



Fig. 1 / Matte painting of the Vandamm House in Alfred Hitchcock's NORTH BY NORTHWEST (1959)




“Characters end up going through various interiors, meeting obstacles all the time. Designing a computer game is not like designing a single film, but like designing eight films at once.”
 Sir Ken Adam¹

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IN THE RHYTHM OF SPACE-IMAGES

Architecture and Art Direction in Films and Computer Games

 With this statement, art director and production designer Sir Ken Adam, famous for the iconic film architectures found in *DR. STRANGELOVE OR: HOW I LEARNED TO STOP WORRYING AND LOVE THE BOMB* (Stanley Kubrick, 1964) and seven James Bond films (1962–79), gets to the heart of the main similarity between films and computer games: the spatio-temporal necessity of traversing scenes where the plot plays out, the audio-visual representation thereof, and the concomitant narrative and semiotic meaning in the context of mise-en-scène and level structures. Films and computer games are, however, perceived in different ways,

which is actually most strongly evident in their spatial presentation. According to Michael Nitsche, films reflect a linear form of description, whereas computer games are experienced as nonlinear exploration.² Nitsche, like Adam, considers the obvious parallels to be spatially contingent necessities and determines that architecture and film are formative media that influence the computer game.³ Players step into a filmic space, as it were, where they encounter their environment with a sense of spatial logic similar to its use in architecture.⁴ Stephan Günzel builds on this in defining the computer game as a space-image that players interactively



Fig. 2 / Approach to the Burnwood Villa, *Hitman: Absolution* (IO Interactive/Square Enix, 2012)

¹ / Ken Adam and Christopher Frayling, *Ken Adam Designs the Movies: James Bond and Beyond* (London, 2008), p. 113.

² / Michael Nitsche, *Video Game Spaces: Image, Play, and Structure in 3D Worlds* (Cambridge, Mass., and London, 2008), pp. 79 and 51.

³ / *Ibid.*, p. 74.

⁴ / *Ibid.*, p. 85: “The necessary eye of the virtual camera makes these spaces cinematic and the interaction makes them accessible much like architectural structures.”



Fig. 3 / Climbing passageway at Vandamm House

➤ navigate.⁵ Digital architectures and backdrops are specifically designed to facilitate the said exploration or navigation due to the unpredictable patterns of the players' movements within delimited yet freely accessible segments on the respective levels. In filmic space, by contrast, architectures and sets are only created and aligned in connection to the perspectives and movements of physically extant cameras as predetermined by storyboards, which means that they are merely fragmentary structural elements.⁶

So it only makes sense that Adam went on to design, in 2003, the digital game architectures for various levels of the computer game *GoldenEye: Rogue Agent* (Electronic Arts, 2004),⁷ for he was now able to lend digital form to many of his analogue-built Bond sets:

"[T]he multiple viewpoints of the game players, as distinct from the single viewpoint of the cinema audience, and the new geography of the sets that is demanded – plus the fact that the game could go on for up to twenty hours – made the project an interesting challenge."⁸

Already in 1925, architect and set designer Robert Mallet-Stevens noted that a film set must be active, play a role, and introduce the characters before they enter the stage.⁹ This maxim also applies to the scenes found on the different levels of digital gaming



↑ Fig. 4 / Climbing passageway at Burnwood Villa

worlds, which are based on actually built, historically established architectural styles so as to rhythmise the gameplay on a spatio-temporal plane. The narrative perspective of Hollywood cinema is also frequently adopted. Andreas Rauscher defines this as "genre settings that serve as a backdrop and semiotic system for ludic events."¹⁰ The interconnection of film genres and architectural styles with the mechanics of games serves to cultivate special characteristics in the structures of the levels.

✓05 / Stephan Günzel, "The Space-Image: Interactivity and Spatiality of Computer Games," in *Conference Proceedings of the Philosophy of Computer Games*, Stephan Günzel and Michael Liebe et al., eds. (Potsdam, 2008), pp. 170–89, esp. p. 172, opus.kobv.de/ubp/volltexte/2008/2456/pdf/digarec01_10.pdf, accessed January 22, 2015.

✓06 / Mike Jones, "Vanishing Point: Spatial Composition and the Virtual Camera," *Animation: An Interdisciplinary Journal* 2, vol. 3 (2007), pp. 225–43, esp. pp. 230–31.

✓07 / Adam and Frayling 2008, see note 1, p. 110.

✓08 / Ibid.

✓09 / Robert Mallet-Stevens, "Le Cinéma et les Arts: Architecture," in *Les Cahiers du Mois* 16–17 (1925), p. 95.

✓10 / Translated from Andreas Rauscher, *Spielerische Fiktionen: Transmediale Genrezkonzepte in Videospielen* (Marburg, 2012), p. 19.

✓11 / Christopher W. Totten, *An Architectural Approach to Level Design* (Boca Raton, London, and New York, 2014).

Prospect Space / Intimate Space

Prospect space and intimate space identify either complete levels or parts of those and often feature large complex spaces through which players have to find a way. In a prospect space, players are exposed to the spatial advantages of their opponents and thus have to move unnoticed. Intimate space is the game's mechanical opposite: Also in complex architecture, players now have the advantage in that they can use elevated vantage points or hiding places.

Hitchcock as Precedent for *Hitman*

In this context, Christopher W. Totten recently undertook a spatial overview of the common categories of digital gaming worlds.¹¹ An ambiguous character from Totten's "prospect space" and "intimate space" is found on most levels of the stealth-shooter game *Hitman: Absolution* (IO Interactive/Square Enix, 2012). Both spatial types are embodied by what is usually multilevel architecture, where the player can move through the generous spaces of the opponents, sometimes in a restricted way and other times with more opportunities for use and movement than his rival.¹² Such varying patterns of motion and behaviour are the basis for fostering the dense tension that arises during prowling and the silent elimination of guards.

In the first level of this computer game, the players must infiltrate the villa of the NPC13 Diana Burnwood with their Avatar Agent 47, preferably without being caught (fig. 2). Serving as an archetype was a setting found in *NORTH BY NORTHWEST* (Alfred Hitchcock, 1959). Over the course of the film, the protagonist Roger O. Thornhill (Cary Grant) repeatedly becomes trapped in architectural structures and is ultimately forced to break into the villa of the antagonist Philip Vandamm (James Mason), which is situated above the four presidents' heads at the Mount Rushmore memorial.¹⁴ Already evident here are parallels between the filmic archetype of modern agent films and the stealth shooter.

Production designer Robert Boyle drafted the Vandamm House (fig. 1) according to certain plot parameters and Hitchcock's idea of architecture as an uncanny labyrinth.¹⁵ So the house scene must put Thornhill in a dangerous position, one in which he is

able to spy on the antagonist without being discovered. Additionally, secret passageways for crawling and climbing while entering and escaping must be provided.¹⁶ Like the players, Thornhill manoeuvres through a combination of prospect space and intimate space. The specifics of game mechanics are therefore congruent with the plot of the film. Aside from this initial situation, both the filmic space and the game-immanent structure of levels correlate in terms of common architectural language. Boyle, for



Fig. 5 / Inside Vandamm House



Fig. 6 / Inside Burnwood Villa

Stealth-Shooter

In these games, direct confrontation with opponents is avoided if possible. Rather, it is characteristic to act from hidden places and approach the target of the mission unnoticed. Discovery by the enemy most often leads to the premature end of the mission.

/ 12 / Ibid., pp. 120-22.

/ 13 / NPC stands for non-playable character.

/ 14 / Steven Jacobs, *The Wrong House: The Architecture of Alfred Hitchcock* (Rotterdam, 2013), p. 299.

/ 15 / Ibid., p. 12.

/ 16 / Interview with Robert Boyle, cited in Vincent LoBrutto, *By Design: Interviews with Film Production Designers* (Westport, 1992), pp. 1-16, esp. p. 9.



✦ Fig. 7 / Frank Lloyd Wright: Fallingwater, 1934–37

- his part, modeled his design after the Prairie School style of the US architect Frank Lloyd Wright. His filmic adaptation references the house Fallingwater, built in 1937, since it offers potential for climbing thanks to the horizontally aligned limestone walls and the living space overhanging a waterfall (fig. 7).¹⁷ The selection criteria employed by Boyle in creating the fictitious Vandamm House were also decisive for art director Robert Marchesi in choosing the latter as a model for the Burnwood Villa. It is the playable

Matte Painting

Matte paintings are backgrounds that were painted onto glass and inserted into a film using an optical printer. Today, for the most part, this process is emulated by digital visual effects.

adaptation of the Vandamm House, which is, in turn, a filmic adaptation of Fallingwater. So the game architecture only indirectly refers to Wright's iconic structure.

Such intermedial recourse is founded on the parameters of concordant directives. Thornhill's climbing passageways along the façades and inclined supports (fig. 3) as well as his prowling and eavesdropping inside the villa (fig. 5) are prolonged in *Hitman: Absolution* due to game-mechanical reasons and are redundantly implemented in order to practise the avatar's scale of operations (fig. 4). Inevitably found on the inside of both operative scenes, therefore, are also correlations in terms of style and spatial sequences (fig. 6).¹⁸

With the living spaces projecting out toward the abyss, serving as a sort of control centre with a general overview, the two architectural settings embody power and malice. While the Vandamm House, as a montage of matte paintings and smaller studio backdrops, sits enthroned above a national monument, the

Burnwood Villa rests along the precipice of a fictitious cliff with the view of a digital rendition of Chicago. With such panoptic pretenses, both architectural structures give rise to a sense of foreshadowing of the next scene of drama.

Despite its fragmentary existence, the Vandamm House is designed to be an iconic stronghold of evil and even as an archetype for the refuges of villains in Bond films. This, too, is a reason why Marchesi avails himself of this haunting film architecture as an architectonic rhythmisation of the first level.

¹⁷ Ibid.

¹⁸ The digital game architecture, with its partial Art Deco adaptation, also makes reference to the extravagant penthouse in *INDIANA JONES AND THE LAST CRUSADE* (Steven Spielberg, 1989), which is likewise occupied by an antagonist (Julian Glover as Walter Donovan).



Fig. 8 / War Room in Stanley Kubrick's *DR. STRANGELOVE OR: HOW I LEARNED TO STOP WORRYING AND LOVE THE BOMB* (1964)

The War Room Myth

Sir Ken Adam designed a set for Kubrick's antiwar film *DR. STRANGELOVE* that has gone down in cinematic history as the iconic showpiece for the architecture of power.¹⁹ The underground scene is a core visual element that is repeatedly shown over the course of the film. In rendering the expansive space employed by the upper echelons of the US government, Adam uses the asymmetrical monopitched-roof construction so typical for him and found in many Bond films, but which is actually, once again, inspired by the architecture of Frank Lloyd Wright, specifically the Taliesin West building complex erected in 1937.

However, Adam overextends Wright's structural forms and adds megalomaniac world maps, which show the trajectories of airplanes carrying atomic bombs. Petra Kissling-Koch notes that Adam achieves a tight interweaving of spatial representation and the acting role.²⁰ The War Room, with its somber and edgy expressivity decoupled from the earth's surface, thus points to the fierce US generals and their



Fig. 9 / War Room in *Mass Effect 3* (Bioware, 2012)

clueless president. This architectural visualisation of the characters and of their potential courses of action culminates in the circular conference table and the annular lighting hanging above, both situated in the middle of the room (fig. 8). The rounded furnishings are reminiscent of a poker table that represents this risky, bluff-filled game with the world being at stake. Such strongly readable symbolism, according to

¹⁹ / Petra Kissling-Koch, *Macht(t)räume: Der Production Designer Ken Adam und die James-Bond-Filme* (Berlin, 2012), p. 79.

²⁰ / *Ibid.*, p. 8.

²¹ / *Ibid.*, p. 95.

Non Playable Character (NPC)

NPCs are video game characters that are controlled by the game itself. The player can interact with them, and they can possess various functions: Thus, they help, for example, to advance the plot or grant facilities to the players by giving them advice or items.

- Kissling-Koch, makes the “playing field” immediately clear to the beholder.²¹

The mythically charged image of the perfectly staged War Room has existed for many decades and spanned various genres.²² Yet, often it is only the distillate of Adam’s round conference table and its ring-shaped lighting that are adopted as the *pars pro toto* of fictive power architecture.

Thus, it is no wonder that Adam’s expressionist design is likewise transferred into the level structures of computer games. In the science-fiction action adventure *Mass Effect 3* (BioWare, 2012), players can speak with **NPC** crew members on their interstellar journeys in between the missions on board their spacecraft Normandy SR 2; this allows them to more easily bond with each other and to solicit support for gameplay missions. Integrated next to the cabin of the avatar (Commander Shephard) or the engine room is also a conference room bearing the name War Room. It

is circular and has a round projection table at its centre with appropriate lighting (fig. 9). This ensures that intermedial recourse is taken above and beyond the appellation. The game-immanent scene of action for the spacecraft is designed to move far beyond the level for interactive dialogue and cutscenes that is typical for martial gameplay and, therefore, in the context of *DR. STRANGELOVE* as a model, also has a similar narrative function in the game of power and intrigue.²³

In the Maze with the Alien

ALIEN (Ridley Scott, 1979) is considered a stellar example of the blending of suspense-horror and science fiction, and not only because of H. R. Giger’s world-famous design of the eponymous xenomorph and the probably first-ever woman action hero (Sigourney Weaver as Ellen Ripley). The scenes also

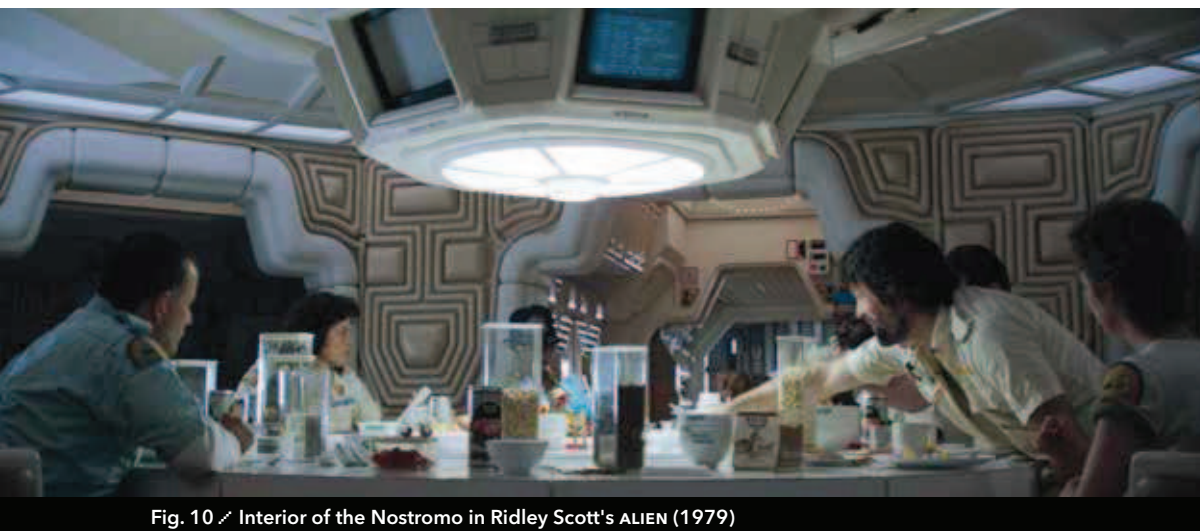
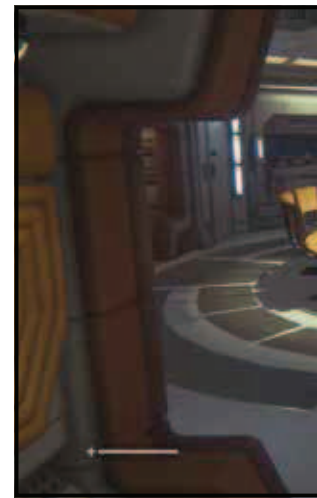


Fig. 10 / Interior of the Nostromo in Ridley Scott's *ALIEN* (1979)



22 / The most recent adaptations are seen in *WATCHMEN* (Zack Snyder, 2009), *X-MEN: FIRST CLASS* (Matthew Vaughn, 2011), and *STAR TREK INTO DARKNESS* (J. J. Abrams, 2012).

23 / Other computer games, by contrast, only rudimentarily allude to the War Room. For example, in *Call of Duty 4: Modern Warfare* (Infinity Ward and Activision, 2007) there is a level titled *No Fighting in the War Room*. This is a direct reference to one of the most famous snatches of dialogue from Kubrick’s film. However, the meeting room actually found in the level is small and looks like a conventional conference room from everyday life.



Fig. 12 Interior of the Nostromo

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Fig. 13 Interior of the Sevastopol in
 Alien: Isolation (Creative Assembly, 2014)

count as being among the most powerful spaceship structures in the world of film. The film mainly takes place inside the USS Nostromo, which was designed in a diverse way by several renowned artists and set designers.

In the science-fiction-survival-horror computer game *Alien: Isolation* (Creative Assembly and Sega, 2014), the filmic maze of Nostromo – which later served the alien as hunting grounds for killing the crew – was almost reproduced 1:1 as the digital game world of the spaceship Sevastopol. The many chaotically flashing control elements, organic ornaments, flickering CRT displays, and bulky buttons are modeled after the set of the 1979 science-fiction film, down to the very last detail (figs. 10–13). Creative director Al Hope has remarked that *Alien: Isolation* is actually based on the past despite being set in the future.²⁴

However, this retro-futurism quickly reaches its limits in the few available film settings, which at the time



were analogue-built. Since the players in *Alien: Isolation*, as Ellen Ripley's daughter Amanda, must spend considerably more time in the spaceship's ductal systems and supply pipes, the designers had to go through old conceptual studies for the creation of the level structures of the game so as to authentically model yet unseen places after the style of the film scenes. In the computer game, the constant threat of the alien actually becomes experienceable in a continuum of rooms, passages, and corridors. So the three-dimensional design is more than just a nostalgic 1:1 adaptation of the filmic "world-feeling."²⁵ This example once again makes clear that in the filmic space-image architecture is experienced through fixed, choreographed camera panning, whereas in the interactive simulation of a computer game, the players themselves navigate through the game-immanent space-image using input devices. Yet, the resulting gameplay is tied to preprogrammed occurrences that simulate the playable area and predefine the potential scope of action. Sir Ken Adam's comment remains significant here: "Characters end up going through various interiors, meeting obstacles all the time."²⁶



Fig. 11 Interior of the Sevastopol

²⁴ / "This is a game set in the future but based on the past... It's a place which we can really relate to. It's also a world where technology won't save you." Dave Tach, "Alien: Isolation video explores its 'low-fi sci-fi' design, straight out of 1979," *Polygon*, April 17, 2014, www.polygon.com/2014/4/17/5624086/alien-isolation-design, accessed January 8, 2015.

²⁵ / Daniel Yacovone, "Film Worlds: Zur Neukonzeption von filmischer Repräsentation, Temporalität und Reflexivität," in *Rabbit Eye: Zeitschrift für Filmforschung* 1 (2010), pp. 109–20, esp. p. 117, www.rabbiteye.de/2010/1/yacovone_film_worlds.pdf, accessed January 22, 2015.

²⁶ / Adam and Frayling 2008, see note 1, p. 113.