's initial impression of the region. Even before these areas were made playable, concept artworks alone revealed the strong geographical inspirations behind their design.

However, not all of Natlan's regions adhere strictly to realism. Some areas lean toward the mystical and dreamlike, where real-world prototypes are obscured. In these cases, designers appear to have used natural topography merely as a foundation, transforming it through bold artistic reimagination to create fantastical terrains that express the spiritual essence of the culture rather than its physical geography.

Overall, Natlan's landscape design represents a fusion of realism and fantasy — players can recognize familiar natural formations while simultaneously immersing themselves in the wonder of a surreal world. The following section introduces one of the region's most prominent landforms.

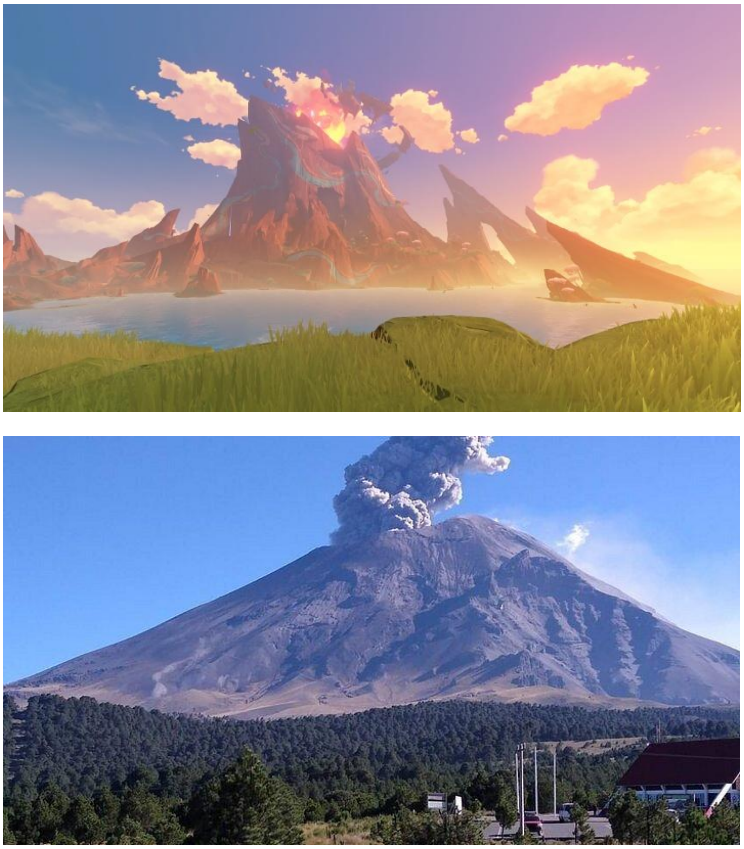
Great Volcano of Tollan

The Great Volcano of Tollan is the most striking geological landmark in Natlan, towering over the continent with an ever-burning intensity. Its colossal, conical form dominates the southwestern highlands, visible from nearly every region, with perpetual eruptions casting fiery light and dense smoke into the sky. In the game's world map, the volcano serves as the central axis of Natlan's geography.

The mountain exhibits the classic structure of a stratovolcano, with a summit that remains active year-round. The surrounding environment is veiled in volcanic gases and shimmering heat, creating a distinct zone of sulfuric vapor and thermal updrafts. At its base stretch vast fields of hardened basalt and lava fissures, through which glowing magma flows and jets of steam burst from vents. Some fractures descend deep underground, linking to intricate cavern systems beneath the mountain. This dual-layered formation—a scorching surface above and a labyrinthine subterrain below—is highly representative of real volcanic structures, emphasizing both the danger and the monumentality of the site.

Rather than presenting a smooth slope, the terrain is divided into natural sectors formed by steep ridges, fault valleys, and lava plateaus, gradually transitioning into canyons and hot-spring areas at the foothills.

The volcano's real-world prototype is clearly identifiable: the Popocatépetl Volcano in central Mexico. One of the most active stratovolcanoes on Earth, Popocatépetl is renowned for its towering height, sharply defined cone, and persistent plumes of smoke. Its surrounding landscape—strewn with lava plains and geothermal vents—closely matches the in-game depiction of Tollan. Moreover, the name Tollan itself derives from the sacred city of the Toltec civilization, located at the very base of Popocatépetl. This direct link between geological reference and cultural toponymy underscores that the Great Volcano of Tollan was conceived as a tribute to the authentic volcanic landscapes and mythic heritage of Mesoamerica.



Fgure27. the image above: The Tollan Volcano can be seen erupting with flames from a distance. below: Popocatépetl Volcano, Mexico.

Tequemecan Valley

Located northeast of the Great Volcano of Tollan, Tequemecan Valley is one of Natlan's most distinctive plateau–canyon composite landforms, and serves as a key traversal zone for players in the early stages of exploration. The region stretches across a long, narrow corridor shaped jointly by ancient tectonic fractures and post-volcanic crustal movements. Its defining feature lies in the towering rock walls and narrow valley floor: the cliffs on both sides rise almost

vertically, exposing distinct stratified layers where volcanic and sedimentary rocks alternate in visible geological bands. This steep terrain creates a profound sense of spatial compression, giving the area both the function and symbolism of a natural stronghold.

The valley floor lies at a much lower elevation, where volcanic geothermal activity and the enclosure of surrounding cliffs generate a microclimate of contrasting dryness and humidity. Scattered throughout the region are hot springs and steam vents, while the rock walls bear signs of weathered lava and collapsed strata, revealing evidence of the crust's secondary evolution following volcanic eruptions. The terrain also features numerous natural arches, fractured terraces, and stone pillars, closely resembling the erosional and fault-formed landscapes typical of great canyons, adding a pronounced sense of vertical depth and spatial layering to exploration.

The real-world prototype for Tequemecan Valley corresponds most directly to the Grand Canyon of the Colorado River in the United States. Like its counterpart, Tequemecan Valley displays horizontally stratified cliffs, vast elevation contrasts, and meandering canyon lines carved by long-term erosion. Yet in Natlan's world, these canyon characteristics are creatively merged with volcanic geography, forming a transitional zone between the volcanic highlands and the central plains. Within the broader world structure, Tequemecan Valley serves not only as the natural boundary separating two major regions but also as one of Natlan's most visually striking and geologically impressive environments.

Fgure28. Image above: An aerial view of the Solid Rock Gorge, where the canyon divides the game space into upper and lower levels; Image below: the Grand Canyon, USA.

Toyac Springs

Located along the southern rim of the Great Volcano of Tollan, Toyac Springs is one of the most hydrologically active regions in Natlan. The terrain here is relatively open, where subterranean geothermal energy meets surface water systems, giving rise to a vast hydrothermal plain interwoven with hot springs and cascading waterfalls. Countless vents of varying sizes are scattered across the landscape, where steaming water surges from volcanic fissures, flowing gently down slopes into shallow creeks and tranquil lakes, before plunging over cliffs in layered waterfalls. Perpetual mist and refracted light envelop the entire region, making it appear, from afar, like a kingdom sculpted from flowing water and vapor.

In contrast to the fiery, molten terrain of the Great Volcano, Toyac Springs is characterized by soft and stable geothermal activity. As the warm water travels across the surface, it deposits milky-white and pale-yellow minerals, forming a series of terraced hot-spring plateaus. The waters are warm and crystalline; dense vegetation thrives along both banks of the streams, nourished by the humid and temperate microclimate, creating a lush oasis distinct from the surrounding volcanic wastelands. Within the canyons, steam vents, geothermal pools, and bowl-shaped basins punctuate the terrain, where the sound of rushing water merges with drifting mist, imbuing the landscape with a sense of motion and vitality.

Fgure29. The surface of Fontaine's Chasm is covered by extensive bodies of water, making it the most water-rich area in the Natlan region.

This humid and life-filled region stands in vivid contrast to the searing imagery of lava fields. Its design closely evokes the hot spring valleys along the volcanic slopes of Latin America, such as Papallacta in Ecuador, where alternating hot and cold streams wind through forested mountains, and Tolantongo in Mexico, where turquoise thermal rivers cut through deep gorges and sheer cliffs. The interplay of warm air, steam, and cascading water produces a multisensory experience—the murmur of streams, the roar of falling water, and the shimmer of vapor coalesce into a living atmosphere. The terrain's mineral terraces and color-rich pools reflect the passage of flowing water, creating the poetic impression of "streams dancing upon the mountain's edge."

Fgure30. Top image: the underground lava river in Fontaine's Chasm;Bottom image: Tolantongo, Mexico.

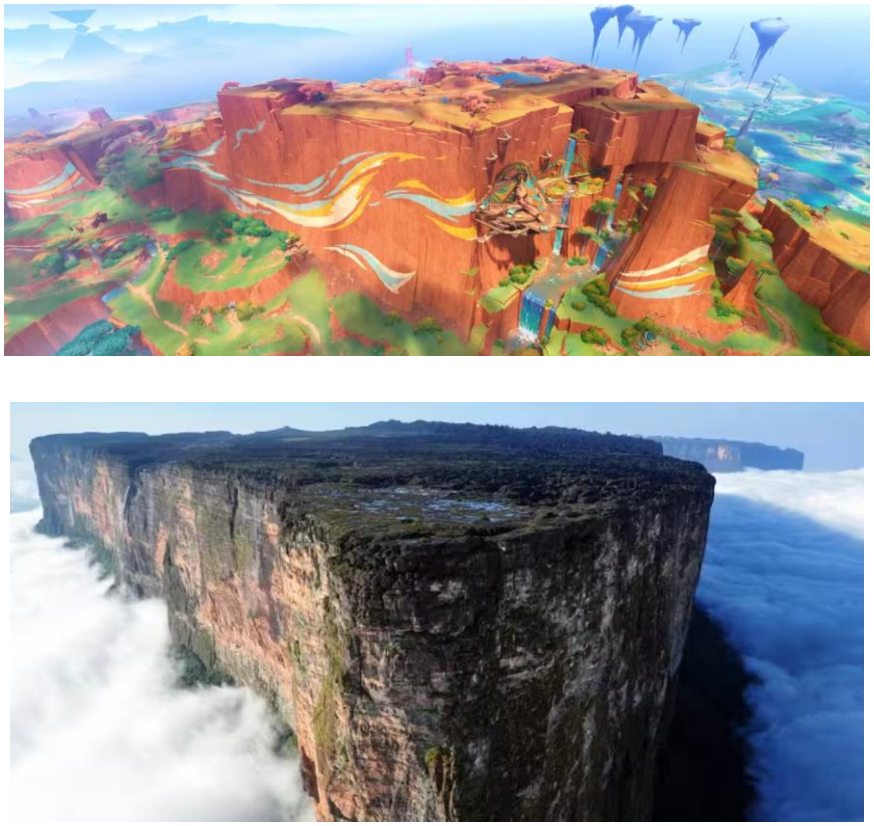
Sawtooth Mountains

The Sawtooth Mountains form one of Natlan's most visually distinctive landforms. Towering and sharply contoured, the range is characterized by serrated, fractured strata that resemble the teeth of a giant blade. The mountains rise steeply, their flat-topped peaks encircled by near-vertical cliffs, evoking both grandeur and peril. The overall structure of the massif combines stepped terraces and faulted ridges, appearing as if sculpted by eons of geological activity. Broad plateaus crown the summits, while the mid-slopes and foothills are surrounded by deep ravines and shadowed gorges, creating dramatic vertical relief. This pronounced layering and elevation difference lends the landscape a sense of monumental three-dimensionality. Beyond its aesthetic impact, the terrain also suggests a long process of geological evolution—where the exposed rock strata have been shaped by weathering, erosion, and tectonic uplift, forming a natural bastion both majestic and forbidding.

The design of the Sawtooth Mountains draws clear inspiration from the tepui formations of the Guiana Highlands in northern South America. These "tabletop mountains" are famous for their sheer cliffs and near-flat summits, which rise abruptly from the surrounding rainforest like isolated stone citadels. The multiple flat peaks of the Sawtooth range closely mirror the morphology of real tepui formations, most notably Mount Roraima, whose massive sandstone plateaus and vertical escarpments stand as icons of geological isolation and endurance.

By adapting and stylizing these natural wonders, the designers of Genshin Impact have transformed the tepui's primordial grandeur into a fantastical geological landmark. Through visual abstraction and artistic exaggeration, the Sawtooth Mountains preserve the authentic sense of geological realism while integrating seamlessly into the game's mythic aesthetic. The result is a mountain landscape

that embodies both scientific credibility and dreamlike wonder, standing as one of Natlan's most emblematic terrains—a place where nature's raw power meets human imagination.



Fgure31. The image above shows an aerial view of Mt. Seghettata from the game. The image below shows Mount Roraima in real life.

Mirrorglass Mountain

Nestled deep within the rocky valleys of the Sawtooth Mountains, the tribe of the Smoke Riddle Master inhabits a secluded region encircled by steep cliffs that rise like natural fortresses. Jagged peaks surround the settlement, and the terrain unfolds in a dramatic interplay of ravines, stone terraces, and sheer escarpments, giving the area a sense of isolation and sacred mystery. Before players uncover this region, it lies shrouded in dense mist—its topography fragmented and unpredictable, its paths twisting through shadow and fog. The result is a landscape that feels at once forbidding and alluring, drawing explorers into its enigma.

Unlike other regions inspired by identifiable real-world geographies or civilizations, the Smoke Riddle Master's tribe in Mirrorglass Mountain has no direct cultural or geographical prototype. Its conception leans toward a fantastical reimagining of human habitation, where the natural and the mythical converge.

The designers observe and reinterpret natural forms—mountain valleys, fractured cliffs, and isolated ridges—and weave them into a spatial logic grounded in fantasy. The settlement follows the principle of "dwelling by the mountain, building with the land", balancing the defensive advantages of rugged terrain with an aesthetic of coexistence between humanity and nature.

This design philosophy stems less from historical imitation and more from an imaginative synthesis of mountainous, secluded habitats. Through exaggerated elevation contrasts, dramatic cliff platforms, and deep vertical chasms, Mirrorglass Mountain creates a visual language of mystery, enclosure, and discovery. It evokes the feeling of a hidden sanctuary suspended between earth and sky, reinforcing the immersive tension that defines the Sawtooth Mountain region. In its interplay of mist, stone, and silence, Mirrorglass Mountain becomes both a mythic landscape and a psychological space—a reflection of how Genshin Impact translates geography into emotion and exploration.

Fgure32. Above: an aerial view of Mirrorstone Mountain, where the mist at its base adds a sense of mystery to the exploration area;Below: Horseshoe Bend in Arizona, USA — a section of the Grand Canyon.

2.3.2 Architecture and Settlements

In Natlan, society is organized as a "composite confederation" formed by six tribes, each developing independently within its own distinct ecological environment. Since ancient times, these six tribes have thrived by adapting to the diverse natural conditions of the land, their settlements scattered across the continent in geographically isolated yet interdependent regions. It is precisely this environmental diversity that has fostered a multiplicity of lifestyles and cultural systems, giving Natlan an inherently pluralistic identity from the moment of its formation.

For each tribe, geography is more than a mere physical foundation—it is a symbol of identity and belonging. Every settlement is deeply intertwined with its surrounding environment: people dwell upon the land, harness its natural resources, and construct social orders and belief systems that reflect the logic of their habitat. Some tribes inhabit river valleys and wetlands, mastering the rhythms of water and humidity to sustain their way of life; others endure the rocky highlands and volcanic slopes, where the harsh terrain has shaped disciplined, resilient communities; still others wander across vast plains and open plateaus, their nomadic lifestyles born from the mobility demanded by open space.

No matter how diverse the landscape, the culture of each tribe is inscribed into its terrain—architecture, settlement layout, and material use all mirror the tribe's worldview. The following sections provide an overview of the six major tribes, examining how their cultural values and architectural forms embody their relationship with the natural world.

The Children of the Echo（Natzkayan）

The Children of the Echo, known as Natzkayan, inhabit the depths of Tequemecan Valley, living side by side with the native Ridgeback Drakes. Their livelihood centers on the extraction of solid fuel crystals and gemstones, and the colossal drill-shaped mining towers as well as the explosive ceremonial stages have become their most recognizable symbols. The tribe's overall design draws inspiration from sub-Saharan Africa, particularly regions rich in gold and gem deposits, where earth, stone, and ritual coexist within a vibrant cultural landscape.

The settlement of Natzkayan is built within the canyon's steep rock faces, clinging to the cliffs in layered terraces that follow the valley's contours. Rather than constructing separate houses, the people here live within the rock itself. The village expands vertically from the canyon floor to the ridges above, linked by stone stairways, suspension bridges, and narrow cliffside passages carved into the rock. Most dwellings are half-embedded into the cliffs, exposing only arched stone doorways and slit-like windows, while the interiors extend inward along geological layers, forming a network of cave-like living spaces that vary in depth and size. This architecture not only adapts ingeniously to the terrain but also shields

inhabitants from windstorms and extreme temperatures, creating a self-contained refuge within the earth.

The settlement's structure embodies a clear vertical hierarchy of space. At the canyon floor lie the communal and productive areas—ore storage sites, forges, markets, and water sources. The middle tiers serve as residential zones, densely packed with families, while the upper levels host ritual and council spaces, including cantilevered platforms and semicircular terraces carved into the cliffs. These elevated terraces overlook the entire valley, functioning as both ceremonial centers and repositories of collective memory. At night, the lights scattered along the cliffs flicker with the vertical relief of the landscape, creating a tranquil yet solemn atmosphere reminiscent of starlight embedded in stone.

Sound holds profound cultural and spatial significance for the Children of the Echo. The natural resonance of the canyon has been deliberately integrated into their architectural planning: terraces, corridors, and archways are designed at specific angles to amplify and transmit voices, songs, and footsteps throughout the valley. Language and melody thus become architectural experiences—communication through reverberation. During festivals, the tribe gathers in massive choral ceremonies where human voices intertwine with the resonance of instruments and the canyon itself, transforming sound into a communal ritual of identity and belonging.

Figure33. The Natzkayan tribe was built within a canyon rift, with its structures embedded into the mountain walls on both sides and connected by suspension bridges in the middle.

People of the Flowing Springs(Mextli)

The People of the Flowing Springs, known as Mextli, dwell in the valley where countless hot springs and fountains emerge, coexisting harmoniously with the aquatic Finback Drakes. Among all Natlan's tribes, theirs is the most welcoming to

outsiders—its gentle mist, soothing waters, and tranquil music have made it synonymous with leisure and rejuvenation. The culture and aesthetics of Mextli draw heavily from Hawaiian and Austronesian traditions, evoking a sense of tropical serenity and spiritual intimacy with water.

The Mextli settlements are distributed along thermal river valleys, where architecture and waterways interweave seamlessly. The entire village conforms to the terrain, flowing naturally along the rivers rather than rising in tiers. Unlike the cliff-carved dwellings of Natzkayan, the structures here adopt soft, curvilinear forms, exuding a sense of warmth and fluidity. Many buildings rest on broad wooden or stone platforms elevated above the water, their bases hovering over shallow pools or wetlands. This technique prevents moisture erosion while maintaining constant contact with the springs, reinforcing the people's belief that to live is to live with water.

The settlement's organization emphasizes the continuity of waterways. The hot spring's flow is divided into multiple gentle channels that thread through the community, linking residential clusters, communal baths, gathering platforms, and floating corridors into an organic network. At the heart of each village lies a natural hot spring transformed into a semi-open plaza—a space that functions simultaneously as a bathhouse, a forum, and a ritual ground. Within the drifting steam, the sound of water becomes the music of daily life, shaping both rhythm and mood.

Culturally, the Mextli are devoted to sensory experience and emotional connection. Water is regarded as the vessel of memory and time, and their architecture embodies this belief through transparency, gentleness, and continuity. Walls are often semi-permeable, blurring the boundary between interior and exterior; air and vapor circulate freely. Constant mist veils the structures, producing an ethereal layering of space. Interiors favor smooth textures—polished stone, seashell inlays, and burnished wood, avoiding sharp edges so that everything feels as calm and yielding as water itself.

This profound integration of life and water defines the Mextli's temperament: gentle, inclusive, and empathetic. Their settlements lack towering walls or grand axes; instead, fluidity replaces hierarchy. The village breathes and grows like a living stream—its architecture, its rituals, and its people all moving in quiet synchrony with the pulse of water.

Figure34. The Mextli tribe's buildings are constructed above the water, resembling large fish or ships in form.

The Skywood People (Wiztlan)

The Skywood People, known as Wiztlan, inhabit the towering cliffs of Mirrorglass Mountain, sharing their aerial domain with the elusive Leafveil Drakes. Their ancestors once suspended enormous tree trunks between the cliffs using ropes and iron hooks, giving rise to both their name and their distinctive way of life. As descendants of sky-borne builders, the Wiztlan are renowned for their love of extreme movement and balance—daring climbers who dance between the edges of mountains. The tribe's cultural design draws inspiration primarily from Incan civilization and broader Andean traditions, echoing the ingenuity and spiritual elevation of South America's mountain peoples.

Unlike the Echo dwellers who carve into the rock, the Wiztlan choose to hang from the cliffs themselves, allowing their homes to "float" in the air. The entire settlement resembles a chain of wind chimes clinging to the mountainside—light, flexible, and imbued with a quiet sense of danger. The architecture relies on a structural system of interlocked timber beams and massive chains: the beams form triangular support frames that are anchored into the rock face by thick iron links, securing each dwelling in midair. Most homes take the shape of pointed, tent-like pavilions, their surfaces wrapped in layers of weatherproof cloth or treated hide—materials that breathe with the wind while protecting against mountain storms.

The settlement unfolds in asymmetric vertical tiers. There are no streets or orderly rows of houses—only a network of hanging bridges, wooden ladders, and suspended walkways that weave between platforms at different elevations. Standing on these narrow paths, one looks down into bottomless ravines while the air above shimmers with drifting fabric and mist, evoking the sensation of walking

through a dream suspended in motion. Larger structural decks jutting out from the cliff serve as public gathering spaces—arenas for meetings, celebrations, and aerial performances. These platforms are reinforced with heavy trusses, their perimeters strung with retractable chain nets for safety, allowing them to function as both stage and shelter.

In terms of materials, the Wiztlan favor lightweight timber and flexible fiber ropes that minimize load and enable easy repair. Chains are both functional and aesthetic—their rhythmic arrangement defines the tribe's architectural language. From the ends of these chains hang wood carvings, feathers, and small bells, which chime together when the wind sweeps through the cliffs. The sound—a mingling of metal, wood, and air—forms a sonic landscape unique to the tribe, turning every gust into a chorus of existence, a living echo that marks the rhythm of life suspended between earth and sky.

This airborne way of living reflects a cultural temperament of lightness and openness. The Wiztlan reject the heaviness of stone and soil, preferring structures that can breathe, sway, and yield. The tent-like dwellings blur the threshold between inside and outside, allowing wind, mist, and light to flow through freely. At night, their lanterns float against the darkness like a constellation of stars scattered across the mountain face. The people of Wiztlan take pride in "dancing with the wind," their daily lives defined by agility, balance, and an ever-present awareness of the space beneath their feet.

Figure35. The Wiztlan tribe is suspended along the mountainside, with large overhanging structures forming tent-like shapes.

The Keepers of the Smoke (Mikhtlan)

The Keepers of the Smoke, known as Mikhtlan, inhabit the misty canyons of Mirrorglass Mountain, sharing this shrouded realm with the elusive Nightseer Drakes. Their tribe serves as the memory weavers of Natlan, entrusted with gathering and intertwining the stories of every clan into sacred fabrics that glow faintly in the dark. These luminous markings and mystical graffiti are not mere ornaments—they are vessels of history and spirit. Culturally, Mikhtlan draws inspiration from the Indonesian archipelago, the Aztec world, and the Huron (Wyandot) people, merging shamanic spirituality, textile artistry, and mythic storytelling into a single living tradition.

The Mikhtlan settlements are hidden deep within the northwestern gorges of Natlan, enveloped in perpetual violet-blue haze that drifts through the air like gauze. Layers of mist cling to the cliffs and hollows, concealing the village from outside eyes. The terrain is steep and irregular, with sheer walls and jagged outcrops. Architecture follows the folds of the rock itself—low stone dwellings and wooden overhangs are built along the canyon's natural contours, stacking and interlocking in complex tiers. From above, the village appears as a web of terraces, stairs, and bridges woven into the mountain, creating a labyrinth of shadow and depth that seems to breathe with the fog.

Colorful textiles hang from roofs and stair rails, their patterns vivid under the pale shimmer of the mist. These fabrics are both records and rituals: each thread preserves the visions, prophecies, and ancestral tales of the tribe's seers. At night, the pigments absorb ambient light and emit a gentle phosphorescence, turning the canyon into a softly glowing veil of stories. The wind animates these cloths, causing them to flutter and whisper; the entire settlement hums faintly, as though the mountain itself were murmuring ancient memories.

For the Mikhtlan, weaving is not craft but communion. Fabric becomes a living scripture—color and motion replace ink and voice. Every movement of the breeze reshapes the narrative, blurring the boundary between the material and the spiritual. Walking through their misted village feels like wandering inside a dream, where history, belief, and landscape dissolve into one another, and every glimmer of light might be the echo of a story still unfolding.

Figure36. The Mikhtlan tribe is built atop an isolated rock formation at the center of Mirrorstone Mountain. Surrounded by impassable cliffs, it is naturally separated from the outside world.

The architecture of Mikhtlan rests upon a dual structure of solid rock foundations and lightweight timber frameworks, achieving a harmony between permanence and fluidity. Stone provides stability against the rugged canyon terrain, while the wood beams introduce resilience and motion, allowing structures to adapt to shifting fog and moisture. Walls and courtyards are adorned with luminescent glyphs and pigment stones, their symbols invisible under normal light yet revealed in moonshine or heightened spiritual perception—creating the sense that each building itself participates in a sacred rite. The settlement's narrow alleyways, staggered terraces, and semi-open shrines form an intricate spatial hierarchy where the boundaries between public and private, reality and the unseen are intentionally blurred. Ritual spaces often occupy raised platforms; veils of dyed fabric and patterned screens define their perimeter, granting these sanctuaries both a ceremonial aura and a delicate independence from the daily rhythms of the village.

Culturally, the Mikhtlan follow a shamanic tradition of communion with the underworld, where architecture becomes both a vessel of ritual and a repository of memory. Their textiles, glowing symbols, and mystical graffiti are not mere decorations but spiritual instruments—mediums for divination, ancestral record-keeping, and the invocation of forgotten rites. Each wall is a scripture; each pattern, a portal. At night, mist and phosphorescence weave together, the reflections sliding across stone and fabric as the Nightseer Drakes glide above, their luminous eyes interpreting the shifting signs and movements. The entire settlement seems suspended between dream and waking—a breathing labyrinth of fog, light, and meaning.

Thus, Mikhtlan embodies a symbiosis of seclusion and sanctity. Its architecture fuses the grounded weight of stone with the ethereal lightness of timber and fabric. Colorful draperies and glowing motifs transform dwellings into spiritual thresholds, while the layered paths and stepped courtyards construct a spatial maze rich in rhythm and mystery. In this mountain enclave, buildings are not merely shelters but living monuments—the tangible expressions of culture, ceremony, and communion. They are the bridges through which the tribe converses with the lower realms and with its own ancestral past, ensuring that even in silence, the stones and fabrics of Mikhtlan continue to speak.

Figure37. The Mikhtlan tribe's ceremonial hall

The Skybound Tribe (Tlalocan)

The Tlalocan, or Flower-Feathered Assembly, dwell upon the summits of Natlan's highest cliffs, sharing the open skies with the majestic Downfeather Drakes. Renowned for their mastery of aerial travel, they form entire squadrons of dragon riders who glide through the clouds in brilliant formation. The tribe's culture draws deeply from North American Indigenous traditions, reflecting a worldview in which sky, wind, and spirit are inseparable forces of life.

Their settlements perch upon precipitous ridgelines and suspended platforms, yet true habitation lies not on the ground but in the air. Through ingenious use of hot-air balloons and lightweight truss structures, the Tlalocan elevate their homes into the heavens—each dwelling a drifting "wing," tethered between mountain and sky. The visual language of the tribe is defined by deep crimson, ochre, and sunlit orange, hues symbolizing flame, vitality, and divine communion with the heavens. These colors echo the spiritual aesthetics of many Native American nations, where red represents both life force and sacred energy.

Each home consists of a light platform suspended beneath a vast balloon, sheathed in woven fabrics and treated hides, creating hybrid spaces between tent and

gondola. Architecturally, they recall the plains tribes' conical lodges—open-sided, circular in plan, and responsive to shifting wind and light. Around the perimeter hang feather ornaments, bead strings, and geometric banners, each pattern narrating family lineage, clan identity, or ancestral myth. The platforms are linked not by permanent paths but by rope bridges, zip lines, and retractable ladders, forming an aerial web of circulation that moves with the wind. In the settlement's center, a broad "sky plaza" floats—a ceremonial void reminiscent of the circular gathering grounds of traditional Native communities. There, rituals, festivals, and dances unfold seamlessly, the sky serving as both roof and witness.

The Tlalocan revere freedom, wind, and motion. Their society is decentralized yet cohesive, bound together by ritual and the shared rhythm of flight. When festivals arrive, the tribe's crimson banners ripple across the horizon, and the air fills with the echo of drums and wings. Architecture here does not resist nature—it rides upon it, translating the language of the wind into form and color. In this airborne world, the boundary between home and horizon dissolves, and to live is to drift in harmony with the breath of the sky.

Figure38. The Tlalocan tribe is built atop the mountain peaks. Its balloon-shaped structures embody a longing for the sky and the freedom of flight.

The Landborne Nation (Tetelocan)

The Tetelocan dwell on the fertile plains beneath the Great Volcano of Tollan, living with the Horncrest Drakes. Their strength and vitality come from the volcanic soil that sustains their crops and defines their spirit. Unlike the skybound Tlalocan, their architecture is solid and grounded, celebrating endurance and collective power.

Settlements are arranged in circular or axial forms, centered on a large plaza symbolizing the sun and the volcano's heart. This echoes the Aztec capital

Tenochtitlán, where city layout followed ritual symmetry. Houses built from volcanic stone, adobe, and red brick stand heavy and warm, their ochre and crimson façades glowing under sunlight. Flat roofs serve for drying grain or gatherings, while arches, colonnades, and sun motifs blend Spanish colonial details with pre-Columbian symbolism.

The central square functions as both ritual and communal space. Stone terraces and altars rise in steps, reinforcing the link between ceremony and strength. Festivals fill the plaza with dance and contests, celebrating unity between people and land. For the Tetelocan, architecture is not mere shelter but a manifestation of the earth's power—a place where labor, faith, and flame meet.

Figure39. The Tetelocan tribe built a massive ship-shaped base at the foot of Tullán Volcano, giving an impression of stability and strength.

At the heart of Tetelocan lies a vast wrestling platform, the tribe's principal public arena. Here, residents hold festivals of strength and flame, staging wrestling matches, fire rituals, and communal feasts. Through these bodily and ceremonial acts, they affirm collective identity—a practice deeply aligned with Latin American traditions of festivity, where ritual and competition merge into expressions of unity.

Culturally, the Tetelocan revere muscle and fire, valuing honor, passion, and direct expression. Their architecture mirrors this temperament—open, monumental, and resonant. At night, when volcanic embers mingle with the light of ceremonial flames, the entire settlement glows like a living forge. This fiery spectacle is not merely scenic; it embodies belief. The Tetelocan hold that strength rises from the soil beneath one's feet—and must, in turn, be offered back to it.

Figure40. The Tetelocan tribe's wrestling arena.

Summary

This spatial layout—built upon the correspondence between environment and tribe—forms the foundation of Natlan's social structure. The six tribes stand as independent cultural pillars: none are forcibly unified under a central power, nor confined to a single model. Each inhabits its own landscape, preserving autonomy and the freedom to sustain its cultural lineage.Though seemingly fragmented, this arrangement embodies a coherent and enduring social order. The spatial separation reinforces tribal identity, ensuring that their languages, rituals, and traditions endure through time without dilution.

2.3.3 Bonded Space

Though Natlan appears to be a land of diverse and independent tribes, it is not a realm divided by six impassable borders. Each tribe inhabits its own ecological zone, yet none exist in complete isolation. Instead, all six are united by a shared spiritual and geographical heart—the Crucible of Ten Thousand Flames.

Basin of Unnumbered Flames

The Basin of Unnumbered Flames is a realm of singular importance—more than the geographical center of Natlan, it is the convergence of its spirit and order. This vast, circular amphitheater has stood since time immemorial, regarded as the sacred ground jointly guarded by the six tribes. Both in form and in function, it carries meaning that transcends geography: though each tribe's borders are clearly marked, their roads, rituals, and lines of sight all ultimately converge upon this one point.

In Natlan's ancient lore, the Basin was not crafted by human hands, but remains as a relic of the Fire God's descent. Thus it stands as the shared emblem of unity and divine origin, the heart through which every flame and every spirit of the six tribes are bound together, sustaining the very essence of the nation.

Figure41. From the top view, the Crucible of a Thousand Flames extends three main roads outward from its center, connecting the various tribes of Natlan

It is here that the bonds among the tribes are forged and sustained. The Basin serves at once as a council hall, a stage for rituals and festivals, and a crossroads of competition and faith. Whenever momentous events arise—be it political deliberation, the signing of alliances, the mediation of tribal disputes, or grand ceremonies, sacrifices, and contests—the six tribes gather in this sacred place. Through these recurring encounters, their relationships are affirmed, renewed, and deepened, ensuring that even in dispersal, Natlan remains one unified whole.

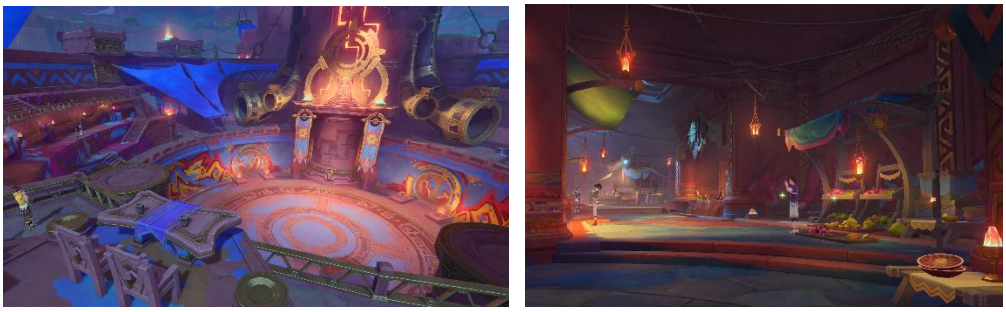


Figure42. Figure. The left image shows the Ceremonial Center of the Crucible of a Thousand Flames, used for large-scale competitions and public gatherings; the right image depicts the indoor market, where people from all tribes meet and interact once again.

Most crucially, the Basin of Unnumbered Flames is the sacred ground of the Fire God's selection. In Natlan, the Fire God is neither hereditary nor a preordained deity, but a warrior or sage chosen and tested by all six tribes. At certain intervals—when the divine flame wanes or the old god's duty is fulfilled—representatives from each tribe gather at the Basin to undergo rigorous trials and rites, through which a new Fire God is born. The Fire God is not merely a symbol of faith, but the supreme spiritual leader who upholds Natlan's order. The

ceremony lasts for several days: the central flame of the Basin is kindled and grows ever brighter as the rites progress. At last, when the chosen one receives the blessing of flame before the eyes of the gathered tribes, the Basin once again fulfills its sacred role—to renew the nation's spirit and sustain its order.

Beyond divine selection, the Basin serves as a symbolic arena of cooperation among the tribes. Here, they hold festivals, tournaments, and religious pilgrimages. During these grand occasions, people from every tribe bring their totems, offerings, and crafts, joining in the ignition of the central flame. In the tournaments, warriors from all six tribes compete openly, displaying the strength, honor, and conviction of their distinct cultures. These gatherings are not merely acts of worship or celebration—they are the living bonds of mutual recognition and respect.

From the perspective of modern urban logic, one might assume the Basin to be Natlan's densest or most politically central district. Yet in truth, it functions differently. It more closely resembles the "ceremonial centers" once proposed in early American archaeology—a concept suggesting that ancient peoples lived dispersed across small villages, assembling only at sacred sites for ritual events. Though this theory has since been revised by later discoveries, the game's adoption of such a model vividly reinforces the Basin's essence: a place of gathering, where division finds harmony, and the many become one.

Summary

This "distributed-yet-convergent" spatial structure forms the core logic of Natlan's social operation. Each of the six tribes possesses its own cultural base and geographic autonomy—an independence that ensures stability in their collective identity. Yet the presence of the Basin of Unnumbered Flames prevents such independence from turning into division or hostility. The Basin serves as a meeting ground, a spiritual axis that all tribes must jointly face, participate in, and protect together.

It is precisely because of this that Natlan's national form differs fundamentally from that of many centralized states. There is no dominant tribe imposing its order upon others, nor a singular capital exerting direct control over the periphery. Instead, Natlan operates through a flexible structure: a sacred center as the pivot, and tribal autonomy as the foundation. The six tribes maintain their distinctions while remaining united through shared faith and ceremonial politics. In this sense, such a spatial configuration is unique among all nations in Genshin Impact—a rare balance between unity and plurality, between freedom and belonging.

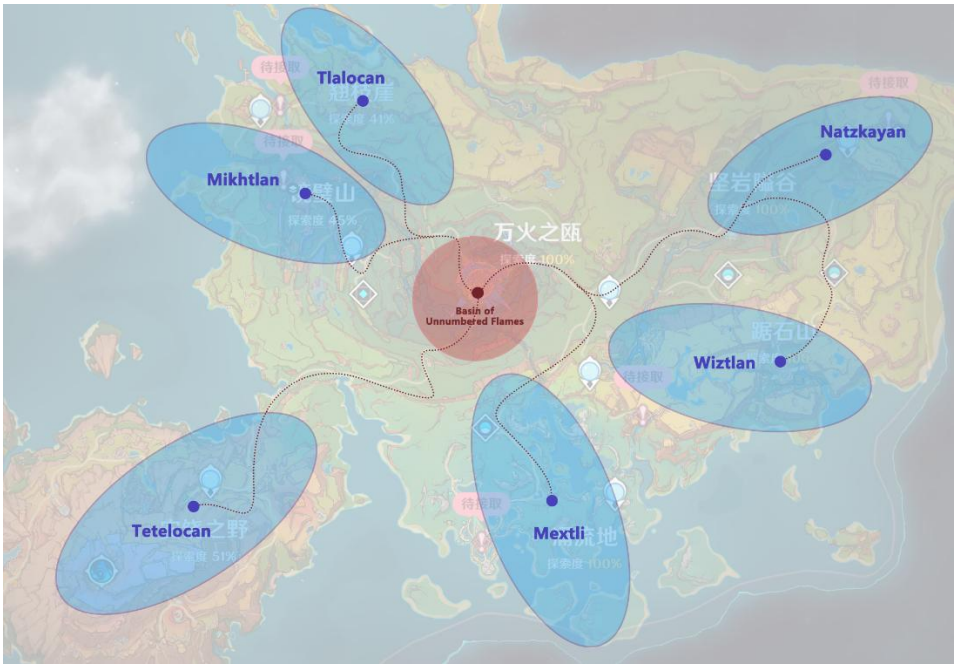


Figure43. Spatial distribution map of Natlan

From a design perspective, this spatial composition carries a clear symbolic meaning. Through the distribution of the six tribes and the central role of the Basin of Unnumbered Flames, it conveys an idealized vision of multiethnic coexistence within the world of Natlan. Much like the diverse mosaic of cultures across the American continent, Natlan's geography and social pattern are not born of uniformity or assimilation, but of a dynamic equilibrium founded on the recognition of difference and the respect for plurality.

The six tribes are like six flames, each burning independently upon its own land, yet converging at the Basin's center into a single radiant blaze. This shared fire symbolizes a collective faith, the spiritual essence upon which the nation stands: difference is not erased but embraced; diversity is not dissolved but woven into a living tapestry of coexistence. In this way, Natlan's spatial structure becomes the tangible embodiment of its ideal—a harmony of many voices sustained by one unifying light.

2.3.4 Social Organization

Social Prototype

Natlan's social system draws partial inspiration from the Iroquois Confederacy of North America, a political structure without monarchs, governed instead by a council of tribal representatives who reach decisions through consensus. The Confederacy comprised tribes that differed greatly in geography and culture, each maintaining high autonomy while convening a grand council to address matters

that concerned the entire alliance—such as warfare, defense, diplomacy, and ritual observances. This principle of decentralized governance is clearly reflected in Natlan's spatial organization, as previously discussed.

Division of Tribal Roles

Within Natlan's social framework, the political functions of the six tribes are not the result of deliberate institutional design but have organically evolved from geography, culture, and specialized skills—forming a cooperative system where functional differentiation and spatial distribution deeply overlap.

For instance, the Children of Echoes, living among canyons, rely on their unique acoustical knowledge and terrain to develop superior reconnaissance, defense, and memory skills, making them the "ears and eyes" of the alliance. The People of Flowing Springs, blessed with abundant water sources, serve as the foundation of livelihood and resource circulation, overseeing agriculture, irrigation, and essential supplies. The Hanging Woodfolk, experts in woodcraft and suspended architecture, act as builders and connectors, their engineering prowess allowing scattered settlements to form a tangible network. The Feathered Assembly, dwelling in the skies and embodying the symbolism of flight, governs ritual and external relations, representing Natlan's spiritual unity and diplomatic image. The Mist Enigmas, shrouded in mystery and ritual practice, function as shamans and spiritual guides, preserving the ideological and ceremonial order of the alliance. Finally, the Land of Plenty, located at the volcano's base, upholds strength, discipline, and defense, forming the military and labor backbone of the confederation.

It becomes evident that these tribes are not isolated or hierarchical, but mutually dependent and symbiotic: defense and enforcement rely on intelligence, supply, and transport; rituals and spiritual order provide legitimacy for governance; engineering and production sustain daily operation. All of these functions converge within the Basin of Unnumbered Flames, a neutral arena where councils and ceremonies occur. Thus, Natlan manifests a multi-centered co-governance system, grounded in functional interdependence, sustained through spatial networks, and unified by ritual politics.

2.4 Spatial Narrative

In the preceding sections, we analyzed the structural composition of the virtual world. Yet, without the dimension of narrative experience, such a world would remain nothing more than a static diorama—an elaborate sandbox for visual appreciation but devoid of meaning. Therefore, it becomes essential to examine how Genshin Impact constructs its narrative through space, and how the act of exploration itself becomes a storytelling mechanism.

When opening Natlan's map, one can observe that the region presents a directional, belt-like formation, composed of several major spatial nodes. From a player's perspective, traversing these nodes through self-directed exploration allows for an intuitive grasp of the underlying narrative thread—a progression not solely told by dialogue or quests, but embedded in the spatial rhythm itself.

By inhabiting the role of the player, one perceives that Natlan's geography subtly orchestrates narrative tension: each zone, landmark, and transition point functions as a narrative trigger, shaping both pacing and emotional resonance. Thus, instead of focusing on peripheral lore or plot details, the following analysis centers on the relationship between spatial structure and storytelling experience—that is, how space itself narrates, guides, and transforms meaning through movement.

Figure44. Spatial distribution map of Natlan

2.4.1 Initiation

As foreign travelers crossing the desert border of Sumeru—the previous nation—Natlan's spatial silhouette gradually unfolds before our eyes. A distant oasis gleams like a stroke of color against the ochre landscape, while towering peaks on both sides frame a natural corridor. The terrain steadily descends as we advance, and without realizing it, the path gently guides us deeper into the heart of the land. This directional and linear spatial organization effectively dissolves any sense of disorientation upon entry, leading the player along an intended yet seamless route. As the terrain narrows, an artificially carved cave entrance appears between the cliffs—a dark void sharply contrasting with the natural surroundings. This marks the first man-made spatial node in the entire experience, symbolizing both the formal crossing into Natlan and the narrative transition from wilderness to civilization.

Upon entering the cave, players encounter the Children of Echoes—the first tribe and, simultaneously, their first contact with Natlan's civilization. Through these inhabitants' daily activities, the player gains a firsthand understanding of the region's culture and social order: their methods of labor, forms of social gathering, and ways of adapting to the environment are all conveyed through spatial observation. The settlement is compact and sheltered, serving as a micro-scale exploration node where players can move freely, observe, and interact with the villagers to piece together an image of Natlan's society.

The design of the space exhibits a natural sense of guidance—its circulation patterns, sightlines, and alternating open-closed segments shape both directionality and rhythm, enhancing immersion. In this sense, the node fulfills a dual function: narratively, it introduces Natlan through the ordinary lives of its people; spatially, it provides a safe yet engaging environment for free exploration. Together, these elements establish the foundation for the player's emotional and experiential connection to the world before venturing into the broader expanse that lies ahead.

Figure45. From outdoor settings to interior spaces

2.4.2 Development

After completing the quest within the Children of Echoes' settlement, we ascend a gently sloping path leading toward the upper reaches of the Tequemecan Valley. The gradual elevation shift offers the player their first panoramic perspective of the entire region. From this height, the valley's winding contours naturally suggest a forward direction, while the distant silhouette of the Great Volcano of Tollan anchors the horizon, hinting at an ultimate destination still beyond reach. This visual alignment subtly establishes narrative tension and anticipation, guiding the player's curiosity toward a distant goal that remains shrouded in mystery.

The Tequemecan Valley stands in sharp contrast to the linear corridor traversed earlier. Where the previous section relied on narrow terrain to channel player movement, this new environment suddenly expands, revealing a broad canyon-

shaped node—a rectangular expanse wide enough to support multiple navigable routes. This transition from constrained linearity to open exploration marks a key narrative shift: the player moves from passive progression to active discovery. The valley's vertical division between mountaintop and canyon floor further enriches spatial experience. Below, dense vegetation and towering baobab-like trees create layers of visual depth, emphasizing the valley's habitable and explorable quality.

For the more adventurous, the steep cliffs invite a challenge of stamina-based climbing. Those who scale the heights may encounter the Wiztlan (Hanging Woodfolk) ahead of schedule—an optional but rewarding narrative detour that reveals fragments of their culture before the main storyline formally introduces them. Nonetheless, the design intent clearly prioritizes the valley floor as the dominant experiential zone. Its visual density, ecological diversity, and multiple traversal routes encourage prolonged engagement, making it both a narrative and spatial centerpiece within the early stages of the Natlan journey.

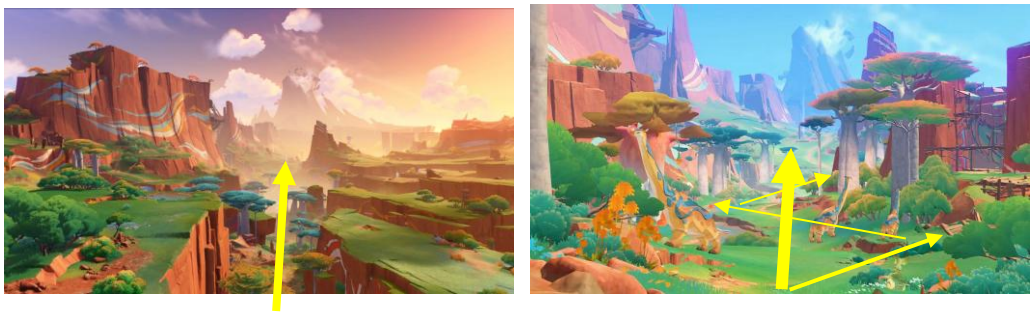


Figure46. Using the volcano as a landmark and employing canyon fissures to generate directional cues, the design draws players to move spontaneously toward content-rich areas.

2.4.3 Transition

As we continue forward along the canyon floor, the path ahead narrows, momentarily obstructed by a massive boulder. The player's field of vision compresses, and movement becomes cautious. Yet the very next moment—upon turning the corner—the landscape suddenly expands into a vast, breathtaking arena: the Basin of Unnumbered Flames, the central node of Natlan. In stark contrast to the valley's linear terrain, this space manifests as a geometrically defined circle, with clear boundaries and a powerful central focus. Approaching via a spiraling suspension bridge, the player moves along the periphery before entering the heart of the arena. This gradual, centripetal movement is deeply ritualistic—transforming the act of walking into a process of psychological convergence from exploration to reverence.

Figure47. The public space serves as the most effective vantage point for understanding the region's current condition. Within this space, players can observe everyday life, participate in routine rituals, and perceive the crises faced by the various tribes.

The circular arena naturally commands attention. Its form gathers vision, sound, and movement toward the center, making it an ideal stage for narrative culmination. In open-world design, such "convergent spaces" often serve as the locus of dramatic revelation—and here, it is where the player first encounters Natlan's deity. Through this spatial encounter, the narrative communicates a critical truth about Natlan's sociopolitical structure: the god is not an immortal sovereign but a leader chosen through ritual combat. This revelation is not merely delivered by dialogue but embodied through space—the arena itself, as a symbol of equality, trial, and collective will.

Soon after, a new tension emerges: the nation faces external invasion. The function of the arena transforms from a ceremonial sanctum into a space of mobilization. Around this central node, players are sent outward to rally the six tribes, turning the previously centripetal structure into a radiant network of missions. The arena thus becomes the narrative pivot from which the world unfolds in multiple directions. Rather than being confined to linear progression, the player now engages in multi-directional exploration, organically unlocking diverse regions,

interacting with new tribes, and constructing an increasingly complex web of social and spatial connections.

When the invaders finally return to the Basin of Unnumbered Flames, the arena once again fulfills its centripetal destiny: it gathers all narrative threads and characters into one grand convergence. The six tribes assemble, and the circular geometry amplifies the sense of collective unity and emotional intensity. The "center–radiation" structure here is more than aesthetic composition—it becomes a mechanism of narrative orchestration, synchronizing emotion, action, and meaning within spatial order.

After the climactic battle, the surrounding tribal lands open fully for exploration, signifying the transition from linear guidance to regional openness. The arena, once a site of ceremony and conflict, now stands as the axial heart of Natlan's world—a spatial anchor balancing focus and dispersion. Through this design, Genshin Impact demonstrates how architecture and geography can act not merely as settings, but as structural agents of storytelling, shaping narrative rhythm, directing movement, and binding world and player into a coherent experiential whole.

Figure48. The quest system prompts the player to visit each of the tribes. The order of visitation is left to the player's discretion, and the storyline adjusts subtly according to the sequence in which these encounters occur.

2.4.4 Resolution

From a narrative standpoint, the preceding three phases might seem to encompass the entirety of Natlan's main storyline. Yet when we recall that first moment—standing at the border and gazing toward the distant volcano—we realize that this landmark, though ever-present in the visual field, has not yet been integrated into the narrative flow. Its persistent absence within presence awakens the player's curiosity, prompting a desire for further exploration. Thus, departing from the Basin of Unnumbered Flames, we follow the terrain toward the volcano, beginning an extension of the main narrative—a voluntary journey that lies beyond the prescribed storyline.

At the volcano's foothills, we arrive at the settlement of the Tetelocan, a tribe whose remote geography spared them from the turmoil of war. Though the player may have encountered a few of their warriors during earlier events, this is the first time we truly enter their homeland. Through conversation and ritual, we learn that the volcano is not merely a geographical summit but a repository of ancestral memory, a monument in which Natlan's history is sedimented. Guided by the tribe's elders, we begin our ascent toward this symbolic height.

The volcano's spatial composition contrasts sharply with previous regions. Here, the path assumes a spiraling, centripetal structure, its geometry tightly constrained, offering almost no branching choices. The player's movement is rhythmically synchronized with the mountain's form—each turn, each incline choreographed to sustain tension. Periodic eruptions, falling rocks, and scattering creatures introduce dynamic resistance, transforming the climb into a visceral performance of endurance. This design, after the openness of the canyon–arena–tribal sequence, represents a deliberate reconvergence of space—a compression of freedom into focus.

Upon reaching the summit, the narrative once again shifts—this time inward rather than upward. With the help of the skyborne drakes, the player descends into the volcano's core, discovering a hidden inner world. Floating islands encircle a molten center, forming a three-dimensional ring-like system. Unlike the natural or tribal spaces of earlier zones, this interior realm merges ancient technology and mythic ruin, revealing a deeper layer of Natlan's civilization. Through exploration, we uncover that this land was once home to an ancient lizard-like race—masters of energy and metallurgy—upon whose remnants the current nations were built.

Structurally, the volcano serves a dual narrative function: as an epilogue to the central storyline and as a cosmological expansion of the world. It no longer propels immediate conflict but instead enriches the mythos through spatial symbolism and cultural layering. Its linear ascent and enclosed ruin contrast the open-world flow, turning the climb and descent into metaphors for historical excavation and spiritual descent. As a "hidden zone," the volcano embodies intentional spatial absence—a gap designed to ignite curiosity. The reward for this curiosity is knowledge: the revelation of deep time, continuity, and cultural inheritance. In doing so, the volcano not only extends the story's temporal and spatial depth but also pays homage to its real-world inspirations—the layered civilizations of pre-Columbian Latin America. Through this final convergence of geography, narrative, and myth, Natlan's spatial narrative attains its full closure: the world becomes whole, and its silence finally speaks.

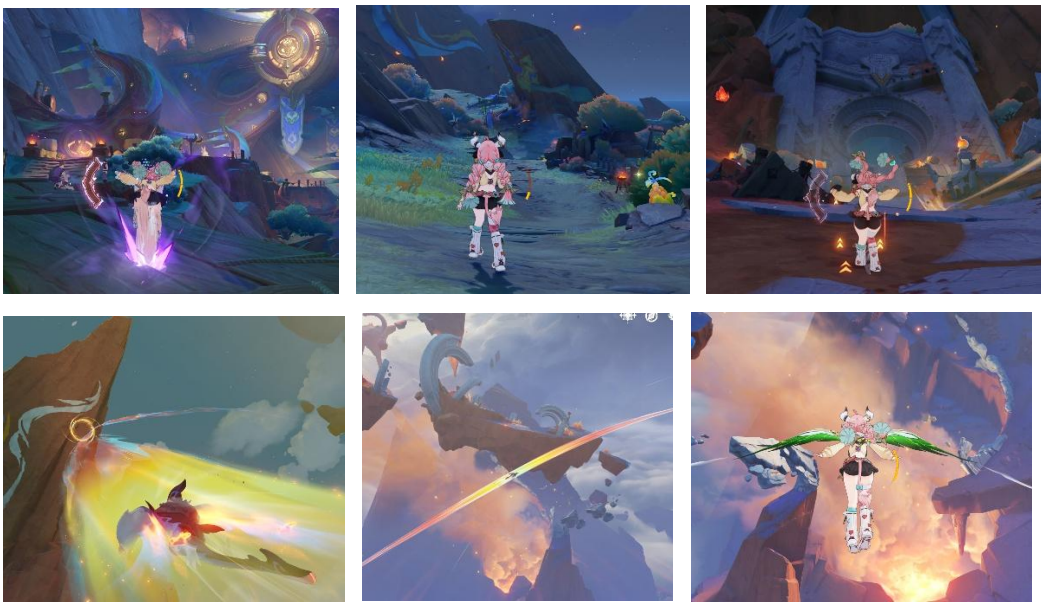


Figure49. The image illustrates the player's progression from climbing at the base of the volcano to ascending into the air, ultimately reaching a vantage point from which the volcanic crater can be viewed from above..

2.5 Summary

Through the preceding analysis, it becomes evident that Natlan's experiential structure in Genshin Impact is composed of two interlocking spatial logics: linear space and open space. The linear segments employ strong guidance mechanisms to ensure that players inevitably encounter key narrative events, maintaining the rhythm and coherence of the overarching story. In contrast, the open zones operate primarily on the level of gameplay, granting players the freedom of autonomous exploration. Within these areas, fragmented missions, environmental details, and symbolic cues collectively enrich the understanding of Natlan's culture and worldview beyond the main narrative. The interdependence between these two spatial systems—one directive, the other generative—embodies the quintessential tension of open-world storytelling: preserving narrative order within exploratory uncertainty.

If we were to visualize Natlan's spatial organization, it would resemble a "string of pearls." Each "pearl" represents a key spatial node, carrying distinct narrative weight. Some function as introductory gateways, acquainting players with the geography and cultural context of the nation; others serve as climactic stages, advancing the central storyline through major events; still others act as hidden or peripheral zones, rewarding curiosity with secrets and supplemental lore. On the design level, the developers connect these nodes through a main narrative axis, sequencing them according to a calibrated rhythm that ensures players encounter critical story moments in an intentional order. Thus, movement through space

becomes a form of narrative progression, where traversal itself constitutes storytelling.

However, when we shift focus from the macrostructure to the microstructure, each "pearl" reveals its own nonlinear interior complexity. Rather than being composed of a single directed path, every node houses a web of intersecting routes and micro-environments. These allow players to navigate according to personal preference—choosing side quests, interpreting environmental clues, and assembling fragments of narrative into a personalized story mosaic. In this sense, each node operates like a "theme-park module", embedding within its boundaries a microcosm of open-world design: multiple pathways, layered spatial storytelling, and an abundance of environmental interactivity. Players are thus liberated from being passive recipients of a fixed narrative. Instead, through play itself, they construct their own experiential narrative logic, turning exploration into authorship.

Ultimately, this hybrid model—where linear storytelling coexists with networked freedom—demonstrates Genshin Impact's sophisticated spatial narrative design. By orchestrating macrolinear continuity and microlocal openness, the game enables both designed storytelling and emergent discovery to coexist, crafting a living world where space is not merely the stage of the story, but its very syntax.

Figure50. The figure simulates the player's progression along the main narrative line and its key plot nodes. From a macro perspective, the overall narrative path exhibits a clear sense of direction; however, on a micro level, players' exploration at major narrative nodes often displays a degree of randomness and disorder.

Viewed as a whole, Natlan's map can be understood as a hybrid narrative construct, synthesizing two dominant models of spatial storytelling: the "string-of-pearls" structure and the "theme-park" model. The former ensures the perceptibility of the main storyline and the stability of narrative rhythm, while the latter enriches the player's subjective experience through fragmented, nonlinear exploration. Their interplay allows the world to maintain narrative coherence and formal order on the macro scale, while simultaneously preserving freedom, contingency, and player authorship on the micro scale.

More importantly, this mode of spatial storytelling is not a mere formal juxtaposition but a reflection of the contemporary open-world designer's philosophical negotiation between narrative control and player agency. Through deliberate spatial organization and route design, the developers construct an implicit narrative grammar—one that subtly guides the player beneath the surface of freedom. Yet within this framework, the player's choices, rhythms, and moment-to-moment interactions inject individuality and emotional resonance into the story. The result is a co-authored narrative, one in which meaning arises not solely from scripted dialogue or textual exposition, but from the dynamic interaction between spatial form and experiential tempo.

From a broader perspective, Natlan's spatial-narrative system exemplifies a wider trajectory in virtual world design: the search for balance between openness and structure, between order and improvisation. This logic—of "structured guidance" coexisting with "perceptual freedom"—does not merely define the rhythm of play; it also offers a metaphorical framework for real-world spatial design. Just as Natlan invites freedom within order, so too might urban spaces aspire to create environments where planned structure and personal experience coexist—where the city, like a well-designed virtual world, becomes a narrative field of potential, capable of accommodating both collective coherence and individual storytelling.

CHAPTER 3: From Playable Worlds to Urban Rationalities

The preceding chapters focused on the internal world-building logic of video games, examining how they construct inhabitable virtual environments through narrative and spatial design. From narrative structure to cultural symbolism, the analysis of Natlan in Genshin Impact reveals what might be called the spatial organizational power of games: they not only shape visible landscapes but also establish experiential orders through interaction and rules. As video games evolve from entertainment media into complex laboratories of spatial experimentation, a new possibility emerges—games are no longer mere reflections of reality, but conceptual devices capable of reimagining the city and reconfiguring our understanding of space itself.

This chapter therefore shifts focus from the virtual world to the real city, addressing the central question of this thesis: When virtual space acquires the capacity to narrate, structure, and generate, what can it teach us about real-world urban design? This question signals a methodological turn—from observing games to thinking through games. By analyzing the spatial logic and operative mechanisms of game worlds, we can gain new insights into the form, order, and freedom that define urban experience.

From the discussions above, three interconnected concepts can be extracted as points of dialogue between game space and urbanism: social simulation, narrative city, and participatory planning. These are not isolated themes but rather stages within a conceptual continuum—from representation to narration, and finally, to generation. Together, they reveal how video game spaces can inspire a rethinking of the urban: not as a static artifact, but as a dynamic medium of collective imagination and lived storytelling. Within the framework of the virtual world, the city reemerges not merely as something built, but as something continuously told, experienced, and generated—a living process of co-creation between structure and play.

3.1 Simulated City: The Social Model within Virtual Worlds

As demonstrated by Natlan in Genshin Impact, its model of “six co-governing tribes” is not merely a fictional political arrangement, but a spatial–social coupling structure with significant real-world implications. Rather than relying on a single center or unified institutional framework to sustain coexistence among diverse groups, this structure operates through the coordination of geographic, functional, and ritual nodes, forming a loosely coupled yet remarkably resilient system. It

suggests that a polycentric urban structure should not be understood as a simple aggregation of heterogeneous functions, but as an organizational logic capable of maintaining coherence within difference.

In this sense, the idea of "functional tribes" articulates an alternative form of urban differentiation that is no longer grounded in administrative boundaries or ethnic identities, but in the lived temporalities and practices of specific groups. Urban social units should be identified through lifestyle patterns, age profiles, work rhythms, and daily needs—families, students, artists, seniors, night-shift workers—each of whom occupies the city according to distinct sequences of time and space. These differences demand spatial expressions with clear identities and degrees of autonomy. Rather than forcing all groups into standardized solutions, cities should cultivate diversified environments that allow each mode of life to find its appropriate architectural and infrastructural support. This corresponds, in practical terms, to planning for "functional tribes": designing neighbourhoods or neighbourhood units whose physical form, public facilities, and services explicitly respond to the needs and rhythms of their particular populations.

Yet the protection of difference does not negate the necessity of shared public life. Natlan's spatial logic reveals that alongside autonomous peripheral territories, a multifunctional and symbolically charged common center is essential—a place where periodic gatherings, rituals, markets, and public deliberation shape collective experience. This "urban center" is not an administrative town hall but a civic stage, capable of facilitating encounter, negotiation, and symbolic integration. Within such structured public settings, different functional tribes retain their specificity while developing mutual recognition. This model of "peripheral autonomy with an integrating centre" provides a spatial governance strategy for heterogeneous contemporary cities: neighbourhoods or district units may develop strong identities and specialized facilities, yet remain physically and functionally connected to a higher-level civic core that anchors city-wide interaction.

This principle also offers clear operational pathways for contemporary planning. Peripheral neighbourhoods may be equipped with differentiated public spaces—community gardens, playgrounds, local markets, sports areas—each tailored to the needs and identities of their respective groups, while a major central park or civic plaza hosts festivals, large-scale markets, and collective decision-making events. Such a dual structure ensures that groups maintain everyday autonomy while periodically entering shared civic life, turning multicultural integration into a gradual, sustainable process rather than a superficial effect of forced cohabitation. Through this spatial and institutional choreography, diversity becomes a generative force, and the city acquires a polycentric coherence grounded in both difference and shared belonging.

3.2 Narrating the City: The Experiential Narrativity of Game Space

Through the spatial-narrative analysis of Genshin Impact's Natlan, it becomes clear that its spatial organization serves not only gameplay mechanics but also a deeply narrative function. Terrain, pathways, nodes, and symbolic systems are orchestrated as layers of storytelling: the landscape acts as grammar, routes as syntax, and cultural signs as semantics. Together they construct a multi-layered narrative logic of space. From this framework, four design principles emerge as potential inspirations for enhancing the narrativity of real urban environments: environmental storytelling through terrain, path-based narration, narrative nodes and landmarks, and the expression of cultural symbols. These dimensions collectively form a methodological structure for the narrative city.

3.2.1 The Narrative of Terrain

In Natlan, the terrain is not a passive backdrop but the grammatical foundation of the world's narrative. The volcano's vertical tension, the fractures of rock, and the movement of lava together compose a topographic drama. As players climb and descend, they experience emotional transitions—between power and fragility, exposure and shelter—embedding meaning directly into geography.

Real cities demonstrate the same principle: topography itself is a primal narrative medium. From Siena's concave urban form that gathers life around its sloping piazza, to the layered rhythms of Chongqing or Hong Kong where elevation defines social and visual tempo, terrain shapes both experience and identity. If urban design can treat topography not as an obstacle to flatten, but as a structural storyteller, the city gains narrative depth—its form becomes a record of time and memory.

This is not romanticizing nature, but a design strategy: through height variation, spatial layering, and the sequencing of ascents and descents, designers allow inhabitants to sense their relationship with the environment. The Oslo Opera House, which slides seamlessly into the fjord, demonstrates how a building can guide the body from solid ground to reflective water—turning movement into narrative transition. The urban surface, like language, can be folded and modulated so that terrain becomes a carrier of emotion and culture. In this sense we could think about a theory of soil. Not only exploit the existing topography (hills, slopes, waterways) as a primary narrative element, but explore its ecological and conflicting possibilities, such as how to negotiate with the soil.

Figure51. Opera house in Oslo, Norway

3.2.2 The Narrative of Pathways

In real cities, this logic resonates profoundly with Michel de Certeau's assertion that walking is a form of writing. In The Practice of Everyday Life, De Certeau draws a critical distinction between the city as imagined from above and the city as lived from below. The elevated, panoramic view—embodied in maps, masterplans, and administrative visions—produces what he calls strategies, forms of control that aim to stabilize, classify, and rationalize urban space. This is the city of planners, architects, and institutions: ordered, coherent, and abstracted into a visual totality.

Yet De Certeau argues that the true life of the city unfolds not in this panoramic abstraction, but in the everyday practices of pedestrians who navigate it from the ground. Their movements constitute tactics—improvised, situated, and often resistant acts that re-appropriate the planned city. A shortcut taken through an alley, the choice to pause at an unexpected vista, the detour around a crowded intersection, even the pattern of strolling without destination: all of these are narrative gestures. They inscribe alternative meanings onto the urban fabric, producing a spatial text that is layered, polyphonic, and never fully contained by the official map. Thus, walking does not simply traverse the city; it authors it, creating what De Certeau calls "anthropological, poetic, and mythic" layers of space.

This theoretical lens reveals why path-based narration is so powerful for urban design. If walking is a form of writing, then pathways become narrative media—structures that choreograph how meaning unfolds through motion. Designing a path is therefore not merely arranging circulation, but composing a sequence of experiential events. Changes in paving texture, the compression and expansion of space, the modulation of light and shadow, the interruption of movement through a staircase, slope, or turn—all function like punctuation marks: commas that slow the rhythm, colons that prepare a shift, exclamation points created by sudden vistas or sensory contrasts.

Precedents across global cities demonstrate how such narrative thinking can transform everyday mobility. Kyoto's narrow machiya lanes orchestrate controlled

sightlines and slow rhythmic unfolding, turning each turn into an anticipatory act. New York's High Line repurposes an obsolete railway into a linear promenade where elevation, planting, and framed views create a cinematic sequence of moods. Even the labyrinthine medinas of Fez or Marrakech exemplify De Certeau's notion of tactical space, where wandering becomes a form of imaginative authorship that constantly negotiates between planned structure and lived improvisation.

Through these rhythmic and perceptual orchestrations, movement becomes the protagonist of spatial experience. The city is no longer a static composition to be viewed, but a narrative text continuously read, interpreted, and rewritten by its walkers. De Certeau thus transforms the act of walking into a critical design principle: to design pathways is to design the very ways in which urban stories are produced.

3.2.3 The Narrative of Nodes and Landmarks

Every story needs turning points; in cities, these are nodes and landmarks. In Natlan, ritual sites, settlements, and ruins act as emotional and visual foci—the loci where memory condenses and orientation stabilizes. They punctuate the landscape, transforming the vast world into an intelligible sequence of events.

In real cities, nodes serve similar narrative functions. Paris's Place de la Concorde centers political symbolism; Rome's Piazza Navona frames ritual theatricality through its oval enclosure; Barcelona's Plaça de Catalunya intertwines civic life and political expression. Their meaning arises not only from geometry or scale, but from the events and memories they host.

Designing landmarks is thus an act of constructing memory punctuation. Preserving traces of former industrial structures or juxtaposing new and old architectures allows time to be spatialized. The city becomes not merely a network of functions but a network of memories. By linking such narrative nodes, the urban experience acquires rhythm and coherence—complete with anticipation, climax, and echo.

3.2.4 The Narrative of Cultural Symbols

If terrain, paths, and nodes form narrative structure, cultural symbols provide its semantics. In Natlan, the motif of fire permeates religion, architecture, and social order—it signifies energy, destruction, and rebirth. This unified symbolic system sustains conceptual and visual coherence across the world.

Cities, too, require symbolic systems to translate local spirit into spatial language. Kyoto's tiled roofs and wooden lattices express restraint and ritual order; Barcelona's curves and colors evoke Mediterranean openness; Norway's timber and stone articulate a stark, elemental identity. These materials and motifs enable recognition—they make culture visible.

Reconstructing such symbol systems today means designing multi-layered semantic networks: from building textures and color palettes to public art and lighting language. Effective symbols are not nostalgic repetitions but extendable metaphors—structures of meaning that evolve through reinterpretation. The result is a city as an open text, remaining alive through continuous use and reinterpretation.

3.3 Generative City: Toward a Truly Participatory Logic of Planning

Having examined the representational dimensions of simulation and narration, this section turns to the foundational logic of video games—the level of rules, systems, and interactions that constitute their generative structure. Here, the focus shifts from surface representation to processual formation: a game world is not built through images, but through the dynamic interplay of code, feedback, and agency. Within this logic, we can begin to ask: How does freedom arise within order? How can emergence occur within constraint? These questions, fundamental to game design, also offer a philosophical reframing of urban planning—suggesting that cities, too, might be conceived as open systems of continuous generation rather than fixed products of design.

3.3.1 "Reality does not know itself"

To begin this discussion, I draw upon the philosophical framework of Slavoj Žižek, the Slovenian theorist who famously asserts that "reality does not know itself."(Žižek,2013) In Žižek's interpretation, reality is never a self-contained, transparent totality; rather, it relies on the intervention of the subject to become manifest. This idea originates from his reading of quantum mechanics.

In classical physics, reality was assumed to exist independently of observation—a pre-given stage upon which events unfold. Quantum theory, however, dismantles this assumption: before measurement, reality is indeterminate and probabilistic. For Žižek, this implies that the world is not a fixed whole awaiting discovery, but something that is retroactively constructed through the act of observation and interpretation. There is no "God's-eye view" of reality; it takes shape only through the interplay of subjects, instruments, and symbolic frameworks. In his psychoanalytic and political writings, Žižek extends this argument to ideology: just as quantum measurement collapses potential states into observable outcomes, ideology structures how we "measure" and thereby constitute social reality.

This perspective maps surprisingly well onto the logic of video games. In a game world, the narrative, environment, and mechanics do not preexist as a complete, autonomous entity. Designers merely establish a rule set—a matrix of possibilities—and it is through the player's actions that the world truly "comes into being." In Žižek's terms, a game that emphasizes player freedom invites

participants to write reality into existence through their own engagement, liberating them from the illusion of a self-sufficient world.

From this angle, quantum philosophy and game design share a structural affinity: both reject the notion of predetermined totality. The world is not completed in advance—it is produced through interaction, perception, and feedback. Each decision a player makes collapses a field of potentialities into a tangible spatial experience.

In Genshin Impact's Natlan, this becomes particularly evident. Player agency—choosing exploration routes, interacting with environmental elements, aligning with different tribal narratives—continuously reshapes the perceived order and emotional tonality of the world. The virtual environment thus operates as a probabilistic space, one that contains multiple possible stories rather than a single linear reality. The moment of choice is not simply narrative branching; it is ontological construction.

From this standpoint, the video game can be seen as an experimental model of contingent urbanism: a system where structure and spontaneity coexist, where the built environment responds dynamically to participation, and where the city's "reality" is co-produced through the actions of its inhabitants.。

3.3.2 "The Quantum Observer" vs. "The Big Other"

In his philosophical reading of quantum mechanics, Slavoj Žižek draws an illuminating parallel between the "quantum observer" and Lacan's "Big Other." For Žižek, the essence of quantum physics is not the discovery of a complete, objective reality but the exposure of observation itself as a constitutive act. Reality only "collapses" into a definite state when it is observed. Likewise, in the symbolic and social domains, the Big Other—that is, the totality of language, norms, and meaning—does not exist as an omniscient, transcendent structure. It is a necessary fiction, a construct the subject presupposes in order to sustain the coherence of the world.

From this standpoint, both physics and psychoanalysis dismantle the idea of a detached "God's-eye view." Reality's coherence is not pre-given but retroactively assembled through participation, interpretation, and belief. This means that what we call "the world" is always unstable—produced through the interplay of subject and structure, action and illusion.

Transposed into the context of video games, this framework precisely describes the relationship between the player and the game designer. The player acts as the quantum observer: their choices not only determine the course of events but also give meaning to the entire world retroactively. Yet this generative process is never purely open. Games inevitably include narrators, algorithms, and rule systems that suggest a "correct" path or desired behavior. These invisible mechanisms

constitute the Big Other of the game—a pervasive symbolic order (the designer and their code) that maintains the world's apparent coherence and legitimacy.

Rules, therefore, are not a constraint but the precondition for play itself. Without rules, there is no orientation, no objective, and no meaningful agency. The paradox is clear: even as designers strive to create freedom, such freedom is always conditional, shaped by a prior framework that enables it. The player can never truly escape the logic of the Big Other; they can only act within its structure. As Žižek would put it, the Big Other does not exist—but we must act as if it does. This paradox defines the core tension of game narrative: the player is both the creator of meaning and a captive within a predesigned illusion of freedom.

Nevertheless, game design can modulate this relationship by expanding the field of possible actions. Within a fixed framework, designers can maximize the player's sense of agency by offering multiple paths, variable outcomes, and responsive systems that make the world appear indeterminate. This aligns closely with the logic discussed in Chapter 1—the idea of "creating freedom within rules." Open-world games exemplify this approach: each "pearl" of designed content can be rearranged in countless sequences, generating hundreds of emergent experiences. While these possibilities are not infinite, they are sufficient to sustain the illusion of boundless freedom.

Perhaps the most explicit manifestation of this tension appears in meta-games—titles that consciously break the fourth wall to engage the player as both participant and observer. If we imagine a game as a constructed box in which the player projects an avatar and experiences a simulated world, then meta-games make the player aware of the box itself. They transform the act of play into a self-reflective inquiry.

A prime example is Davey Wreden's The Stanley Parable (Galactic Café,2013), a meta-game built entirely around the dialectic of freedom and control. The player assumes the role of Stanley, an office worker exploring his empty workplace under the commentary of a narrator. At every junction, the narrator describes what Stanley should do—for instance, "Stanley entered the door on his left." The player can choose to obey or defy. If they disobey, the narrator reacts with irritation, chastising the player for breaking the rules and continually attempting to restore order.

The pleasure of the game lies precisely in this rebellion against the Big Other. Players derive enjoyment from disobedience, from testing the edges of the system, even as they know that every act of resistance has already been scripted by the designer. In doing so, the author invites players to embrace a paradoxical freedom: to become the rebellious child who dares to act as if genuine autonomy were possible. The game thus becomes a philosophical experiment—a mirror of our own condition within symbolic systems, where resistance and obedience, freedom and structure, coexist in perpetual play.

Figure52. In The Stanley Parable, the narrator guides the player to take the red door on the left. When the player disobeys and goes to the right instead, the narrator pulls them back into the scene to make the choice again, even deleting the blue door on the right. (Interestingly, if the player turns around at that point, they'll find that the blue door has been hidden right behind them.)

3.3.3 The City as an Unfinished Narrative

After this long theoretical detour, we can finally return to the realm of urban planning. If the video game offers a highly coded yet open virtual structure—where the player, as a "quantum observer," collapses potential narratives into actual trajectories—then the city, as the everyday stage of lived experience, operates through a remarkably similar logic. Žižek's framework allows us to reconsider urban design not as the representation of an already given reality, but as a continuous process of narrative generation.

Traditional planning carries within it a kind of false universality. It often describes the city—especially its public space—as a "natural" and self-evident common ground, concealing the ideological mechanisms that construct this very illusion. Yet just as a quantum system remains indeterminate before observation, urban space only materializes through use and perception. A masterplan, viewed through this lens, resembles a superposition of potential states—its latent possibilities collapse into concrete form only when people move, pause, negotiate, and inhabit it.

More crucially, the city's "real function" is never complete. It constantly exceeds the designer's intent: temporary occupations, informal reuse, spontaneous routes, shifting boundaries, and unplanned social practices all emerge as forms of urban remainder. Within traditional planning logic, these irregularities are treated as "errors" or "bugs" in the system—disruptions that must be managed or erased.

Yet game design teaches us the opposite lesson: the unfinished is not a failure but an ontological condition. A city lives precisely because it accommodates heterogeneity, temporal multiplicity, and divergent actions. Every act of construction, adaptation, or everyday use is a new "measurement" of the urban field—an act that retroactively rewrites the spatial narrative. The city, in this sense, has no fixed gestalt; it exists only through the presence and participation of its users.

3.3.4 Designing for the "Glitch"

In Žižek's terminology, the city's indeterminate elements can be seen as the Real erupting within the urban symbolic order—the points where regulation, zoning, and representation fail to fully code reality. Informal markets, street vendors, graffiti, temporary gatherings, or political protests all expose the instability of the system. Like "bugs" or "glitches" in a video game, they reveal both the constructedness of the structure and the potential for new meaning to emerge through its rupture.

Consider, for instance, Hong Kong's traditional street markets or Mumbai's Dharavi settlement. These spaces—often deemed "unplanned" or "illegal"—actually form intricate micro-networks of exchange and production, offering high-frequency, low-barrier social interaction and adaptive economies. They constitute what we might call a "third zone" between macro-level order and micro-level improvisation: zones of negotiation where the real narrative of the city unfolds.

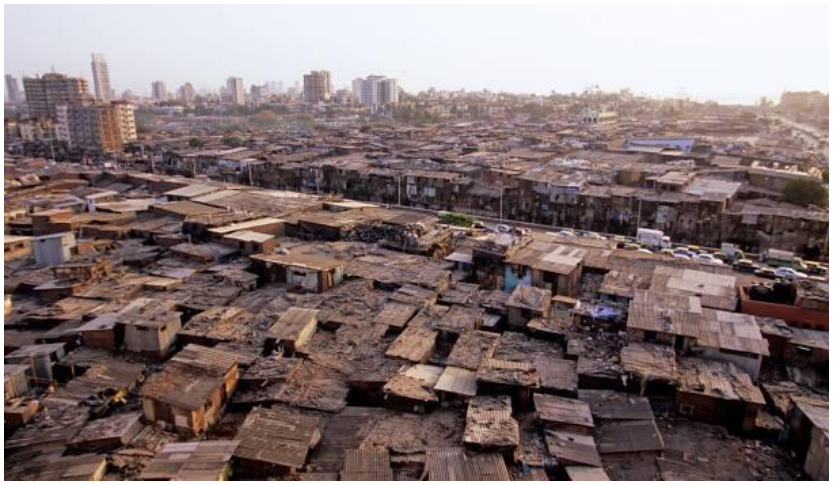


Figure53. Dharavi slum, one of the largest slums in the world, was established in 1882 during the British colonial period. It is a diverse settlement characterized by multiple religions, ethnicities, and communities. Dharavi provides affordable housing for workers and laborers coming from outside Mumbai, and it hosts a large number of thriving small-scale industries.

Thus, the task of planning is not to eliminate uncertainty but to sustain a balance between structure and openness—to provide enough framework for stability while preserving the capacity for reinterpretation and spontaneous adaptation. Just as an open-world game requires minimal systemic rules to function yet leaves room for players to create their own paths, so too must the city operate within the tension between rule and freedom.

Regulation ensures accessibility, usability, and governability; openness ensures re-use, re-interpretation, and re-narration. The city, therefore, is not a completed

artifact but a living text, rewritten daily by its inhabitants. Planning, likewise, ceases to be a final blueprint and becomes a field of potentiality, a scaffolding for ongoing storytelling and collective meaning-making.

3.3.5 The Truly participation

Contemporary urbanism increasingly champions the language of "participatory planning" and "co-creation." On the surface, these strategies appear to empower residents, inviting them to take part in shaping the narrative of urban space. Yet, as Žižek's critique of ideology reminds us, the most powerful ideology is not the one that forbids action—it is the one that allows you to freely choose within a predetermined framework. In other words, democratic participation often functions less as a redistribution of power than as a sophisticated mechanism for its concealment.

Public hearings, digital surveys, online voting platforms, and participatory workshops frequently do not alter the core structure of urban decision-making; instead, they manufacture the illusion of being heard. Participants experience a sense of agency while remaining confined within a passive system. The phenomenon mirrors what happens in video games: the illusion of freedom maintained through tightly scripted choice.

In traditional branching or pearl-necklace narrative games, players make decisions from a limited set of predefined options. They appear to direct the story, but every path has been programmed within the designer's logic. The supposed freedom is, in fact, the performance of freedom within boundaries. Similarly, in many participatory planning processes, the structural limits are already set by planners, developers, or administrative bodies. Public input is reduced to confirmation or data collection—citizens' voices are quantified and archived rather than transforming the design agenda itself.

In this sense, participation becomes an ideological container. Žižek calls this mechanism the "imperative of enjoyment": people are encouraged to express, to participate, to feel fulfilled, yet in doing so, they unwittingly reinforce the stability of the very order they inhabit. Smart-city platforms, virtual hearings, and civic engagement apps promise transparency and interactivity while concealing algorithmic closure and administrative control. What appears as openness often deepens the invisibility of power. Just as the gamer enjoys the feeling of making choices, the urban participant enjoys the sense of being heard—both experiences hinge on systemically permitted freedom.

A more critical and generative approach to participatory urbanism does not reject rules but rather designs within them the space for ambiguity, rupture, and reinterpretation. Here, the open-world game becomes a vivid metaphor. Instead of dictating a single storyline, the designer sets up systemic boundaries within which multiple narratives can emerge. Likewise, the urban planner's task is not to

write the story, but to write the rules—to construct the conditions under which conflicts can coexist, evolve, and produce meaning.

Berlin's strategy of Critical Reconstruction exemplifies this ethos. Rather than erasing the spatial scars of the Cold War, the city used architectural tension, reconstituted block structures, and the recomposition of historical fragments to produce an urban fabric that acknowledges discontinuity. The result is not harmony but a deeper form of wholeness through the recognition of fracture.

Figure54. Today, parts of the Berlin Wall remain standing, their surfaces covered with graffiti and murals. Confronting this historical scar, the city did not choose erasure; instead, it preserved the remnants and re-inscribed them with new meaning, transforming them into an integral element of public memory.

Similarly, Lisbon's LX Factory demonstrates how user-driven adaptation can transform rigid industrial structures into dynamic creative ecologies. Artists, craftspeople, and entrepreneurs collectively redefined the site through informal reuse and iterative transformation. There was no masterplan, only a framework within which multiple narratives accumulated over time. The space evolved not through centralized vision but through collective play—a literal enactment of freedom generated within rules.

Figure55. It is in the year of 1846 that the Company of Wiring and Fabricos Lisbonense, one of the most important factory complexes of Lisbon, settles in Alcântara. Now it returned to the city in the form of LXFACTORY, which has been the scene of a diverse range of events in the fields of fashion, advertising, communication, multimedia, art, architecture, music, etc.

True participation, therefore, does not reside in procedural formality but in the provision of indeterminacy. The ethical task of the urban designer is to create spaces-yet-to-be-defined—places that can be reinterpreted, reoccupied, and retold. Just as the open-world game designer leaves intentional blankness for players to fill, the planner must preserve contingency within order, allowing the city to be continually played into being and told into existence by its inhabitants.

Such a city does not seek total control but embraces the complexity of freedom itself—a condition where structure enables, rather than limits, the unpredictable creativity of collective life.

3.3.5 The Ripples in the City

Game mechanics demonstrate with clarity that freedom does not arise from the absence of rules, but is produced within a structured framework; likewise, emergence does not stem from randomness or chaos, but relies on a system capable of accommodating change and enabling re-narration. Translated into the context of urban planning, this implies that design should not aim at producing a static “final plan,” but should instead focus on constructing an open yet bounded set of rules. Such rules may include minimum green ratios, mandatory pedestrian connections, limits on building height and density, permitted material systems, and basic accessibility requirements. These conditions provide the stability necessary for urban functioning while refraining from prescribing specific forms, allowing space to be continually redefined by shifting needs, practices, and social interactions.

This shift—from prescribing ideal forms to designing operative rules—aligns closely with the concept of performative zoning. Rather than assuming that spatial meaning can be fixed in advance by the designer, performative zoning recognizes that meaning is generated through the accumulation of events, actions, and social practices over time. Instead of determining what the city should be, it establishes how the city may operate, replacing the rigidity of conventional prescriptive zoning with an open but regulative framework. The process resembles hosting a social gathering in which the organizer provides the setting for interaction but does not dictate the precise sequence of events: encounters and patterns emerge organically through use. In this way, the city, like a well-designed game system, acquires variability, adaptability, and long-term evolvability.

This generative, "rules-before-form" logic has been vividly demonstrated in several canonical projects. The Parc de la Villette in Paris is exemplary: its design does not attempt to produce a closed, completed landscape but instead constructs an open spatial syntax through a "points–lines–surfaces" framework. The red folies, embedded within a strict grid, do not carry predetermined functions; rather, they act as event triggers, reserving space for future activities and unforeseen appropriations. The linear promenades and thematic gardens create experiential narrative sequences, while large areas of open lawn and undefined grounds operate as fields of indeterminacy—spaces that welcome temporary installations, collective gatherings, and future reinterpretations. Through this programmable spatial structure, rather than any fixed form, La Villette exemplifies the principles of performative zoning, ensuring multiplicity and evolvability across time.

Figure56. The red folies in Parc de la Villette create points that generate the potential for events to occur throughout the park, like stones dropped into water creating ripples.

The conceptual foundations of Parc de la Villette can be traced to the ideas of British architect Cedric Price, whose work pushed generative thinking toward even more experimental horizons. If the Fun Palace was conceived as a provocative apparatus for activating passive cultural subjects, then the Potteries Thinkbelt represented a more mature and operational exploration of similar principles—

offering not only a theoretical stance but also organizational strategies and implementable methods.

The project reassembled the disused railway infrastructure of a declining industrial region and transformed it into a mutable learning network composed of mobile classrooms, laboratories, and residential units. In this system, education, work, and everyday life were envisioned as fluid and adjustable components of an evolving urban metabolism. Price rejected the cultural elitism he associated with the term "university," arguing that contemporary universities had become "medieval castles with power nodes, elegantly withdrawn from the world and detached from applied science and technology." In contrast, the Potteries Thinkbelt (pTb) proposed an open, distributed learning community capable of accommodating approximately 22,000 students in scientific and technical fields. Teaching and research modules were mounted directly onto the old rail lines, allowing them to be grouped, assembled, or redeployed according to immediate needs; meanwhile, modular housing and administrative facilities were anchored at several fixed nodes along the network.

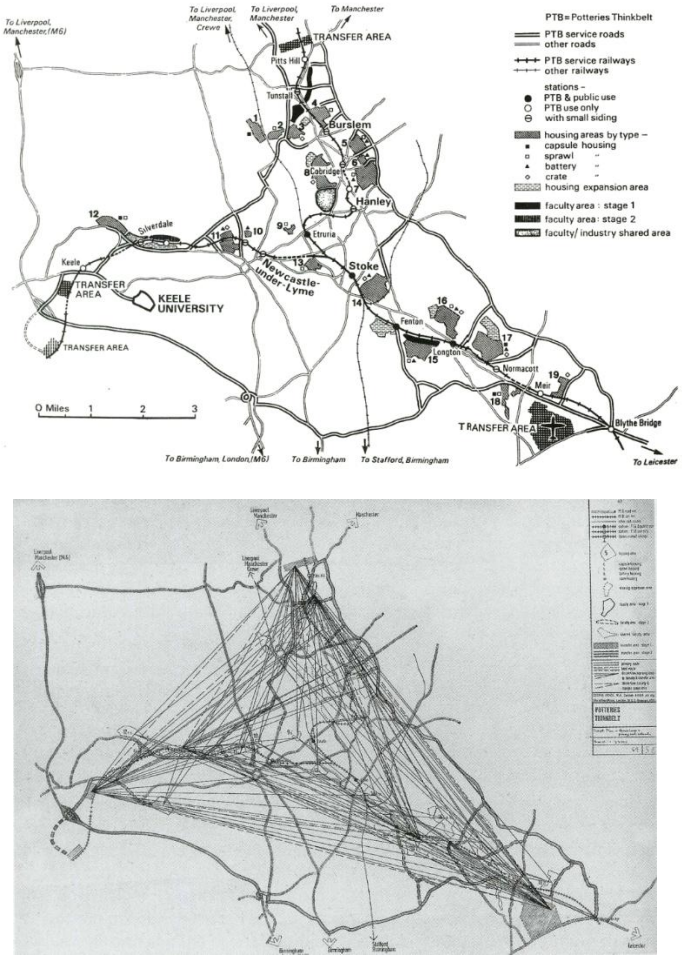
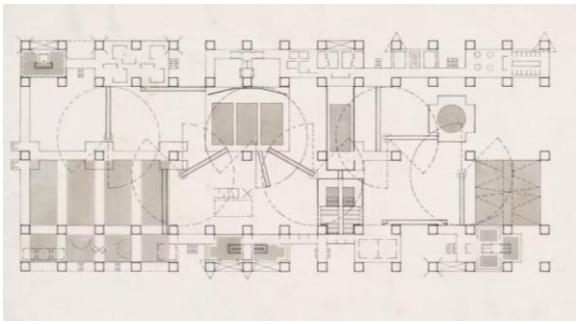
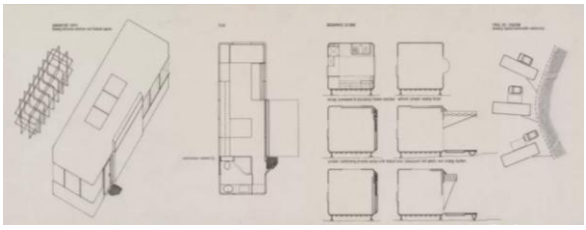


Figure57. The plan and road network of the Potteries Thinkbelt

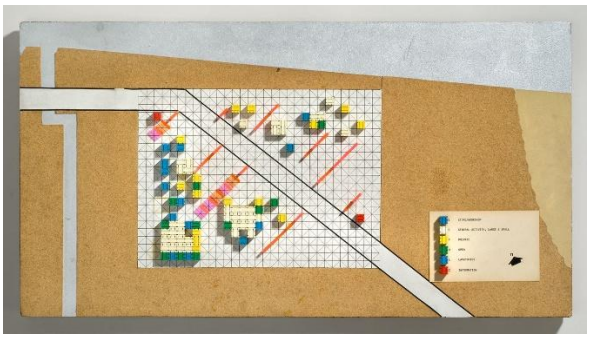
At the heart of Price's thinking was a radical critique of architecture's fixation on permanence. He sought to dismantle the dominance of fixed buildings by reframing the city as a dynamic system—capable of renewal, substitution, and recombination. As societal conditions or functional demands shifted, individual spatial units could be replaced, relocated, or reconfigured, demonstrating the city's potential to exist not as a static physical form but as an ongoing process. The Potteries Thinkbelt thus stands as a seminal prototype of generative urban planning, revealing how spatial organization can be governed by adaptability, responsiveness, and temporal evolution rather than by material fixity.



the 'tartan grid' structural plan of the Fun Palace



the mobile modular units of the Potteries Thinkbelt



site model with key to cube functions for Generator

Figure58. Plans of Cedric Price's works. All the three projects endow architecture with a capacity for adaptability, enabling it to respond to dynamic social changes and evolving functional demands.

This brings us back to the notion of the city's "unfinishedness". A genuinely generative city must intentionally design unfinished spaces—sites whose boundaries are porous, whose functions are not fully predetermined, and whose configurations remain open to transformation. Such spaces are not the result of planning failure, but the structural reservation of potential: places left open for future actions, events, and narratives to unfold. Reconfigurable public squares, open grounds reserved for community self-organization, and lightweight structural systems that can be adapted as needs evolve all exemplify this logic. They offer residents opportunities to reinterpret, extend, and reshape urban meaning over time. Within such a framework, the narrative of the city is co-authored by planners and inhabitants alike, and space continually absorbs new events, emotions, and memories. In this sense, the freedom experienced in games is not merely referenced metaphorically, but translated into concrete spatial practice.

3.4 Summary

The inspirational power of game worlds lies in the way they expose, with exceptional clarity, the tension between rules and freedom, structure and contingency. In such spaces, the environment is never a finished object imposed from above by the designer; rather, it is continuously "written" through the interventions of users, narrators, and actors. In this sense, the city shares a profound structural affinity with the open world: it should be understood as a dynamic system that is perpetually generated, activated, and rewritten through the activities of its inhabitants. This observation leads to the three conceptual paths developed in this study—the Simulated City, the Narrative City, and the Generative City—and establishes the basis upon which they can be translated into concrete methods for real urban planning.

Faced with increasingly complex social structures and spatial demands, the role of the urban designer must therefore shift: no longer the producer of order, but the weaver of potentials. What must be designed is not only physical form but the very conditions under which action and narrative may unfold. By preserving ambiguity, leaving room for fissures, and accommodating difference and conflict, the city becomes an open system that can be continuously redefined—one in which freedom emerges within rules, and vitality arises within order. This, perhaps, is the most significant lesson that game worlds offer urban design: the value of planning lies not in perfect completion within a fixed framework, but in the ongoing possibility of becoming.

On the basis of the three paths discussed, a more structural and operational design framework begins to take shape—one in which the three logics do not stand as parallel concepts but form a progressive system extending from the macro to the

micro, from structure to experience, from rules to subjects. Generative logic forms the foundational layer: it defines how the city operates through an open yet bounded rule-set that enables long-term evolution and resilience. Upon this macro-framework, narrative logic acts as the meso-scale organizational structure, translating the potentials created by generative rules into perceptible spatial grammar—terrain, paths, nodes, and landmarks that compose the narrative sequences of urban experience. Finally, simulative logic functions at the micro scale, organising differentiated community units, public cores, and multi-centered arrangements that allow heterogeneous groups to locate themselves, self-organize, and sustain collective life.

Together, these layers create a systemic integration: first, design a rule framework (the Generative City) that ensures variability and openness; then construct a narrative spatial structure upon it (the Narrative City) that grants perceptibility and experiential coherence; and ultimately accommodate diverse communities within that narrative frame (the Simulated City), enabling coexistence, negotiation, and shared inhabitation. In other words, generative logic determines what is possible, narrative logic determines how it is understood, and simulative logic determines how it is lived. Their progression from macro to micro forms an urban structure that is both stable and accommodating of diversity.

Within this three-tiered framework, the city is no longer conceived as a fixed formal product but as an ongoing process of becoming: its rule framework ensures evolution, its narrative structure organizes experience, and its community structures grant social vitality. Such integration responds not only to the complexity, variability, and uncertainty of contemporary urban conditions but also offers a genuinely operational methodology for practice—one that balances structure, meaning, and subjectivity. Thus, the city remains open within rules, acquires meaning through narrative, and continually becomes itself through the participation of diverse actors—ultimately, written and rewritten, much like an open-world game.

CHAPTER 4: Urban Design Beyond Final States

To look at the city through the lens of video games is not to indulge in a naïve analogy—the city is like a game, the planner is like a designer, and so on. On the contrary, such an approach becomes truly productive only at the moment we resist this temptation. What video games offer is not a new metaphor, but a displacement: a way of grasping the city not as a completed object but as a system that functions precisely because it is never completed. In this sense, the city is not an artefact but a process, a paradoxical entity whose coherence depends on its very incompleteness.

Open-world games make this logic explicit. Their worlds are not oriented toward closure or completion, but toward endurance. They persist not because everything has been designed in advance, but because they are continuously enacted, misused, reinterpreted, and even exploited by players. The "world" exists only insofar as it is being played. What we encounter here is not freedom opposed to structure, but freedom as an effect of structure, an insight that resonates uncannily with how urban space actually works.

Seen from this angle, the city no longer appears as a stable spatial configuration awaiting interpretation, but as a field of ongoing operations. Spatial form is only one element within a dense network of regulations, infrastructures, symbolic orders, economic pressures, and everyday practices. Urban space is not what is there, but what constantly happens. The relevance of video games lies precisely in their capacity to formalise this condition: they show how coherence can be sustained without finality, how order can persist without resolution, and how a system can function only by remaining open to its own modification.

4.1 Rules, Not Forms

Here we arrive at what may be the most uncomfortable lesson offered by open-world games: freedom does not emerge in spite of rules, but because of them. The experience of openness that players associate with these worlds is never a matter of unlimited choice. It is produced, with meticulous precision, through constraints, thresholds, affordances, permissions, and prohibitions. In other words, what appears as freedom is already structured, perhaps even over-structured.

This insight strikes at the heart of traditional urban design, which has long privileged the production of visible form—layouts, typologies, zoning schemes, while relegating rules to a secondary, technical role. Through a ludic lens, this hierarchy collapses. The true object of design is not the form that space takes, but

the conditions under which space can be acted upon. Urban design becomes less an art of composition and more a science, if not an ideology, of rule-making.

In this sense, the planner resembles the game designer not as a creator of worlds, but as an architect of constraints. Streets, buildings, and public spaces function as interfaces for interaction, while the real design effort lies in configuring institutional arrangements, compatibilities between uses, and mechanisms capable of absorbing conflict without falling into paralysis. The city does not fail because it contains contradictions; it fails when these contradictions are denied or prematurely resolved.

Crucially, this shift does not signal a withdrawal of responsibility. Quite the opposite. Rules are never neutral. They determine who is permitted to act, whose actions matter, how conflicts are adjudicated, and which ways of life appear legitimate. As in games, the crucial political question is not whether there are rules, but who designs them, at what scale they operate, and whether they can be revised when their ideological function becomes unbearable.

Once we think in these terms, participation itself must be radically redefined. The familiar rituals of participatory planning, workshops, consultations, public hearings, often function less as mechanisms of empowerment than as ideological alibis, allowing predetermined outcomes to appear democratically grounded. What they offer is participation without consequence: engagement stripped of authorship.

Open-world games suggest a different model. Players do not simply “take part” in a pre-given world; through their actions, they actively generate its rhythms, hierarchies, and meanings. The story of the world emerges retroactively, as a sedimentation of practices rather than as a scripted narrative. Urban inhabitants act in a strikingly similar way, co-producing the city through both formal and informal practices that frequently exceed, distort, or directly contradict institutional intentions.

A participatory urbanism informed by this perspective does not aim at consensus. On the contrary, it recognises dissensus, asymmetry, and misunderstanding not as obstacles to be overcome, but as constitutive conditions of collective life. The task of design is not to eliminate friction, but to construct systems capable of sustaining it without collapsing into either chaos or total control. Participation thus ceases to be a procedural add-on and becomes an operational condition: the capacity of the urban system to register, endure, and be transformed by use.

4.2 The Limits of the Ludic Paradigm

And yet, this is precisely the point where we must resist a new ideological trap. Game worlds, for all their openness, are ultimately closed systems. Their rules are

opaque, non-negotiable at a fundamental level, and enforced by an authority that remains largely invisible. Players may experience freedom, but they cannot rewrite the code. What appears as openness is carefully circumscribed—a freedom that functions perfectly well without democracy.

If transposed uncritically to the city, this logic risks becoming deeply reactionary. The danger is not that cities become playful, but that they become programmable: spaces where agency is channelled, participation simulated, and control disguised as choice. The lesson of games, therefore, is not that their models should be replicated, but that their contradictions should be exposed.

Their true theoretical value lies in making rule-making visible. They show, with brutal clarity, how freedom is produced, limited, and administered. In doing so, they force upon us the central urban question that planning discourse so often avoids: who has the power to define the rules through which space is lived? And who bears the consequences when those rules prove inadequate?

4.3 Toward an Urbanism of Open Systems

Approaching the city through the logic of open-world games thus entails a genuine methodological shift. It demands that urban design abandon its fixation on objects, plans, and end states, and instead engage with systems, processes, and compatibilities. The city appears not as a harmonious whole, but as a polyphonic assemblage held together by a fragile and constantly renegotiated framework.

In this sense, urban design becomes an exercise in intentional incompleteness. A project succeeds not when it resolves all antagonisms, but when it constructs a system capable of surviving them. Like a game world that remains playable precisely because it is never finished, the city endures through the openness of its rules and the creativity of those who inhabit it.

Conceived in this way, the city is never complete. It is endlessly rewritten, contested, and reprogrammed through the uneasy interplay of structure and agency. To design the city, then, is not to impose a final form, but to enable its capacity to remain negotiable, to persist as a living system open to multiple, and inevitably conflicting, futures.

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