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**Blind Spots:**  
*The Phantom Pain, The Helen Keller Simulator, and Disability in Games*

Q: “But what shall we dream of when everything becomes visible?”

A: “We’ll dream of being blind.”

-- Interview with Paul Virilio

**Hypertrophy**

For the past thirty years, and especially since the popularization of real time 3D graphics processing in the mid-nineties, the computer and videogame industry has been caught up in a graphical arms race, a relentless and blind pursuit of what Terry Harpold calls the “upgrade path” (3). As indicated by the best advertised, highest selling, and most played games, mainstream game developers prize high fidelity graphics, complex physics simulation, naturalistic character and camera animation, and even voice, face, and motion capture over other forms of engagement. While this technical hypertrophy extends human forms of play into new domains, it does so at the cost of other abilities. As Marshall McLuhan wrote, “[s]ense ratios change when any one sense or bodily or mental function is externalized in technological form” and this talk will explore the sensual economies neglected in the videogame industry’s ocularcentric pursuit of graphical realism (265).

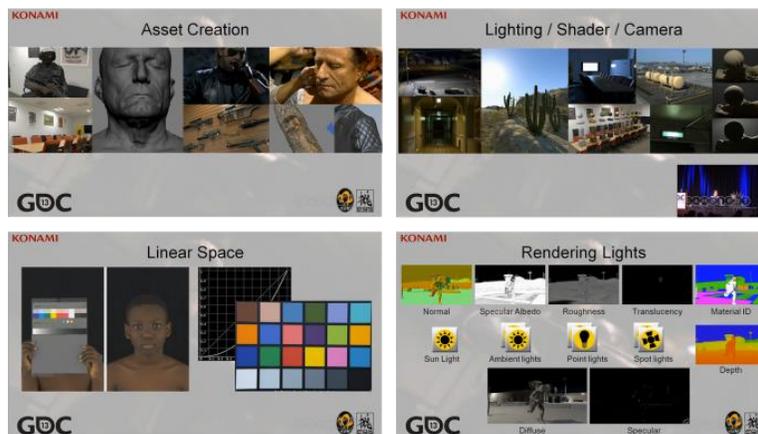


Figure 1. Photorealism through the Eyes of a FOX.

Just last month, at the annual Game Developers Conference in San Francisco, Hideo Kojima unveiled the latest entry in the *Metal Gear Solid* series of tactical espionage games in panel titled “Photorealism Through the Eyes of a FOX” (Figure 1). The presentation focused on the FOX Engine, a software framework for rendering graphics, simulating physics, detecting collision, outputting sound, and other backend operations necessary for game development like scripting, threading, networking, and so on. Kojima’s team spoke at length on the engine’s ability to simulate linear space lighting, physically-based rendering, diffuse Albedo mapping, and its handling of complex assets produced with cutting edge techniques like photorealistic modeling, photo-based scanning, and photographic texture mapping. Months before the presentation, Kojima Productions released two images of their company conference room, one photograph and one FOX render, inviting viewers to decide “Is it real or is it ‘FOX?’” (Figure 2). Like Zeuxis’ birds pecking at painted grapes or ancient artists asking for curtains to be pulled back, Kojima claimed that the FOX Engine’s graphic output “looks real” and that there is “virtually no difference when compared to the photograph”--a Turing Test of graphical realism (Kojima et al.).



Figure 2. Is it real or is it FOX? Kojima’s Turing Test of graphical realism.

This frenzy of tech demos and PR campaigns occurred five years after the release of *Metal Gear Solid 4*, a 2008 game best known for its *hour-long* cutscenes and general technical and visual excesses.<sup>1</sup> Following a mysterious trailer shown at Spike TV's Video Games Award show; an elaborate alternate reality campaign centered around a fake, Scandinavian game development team branded "Moby Dick Studio"; a few interviews involving a disturbing, blue-eyed and bandaged masked man; and finally this presentation on photorealism, Kojima was finally ready to break radio silence and reveal his white whale (Figure 3). *The Phantom Pain* begins with a perfectly rendered prosthetic arm with a hook at the end extending upward, away from the virtual camera affixed to the face of the in-game avatar. Floating above, just out of reach, and buffeted by the parameters of whatever particle system is synced with the spinning hospital fan, a single flower petal drifts downward. Whether a hallucination brought on by medication or some cinematic form of magical realism, the white lily petal is impossible for the player to grasp. Carefully modeled, textured, lit, and animated within the mathematical constraints of perspectival space, the flower petal promises a form of naturalism which continues to propel the central desires of the mainstream games industry: technological mastery, graphic realism, and player immersion. This petal appears as a utopian vision--a white whale to our Ahab avatar--and promises a reality that can be simulated, controlled, exchanged, and consumed. That is, until another form of realism startles the patient from his stupor: the fact that no amount of technological invention will immerse anyone other than the digital subject we see before us. The mathematical abstractions necessary for this form of visual spectacle remain formally estranged

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<sup>1</sup> With its cutting edge graphics and a complex, Hollywood-style narrative, *Metal Gear Solid 4* also functioned to promote Sony's then-new Playstation 3. This type of exclusivity contract was standard practice during the "Console Wars" in which Nintendo, Sony, Microsoft, and Sega (at one point) vied for the same market by branding their hardware through console-specific software releases like the *Metal Gear Solid* series.

from the phenomenology of the human player, but not the virtual veteran. This digital body, with its single, cycloptic camera-eye and prosthetic controller hand stand in for and exemplify technical apparatus of the videogame platform itself. No biological body could ever hope to grasp the speed and scale at which this reality is being processed. The hospitalized hero is not a figure of disability, but rather the one body perfectly adapted to the constraints of this visual system: his single eye a metonymy for single-point perspective and hook hand recalling the limited mobility of a game controller as the dexterity of digits is replaced with digital inputs.



Figure 3. The unorthodox marketing campaign for the fifth *Metal Gear Solid*.

While *The Phantom Pain* promises to outdo all previous iterations of the *Metal Gear Solid* series, Kojima signals a deep ambivalence towards this project by both deploying a disabled man as the protagonist of his game and assuming the a position of disability himself. In one respect, this Ahab-figure with his eye-patch and prosthetic hook is a welcome contrast to the able-bodied white men typically cast in the leading roles of AAA games (Figure 4). However, the representation of disability is overshadowed by the overabundance of graphic techniques necessary to render a figure in such high fidelity. The figure of disability does not mark an absence, but rather the hypertrophy of the culture and technology of videogames oriented towards an upgrade path of endless sequels, graphic spectacles, and greater and greater sales. This decades-long investment in the spectacular and Kojima's deep ties to the mainstream game

industry comes at the detriment of other sensory and financial economies. In the same way Melville deployed Ahab as a figure of nineteenth-century transnational capitalism,<sup>2</sup> so too does Kojima's bandaged avatar signal contemporary cognitive capitalism and the over-investment in a particular model of videogame design. Marked by the avatar's hook-hand and cycloptic eye, Kojima's pursuit of the game industry's white whale ends in the hypertrophic exceptionalism of the perfectly rendered scene to the detriment and disability all other non-ocular forms of sensory engagement.



Figure 4: The cycloptic eye and hook hand allegorize the gaming apparatus.

### Atrophy

As much as Hideo Kojima's games appeal to a naive desire for realism, the fantasy of immersion, and the promise of technological mastery, the *Metal Gear Solid* series complicates this hypertrophic upgrade path through medium-specific design. In contrast to the game's

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<sup>2</sup> See Parsons 2012 for a reading of the ambivalent relationship of *Moby Dick* to the expanding reach of global capitalism and the specific role occupied by the whaling industry. Despite the argument that Ahab's pursuit of the white whale is a rejection of capitalist modes of production, Parsons suggests that "Because everything and everyone around him is subject to his powerful and unrelenting system of abstraction, his resistance to the demands of profit is ultimately futile. He may declare "Nantucket market! Hoot!" and insist that revenge rather than productive work will bring the greatest "premium" to his heart; however, his resistance does not yield anything "audacious, immitigable, [or] supernatural" other than violence and death because he reproduces the epistemological hallmarks of capitalist subjectivity and transnational exchange" (82).

Hollywood aspirations, Kojima’s game design incorporates strategies that are positively Brechtian (Figure 5). But instead of breaking a theatrical fourth wall, estrangement foregrounds the platform and larger media apparatus of the videogame system: passwords hidden in the game’s packaging, mind-reading mini-bosses who mock your memory card data, psychic trauma in the form of faux video (or “HIDEO”) input warnings from the television screen, rapid-fire button mashing followed by controller vibrations for optional arm massages, a compromised commanding officer who orders you to manually power the console off, and more than a few references to virtual missions, combat simulations, proxy soldiers, and infowar. In light of how these strange, idiosyncratic, and medium-specific moments delay progression and disrupt *Metal Gear*’s larger narrative, Leigh Alexander has proposed that *Metal Gear Solid* is not actually about proxy wars, child soldiers, and military technology but instead a commentary on Kojima’s personal battles in the ongoing console war. In an interview with Tom Bissell in *Extra Lives: Why Video Games Matter* (2010), Alexander argues “The war in the game is the *console* war (qtd in Bissell 187, emphasis original).

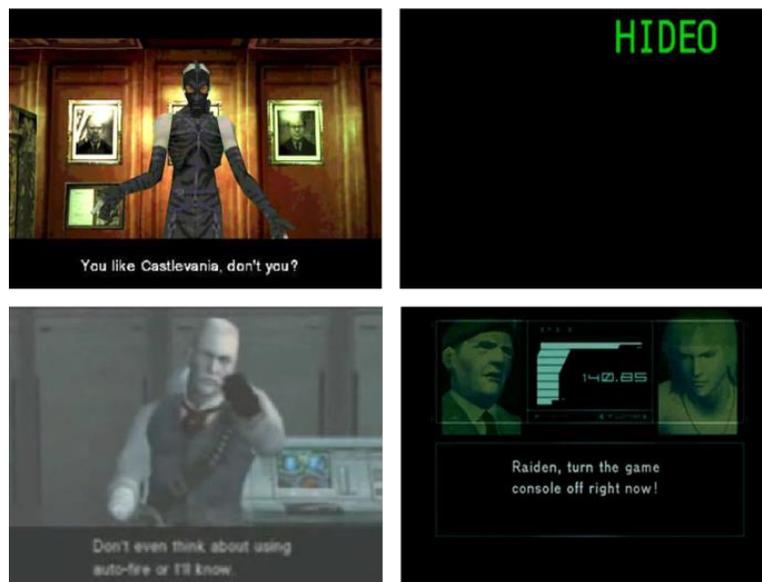


Figure 5: The *Metal Gear Solid* series deploys self-reflexive techniques of ludic estrangement.

Kojima's *Phantom Pain*, then, is not simply an ache for the impossible desires of the game industry, but is also evidence of another form of injury. Rather than the hypertrophy of the cinematic cutscene, which disables play through an engorgement of the filmic, the deployment of video malfunctions, memory card errors, controller failures, and other nondiegetic machine operations fall into a separate category that disables play through atrophy. Alexander Galloway has labeled these operations "disabling acts." According to Galloway, "[disabling acts] are any type of gamic aggression or gamic deficiency that arrives from outside the world of the game and infringes negatively on the game in some way. They can be fatal or temporary, necessary or unnecessary. . . . crashes, low polygon counts, bugs, slowdowns, temporary freezes, and network lag" (31). As the graphics arms race rages between the latest *Final Fantasies* and *Madden Footballs*, the disabling act has become a major part of the design language of independently-developed games as a way to both critique the mainstream and mark a difference in modes of production, distribution, and play. Like the more eccentric and discordant moments of *Metal Gear Solid*, a new generation of players and designers have internalized the logic and codes of videogames and are producing games and game practices which engage the conditions of the medium. Rather than regard disabling acts as impediments, these games have made use of atrophy and the attenuation of gameplay as a form of critical game design. Whereas the hypertrophic cutscene disables interaction with the computer as a means to immerse the player in a diegetic storyworld, the disabling act terminates in a form of conceptual practice in which the player is invited to contemplate the limits and ontology of games to the detriment (and eventual atrophy) of play and modes of ludic mastery.



Figure 6: Visual economy and ludic minimalism as critical game design. From left to right, *SOD* (1999) by Jodi, *Super Mario Clouds* (2002) by Cory Arcangel, *Velvet Strike* (2002) by Anne-Marie Schleiner, Joan Leandre, and Brody Condon, *Desert Bus* (1995) by Penn and Teller, *Basho's Frogger* (2000) by Neil Hennessy, *4 Minutes and 33 Seconds of Uniqueness* (2009) by Petri Purho.

Though there is a long history of artgames, antigames, countergames, overgames, notgames, and nongames that deploy disabling acts to critically investigate the medium (Figure 6), the best example of the atrophy of games is *The Helen Keller Simulator*. Propagating (mostly unsuccessfully) in the form of an Internet meme, the simulator, whether created in HTML, Flash, Java, or even Unity, usually consists of a black screen with no other visual, auditory, or haptic feedback (Figure 7). This soundless, monochromatic game is initially assumed to be loading, paused, crashed, or nonfunctional before the cognitive dissonance catalyzes into a punchline. Stated frankly, the joke is that the experience of a blind and deaf person is illegible, unplayable, broken, and boring. In other words, disabled. However, if the joke is inverted, it's not Helen Keller who is disabled but the medium that cannot represent subjective realities outside that of the hypertrophic graphic spectacle. Thus the *Helen Keller Simulator* places the disabling act at the center of gameplay to function as the negation of videogames—a null set or empty game.

The *Helen Keller Simulator*, if taken sincerely, imagines an alternative history of gaming dedicated to other sensory regimes: the haptic, the linguistic, and the philosophical. Yet the inescapable fact is that the logic of this game is still built around a visual regime--rather than the hypertrophy of cinematic spectacle, this simulation depicts a reduction in the form of monochromatic minimalism. In contrast to the hypertrophied masculine body deployed as an allegory for the videogaming apparatus in *The Phantom Pain*, *The Helen Keller Simulator* atrophies play by preferring to joke at the expense of those bodies that have been historically excluded from the videogame medium.

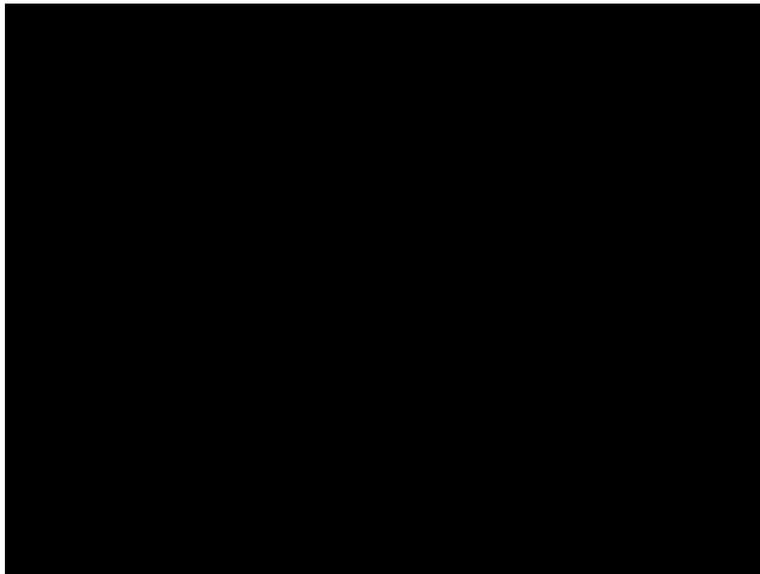


Figure 7: *The Helen Keller Simulator*.

### **Disability**

*The Phantom Pain* and *The Helen Keller Simulator* exemplify two extremes: the hypertrophy and atrophy of the visual economy of games. But what happens when disability is rethought not in terms of representational excesses or attenuations but in terms of the performances of players? In *The Philosophy of Sport* (2011), Steve Connor erodes the distinction between the concepts of disability and play writing:

The objects and instruments of sport are the means both of imposing and surpassing disability, of imposing disability in order for it to be possible partially to overcome it. It is for this reason that there is no real difference between able-bodied and disabled sports, since all sports are means towards the exertion of freedoms through the imposition of impediment. . . . [S]port is not possible without the assumption of disability, which means that disabled sports are *the only kind there are*. (emphasis original, 18)

This definition of sport is very close to the definition of game that Bernard Suits offers in *The Grasshopper: Games, Life, and Utopia* (1978). Suits writes that “[p]laying a game is a voluntary attempt to overcome unnecessary obstacles” (41). So, according to these theorists, it is the unnecessary, or freely placed impediment which defines the game. However, unlike traditional games of dice, cards, chess, or physical sports, videogames conflate the rules of a game with the mechanics governing the environment in which the game is played. For example, nowhere in the rules of baseball is gravity defined, while in a videogame like *The Phantom Pain* or *The Helen Keller Simulator*, the explicit authoring of forces like collision detection, physics systems, weather simulation, procedural animation, or even the processes necessary to sustain a black screen take the place of traditional rule sets. Rules are social configurations, pacts between players not to peek or move outside invisible boundaries. They are adopted disabilities. Mechanics, on the other hand, are involuntary and necessary; these constraints are not freely chosen and will continue to operate with or without the player. Thus, both *The Phantom Pain* and *The Helen Keller Simulator* are not games in the traditional sense. Playing a videogame always requires the user to author their own rules with which they navigate the game’s mechanics. Whether they look like it or not, these are software sandboxes waiting for players to decide which kind of castle to build. We don’t play videogames; we make metagames.

In 2009, Jordan Verner created a thread on speeddemosarchive.com titled “Can Someone Please Help Me with OoT?” Verner, who was born blind, was seeking help from the speed running community in order to complete one of the most famous (and most complex) entries in the *Legend of Zelda* series. The response on the forum was initially mixed:

Hitaro: Odd, a blind man who can find this site, type nearly perfectly, plays video games . . . has OoT ‘for boss fights’, wants the map to be there (even though he can't see it) and expects a video to help him learn the game...what?

Zurreco: I'm sorry, but there are way too many complications for me to believe that a blind person can play through OoT.

coolwer2: I wasn't trying to make a useless post, but this is kind of a useless topic. (Verner)

A number of posters were unable to fathom that a non-sighted individual could successfully read, write, and interact on the Internet let alone play videogames and that blindness did not have to be treated as an object of desubjectivizing pity. Ironically, the community that Verner involved himself in is based entirely around the concept of disability that both Connor and Suits articulate: playing videogames by authoring and abiding by arbitrary constraints.

Since 1998, the Speed Demos Archive has been dedicated to the creation and publication of speedruns. A speedrun, or “real time attack” is the competitive attempt at completing a videogame as quickly as possible. Though playing a game quickly seems obvious and is clearly suggested in the design of certain videogames, speedrunning, as a practice, takes this logic to its extreme, and, in doing so, challenges the very notion of what a videogame is and can do. Speedrunners then, don't merely choose to play games fast, but in the act of applying an unnecessary obstacle to a set of invariable mechanics, invent entirely new metagames and new ways to play. Whereas blindness was a physical condition that Verner could not control, he found a form of freedom by recontextualizing his disability as a self-imposed handicap. This act

of *choice* is the same freedom that defines speedrunning and why many speedrunners felt a kinship with Verner. As much as speedrunners rely on the eye to navigate the space, their success is so dependent on internalized haptic routines and muscle memory such that the best speedrunners often attempt blindruns as a way of practicing certain techniques.

Though a number of Speed Demo Archives community members helped Verner produce scripts, save states, and strategies for navigating *The Legend of Zelda*, there was one runner in particular who was drawn to Verner's blind games. Drew "Runnerguy" Wissler, one of the record-holding *Ocarina of Time* players not only assisted Verner with his project but, in solidarity, began to perform blindfolded speedruns of the game (Figure 8). Facing away from the screen, with a green pillowcase over his head, Wissler began videotaping himself navigating the virtual space without visual feedback. Unlike Verner, Wissler was able to rely on his memory and spatial intuition in conjunction with the sound cues and scripts he had designed for blind play. The result is not a blind run as much as a blindfolded run. Wissler is the first to admit that he and Verner are not playing the same game. When blind and blindfolded play is compared, Verner's movements appear procedural, meticulously prepared and practiced in advance by following a linear set of instructions whereas Wissler's attempts to navigate are sloppy and spontaneous based on muscle and visual memory, stereo sound cues, and frequent sword slashes on obstacles with Link's sword-cum-cane. Whereas Kojima's *Phantom Pain* is precisely that--a phantom pain--and *The Helen Keller Simulator* functions mostly as a thought experiment, Wissler's disabling act, as seen in his videos, produces a visceral, bodily reaction as the frustration of a self-imposed rule sets in over hours and hours of play. Even Wissler's symbolic placement of a bag over his head rather than blindfold recalls acts of torture. But both players

persisted. Jordan Verner and Drew Wissler are perhaps the only two people in the world to have successfully completed *Ocarina of Time* without the use of vision.



Figure 8. In solidarity, Jordan Verner and Drew Wissler play *Legend of Zelda: Ocarina of Time*.

### Conclusion

While *The Phantom Pain* culminates in cutscenes, *The Helen Keller Simulator*, despite operating as a contrast to mainstream industry, deploys the restriction of gameplay to uncannily similar effect. In contrast to this hypertrophy of cinematic spectacle and the atrophy of the art game, speedrunning functions as evidence of the elaborate games that players invent according to alternate sensory economies. By turning a videogame mechanics into equipment for inventing new play rather than predetermining it, speedrunning reveals a game's hidden eccentricities. The unintended complexities, gaps, and overlaps hidden by clever programming emerge as a valuable part of a game's mechanics. To use Galloway's language, metagames transform disabling acts into enabling acts. Rather than distributing attention across a vast assortment of sequels, they apply deep focus to a single piece of software as a means of engaging in the possibilities afforded by videogames as a medium. Speedrunning rejects a model of games defined as commodities and objects of consumptions. By opting out of the many new commercial games vying for their gaze and dollars, they have created a second life based on the recycling of past platforms. In many ways, speedrunners engage in the most ambitious of Oulipian experiments: it's a constrained writing exercise written with the body and in long duration. These alternative

modes of disabling and redistributing of the senses serve to re-enable one mode of resistance to the ocularcentric focus on spectacle that has reified certain modes of gameplay to the expense of others.<sup>3</sup> In an interview with Paul Virilio, the theorist was asked: “But what shall we dream of when everything becomes visible?” He replied that “We’ll dream of being blind.” By turning to these dreams of the-dark, speedrunners have uncovered the blindspots of capitalism. With the games industry focused on blindsiding consumers, metagames turn blindspots into alternative forms of play. Rather than take the blindfolds off, perhaps it is time to put them back on again. To dream of being blind.

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<sup>3</sup> There is an irony, however, that much of this is accomplished through a reconfigured relationship to spectatorship and the cinematic apparatus. Whereas *Metal Gear Solid* conflates player with viewer by incorporating elaborate cutscenes that arrest play, speedrunning flourishes in a complex media ecology designed around converged modes of playing, laboring, and watching. Blindrunning exists on account of the development of an emerging culture and economic mode of production built on videogame spectatorship developing through the rapid expansion of competitive E-Sports as a cinematic spectacle and the growth of live videogame streaming. As Tom Gunning wrote in “The Cinema of Attractions,” “every change in film history implies a change in its address to the spectator, and each change constructs its spectator in a new way” (70). Systems like Twitch.tv, *Dota 2*’s spectator client, and Korean television stations broadcasting live *Starcraft 2* are built around a model that expands Jonathan Beller’s theory of attention economies in *The Cinematic Mode of Production* in which he argues that “to look is to labor” (2). In this reconfigured model of spectatorship via networked gaming, to watch is to play is to labor on behalf of commercial platforms. Through these emerging interfaces, the distinction between player, worker, and spectator is eroded as the gaze and clicks of all bodies within this ludic system are quantified and converted into instrumentalized data analytics.

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