

# GAME THEORY

## Adam Jasper on Harun Farocki's final project

Where does the wind come from? *From the trees.*  
 How did the wind begin? *Because the branches move.*  
 Do the branches make the wind? *Yes.*  
 But how do the branches move? *Because of the wind.*  
 —Jean Piaget, *The Child's Conception of Physical Causality* (1930)

SOME TWO YEARS before he died, Harun Farocki released the first installment of *Parallel I–IV*, 2012–14, the four-part film cycle that was to become his last major work. Whereas many of Farocki's films explored polemical images of technology and violence—from the flying smart bombs that repeatedly appear in *Eye/Machine I–III*, 2000–2003, to the uniformed soldiers totally disoriented behind their VR goggles in *Serious Games (I–IV)*, 2009–10—*Parallel* exhibits a calculated restraint, refusing dramatic events in favor of an exploration of the structure and boundaries of the virtual spaces in which we increasingly dwell.

*Parallel I* begins with a study of a seemingly marginal question: the changing depiction of trees over the first thirty years of computer-game graphics. By treating this arboreal evolution as if it were an art-historical motif, Farocki seduces us into actually *looking* at computer games rather than immediately judging them for the

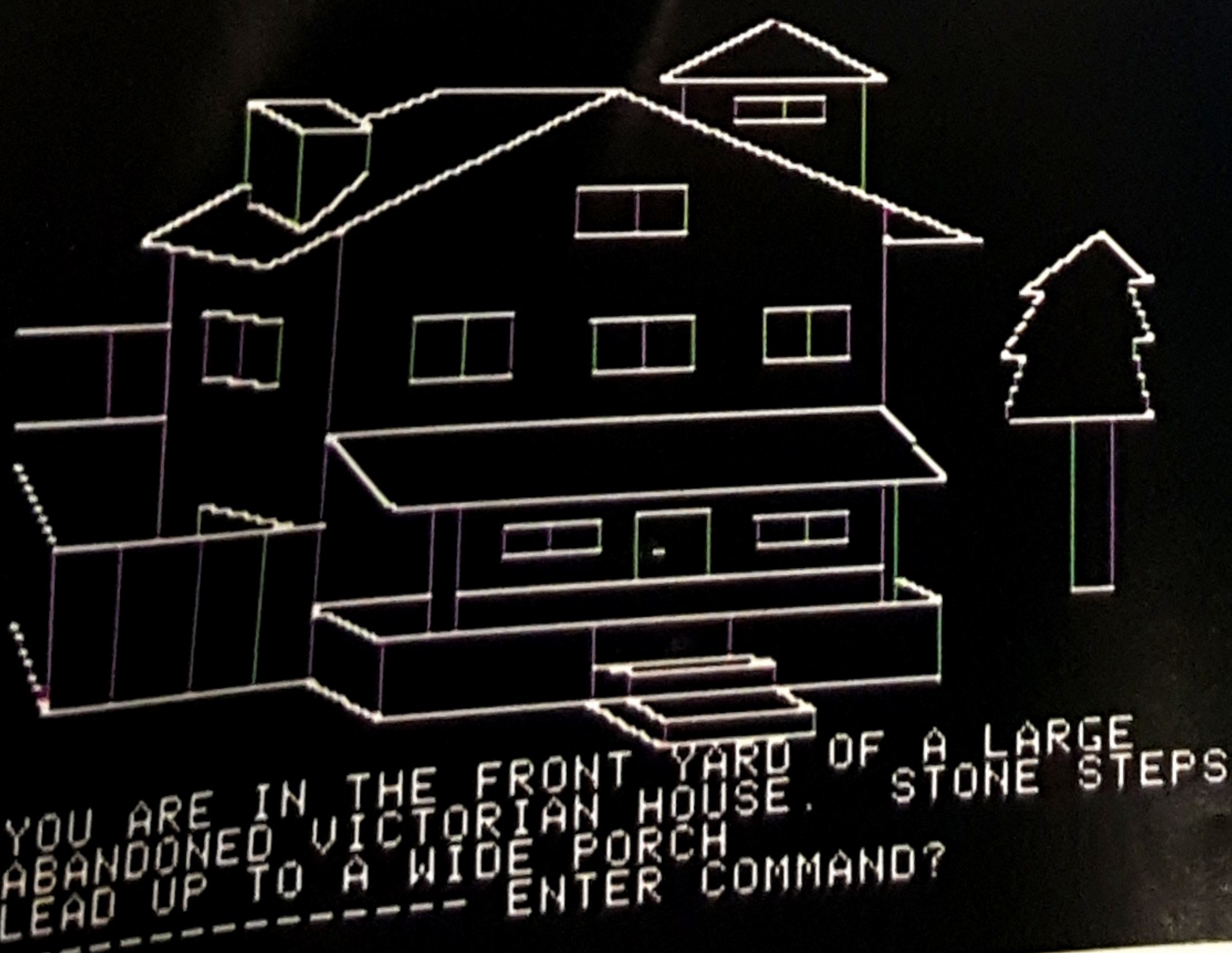
violence or crudity of their content. The earliest tree in Farocki's history appears in *Mystery House* (1980): a giant sequoia, depicted as a jagged outline. In the game, in which the user relied on typed commands to navigate a simple environment, the sole tree was not a playable feature, merely an indicator that the adventure had not yet begun: The player was still “outside” the house. As games developed, depictions of trees rapidly evolved. Via shifts from jagged lines to pixels, they first acquired surface, then volume. By the 1990s, the development of procedural textures—fractal algorithms used to create the illusion of a surface of seemingly infinite detail—had produced the appearance of something like leaves, and by the 2010s, photorealistic trees had begun to move, animated by a digital wind. As the series progresses, Farocki shows the development of the tree as if it were a metonym for the deepening of the digital environment as a whole, from command-line interface to rendered world. By the time the vegetation has acquired motion, we no longer find ourselves in a text adventure, or in the emerald fields of *Super Mario Bros.*, but in photorealistic first-person shooters such as *Call of Duty*—spaces in which military simulations and architectural-rendering software have come together to represent a world both familiar and destroyed. The player stands in a realistically

rendered American city, Miesian towers in flames and bullet holes in the granite facing. It seems that while we were watching the trees, the apocalypse occurred.

In the short span of thirty years, Farocki shows, computer games recapitulated all the changes in a textbook history of painting, from hieroglyphs to photorealism. This accelerated evolution might also seem to echo the histories of photography and film, but unlike these two mediums, computer graphics cannot be analyzed in terms of improvements in representational techniques, because in a computer game there is no external reality to represent. Rather, gaming offers what Farocki called, after Max Weber, “ideal-types,” models that share characteristics with actual objects but do not derive from or correspond to any specific example. This is telling, because it reveals that what drives technical development is not fidelity to reality, but rather the desire for a seductive kind of verisimilitude. What Farocki called a “new constructivism” is at play: Each bush in this world is constructed piece by piece, a simulacrum both meticulous and insubstantial—you can walk through a hedge without disturbing a leaf. Realism here is but a kind of truthiness.

*Parallel* is therefore not so much digital archaeology—a history of technical progress—as it is digital anthropology. The goal of such research is not the celebration

Realism here is but a kind of truthiness.





Above: Harun Farocki, *Parallel I*, 2012, two-channel HD video, color, sound, 16 minutes.  
 Right: Harun Farocki, *Parallel IV*, 2014, HD video, color, sound, 11 minutes.



of progress, but the study of the internal logic of a foreign world. Farocki and his longtime collaborator Matthias Rajmann gathered nearly a thousand film clips in preparation for the project. An analysis of this vast trove—which is still preserved on the artist's hard drive, although it has not been available to scholars until now—provides a record of how exhaustive their research was. The material gathered for the first phase of the project, which lasted until 2012, drew on state and scientific archives as sources for films of clouds and weather patterns, ranging from crude early simulations to recent computer models. The juxtaposition of films and digital images of such evanescent phenomena revealed the driving force behind the evolution of such simulations. As Farocki wrote to Rajmann in the summer of 2011, "I think with great pleasure about the new project, about filmic precursor and digital afterimage. I imagine how the ocean shimmers, leaves move in the wind, sand runs."

In the first months of 2012, the focus of research shifted from the evolution of computer graphics to the limits of computer games. Farocki himself, it barely needs to be said, was not a keen gamer; for his fieldwork, he needed a local guide. He employed Rajmann's teenage son to play the games for hours (from a look at the archive, many hundreds) in order to provide the raw material from which the work was made. For *Parallel II–IV*, Farocki instructed him not to try to win, but to explore two boundary conditions implicit in the construction of typical game worlds: the edge of the playable universe and the limits of interaction with computer-generated characters. In an email from April 2012, Matthias Rajmann described an expedition with his son in prose that captures the strangeness of this new world: "In a slow progression we surfaced from below, and kept our noses just over the level of the water [. . .] We investigated a cascading fountain, and we captured images of the drops coming from the sprinkler in front of a suburban house (while a massacre was taking place inside). In Vietnam, we circled around a burning roof;

sparks were thrown up by the force of the heat, ash flied through the air; on closer inspection, it was the ceramic tiles that were burning."

Does it even make sense to apply the theoretical language of film to these games? Some classic film metaphors reappear in games, seemingly enriched. Farocki observed, for example, that loops frequently crop up in computer games, confronting players with existential or Sisyphean parables. The loop, after all, is as native to code as it is natural to celluloid. However, during his last lecture, at the Internationales Kolleg für Kulturtechnikforschung und Medienphilosophie in Weimar, Germany, in 2014, Farocki expressed dismay at the seeming impotence of the defining concept of modernist film—montage, the construction of meaning through the collision of independent shots—in the face of the endlessly flowing movement of first-person shooters.

These games unfold across a continuous and linear space, from the scrolling band of the first *Super Mario Bros.* to the immersive environment of *Counter-Strike*, and time is locked in a perpetual present. The player is fascinated not by the dream logic of montage, of discontinuous juxtapositions, but rather by a different kind of dreaminess, one rooted in the surprise of events that transpire in frictionless space. Understanding game space requires something closer to Jean Epstein's concept of *photogénie*, understood as all that is ineffable in film—in particular, the motion of leaves, reflections on glossy surfaces, or the movement of waves over deep water—complex movements where the individual components are impossible to clearly distinguish and are normally peripheral to awareness. This effect was famously demonstrated when the Lumière film *Le repas de bébé* (The Baby's Meal) premiered in 1895: Audiences were allegedly far more interested in the fluttering of leaves in the background than the baby being fed in the foreground.

Much as the first people to see photographic prints in William Henry Fox Talbot's *Pencil of Nature* (1844–46) had marveled at the impossible details of haystacks,

early film audiences marveled at grass waving in the breeze. In Epstein's 1947 film *Le tempestaire* (The Storm Tamer), a woman whose fiancé is lost in a storm at sea encounters an old man who controls the wind via a crystal ball. His power over the elements is only severed when the crystal falls and shatters. The continuity of *photogénie* stands in absolute distinction to the cut of montage, and achieving this fluid condition is the goal—or, rather, the libidinal drive—behind technical improvements to computer graphics. Like the crystal in *Le tempestaire*, the world of computer graphics is self-contained. Its seductive power is not limited by but is partly drawn from the way in which it pulls itself out of the void by its bootstraps, and the wind that blows, as in Jean Piaget's parable, is causally indistinguishable from the waving of the branches of trees.

As a meditation on the history of computer-generated images, *Parallel* can be viewed as an extension of Farocki's lifelong exploration of the fate of cinema but also as a radical break with that initiative—a work of reflective detachment. Farocki professed an enduring love of dictionaries and thesauruses and, in particular, of that unwieldy German genre known as the *Begriffsgeschichte*. Halfway between an etymological dictionary and an encyclopedia of philosophy, a *Begriffsgeschichte* traces the history of philosophical terms, including how they are applied, by whom, and to what ends. Farocki valued such philological comparisons for their capacity to sharpen our consciousness of the way in which language functions, and proposed that something similar—what he called a *cinematographic thesaurus*—should be developed for the study of images. For all its aesthetic force, *Parallel* can be read as a contribution to this study, continuing the dialectical history of film, even as celluloid itself slips into the past. □

ADAM JASPER IS A RESEARCHER AT EIKONES AT THE UNIVERSITY OF BASEL AND A CONTRIBUTING EDITOR OF CABINET.

Visit our archive at [artforum.com/inprint](http://artforum.com/inprint) to read Hal Foster (November 2004) and D. N. Rodowick (February 2015) on the work of Harun Farocki.