Piercing all Layers of the Anthroposphere

On Spatialization and Architectural Possibilism in *Hitman*

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Architecture as a Medial Hinge

Defining architecture as a "medial hinge"[1] loosely refers to German architect Hans Hollein's (1934-2014) postulation in 1968 that everything is architecture.[2] Architecture has to be understood anew in its *medial* potential, or how it can mediate the environment to the observer by enabling new spheres of action.[3] Hence, the concept of architecture as a medial hinge focuses on the role and importance of architecture, in all its possible forms, as a total work of art.[4] It is a predominant means (in the sense of the

1 | Marc Bonner, "Architektur als mediales Scharnier—Medialität und Bildlichkeit der raumzeitlichen Erfahrungswelten Architektur, Film und Computerspiel," *Image. Zeitschrift für interdisziplinäre Bildwissenschaft* Vol. 21, No. 1, (January 2015), pp. 5–22.

2 | Hans Hollein, "Alles ist Architektur," *Bau. Schrift für Architektur und Städtebau*, No. 1/2 1 (1968): pp. 1–28.

3 | Hollein's primary example is the head-up display (a transparent display that presents data without requiring the user to change their line of sight) inside of a fighter pilot's helmet. This architecture enhances sensual perception and synesthetic experiences of the environment, whether it is at hand or far in the distance.

4 | Architecture is constituted by arrays of different materials, medias, and entities: these range from concepts, theories, ideologies, or abstract atmospheres to drawings, analogue and digital graphics, analogue and digital models; as well as from algorithms and level structures to actual buildings, groups of buildings, built environments, urban complexes, landscape architecture, or film sets.

German term "Agent") of understanding and perceiving reality, as well as the fictional worlds of mass media. Architecture as a medial hinge merges different disciplines of media and art with the realm of the everyday, folding them onto each other and encapsulating one another. Thus, architecture is a medium within a medium: it rhythmizes and regulates our experiences of the world. In its current digital, pictorial, viral ubiquity, architecture no longer has to be bodily present, but "it always has a mediating role instead of being the end itself".[5]

In particular, the enactment of architecture and the perception of 3D game spaces are tightly interwoven, as performative interaction within nonlinear environments and spatial involvement, in the sense of Gordon Calleja[6], is crucial. Speaking of architecture as a medial hinge thus refers to the corresponding architectonics of built reality and digital game worlds.

On Movement, Interaction and Inhabitation

To a certain degree, the observation above is not new to some fields within game studies. Michael Nitsche defines game-intrinsic space as nonlinear exploration, while filmic space is a linear description: "The necessary eye of the virtual camera makes these spaces cinematic and the interaction makes them accessible much like architectural structures".[7] Ernest W. Adams stresses that architecture is used in order to define what a place is supposed to feel like, as well as "what might happen to you there, and even sometimes what you ought to be doing".[8] Ulrich Götz highlights 3D nar-

5 | Juhani Pallasmaa, *The Embodied Image. Imagination and Imagery in Architecture* (Chichester: John Wiley & Sons Ltd., 2011), p. 100.

6 | Calleja's concept of involvement in game worlds will be elucidated later. Gordon Calleja, *In-Game, From immersion to incorporation* (Cambridge, MA/London: MIT Press, 2011).

7 | Michael Nitsche, *Video Game Spaces. Image, Play, and Structure in 3D Worlds* (Cambridge MA/London: MIT Press, 2008), p. 82.

8 | Ernest W. Adams, "Designer's Notebook: The Role of Architecture in Video Games," *Gamasutra* (October 9, 2002) https://www.gamasutra.com/view/feature/131352/designers_notebook_the_role_of_.php. (accessed March 15, 2019).

rative spaces as points of convergence with physically real architecture,[9] which is only fully revealed to explorers who appropriate all of its places and paths.[10] Gordon Calleja also highlights the quality and freedom of player-induced movement, which "is the key ingredient that allows players to act upon the environment and is thus a necessary condition for the sense of agency that is a crucial factor in the game experience".[11]

The convergence between game-intrinsic architecture, built reality, and the spatial perception thereof differs from linear, restrictive, and enclosed level structures seen in *Quake* (1996) to the labyrinthine, multicursal stacks of *System Shock* (1994); from open cityscapes such as Paris during the French Revolution in *Assassin's Creed Unity* (2014) to the coherent building types of *Dishonored 2* (2016). Except for the latter, few game worlds enable the creation of individual narratives through an intricate architectural experience like the current editions of the *Hitman* series. Therefore, the distinct architecture and groups of buildings from *Hitman* (2016) will serve as a case study in this work, as they interweave

9 | In addition, according to Götz, game designers as well as architects are confronted with overlapping design aspects like visual presentation und spatial experience. Both occupational fields must cope with similar problem-solving and construction methods. Ulrich Götz, "Load and Support. Architectural Realism in Video Games," in *Space Time Play. Computer Games, Architecture and Urbanism: the Next Level*, ed. Friedrich von Borries, Steffen P. Walz, and Matthias Böttger (Basel: Birkhäuser, 2007), pp. 134–37, here p. 134. This has resulted in several architects or product designers working in the game industry, see: Marc Bonner, "Analyzing the Correlation of Game Worlds and Built Reality: Depiction, Function and Mediality of Architecture and Urban Landscapes," *DiGRA Conference 2014,* Utah (August 3-6, 2014), conference proceedings (2014), pp 1-14.

10 | Götz, 2007, p. 134. In terms of the role of exploration in open world games, see: Marc Bonner, "On Striated Wilderness and Prospect Pacing: Rural Open World Games as Liminal Spaces of the Man-Nature Dichotomy," *DiGRA 2018. The Game is the Message*, University of Turin (July 25-28, 2018), conference proceedings (2018), pp. 1–18; Marc Bonner, "Erkundung als virtuell-fiktionale Immersionsstrategie—Das prospect pacing der Open-World-Computerspiele als Spiegel nicht linearer Spieler-Einbindung," *Jahrbuch Immersiver Medien 2016*, Interfaces—Netze—Virtuelle Welten, ed. Institut für Immersive Medien Kiel (Marburg: Schüren, 2017), pp. 38–57.

11 | Calleja, 2011, p. 27.

Le Corbusier's (1887-1965) concept of the *promenade architecturale* with the French urban palace layout of the *hôtel particulier* into ludic analogies of built reality.[12]

The corporeal potential of this is characterized by the open-endedness of the game-intrinsic buildings. As Calleja concludes, it is all about spatial and kinesthetic involvement. He defines the "incorporation" of the player as "immersion as transportation," which is characterized "not just [by] an engaging activity, but also [by] a world to be navigated".[13] Thus, spatial qualities such as navigation, interaction, and exploration must play with multiple sizes of space, interior-exterior dynamics, while remaining effectually complex at the same time:

> When a player plots a route through a geographical expanse and then navigates it, it is more likely that she will feel a sense of habitation within the game environment. There is the added satisfaction of having expended effort to reach a particular destination, especially when reaching this goal is challenging.[14]

Therefore, architecture as a medial hinge, and its role in different modes of perception among contiguous media, relies heavily on phenomenology. Both the spatiotemporal experience of space in physically real architecture and the spatiotemporal experience of game-intrinsic buildings have a close relationship. In contrast to film or literature, "[g]ame environments afford experiences that are not available through non-ergodic media".[15]

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12 | For more information on the building type entitled *hôtel particulier,* see: Frédérique Lemerle, "L'émergence de l'hôtel particulier à Paris," *Marquer la ville, Signes, traces, empreintes du pouvoir (xiiie-xvie siècle)*, ed. Patrick Boucheron and Jean-Philippe Genet (Paris/Rome: Publications de la Sorbonne, 2013), pp. 109–123. https://books.openedition.org/psorbonne/3275?lang=de (accessed June 17, 2019).

13 | Calleja, 2011, p. 27.

14 | Ibid., p. 75.

15 | Referring to Aarseth's concept of ergodicity, Calleja states that players must provide active input into a gameplay session. The term "expresses the active participation of the player within" the man-machine feedback loop "that is formed by the game's hardware, the representational layer, and the underlying rules and environmental properties." Ibid., pp. 41, 167–172.

Three Categories of Architectural Experience

Eventually, this leads to Carney Strange and James Banning's categories of design for human behavior in real-world college and university campuses, namely those of "architectural determinism," "architectural probabilism," and "architectural possibilism".[16] According to John McArthur, these categories also apply to digital technologies. Thus, they can become new kinds of spaces, which we then have to appropriate.[17] Architectural determinism "suggests that there is a rather direct link between the built environment and behavior within it".[18] McArthur clarifies that choices "are dictated by the physical structure".[19] Not only is this evocative of the promenade architecturale, but also of the kind of single-path architecture that exists in games like Half-Life (1998) or The Last Guardian (2016).

Architectural probabilism enables multiple behavior patterns and courses of action. Such "probabilistic links" channel certain ambiances and affordances, and can exhibit multicursal configurations. This evokes preferences, but also suggests a kind of freedom in the architectural experience.[20] Here, "the design of a built environment can increase the likelihood of some actions over others".[21] This is the case with games of the *immersive sim*[22] subgenre, such as *Dishonored 2* (2016) or *Deus Ex: Human Revolution* (2011), as well as with nonlinear stealth games like *Hitman: Absolution* (2012). Architectural possibilism "views the physical environment as a source of opportunities that may set limits on, but not restrict, behav-

16 | C. Carney Strange and James H. Banning, *Educating by Design, Creating Campus Learning, Environments That Work* (San Francisco: Jossey-Bass/Wiley & Sons, 2001), p. 13.

17 | John A. McArthur, *Digital Proxemics, How Technology Shapes the Ways We Move* (New York, NY: Peter Lang Publishing, 2016), p. 8.

18 | Strange and Banning, 2001, p. 13.

19 | McArthur, 2016, p. 6.

20 | Strange and Banning, 2001, p. 14.

21 | McArthur, 2016, p. 7.

22 | For better insight into the characteristics of the immersive sim games and its roots in certain developer studios, see: Hans-Joachim Backe, "Metareferentiality through in-game images in immersive simulation games," *Proceedings of Foundations of Digital Games (FDG 2018)*, (August 07-10 2018), Malmö, Sweden (2018), pp. 1–10.

ior".[23] These buildings have an open-ended modular and nonlinear character, and enable context-sensitive interaction for each visitor or player:

> [A] built space sets limits on the actions a user might take, but that the user is free to use the space in any number of unrestricted ways. [...] [T]he environment is passive and the user is active [...]. The environment remains malleable based on the whims of actors; the environment accepts multiple viewpoints without restriction; actors control their own behaviors.[24]

What McArthur states here seems to apply to most open-world games, such as *Far Cry 3* (2012) or *Assassin's Creed Origins* (2017), in which networked places and points of interest like hostile outposts are "quest places" that can be appropriated through multiple play styles and from multiple directions, due to the open topography and architectural configurations. In addition, this applies to the current *Hitman* series as well as to certain *immersive sim* games, once again including *Dishonored 2*.[25]

As the chart illustrates, Strange and Banning's categories are congruent with later models of architectural experience, including the filmic ap-

23 | Strange and Banning, 2001, p. 13.

24 | McArthur, 2016, p. 6.

25 | For example, in *Dishonored 2*'s eighth level, "The Grand Palace," players can explore a nested, multi-story building that merges the minimalist geometry of Walter Gropius's Bauhaus homes with elements of Northern Italian fortification architecture, such as the ravelin and bastion systems, whose slanted polygonal geometries are best known from forts by Domenico dell'Allio (1515-1563) or Sébastien Le Prestre de Vauban (1633-1707). That said, with the ability to teleport or making long jumps on all the nooks and crannies of these eclectic façades, players can traverse and explore the architecture at places and on paths unreachable for NPC (non playable character) pedestrians.

proach of Doris Agotai[26] and the sociological approach of Theresia Leuenberger.[27]

Fig. 87: Congruent categories of architectural experience of different disciplines

Architectural implication	Strange/Banning (2001)	Agotai (2007)	McArthur (2016)	Leuenberger (2018)	Examples
linear, restricted, enclosed	architectural determinsim	directed gaze	passive actors and active environment	differential in power in favor of the architecture	Half-Life, Quake, The Last Guardian
nonlinear, multi-cursal, branched	architectural probabilism	controlled movement	actor and environment are active	balance	Deus Ex: Human Revolution, Dishonored 2, Hitman: Absolution
nonlinear open-ended, networked	architectural possibilism	free wayfinding	passive environmant	differential in power in favor of the perceiver	Assassin's Creed Origins, Dishonored 2, Hitman

26 | Agotai stresses that openings like doors, windows, galleries, and stairs channel gazes and movements into linear perceptions and behavioral patterns. This way, architects play with the presence of an observer, which leads to a heightened experience of reality: perceiving architecture as a spatiotemporal object and participating in it evokes spatialization. Agotai's three categories are inspired by filmic methods like framing and editing: directed gaze, controlled movement, and free multicursal pathfinding. Doris Agotai, *Architekturen in Zelluloid, der filmische Blick auf den Raum* (Bielefeld: transcript, 2007), pp. 59, 68, 133.

27 | Leuenberger emphasizes that experiences of architecture are situational. The arrangement or layout of objects and humans, and how they are experienced and contextualized, changes with each place and moment. Thus, every mode of experience of architecture is realized through one's intention towards it and usage of it. Her categories build upon architectural spheres of impact to the observer. Such differential in power can tilt in favor of the materiality of the building, in favor of the observer, or it can stage a balance between both. Theresia Leuenberger, *Architektur als Akteur? Zur Soziologie der Architekturerfahrung* (Bielefeld: transcript, 2018), p. 80.

On Promenade Architecturale and Hôtel Particulier

The architectural realization of directed gazes on a linear path is best known from Le Corbusier's concept of the *promenade architecturale*, which enables a fluid movement riddled with *establishing shots* into several rooms within a building. *Villa Savoye* (1931) in Poissy is a prime example of this.[28]

Fig. 88: Le Corbusier's promenade architecturale at Villa Savoye, Poissy, 1931

Le Corbusier's intention is to provide a kind of total impression without having been in every single room. This might evoke an urge for further exploration, but can also enable a voyeuristic gaze. One starts in a long, narrow, and dark entrance; ascends on the winding ramp situated to the right, in the center of the building; performs the series of framed gazes into bright rooms; and finally, ends on a rooftop garden.[29]

28 | By 2010, Steffen P. Walz had already used the *promenade architecturale* in order to briefly describe the basic rhythmical way of game spaces. See: Steffen P. Walz, *Towards A Ludic Architecture* (Carnegie Mellon University/Pittsburgh: ETC Press, 2010), p. 30.

29 | In contrast, the *promenade architecturale* of Le Corbusier's *Villa La Roche* in Paris (1923) encloses the center of the interior with ramps, balconies, galleries, and openings instead of being the center itself. Here, the same

In contrast, until the nineteenth century, Parisian villas sported both representational halls and private cozy rooms according to the layout of the *hôtel particulier*. Besides monumental staircases, most rooms were connected via *enfilades* (a series of rooms connected by doors visible along one line of sight). Since every room is directly connected to the adjacent ones, and is thus accessible by at least two doors or more, the host can freely choose along which path the group of rooms will be presented to a guest. Which specific rooms one navigates to, and how far into a private area one reaches, depends on the room's status or role within the overall configuration of the architecture. Agotai highlights the symbolic power of this kind of architectural experience, as it requires crossing certain spheres of public and private usage.[30] This is epitomized in the *appartement double,* which means two parallel *enfilades* and an offset arrangement of rooms. Narrow intermediating corridors and several side stairs underlie the open layout. Thus, they embody an *architectural possibilism* that enables generating multiple paths, in order to circumvent occupied rooms. François Mansart's (1598-1666) *Hôtel du Jars* (1648) in Paris was the first example of such a nonlinear design solution.

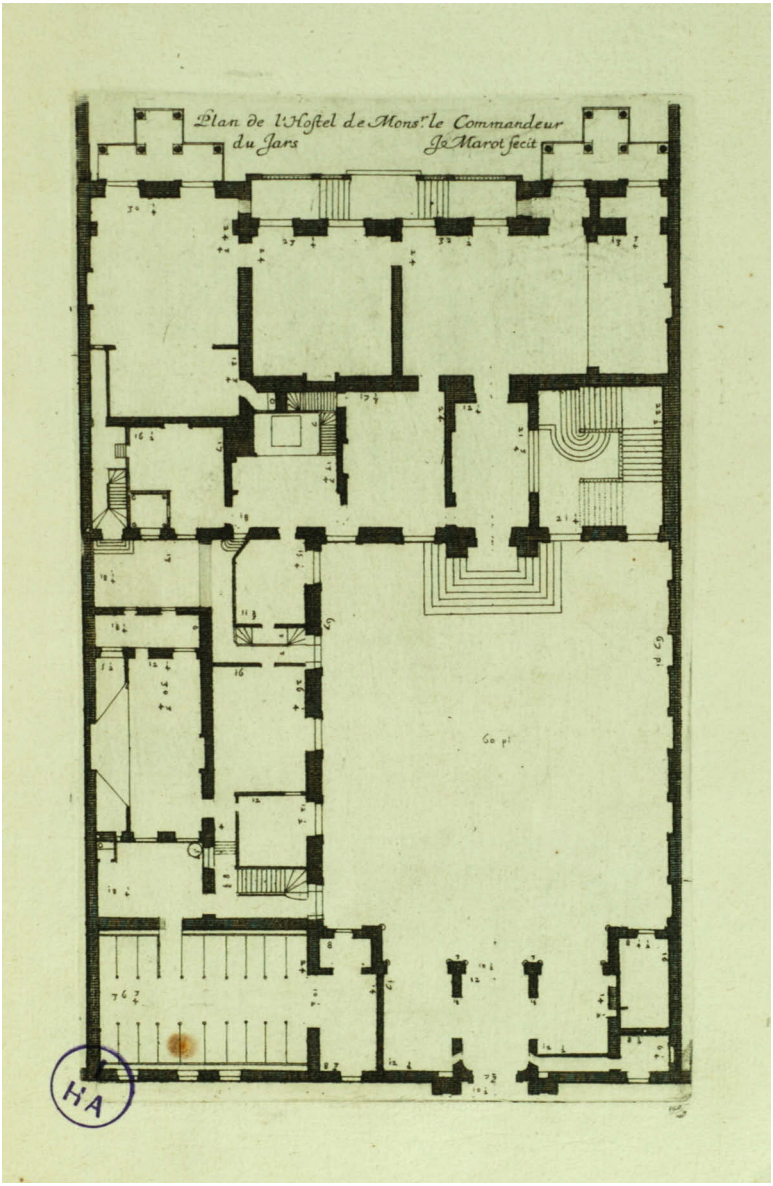
The Architectural Implications of Hitman

Promenade architecturale (determinism) and *hôtel particulier* (possibilism) embody two ends of the continuum of architectural experience. In the environments of IO Interactive's *Hitman* and *Hitman 2*, both ends build a characteristically interwoven and dynamic tandem, in order to stage a

space can be perceived from multiple places. The most iconic and sculptural example of the *promenade architecturale* can be experienced in Frank Lloyd Wright's (1867-1959) *Solomon R. Guggenheim Museum* in New York (1959), with its helical spiral ramp dominating the cylindrical atrium that is also the main exhibition space. Tom Tykwer's *The International* (USA/GER/GBR 2009) copies this structure for a massive film set, staging a dramatic shootout while using architectural determinism for a fluid and complex cinematography. See: Kristine Jaspers, "Alice im Wunderland, Die Gestaltungskunst des Szenenbildners Uli Hanisch," *film-dienst* No. 14 (2009), pp. 6–10.

30 | Agotai, 2007, p. 137.

Fig. 89: Jean Marot, Floor plan of François Mansart's hôtel principle of Hôtel du Jars



multilayered public urban space. Game directors Jakob Mikkelsen and Eskil Mohl even use the same categories in different terms, when speaking of the game intrinsic architecture as a combination of a "'snail house' with 'Swiss cheese'".[31] Mark Brown, of the Youtube channel *Game Maker's Toolkit*, compares this to a physically real IKEA store; he argues that, while IKEA packs the different functions of dwelling and multiple atmospheres into one enclosed hall, they want the customers to look at every interior and every single object. Therefore, "the store's layout provides an obvious and easy-to-follow path," meandering through all of the product groups and culminating at the checkout areas.[32] Yet, as a snail always winds up in narrower segments until it leads to a dead end, describing this mode of architectural experience through the metaphor of a snail shell is insufficient. The intended architectural functions and phenomenological effects are better described as a *promenade architecturale*.

A level in *Hitman* can have several *promenades architecturales*, providing the player with gazes onto spatiotemporal societal dynamics and hinting at different solutions. It is the starting point for delving deeper into crowded places, high security areas, or private rooms. Only by exploring the groups of buildings, interstitial spaces, and successive rooms—by combining several disguises, as someone with a certain type of job—do the possibilities of assassinating targets, which is the core premise of the game, unfold before the player's eyes.[33]

In this, the developers' metaphor of Swiss cheese describes the networked places and multicursal, modular layouts of the game world. In IKEA, it is "all the holes between the rooms that create shortcuts," so "seasoned IKEA veterans and staff members can bypass entire sections and get to where they're going more easily".[34] The Swiss cheese effect in *Hitman* not only refers to built-in shortcuts, such as obvious doorways, but

31 | Mikkelsen cited in Mark Brown, "The Making of Hitman 2's Miami Level, The Game Maker's Toolkit," youtube.com (February 18, 2019), https://www.youtube.com/watch?v=56iiP2xQn74 (accessed June 17, 2019). See 00:11:19.

32 | Ibid., 00:11:39.

33 | See Kevin Wong, "How 'Hitman' Uses Thoughtful Level Design to Tell Stories," *motherboard.vice.com*, (December 2, 2016), https://motherboard.vice.com/en_us/article/pgkvmn/how-hitman-uses-thoughtful-level-design-to-tell-stories (accessed March 15, 2019).

34 | Brown 2019, 00:11:58.

also to hidden or not easily evident paths, like a downspout to a rooftop or a maintenance duct. Traversing the explored game space with such shortcuts gives players "a feeling of mastery".[35] Combining this architectural experience with the fact that the designers try to avoid dead ends—and thus, design grouped rooms with multiple entrances and exits[36]—the Swiss cheese metaphor is congruent with the *hôtel particulier* layout.[37]

This is perfectly displayed in *Hitman*'s Paris mission "The Showstopper," in which players attend a fashion gala in fictional *Palais de Walewska*. While the exterior merges different French architecture styles, combining volumes and façades of three iconic buildings into a *Beaux-Arts* chimera,[38] the ground plan of the four-story *palais* resembles symmetrical concepts of the *hôtel* layout, complete with *enfilades* and the *appartement* principle.

Fig. 90: Levels of Hitman's Palais de Walewska maps

The environments in *Hitman* stage an alternation between "safety and opportunity," while enticing "participants with the promise of new information, tapping a natural yearning to know 'what's beyond the bend'" in a distinct, media-specific "person-environment dynamic".[39] This strategy of teasing items or points of interest from certain points of view is also a stat-

35 | Ibid., 00:12:45–00:12:57.

36 | Ibid., 00:13:14.

37 | This is especially true for the appartement double, with its hidden stairs, modular succession of rooms, and the possibility of multiple paths.

38 | To be more specific, this includes: Théodore Ballu's and Édouard Deperthes's *Hôtel de Ville* in Paris (1882), Hector Lefuel's *Pavillon de Flore* of the Musée du Louvre (1868), and Nicolas Fouquet's *Château Vaux-le-Vicomte* (1661).

39 | Strange and Banning, 2001, p. 28, 75.

ed objective of the game designers.[40] As such, the larger nonlinear levels of *Hitman* and *Hitman 2* can be described as semi-open world structures.

The game designers must construct a thorough disguise system that marks the core point of the person-environment dynamic, in order for players to delve deeper into *architectural possibilism*. Most levels have a layering of six public, security, and privacy spheres; these are convoluted within the spatial arrangements and buildings, and represent a distilled version of everyday society.[41] NPCs must be distracted, trapped, and knocked out in order to gain the desired disguise; behavioral patterns are deeply linked to certain areas within a building or compound.[42] Although there are traditional stealth passages—in the sense of circumventing enemies, or using shadowed areas in narrow labyrinthine layouts, as best known from *Tom Clancy's Splinter Cell* (2002-2013) or the *Metal Gear Solid* (1998-2015) series—*Hitman* and *Hitman 2* are all about "hiding in plain sight"[43] via the most heterogeneous jobs, characters, and thus, the horizon of agency within a built environment. Mikkelsen articulates the questions that initiate the structuring and layering of jobs and agencies during the design of a level: "what people would be working here," or "what gives

40 | Brown, 2019, 00:04:58.

41 | Level designer Mette Podenphant Andersen speaks of public open space, public purpose space, public rule space, private space, professional space, and personal space; she highlights the potential "involvement" of the players by public spaces. Andersen cited in Alissa McAloon: "Mapping out the subtle social cues throughout Hitman's level design," *www.gamasutra.com* (March 19, 2019), http://gamasutra.com/view/news/338996/Mapping_out_the_subtle_social_cues_throughout_Hitmans_level_design.php?fbclid=IwAR2RUrJzPfAolBtQwgXWmcpiHzv1BYZHOdB-fU1tBlSMRHI89_8EuuaUD54 (accessed March 19, 2019).

42 | A player has to assassinate different types of target NPCs that roam the area. Targets of the type "dweller" stick to one location, such as one building or a few rooms on a story, ever circling the same succession of waypoints contextualized with the character and the building's functions. The "roamer" type is more complex, and may have different phases of behavioral patterns and looped paths in more open areas of the semi-open world. Brown, 2019, 00:03:19, 00:03:49.

43 | Ibid., 00:14:03.

you access to when," and "how early do you meet them [the disguises or jobs]".[44]

This can also be experienced in and around *Palais de Walewska*: while switching context-sensitive disguises such as auction staff, a model, a chef, a stylist, palace staff, a member of the tech crew, or a security guard, players are able to roam the palace from the wine cellar to a kitchen, from representational rooms to a lounge bar, from a dressing area and backstage rooms to the catwalk, from the high security garden to a dusty attic.[45]

Fig. 91: Image series of Palais de Walewska in Hitman

44 | Mikkelsen cited in Brown, 2019, 00:15:09.

45 | That said, certain kinds of assassination are more likely than others, as they are either the easiest or most evident. For some players, this may lead to a performance of ludic probabilism, as an ideal combination of disguises enables them to directly achieve the goals. Thus, it is the most effective way in a linear manner. It is the dramaturgy of gaining ever-more powerful or empowering outfits. Therefore, the game system rewards players that plan and use the most creative or stealthiest means of assassination.

Through switching between jobs and varying agency, the player unfolds the game world into an *architectural possibilism,* becoming the host of a level and its distilled societal dynamics.[46] Staging such an intricate *hôtel* layout during an ephemeral modern day conversion, complete with authentic work routines, crowds, and infrastructures, it is no wonder that two of *Hitman's* game designers, Fredrik Gyllenhoff and Nils Damsgaard, are actually trained architects.[47] *Hitman*'s Italy mission "World of Tomorrow" embodies the initial design that became the archetype and blueprint for the even more complex and sprawling areas of *Hitman 2*.[48]

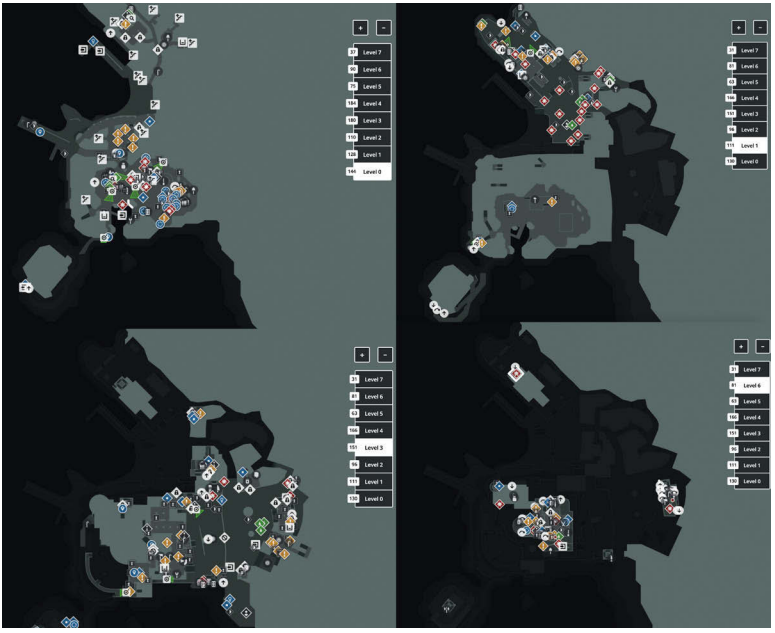
46 | As Don Carson puts it: "As players learn to read a game space as a complex spatiotemporal setting, multiple roles position the player in different perspectives toward the game world and assist in a deeper exploration of it." Don Carson, "Environmental Storytelling: Creating Immersive 3D World Using Lessons from the Theme Park Industry," *Gamasutra* (March 1, 2000), https://www.gamasutra.com/view/feature/131594/environmental_storytelling_.php (accessed March 15, 2019).

47 | "[E]very object, placed or misplaced, had to tell a tale, or imply a prior action. It creates the illusion that this is a living breathing world. And it adds to a mood of invasiveness." See: Wong, 2016.

48 | Like the fictional racing track facing the high security research facility *Kronstadt*, complete with laboratories, paddocks, marina, racing team lounges, and numerous tunnels and gangways in Miami level "The Finish Line", or the vertically stacked eight-story high castle on the remote fictional Scottish *Isle of Sgàil* in the mission titled "The Ark Society", which is crowned with a glass cube as high-security area. In addition, especially the Columbia mission "Three-headed Serpent" mirrors core locations and topologies of the archetypal Italy mission. The level takes place in and around the fictional village *Santa Fortuna*. It is framed by a cocaine plantation, the dense jungle, a muddy river and a construction site. Like in *Sapienza* there exists a hidden cavernous facility underneath the spacious escapist villa that is situated on a higher altitude and besides the rural village full of stacked buildings and furrowed by narrow alleys. The locations differ in atmosphere and design, of course. For example, the villain's villa differs from the rustic-style *Villa Caruso* in it's architectural language and layout by merging aspects of Le Corbusier's *Villa Savoye* with Richard Meier's *Bodrum Houses* on Turkey's Bodrum peninsula (2012) as well as building materials or material aesthetics known from Frank Lloyd Wright's numerous prairie houses into a Modernism meets American Craftsman Style

It stages the fictional Italian coastal town of *Sapienza*, which is said to be nested on the Amalfi coast. *Sapienza* consists of a Medieval old town, complete with a piazza, beach, church, ruins, narrow alleys, several shops and flats, recreational places, the monumental *Villa Caruso*, and laboratories hidden in a cave underneath the villa. While this may sound like a James Bond film set, *Sapienza* is more than that. It is a fully explorable town, with a layout reminiscent of the real-world town of Vernazza, which clings to a picturesque cliffside in the Cinque Terre region of Liguria. With nearly forty-four sub-locations adjusted to the dynamics of a coastal tourist town, *Sapienza* is the first mission in the *Hitman* series that fully unlocks the potential of the game mechanics.[49] The newfound complexity of architectural and societal depiction can also be seen in the twenty-six disguises placed throughout the level.

Fig. 92: Levels of Hitman's Sapienza map



chimera. Having said this, *Santa Fortuna* sports more locations and may enable even more ways to fulfill the mission's goals.

49 | According to Andersen's analytic sheet of *Sapienza* in McAloon, 2019.

Torbjørn Christensen, who was the lead level designer of *Sapienza*, highlights the intention "to explore the verticality in coastal towns, and how streets and corridors connect everything".[50] Besides its vastness and complexity, it is also a characteristic of *Sapienza* that the targets are "dwellers" restricted to the villa compound on the rocky peninsula, while most of the level enables an "organic touristic exploring"[51] of public places. The means of roaming through the game world as a recreational place, and as a walkable picturesque diorama of an Italian coastal town society, full of altering atmospheres and congruous as an end in itself made for a path breaking level design within the game series.

Fig. 93: Image series of Sapienza level in Hitman

50 | Christensen cited in Phil Savage: "The making of Sapienza, Hitman's best level," *pcgamer* (January 1, 2017), https://www.pcgamer.com/the-making-of-sapienza-hitmans-best-level/2/ (accessed March 15, 2019).

51 | Savage, 2017.

Conclusion

In *Hitman* and *Hitman 2*, architecture as a medial hinge becomes a media-specific paradigm: it communicates a heightened comprehension of complex building types, and the socio-urban dynamics of the real world by fictionalizing "reality and culture through turning human settings into images and metaphors of idealized order and life, into fictionalized architectural narratives".[52] Though *Hitman* stages real-world building types like the *Palais de Walewska* in a coherently arranged manner, it is not only about adapting the *promenade architecturale* or *hôtel particulier* principle one-to-one in this, but rather, it is about staging media-specific architectonics for an analogous mode of architectural experience in the sense of ludic logics. In other words: not every *promenade architecturale* must be embodied as a ramp made of concrete; not every building volume has to depict a palace in order to be rhythmized in the *hôtel particulier* manner within the level structure. It is about its function within the person-environment dynamic.

The game-intrinsic architecture of the *Hitman* series perfectly interweaves the linear fluid *promenade architecturale* with the open, nonlinear, networked concept of the *hôtel particulier*, and its multi-directional accesses into coherent buildings and urban districts. Every level is a semi-open world, where the player starts anew as a tourist or guest in a publicly unrestricted area; one proceeds by exploring and disguising, sneaking and circumventing into ever smaller places of higher security clearance or personal sphere. Appropriating the networked places enables a knowledge of the architecture to arise. That said, the metamorphosis from tourist to host, in terms of the horizon of agency, is only possible by exploring the intricate interiors and spacious architectures, by piercing through all the architectonical and societal layers of a staged but intricate everyday life. Only then is one able to master *architectural possibilism*.

52 | Pallasmaa, 2011, p. 19.