

# The final frontier of space in video games. Spatio-narrative design in *Judgment* by Ryu Ga Gotoku Studio

**Diego BARROSO**

City University of Hong Kong  
83 Tat Chee Ave, Kowloon Tong,  
Kowloon, SAR Hong Kong, China  
[dbarrosos2-c@my.cityu.edu.hk](mailto:dbarrosos2-c@my.cityu.edu.hk)

**Zidong HUANG**

City University of Hong Kong  
83 Tat Chee Ave, Kowloon Tong,  
Kowloon, SAR Hong Kong, China  
[zidohuang2-c@my.cityu.edu.hk](mailto:zidohuang2-c@my.cityu.edu.hk)

## ABSTRACT

In video game environments that hold a referential relationship to preexisting spaces, such as Kamurocho from the *Yakuza/Judgment* series and Kabukicho in Shinjuku, the narrative and ludic content in the virtual world reflects the personal urban understanding/experiences of the members of Ryu Ga Gotoku Studio. Given creative manipulation of space, **can gameplay and narrative design be influenced by virtual urban design?** Furthermore, **is the particular approach to spatio-narrative design of RGG Studio discernible in Kamurocho's design?**

By designing a series of architectural drawings/axonometric diagrams in the architectural ethnography/urban sociology tradition widely practiced by Japanese architects and urbanists (vid. Matsumoto 2000; Kuroishi 2016) of the late 20th and early 21st centuries, we schematize how the re-usage of in-game design resources affords the creation of specific and varied narrative-gameplay situations.

## Keywords

Ludoforming, referentiality, virtual urbanism, modalities of space, architectural ethnography

## INTRODUCTION

There are multiple reasons to use preexisting spaces in fiction, from nostalgia to faithful simulation (Aarseth 2019). These specific environments facilitate the telling of certain narrative forms. We believe that, in the case of Kamurocho, the well-known representation of Kabukicho in the *Yakuza/Judgment* series, the narrative and ludic content in the virtual world reflects the personal urban

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understanding/experiences of the members of Ryu Ga Gotoku Studio. To pursue this line of thought, we explore the following questions:

- **Can gameplay and narrative design be influenced by virtual urban design?**
- **Is the particular approach to spatio-narrative design of RGG Studio discernible in Kamurocho's design?**

At the 2025 Digital Games Research Association: Central and Eastern Europe Conference (CEEGRS 2025), we proposed a “triple modality of space” framework for analyzing urbanism in video game (virtual) environments (Barroso & Huang 2025). Since it was an extensive project, we focused only on the design of the virtual city and on strategies for translating real (preexisting) space into a playable environment, that is, the “ludoforming” practices (Aarseth 2019) that addressed only their first two modalities. By considering game analysis alongside urbanist theories, we reviewed the specific approaches to translating Kabukicho (the actual Tokyo) into Kamurocho (the in-game setting).

In our desire to further explore their proposal, we explore the third modality coupling designed space with narrative design; as Álvarez and Duarte point out: “Spatial characteristics, the ludic aspects of the game, and narrative functions, all working in tandem to create a sense of place closer to the players/designers’ actions and intentions” (2018: 3). This layer takes the whole city district created by RRG Studio as what the architecture studio Atelier Bow-wow calls “environmental unit” (Kaijima et al. 2007), which refers to built environments where “any particular building (...) can perform several roles within multiple urban sets”. This conceptualization of space-activity symbiosis finds its counterpart in game studies, as seen in Adam Chapman’s idea of “narrative gardens” (2016), a conceptual structure where “space and narrative are deeply and inextricably linked” (101), a space that gives players the opportunity (and responsibility) of enacting certain (hi)stories.

As we carefully examine the models of in-game Kamurocho and compare them with those taken from Google Earth and on-site three-dimensional scans of Kabukicho, we abstract and describe the different tendencies or strategies employed by the development team to guide and channel both the story and gameplay. Through a series of axiometric diagrams in the architectural ethnography/urban sociology tradition widely practiced by Japanese architects and urbanists (vid. Matsumoto 2000; Kuroishi 2016), we schematize how the re-usage of in-game design resources affords the creation of specific and varied narrative-gameplay situations.

In this regard, two design strategies stand out above the rest: the efficient use and reuse of architectural/urban assets, and a direct relationship between the openness of an environment and gameplay mode and difficulty adjustments. These strategies result in an evolving rapport between the virtual city and the life in it, simulated yet emergent. Both strategies also prompt us to think of a “rhizomatic” approach to design that dynamically relates ideas, people, and assets.

Through a playful/gameful narrative, RGG Studio crafts a compelling video game world and projects its own understanding and experience of the city. As the

developers have expressed, they have tried to present human stories deeply rooted in their locality, in their Japaneseness (Archipel, 2020; Shimanuki 2024); furthermore, they also sought to make the possible what is usually impossible in the city, creating new forms of urban experiences through gameplay.

## **METHODOLOGY**

Previous research on “virtual urbanism”, a budding research focus promoted by Konstantinos Dimopoulos (2017A/B, 2020, 2022), has already linked real-life theories of urban planning, such as Kevin Lynch’s five elements that contribute to a city’s imageability (1996) and Robert Venturi’s focus on the symbolic value of built environments (Venturi et al. 1977), with video game design (for the Lynch connection, examples abound: Schweizer 2009, Popa 2009, Karadede & Özen Yavuz 2018; for Venturi, we could mention: Pearson 2016, Çınar & Özeke Tökmec 2025, Estrina & Ma 2025).

In our presentation on this subject, we (Barroso & Huang 2025) explained how we approached the analysis of the design of Kamurocho, focusing on the first and second modalities of our proposed “triple modality analysis of virtual urban spaces”. Here, we shall briefly describe the overall methodology, as it will let us understand how we approach the analysis of the third modality in this paper.

### **Triple modality of virtual spaces**

Our original formulation of the triple modality of virtual spaces was deeply influenced by the work of Henri Lefebvre, French urban sociologist whose tri-partite conception of the human space has had a profound repercussion on how we think our relationship with spaces (1991). While we have further refined our ideas on how the spatial modalities should be conceived in video games, moving away from Lefebvre’s work, our analysis of Kamurocho was still informed by this initial proposal; thus, we shall describe each modalities as it was conceptually deployed for this paper.

#### *First and Second Modalities (Barroso & Huang 2025)*

In our analysis of the first two modalities, we noticed how the designers adhere closely to the urban feel of the non-virtual Shinjuku district, rather than merely replicating the visual experience and actual spaces. The first modality would correspond to the “conceived space”, that is, how we think of the city or the higher-level arrangement of space that would afford diverse socio-spatial configurations (Lefebvre 1991: 190). To analyse these structures, we follow the well-known formulation of the “image of the city” by American urban planner Kevin Lynch (1996). If we look at the way the “five basic elements” of a city are employed, Kamurocho would be a good example of how they can be utilized to convey an urban experience effectively. Another factor to note is the use of *zakkyo* architecture; these multi-tenant and multi-use buildings are commonly found in real-life Kabukicho, and they also support the structure of the *Yakuza/Judgment* series in terms of space and theme.



**Figure 1:** Texture of Tenkaichi Street, right side, south to north orientation. *Judgment* (Sega, 2018) (Extracted with Ninja Ripper)



**Figure 2:** Facades of the *zakkyo* buildings along the northern side of Yasukuni Avenue in the Southern edge of Kabukicho, as of August 2020. (Almazán & Studiolab, 2023: 84)

Our second modality focused on the street level, which we aligned with the idea of the “perceived”, for we understand this modality as the expected usage or experience of a specific space, a mutual modeling between expectation and practice (Lefebvre 1991: 38). For this analysis, we employed a more “intrusive” method for a deeper analysis of the actual design of the spaces in the game: we extracted models

from *Judgment* (Kamurocho) and from Google Earth (Kabukicho) to compare theories of urban planning, especially those from Japan in the late 20th century, including influential architect Yoshinobu Ashihara (1983), with the layout of spaces in the game.

Ultimately, in terms of street experience, we came to the conclusion that RGG Studio mainly focused on the proportions of the street and the simulation of the specific visual style of the vernacular *zakkyo* buildings; we also found a different form of spatial deformation or warping from what we might find in say *Assassin's Creed Unity* where the "radial scaling" brings a decreasing recreative density from center to periphery (Pearson & Youkhana 2022: 22). Here we find a "directional compression" from the North, to bring Okubo Park closer as (a much smaller) Children's Park, and from the East, putting the famous Golden Gai area at the edge of Kamurocho as Champion District. The way the streets of Kamurocho are both preserved and recreated is a manifestation of the particular "unreal realism" RGG Studios seeks in their narratives (Shimanuki 2024).

### *The third modality: game space as "environmental unit" and "narrative garden"*

The third modality, while building on the previous analysis of space, was not fully explained in terms of how it fits into their analysis. In general terms, this layer highlights the strong relationship between narrative and spatial design, typically expressed through environmental or indexical storytelling (Jenkins 2006), which would be notionally in line with the "lived space", linking the representation and gameplay experience holistically through gameplay, the subjective space of the user/player (Lefebvre 1991: 362). We focus on this relationship between spatial arrangement and narrative composition, more specifically through the lens of "historical game studies" and "urban ethnography" (as practiced throughout the late 20th and early 21st centuries in Japan).

When discussing how space is handled in historical games, Adam Chapman (2016) proposed two main ways in which the (historical) narrative of a game could relate to its spatial setting. We consider that both stories and histories are closer than we might usually think (as postmodern historiographers such as Hayden White and Keith Jenkins argue; Chapman 2016: 146); as such, we find Chapman's coupling of (hi)story and space quite compelling. For him, this relationship can manifest itself in one of two forms:

1. Narrative gardens: this structure is more constrained and affords less influence on the development or outcome of the story, but that doesn't necessarily refer to the degree of interaction, for, as Chapman puts it, "gardens and *narrative gardens* are a type of designed aesthetic experience and yet in each we also have some agency" (102).
2. Narrative canvas: in this structure, (virtual) space is "a resource in which, and from which, players can craft historical narratives" (104); with this view of space, the player is given more overall agency, even to the degree of being

considered an author, with the resulting narratives having a similarly de-centered or “messy” development (105).

The work of RRG Studio might implement certain “space management” gameplay modes in some of their games (more specifically, in *Like a Dragon*, or *Yakuza 7*, where the player can buy and manage different properties as they build their own “Ichiban Holdings”); however, whatever actions the player might take in these activities within the game, the unfolding of the plot and its final outcome are not affected by this spatial agency<sup>1</sup>.

By viewing these games as “narrative gardens,” we can better understand the development team's objectives and ultimate pursuit. This particular spatial structure favors highly structured stories that let the player discover what happens/happened, rather than creating emergent stories (ibid. 119). Also, “narrative gardens”, by employing different forms of in-game realism, are primed for “creating environmental similarities” (199); this affinity with more faithful simulations of space further highlights the key role “ludoforming” plays in the design of cities in the *Yakuza/Judgment* series.

The idea of “reality” aligns with the main objective of the studio, as RGG Studio president Masayoshi Yokoyama states: “(R)eality was the most important thing. I wanted to make it really feel like you were in the area . However, the depiction of the area has evolved a lot since 3” (Shimanuki 2024). There is a commitment to “reality”, but not to slavish “realism”. RGG Studio’s ultimate goal lies in the effective transformation of “topography” into “topology”, of translating a familiar city into a credible “narrative garden”:

Our premise is “something that could exist in a game space,” and our main focus is to enjoy the innovative plot. As long as it is not an element that would greatly disturb that premise, I believe that any unrealistic element can be included. (ibid.)

From this, we can see that the driving strength of their games is not a commitment to realism, but a creative acceptance of the extraordinary in the video game reality.

Ontologically parallel to the “narrative gardens”, the concept of an “environmental unit” regards different parts of the city as organic entities that serve as stages for diverse experiences. When the architects at Atelier Bow-Wow (est. 1992, Tokyo) published their innovative guidebook/urban study *Made in Tokyo* (Kaijima et al. 2007), more than offering a strict classification of buildings in Tokyo, they wanted to show how “(a)ny single activity can stand astride several structures at once” and that “our activities are regulated by physical structures such as architecture and civil engineering” (21). In other words, the vernacular *zakkyo* buildings and their underlying symbiotic essence are the rule for Tokyo’s urban dynamic, more than the exception.

Kaijima and her colleagues (2007) extend their consideration beyond individual buildings to encompass the use of urban space. They took Tokyo’s urban practice and categorized it according to the presence/absence of three orders (category, structure, and use) (24-5), resulting in 9 basic types of constructions<sup>2</sup> that are no

longer considered one stable (monofunction) building, but cross-breeds that work when conscious of this multiplicity (24). Let us then end this overview of Atelier Bow-Wow's work by drawing a direct line between the "environmental unit" and the topology of *Judgment*: "the people of Tokyo have accepted the mixture of traffic space and human space, almost as a version of an 'urban regulation'" (29). The Kamurocho experience is its streets, streets that have adopted many of the characteristics and social dynamics of *zakkyo* buildings, streets with the values of "category", "structure", and "use" in shifting proportions.

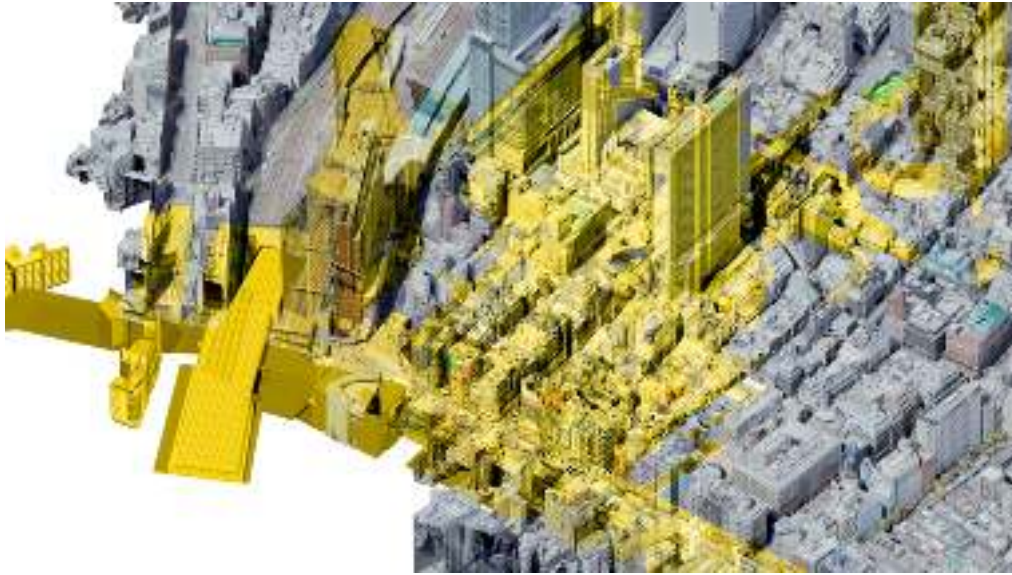
## **Transgressive playing and model extraction**

Our focus on RGG Studio's economical approach to environment design, employing principles of reutilization and rearrangement to reduce production times and strain, have lead us to the direct study of in-game models. We have extracted models from different sections of *Judgment* (RGG Studio, 2018), primarily from the first three chapters, to analyze the relationship between spatial arrangement and narrative flow during gameplay.

Following our previous work, where we went beyond a more constrained reading of the game based on our individual gameplay experiences, we have opted for an exploration of game assets. This transgressive playing (a practice already prominent in the work of Luke Caspar Pearson 2017A/B, 2018, 2020; Pearson & Youkhana 2022) lets the user/researcher dissect the artefact that is the video game, study its specific configurations, and further iterate/reflect on its current (in-game) and other possible arrangements.

### *Model extraction*

First, we used the program Ninja Ripper (v 2.11) (blackninja 2025), meant to run with the Steam platform, to extract spatial assets from selected sequences of *Judgment* representing the main gameplay modes<sup>3</sup> (mainly from Chapter 2; see Appendix A for a summary). Then, we took those models and reconstructed them in Blender. For contrast, we used the program RenderDoc (n.d.) to capture 3D meshes and models from Google Earth; again we used Blender to reconstruct the locations.



**Figure 1:** Overlap of Kabukicho (Google Earth) and Kabukicho (*Judgment*). Game model tinted in yellow and with lower transparency

### *Architectural redrawing*

After analyzing the network of assets in each model, we created axonometric diagrams/architectural drawings, in line with the ethnographic practices of Atelier Bow-Wow (2007) and other Japanese architectural anthropologists (Kuroishi, 2016), that exemplify key moments of each gameplay mode. These drawings not only enable researchers to engage more directly with the utilization of game elements, but they also help establish the form of the “environmental unit” and describe its coupling with the narrative beats of the city.

### **Ryu Ga Gotoku Studio (RGG), from thugs to justice**

Since we are looking at Kamurocho, a very idiosyncratic and emblematic translation of Tokyo’s urban landscape, a brief word on its creator and its evolution will help us understand the relevance of our findings in terms of level/space design. *Judgment* (JUDGE EYES: 死神の遺言) (2018) and its sequel *Lost Judgment* (LOST JUDGMENT: 裁かれざる記憶) (2021) are a companion series to the much older *Like a Dragon* (龍が如く) series, better known in the west as *Yakuza* (2001-2026). Conceived for “adult Japanese men” (Famitsu 2016: 201) according to series creator Toshihiro Nagoshi, over 20 years the series have explored the hardships and heartwarming moments in the lives of the *yakuza* in Tokyo and other places in Japan.

We won’t go beyond this brief overview of the series. However, we shall note from the outset that, despite being a narrative-driven game, the series has distinguished itself from the outset by the variety of (side) activities the player is afforded in each instalment, an approach inherited from the cult-classic *Shenmue* (Sega 1999). As long as the activities are not “boring”, according to Masayoshi Yokoyama, president of the

studio, “no matter how outlandish the setting or content of the game is, it’s okay because the main story will neutralize it” (Shimanuki 2024). This abundance of gameplay modes and agencies is a fundamental part of our analysis.

## RESULTS

### The narratospatial rhythm of a yakuza story in *Judgment*

*Judgment* is an action game set in Kamurocho, an urban area based on real-life Kabukicho (Shinjuku district, Tokyo) that tells the story of detective and former attorney Yagami Takayuki (usually addressed by his last name, Yagami) and his search for the truth behind a series of complicated murders of members of a non-local *yakuza* group. We may refer to the main form of gameplay as “investigation mode”, an assemblage of other, more specialized or focused ludic interactions (namely “chase mode”, “tail mode”, and a variety of “side cases” and “sidequests”). In the foregoing, we shall dissect the modes that make up the majority of the game, “investigation”, “chase”, and “tail”, focusing on the different links established between narrative and space.

We chose the second chapter (“Beneath the Surface”) as our case study for its gradual unveiling of diverse ludic affordances, with occasional references to the first and third chapters for the sake of comparison. Each chapter can be divided into smaller segments that we can view as “missions.” For each of these segments, the game gradually introduces new gameplay modes, allowing players to experience the same environments in different ways. With this constant change of affordances and interactions, we may identify the specific rhythm composed by RGG Studio. Furthermore, we can see how the chapter structure itself follows well-established conventions that date back to the inception of the Japanese detective fiction (Kawana 2008: 29).

#### Chase mode

The opening mission for this chapter displays a frantic beat: while investigating a murder case in the back alley of one of the main streets of Kamurocho, a “masked thief”, chased by a group of police officers, appears out of nowhere and steals his phone; now it’s Yagami’s turn to run from the police and chase the real criminal. In Figure 1, we can see that “Chase mode” presents a few particularities that distinguish it from other forms of gameplay: the player avatar (Yagami) is constantly moving forward, limiting the navigational affordances to the horizontal axis; additionally, at certain moments of the chase scene, the player has to respond to a variety of “Quick Time Events” (referred to as QTE’s among the video game communities)<sup>4</sup> to avoid any obstacles (crowds, billboards, vehicles, etc.) that would otherwise slow down the playable character and make him lose the target. Despite the hectic rhythm of these missions – or perhaps because of it – these compact segments allow players to get a “panoramic experience” of Kamurocho.

One of the main features we immediately identify in this mode (and, as we shall see, every other main mode in *Judgment*) is the ingenious reuse of design assets, both in terms of the city model and its different non-static elements (bystanders, cars,

standing signs, etc.) to guide the player's navigation and overall interaction with the environment. Going back to the diagram in Figure 1, we notice how the spatial assemblages of this mode include elements taken from real life (groups of people, telephone boxes, and such) and those that the designers introduced to have better control of the character's behaviour (one notable example is the inclusion of buses, which would have a hard time moving through the narrow streets and alleys of Kabukicho)

With careful placement and positioning of these elements, RRG Studio bypasses the needed for explicit signposting (highlights, colored surfaces, and other commonly used strategies to guide the player). Furthermore, as each mode offers a more constrained use of the cityscape, the selection of environments for them matches their affordances. *Chase* sequences typically occur around the central node, that is, the Millennium Tower. This comes as no surprise, considering the already restrictive nature of the smaller byways in the district.

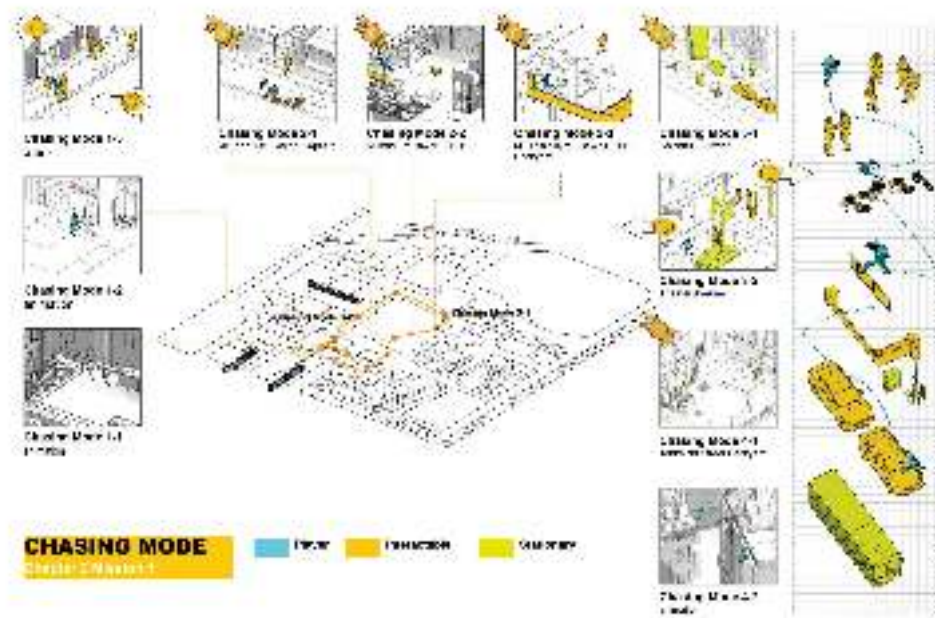


Figure 1: "Chase" after the "Masked Thief" at the beginning of *Judgment's* Chapter 2

## Tail mode

The following mission corresponds to what we refer to as *Tail* mode. These segments require the player to gather information by closely following a human target to a specific location without being detected. For chapter 2 mission 2, Yagami takes on the task of investigating the husband of a small cafe owner, Noriko Taguchi, who has been displaying suspicious behaviour. The rhythm of this mode feels like the nadir of

the previous one: the player slowly follows a target that sometimes moves erratically and goes back and forth, not bumping or avoiding obstacles, but hiding behind them.

The Japanese term for this mode, *biko* (尾行), was already used to refer to this convention in detective fiction of the early 20th century, and as Kawana points out, the tail was a powerful ally in navigating the complex landscape of the city, where it was no longer possible to fully know one's neighbors" (2008: 16). The sneaking system in-game establishes a different relationship between the player and the environment. We find the same environmental elements as those in other modes (Detective and Chase), but the specific navigational affordances of this mode redefine the interactions between them.

As the rhythm of the game slows down –even to the point of reversal–, the player is placed in a new vantage point from which to experience the streets of Kamurocho. Following our assessment of the specificity of the locations chosen for each mode, the developers have selected a route that suits both the content of the mission and the sneaking abilities required by the mission itself. In this instance, the route begins in the open spaces around Millennium Tower and continues through the narrow back alleys of the side streets.

This kind of transition is key to understanding another of the main strategies that distinguish the spatial design in *Judgment*. *Space is challenge*: on the big, crowded streets, there are people, parked cars, vertical signs, a plethora of elements behind which Yagami can safely hide; but as the mission turns to the smaller alleyways, the task of finding safe spots to avoid detection becomes increasingly difficult. This dynamic rhythm, from open to secluded and from easy to difficult, is tightly bound to the utilization of spaces; the design practices of RGG Studio, however, do not require the dramatic modification of the city design (or any at all), as they integrate gameplay beats to the already established urban setting.

In both "Chase" and "Tail" modes, as the player gives up their navigational freedom to different degrees, they are brought into an all-encompassing "scroll game", which, as Henry Jenkins indicates, places a game for a moment "alongside a much older tradition of spatial storytelling: many Japanese scroll paintings map, for example, the passing of the seasons onto an unfolding space" (2006: 122). In its firm conviction to create an unapologetically Japanese experience with the *Yakuza/Judgment* series, RGG Studio honors its visual tradition by bringing the "navigation as narrative" dynamic of the scroll into the narrative garden of the video game.

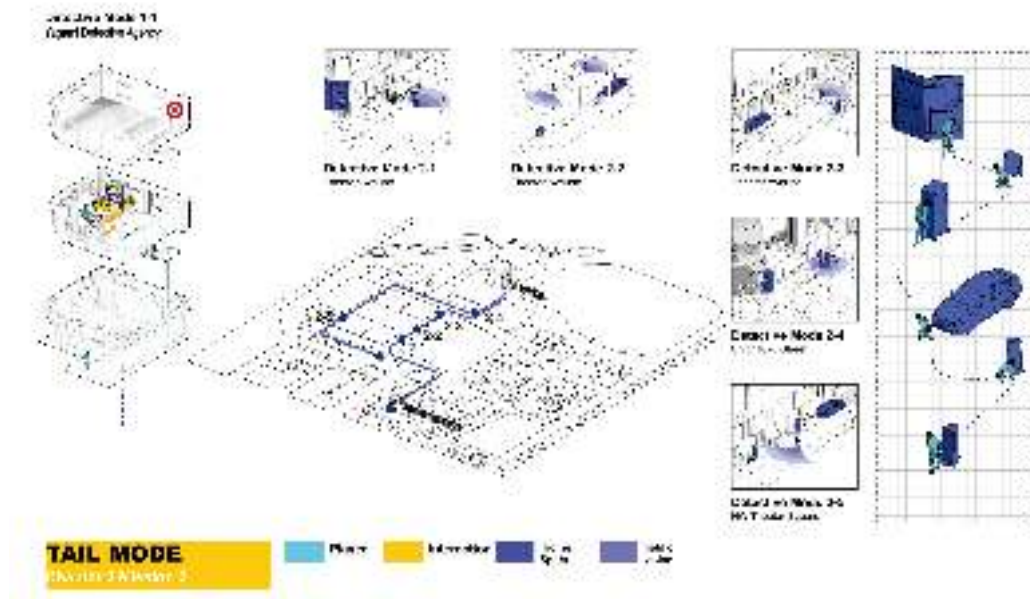


Figure 2: Route for “tailing” Noriko’s husband during Chapter 2 Mission

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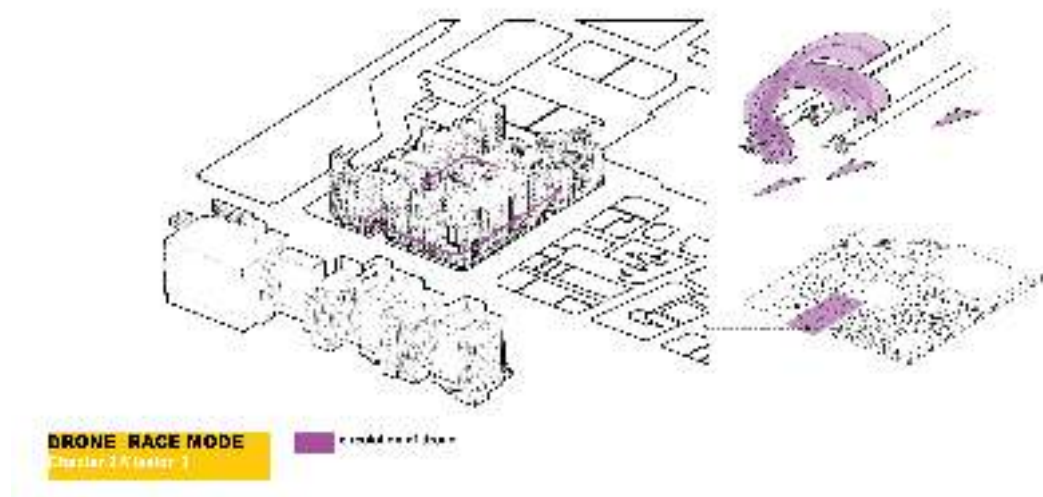
### Narrative diversion 1: Side Cases and Drone Races

After successfully “tailing” Noriko’s husband and resolving their conflict, a new game system is enabled: the “Side Cases”. Most of these extra assignments –our previous “tailing” mission would, in fact, be considered part of this system– can be accepted at Yagami Detective Agency. However, some are initiated at specific locations around the city. The variety of side cases is directly related to the advance of the main plot, and yet, some of these missions have their own narrative arc<sup>5</sup>, even when they have no bearing on the overarching plot of the game. Since this and the other “side” contents are introduced in the game parallel to the gameplay modes, we may emphasize the concept of Kamurocho as a game-wide environmental unit, that is, the whole game environment serves several gameplay modes and narrative beats.

Since side cases can be associated with any of the main gameplay modes, we do not consider a mode on its own; nevertheless, their importance for the overall functionality of Kamurocho as “environmental unit” cannot be overstated: they connect locations around the city with specific non-player characters (NPC), allowing smaller narrative strands to unfold, and these in turn contribute to weave a variegated organic whole.

Another example of side content that highlights the symbiotic systems of *Judgment* is the “Drone Race” mode. Coming right at the end of the previous mission, this system adds another layer to the understanding of Kamurocho as the locus of play. “Drone races” see Yagami pilot his trusty drone (he had already used it to spy on some yakuza in the first chapter of the game) in a series of competitions against other NPC-operated drones. Given the non-human manifestation of the player’s agency,

the spatial experience is dramatically transformed: the speed is significantly increased (up to 5 times that of Yagami on foot), and the vertical axis further enhances the drone's mobility. Again, early races take place in spaces that allow freer mobility, around the familiar Millennium Tower; as the player moves up the ranks, competition moves into narrower spaces. In Figure 3, we can see a simple circuit around two of the main thoroughfares (Tenkaichi Street and Nakamichi Street, and how the city model of other gameplay modes is being repurposed for a different spatial perspective.



**Figure 3:** First “Drone race” circuit in *Judgment*

While on the subject of drones, during the main “Investigation mode”, the narrative may require the use of the machine in “drone search mode”<sup>6</sup>. As a detective, Yagami utilizes any available resource, including technology. When direct engagement is not a viable option, Yagami uses his drone to hover around specific buildings to gather intelligence and set up an action plan. Just as with the races, the use of the drone offers an opportunity to explore – a little part of – the city from an alternative vantage point.

By taking mobility to another level, we are also shown how the developers behind the game manifest another side of their design philosophy: their wish to do –and let players do– “things that are impossible in reality but we’ve fantasized about doing” (Famitsu 2016: 89). RGG Studio is not only trying to tell a classic detective procedural/yakuza drama, they also want to expand on the ludonarrative possibilities of the city. This expansion of urban possibilities leads us back to the fantastical element in the series: the use of drones is strictly regulated in Tokyo, which means events like drone races wouldn’t be a reality in Kabukicho.

### **Investigation mode**

Now we come to what we consider the foundation of gameplay in *Judgment*. The “Investigation mode” combines the most basic elements of gameplay and spatial

arrangements, from which the more focused modes derive their navigational foundation and key movements. As an umbrella mode, “investigation” links narrative and gameplay thematically; the different affordances the player has in the course of a normal investigation reflect the highest degree of freedom and engagement with Kamurocho, in terms of both space and interaction. During an investigation, Yagami can do or encounter the following:

<b>Affordances in “Investigation mode”</b>	<b>Adopted in other modes</b>
Navigate freely through the streets	Tail mode
Gather material/items on the streets	—
Search for clues and intel	— (Exclusively scripted)
Explore the interior of certain buildings	— (*Scripted infiltration)
Interact with elements in Yagami Detective Agency	—
Buy food/decorations/gifts	—
Eat or drink at restaurants/bars/cafes	—
Use cellphone	Tail mode
Upgrade skills (cellphone)	—
Bump into people	Tail mode

Get into random fights	— (*Scripted fights)
Participate in a variety of leisure activities	—
Access <b>photo mode</b>	—

**Table 1:** Affordances of “Investigation mode”

Judging by the unique features of “investigation mode” in terms of gameplay and the richness it adds to the narrative engagement, we might reassess our consideration of it as an umbrella mode of gameplay; “investigation” is the essence of the game, affording the player a multitude of actions and sequences that can be interrupted at almost any time by an equal or greater variety of diversions. Ultimately, the main narrative unfolds within the “investigation” mode, but the mode itself goes beyond the standard narrative and offers a comprehensive street experience of the Japanese megalopolis.

### *Combat*

By examining Table 1, we may notice that the most distinctive activities are free navigation (“free exploration”), random encounters (“combat”), and the search for clues or intel (“search modes”). Of these, urban hand-to-hand combat gameplay might be the one that distinguishes this yakuza narrative form. We analyzed the models from the main combat segments (scripted) of the first two chapters. As the diagram shows, narrative battles frequently take place in secluded areas, such as back alleys and yakuza-controlled office buildings. This spatial choice is highly relevant if we consider how random battles unfold: as you navigate through the streets of Kamurocho –that is, out in the open– a group of thugs<sup>7</sup> may challenge Yagami to a fight; during the match, aside from Yagami’s martial skills, the player can use most of the urban surface (mobile and otherwise) to their advantage, such as using standing signs as weapons, throwing enemies into waste containers, and such; finally, if the player decides to avoid any challenge the combat might represent, they have the option to run away from the assailants since these encounters take place out in the main streets of Kamurocho.

Interaction	Fight		
Type of Scene	Backyard	Interior	
Chapter 1 Mission 3-B Chapter 1 Mission 3-E		Chapter 1 Mission 3-B KURAIT 3 Floor	
Chapter 2 Mission 3-1 Backyard of Yagami Agency		Chapter 1 Mission 3-0 KURAIT 4 Floor	
Chapter 2 Mission 3-4 Backyard of Gakuza		Chapter 2 Mission 3-4 KURAIT 5 Floor	

**Figure 4:** Diagrams of “combat” in *Judgment*, both regular and scripted

Consistent with the rest of the design choices related to the coupling of space, gameplay and narrative, **scripted battles** follow the same strategies we have seen before when it comes to adjusting and balancing difficulty. After examining Figure 4, we may notice that these events occur in more constrained spaces, so the player has to carefully assess their surroundings and utilize them to their advantage; here, open space as a combat advantage is traded for weapon density as a means of defense (for example, furniture in yakuza offices can serve as effective weapons against the enemies). The shift to secluded, even concealed, spaces is consistent with the criminal practices in actual Kabukicho; according to the “2023 Shinjuku Warning Map” released by the Tokyo Metropolitan Police Department, criminal activity in that area of the city (extortion, blackmail, and such) usually happens when tourists or people unfamiliar with the area are lured to specific shops in *zakkyo* buildings and back alleys.

## Search

Detective work often requires focused attention and careful observation. To simulate this side of an “investigation”, the developers have designed segments called “search mode”, brief changes in perspective (from third to first person) that task the player with finding specific information or relevant clues for the case in progress. We already showed how searching with the drone offers a new vantage point to experience certain parts of Kamurocho.

The other forms of search do not create those new possibilities in the same way the drone does. Still, they allow the creators to direct the player's attention to certain narrative cues embedded in the city, momentarily taking some of the agency away from the latter (Chapman 2016: 102). An example of this forced slowing down is the opening sequence of Chapter 2, where the player is tasked with searching the victim and the crime scene of one of the serial murders already introduced in the first chapter; the different things or (narrato-environmental) cues the player needs to focus on (a path to the alley, garbage dumps, out-of-place objects) are both “ornament” and anchor point that help the specific narrative beat move forward.

This kind of scripted event –of which we have discussed “combat”, “tail”, and “chase”– again reminds us that different narrative forms/elements coexist when the space is envisioned as a “narrative garden”. Marie-Laure Ryan and her colleagues (2016) remind us that there is indeed a “built-in affinity with narrative” (104) that video game worlds display due to their procedural presentation. Still, given the degree of agency attached to the medium, games limit this freedom “in order to satisfy the demands of narrative interest” (id.). Even RGG Studio needs to keep tabs on their yakuza and their detectives.

## Narrative diversion 2: Free exploration and mini-games

We discussed at some length one key facet of the main “Investigation mode”, that is, the combat. But the other, perhaps more important, side of this mode is the “free exploration”. Free exploration consists, in the greater part, of the navigation of the city; however, as the name implies, its attached freedom is attested by the wealth of activities offered to the player. Aside from the “drone races” and “side cases”, there are also smaller tasks/missions related to NPCs in different parts of the city, and mini-games.

Mini-games create a particular cultural landscape that makes Kamurocho a distinctive location. Nis Bijin (2021) characterises mini-games (or ‘minigames’) as privileging “one mechanic in the purpose of having a player achieve a 'parent' game's tertiary or voluntary goals” (655). These smaller interactions may or may not have bearing on the overall progress of the main narrative; *Judgment* includes both “critical” and “noncritical” mini-games, with the former, after being introduced, becoming one of the latter.

These activities provide additional instances of gameplay, which translate into new perspectives on the city, new ways of seeing and experiencing it. Of the twelve mini-games in *Judgment*, seven use the same city model as the main gameplay

modes<sup>8</sup>. So, experiences such as “Kamuro of the Dead” and “Paradise VR” reimagine an already reimagined reality, enriching both in this creative process.

This array of side content, both mini-games and side cases, not only offers alternative perspectives on city life but also rewards the player with a plethora of objects and memorabilia that enrich the Yagami Detective Agency. Rewards and souvenirs transform the hestial (Vella 2019) into a microcosmic version of the environmental macrocosmos that is the whole of Kamurocho: “The hestial [Yagami Detective Agency] and the hermetic [the streets of Kamurocho], inside and outside, mapped place and unmapped space, are equally essential components of our dwelling in the world” (145) created by RGG Studio.

In line with the overall “synthesis” of reality and possibility, the inclusion of all these additional elements makes sense to the “environmental unit” of Kamurocho; as lead planner Ryosuke Horii declares on the implementation of “play spots” (mini-game and side-quest locations) for the *Yakuza* series: “Of course we do have a lot of spots that are taken from ideas by us, Nagoshi or Yokoyama, but we also have things that were thought up by the young people or that were born from chit chat. It's easy for something to get picked up if it has an impact or just seems like it would be funny if Kiryu did it.” (Famitsu 2016: 123).

## DISCUSSION

### Use and reuse, a life story

According to Henry Jenkins (2006), “spatial design can either enhance our sense of immersion within a familiar world or communicate a fresh perspective on that story through the altering of established details” (11). In the case of Kamurocho, its main streets and specific places are well-primed for a wide range of spatial configurations, and not only that, but they also facilitate certain narratives and interactions to unfold, as characters and elements are constantly in stable relation.

The interrelationships established between locations, characters, and narrative strands in *Judgment* are made possible thanks not only to the overall management of game models and assets but also by “the altering of established details” in terms of gameplay. As we have shown, despite the diversity of gameplay modes, gameplay modes, and game systems, RGG Studio shows a consistent utilization of spatial assets and distributions, and other types of game resources: city models, character models, buildings’ facades and signs, they make repeated appearances, often with little to no change.

The magnitude and complexity of each element directly influence their ease of modification; however, we also find an inverse proportion with their reuse. What we mean by this refers mainly to the city and NPCs: the former is a constant that, as we have shown through and through, keeps shape and general identity no matter the mode (or side content); on the other extreme, people, inherently mobile, change from mission to mission, from chapter to chapter (in chapter 2 we go the “masked thief” to the homeless in the sewers, to Noriko and her husband, to the Korean gangs, so on and so forth).

## It's a whole (open) world of possibilities

This methodology, revolving around what we have described as a “transgressive playing” of a game, not only allows us to get a better look at the topography of the game world beyond the actually accessible playfield (topology), but it also lets us understand the concrete management of assets and resources across different gameplay modes. This approach appears to have a particular affinity for spatial explorations of both interiors and exteriors. Parts of this methodology, including model extraction (coupled with architectural analysis, such as H/D and W/D proportion analysis), could open new avenues for studying genres that have limited appeal in well-studied areas (like narrative)<sup>9</sup>. That being said, its pertinence for research with other foci is not warranted, and the design of less (explicitly) referential spaces allows for a greater play of proportions, scaling and compression.

While we argue that RGG Studio's strategic space-narrative coordination has a positive impact on their overall game design, we believe there is much to learn by comparing their approach with that of other game developers of a similar magnitude. We've already identified other open-world games, specifically the *Assassin's Creed* series (Ubisoft 2007) and *Ghostwire: Tokyo* (Tango Gamesworks 2022), as the main subjects for a potential comparative analysis. Even newer games and projects either use similar ludofforming practices like *Black Myth: Wukong* (Game Science 2024), with its redesigning and reutilization of direct scans of Shaanxi architectural/cultural elements (LanseyoujiaoVictor 2024), or the upcoming *Ananta* (Naked Rain TBD), an upcoming game that tries to offer an experience adjoining “freedom” and “city”, enriched by a wealth of side content (Wuxianda 2023) as we have described in the works of RGG Studio.

This gap in comparative studies that target specific game design approaches could be addressed by studying these space-exploration-focused games using the architectural ethnography methods employed for this project. By dissecting and reconstructing the spatial experience of games and combining data from various sources, including designer interviews and player feedback, we can study the effectiveness of space-narrative interaction strategies across different game studios. These strategies help us gauge the effectiveness of the (virtual) urban design achieved by developers with distinctive design philosophies, in terms of the consistency between their use of space, their narrative engagement, and their embedded interactions.

One final implication of this research field, virtual urbanism, is the connection between real-life tourism and the experience of video game environments. As Dimopoulos' guide of virtual cities shows (2020), there is real interest in historying and experiencing urban realities on both sides of the screen; this holds even truer when we talk about highly referential environments such as Kamurocho in the *Yakuza* series and Yogenjaya in *Persona 5* (P-Studio 2016) (Corrigan 2018). In his exploration of the relationship between fans and their preferred media, Matt Hills (2002) talks about “cult geographies” in media that serve “as the basis for material, touristic practices” (144); Hills describes how “the audience-text relationship is shifted towards the monumentality and groundedness of physical locations” (149). While local authorities in Japan have explored these implications, more attention to

these real-virtual engagements would bear interesting results for both tourism and game design.



Figure 5: Onomichi, Hiroshima, tourism brochure inspired by *Yakuza 6* (RGG Studio 2016)

## CONCLUSIONS

Just as the investigative work of detective Yagami encompasses a wide array of activities and skills that establish diverse relationships with his environment, human and otherwise, “architectural ethnography” engages in the “drawing and description of the living and the built” (Rodríguez Rivero 2024). This parallel between the drawing method of architectural ethnography outlined by Atelier Bow-Wow (Tsukamoto 2020) and the design approach of a game such as *Judgment* has proven fruitful, as both analytical work and design practice either “uncover [or create] our own entanglements in the most diverse regimes and networks or the potentials and ambitions of a social situation”.

When analyzing a game’s narrative-gameplay coupling as manifested in its space design, we found that the “environmental unit” conceived by Atelier Bow-Wow provided a perfect parallel for the comprehensive experience of Kamurocho in its abundant side activities. Just as Yang and Qian comment on the architectural practices of Atelier Bow-Wow (2018), the developers of *Judgment* establish a “specific way of dialogue (...) based on the environmental reality around the project”, or around the narrative reality.

We've also shown how RRG Studio has been employing a game structure with the *Yakuza/Judgment* series that displays a strong grip on the (main) narrative that is balanced by an equal measure of freedom, manifested in the side cases/content freely distributed around their cities. This oscillation makes the (narrative) garden that is Kamurocho come alive, for it is not only (architectural and urban) structure, it is also a living (seemingly emergent) place.

Each gameplay mode, from "investigation" to "active search", is placed and makes place; in the same model of the city, constrained use of space brings out varied narrative beats. This constant hold-and-release relationship established between the player and developer has resulted in a game that entices with its echoes of popular Japanese culture, a well-defined narrative structure (which in itself relates to older media, such as "V-cinema" and TV dramas), and this is also present in the fabric of the game itself. The profound interrelationship that we encounter at each level of gameplay and ideation, shows the way towards a symbiotic design philosophy that we propose calling "rhizomatic design", following Andaloro's exploration of the concept in terms of building process management (2024); we identify this approach emerging from the diverse links that RGG Studio establishes among their game assets (city models, character models, gameplay modes).

In a 2020 interview (Archipel), *Yakuza* series creator Toshihiro Nagoshi stated that his main intent with the series was to have as many people as possible experience the entire history without abandoning it midway due to difficulty or boredom. Balance, then, was the main concern for its success: making enemies too weak would dull the overall experience, and vice versa. The environment was the solution; as producer Tatsuro Koike shared in the Famitsu "Ultimate Collection" book for the series (2016), their approach to combat design, which was the key to keeping those tense moments interesting, was to "make everything in the city a potential weapon" (95). Again, by providing more ways to interact with the environment, even combat can have narrative weight.

Ultimately, compared to other open-world games (such as GTA or the Assassin's Creed series), the *Yakuza* series, and its sister *Judgment* duology, have a relatively higher average main story completion rate (approximately 52.7% according to u/JE3MAN's comparison of the final chapter completion of mainline games across PS4, PS5, and Steam). Players seem to be attracted to its "narrative garden" and enjoy the different views the gardeners at RGG Studio arrange with each new entry. Until the flowers and everything else in the garden wilt away: with the fading of yakuza groups and activity, how to cultivate this garden? As the *Yakuza* series draws to a close and the yakuza themselves find their activity in Japan more constrained (Baradel et al. 2021: 225), RGG Studio can still find ways to continue telling their stories: tear down and rebuild, as we see in the renewed takes on their older games (such as the *Kiwami* remakes of the first three games of the series), and as we shall see in their new original game *Stranger Than Heaven* (RGG Studio TBD).

## NOTES

1. The division between spatial structures is not strict. Chapman himself points out the influence actions players take on the overall environment, and the actions of the player can leave permanent marks, even if their relevance is purely or mainly ornamental (2016: 110)
2. In their guidebook, they explore 70 examples that present different combinations of orders and, as a result, functions.
3. We talk about “gameplay modes” in the terms used by Ernest Adams in his *Fundamentals of Game Design* (2014): “A collection of features of a game that strongly influence the player’s experience of the game at any given time.”
4. This label was introduced and popularized by Yu Suzuki in his influential game *Shenmue* (Sega 1999), a game for which Toshihiro Nagoshi, creator of the Yakuza franchise, worked as supervisor.
5. One example of side cases narratively bound is the three initial ones called “Twisted Trio”. These cases not only link to the fourth one, “The Pervert King”, but they also spill over into the sequel *Lost Judgment* (2021) as part of the “Filthy Four” DLC content.
6. There are different forms of “search modes” that we’ll discuss later when we talk about “Investigation mode”.
7. These thugs belong to different criminal groups, and their diversity grows as the narrative progresses, from the simple “Street thugs” to more organized criminal gangs (Keihin) and yakuza clans (mainly Tojo and Kyorei)
8. For a comprehensive list of mini-games and their utilization of the main city model, see Appendix B.
9. For instance, new possibilities could emerge for map usage and design as “narrative gardens” in first-person shooters (FPS).

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## APPENDIX A (Chapter 2 Summary)

- This chapter begins with the main gameplay mode: free-roam or detective mode. Takayuki Yagami (Yagami from now on; protagonist, defense attorney turned detective) and Masaharu Kaito (Kaito from now on; Yagami's assistant and former yakuza member) are investigating a series of murders tied to The Mole (a serial killer who has so far executed and gouged out the eyes of three yakuza members of a non-local family). As the player, our first task is to travel from the first crime scene, located in the back alley of Pink Street, to the scene of the second murder, another alley at the back of Tenkaichi Street. This search is quickly interrupted by the new task of chasing a "masked thief" (**Mission 1**) who is themselves being chased by the police; this leads to a second form of gameplay: a chase sequence. Though this breaks the usual rhythm of the game, it allows a very focused view of specific parts of the city, in this case, Tenkaichi Street.
- After this chase scene, you encounter a homeless man who asks Yagami to help find a doctor, a search that leads to the northern fringe of the district, to the Sewers (accessible through a children's park). With little detour outside the map of Kamurocho, you make your way back to Genda Law Office (Yagami worked there when he was a lawyer; now they ask him for investigative assistance), just to inform Yagami that his services are no longer needed. This thematic release is also reflected in a greater freedom to experience the city, with its side cases and minigames, such as the drone races organized in the Millennium Tower. These newfound freedoms come

with new challenges (the Keihin gang) and new city folk (even non-Japanese, like the Korean Kim-san).

- Back in Yagami Detective Agency (the protagonist's headquarters, and a place the player visits and sets out from), you accept a small request (a new side cases system at Genda Law Office), which once again changes the rhythm of the game: tailing, in this case, an older man whose wife believes he's cheating on her (**Mission 2**). The player has to follow the older man through some smaller streets without being seen, all the way to Heavy Coffee. Once this small task is done and the man is caught red-handed, Kaito calls Yagami and asks him to meet at the Koi Bride, an indoor fishing pond.
- Koi Pond is one of the few interior, explorable environments that entail a "transition" (loading). Downstairs, you find a small, austere fishing pond, but despite the peaceful look of this place, Yagami and Kaito are ambushed, and a fight ensues. It turns out, Kaito's informant (Kazuya Ayabe, a "dirty cop" who peddles information) was testing their resolve; after this test, they are shown a set of stairs to go further down (how deep is this space?), to a secret underground casino, L'Amant. Again, this narrative-motivated interaction opens further options of engagement with Kamurocho, this time in the form of gambling activities, such as poker and blackjack.
- After a few rounds in the casino (**Mission 3**), Yagami has to go back to his office to look at the files given by Kaito's informant. On the way back, before going into his office building, Yagami is assaulted by balaclava-wearing assailants who seem interested in retrieving the envelope given by Ayabe. In the office, Yagami reads the file and shares his findings with Kaito. With the info, Yagami decides to go to Kanban Wife (a role-playing erotic "massage parlor" where women act for their guests). As Yagami waits for the girl he wants to interrogate, Hamura (Kyohei Hamura, Yakuza boss who was acquitted of the serial murder charges in the previous chapter) barges into the room, beats the detective, and insists he stop investigating.
- Yagami calls the head of the Mitsugi Matsugane (head of the yakuza family to which Hamura belongs, and Kaito used to belong). The player must navigate to the family office to meet Matsugane; however, the building itself is not fully explorable due to several blockages caused by renovations. With little success, Yagami is summoned to Café Alps by Hamura, a reputable coffee shop/restaurant at the southern end of Nakamichi Street.
- It's time for a boss fight (**Mission 4**). Yagami is taken to the back alley, where he has to fend off a group of Hamura's goons, including big guy Ozaki. Once the fight is over, and Yagami finds himself at gunpoint, the "masked thief" comes to his rescue, leading to another chase sequence around the city to lose the Matsugane family (**Mission 5**). This sequence takes the player through many of the district's most prominent locations, including Theater Square and the Millennium Tower.
- Once safe, in a small, secluded alley, Yagami bids farewell to the "masked thief" with an offer to work for him in the future.

## APPENDIX B (Mini-games)

Minigame	Location	Use of map	Axonomic projection	Render model
Arcade games (classic Sega)	Cup Sega	Yes		
Balling	Yoshi Ball (Sega) / The God of War	Yes		
Blackjack	Sega's Pinball: The Manx Machine / Sega's Pinball: The Manx Machine	No		
Cars	Beniam East Millennium Tower Street	Yes		
Drone races	Millennium Tower	Yes		
Kamuro of the Dead	Citius - Sega / The God of War Square	Yes		
Kai ko	Dragon's Palace	No		
Mahjong	Lobby Kingpin / The God of War Street / Moon Dragon / Sega's Kurosaki / The God of War / The God of War	No		
Ochi-Hachi	Dragon's Palace	No		
Paradise VR	Princess of Paradise / The God of War	Yes		
Shog	Sewers	No		
UFO catcher	Citius / Sega / The God of War / The God of War	Yes	