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Cinema's Turing test: Consciousness, digitality, and operability in 'Hardcore Henry'

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> Will images created from this optical system, this kind of robot-brain that is the cinematographic apparatus, have as great an influence upon the evolution of culture and civilization? – Jean Epstein, *The Intelligence of a Machine*

In HBO's new hit series *Westworld* (2016), one character claims that 'our hosts began to pass the Turing test after the first year'. The hosts, placed in the theme park to entertain paying customers, are life-like robots. This succinct explanation allows the guest – and the audience of the show – to indulge in the illusion of vivacious robotics. However, as the plot unfolds in a series of twists, the main protagonist Bernard, whom the audience thought to be human, is actually a host. The surprise the stunned audience experiences thus recasts the impression of the character in a new light. Has Bernard shown any trace of being programmed? Is the audience fooled because of the series' narrative trickery, a turn of events that dares the audience to call its bluff? In retrospect, the entire television series itself turns into a prolonged Turing test to gauge one's capacity to distinguish human from non-human on screen. What is thematically brought up and sidelined therefore returns as a question of spectatorship. The mind-game narrative, spinning on the question of consciousness, transforms into an imitation game.[1]

Originally proposed in Alan Turing's 1950 paper 'Computing Machinery and Intelligence', the Turing test has become a staple in recent screen phenomena, ranging from *Westworld*, *Ex Machina* (2015), to the latest *Ghost in the*

Shell (2017).[2] The proliferation of these works results partially from the digital revolution in filmmaking. The more robust visual rendering system can now produce a seamless machinic physiognomy. These composites of flesh and transistors are a delayed response to the anxiety toward the integrity of acting and performance, instigated by new technologies such as motion capture and Paul Ekman's Facial Action Coding System.[3] The humanoid entities on screen are no longer only produced by profilmic human actors and actresses; they have add-ons that exaggerate expressions and gestures, erase the miniscule imperfections of the face, and streamline the transition from corporeality to digital imaging.

However, the exploration of image consciousness and artificial intelligence goes deeper, as it involves spectatorship and the elusive definition of subjectivity in film and visual studies. While the examples mentioned above are crucial to this emerging trend of science fiction, I would like to include an extreme test case, *Hardcore Henry* (2015), a film that does not offer anthropoid representations of subjectivity. No humanoid figure as such is granted for examination. Playing the imitation game through the first-person shooter's point of view, *Hardcore Henry* is a contemporary update of the notorious *Lady in the Lake* (1947). What are the visual cues that allow the audience to recognise that consciousness is birthed in and through the images? What is it that enables one to see the image as the embodiment of a certain subjectivity? How does a video game-inspired film dialecticise one's tactile and optical perception? These questions cannot be answered before one understands the polyvalent nature of subjectivity in film and visual studies. *Hardcore Henry*, unlike other iterations, is a Turing test that relies on vision and tactility.

Subjectivity, or composite aggregate

In film studies the word 'subjectivity' often causes confusion. Subjectivity connotes a form of agency. The term points to a thinking and acting individual that drives the narrative of a film forward – one says the character's actions embody a 'certain subjectivity'. Actions and decisions are given a figure on screen as an agent. It can also point to a relative state of the image, as theorised by Gilles Deleuze in *Cinema 1*.[4] The wholly subjective image allows the audience to see from one character's optical perspective. The objective image presents a vision that is not tinted by human agency – or at least one

assumes so. In between the two gathers a series of differential states. What separates subjective from objective is often the organising logic of the gaze in the film (shot and counter-shot) and affective traces (blurring and fading). Moreover, the characterisation of 'seeing from somebody's point of view' also introduces the concept of subjectivity as positionality. In a certain sense, subjectivity is a concept one uses to describe the emergence of an intentional vector and to situate the audience in the process of going along with or being repulsed by said vector in a narrative.

In short, cinematic subjectivity is not essential but relational and processual. I do not mean to put forth an actor-network theory of subjectivity in visual analysis. What I am interested in is this composite, aggregative quality of subjectivity and what kind of consequences it might entail. The composite quality demands a radical ambiguity when one employs the concept of subjectivity; it does not follow a logic of all-or-nothing. It refuses absoluteness. Subjectivity covers narrative formulations, affective textures, and perhaps most importantly, spectatorial identification.[5] It is always a mixture between the three. The composite characteristic shatters the illusion of dot-like subjectivity (concentrating on one single point without any concrete extension) as a vacant position to be occupied. When the onscreen corporeal figure of a character vanishes, these intersections of subjective traces become prominent. What is subjective, in *Hardcore Henry*, is not a single entity but a momentous concoction of various ingredients that moves between what is onscreen and what is before the screen, a liminal contact zone.

Cinematic subjectivity is aggregative as well, reinforced by narrative. The usual shot/counter shot dynamic takes advantage of the audience's pattern recognition – hardwired or not – to assign respective modalities to images. The subjective/objective distinction is retroactively constructed according to the previous or next image. The status of the subjective image points to previous exemplifications and to future recurrences. Precedents and antecedents stack up to manufacture subjectivity as consciousness, as affect, and as positionality. This facet of aggregation is often neglected in the discourses around cinematic subjectivity, as if subjectivity were only an evanescent phenomenon that as soon as it was recognised could be dismissed. The composite and aggregative dimension of subjectivity is where I want to begin my analysis of subjectivity as consciousness in the context of digital cinema, particularly with regard to *Hardcore Henry*. These two qualifications of subjectivity have been essential to any narrative cinema, but the advent of other new media exposes these qualities in an intensified manner.

Fig. 1: Estelle, seen from Henry's yet-to-be-aligned prosthetic vision.

A brief explanation of the film plot's premises is warranted here. The main character Henry wakes up mutilated, two of his limbs missing. Estelle, supposedly his wife, takes care to help him put on a prosthetic arm and leg. Soon after, a military dispatch invades, kidnaps Estelle, and sends him running with no voice program installed. The rest of the film is a journey of advancing from one stage to another only to find out that Estelle is part of a bigger plan to mass-produce clone soldiers with no memories. From this description, it is not difficult to picture the aesthetics of *Hardcore Henry*. The audience perceives the filmic world through the first person point-of-view of the protagonist. Parts of his body appear within the frame from time to time. What holds these seemingly unrelated body parts together is Henry's audiovisual perception, which the audience shares. Henry's is a mute existence. He responds to the world via his physical gestures (nodding or shaking his head) and action (reacting to the sudden threats thrown at him). These bodily features in turn demand a style of mise-en-scène and editing that is raw and immediate. Hence, the takes in the film are unusually long, conveying a sense of excitement through the seldom interrupted time-space continuum – much like the video game *Counter Strike*, only without the player's voice communication (to coordinate tactics with other teammates) and manual operation (to control the character), a point I will return to in discussing the film's 'digitality'.

The film invites the audience to verify Henry's consciousness through a series of first person-shooter long takes. However, this serial operation implicates the audience in piecing together these subjective shots *not manually* but *mentally*, since the protagonist Henry is both beyond the audience's

control and devoid of humanoid representation. In other words, Henry's subjectivity is not an *obvious fact*; his subjectivity is determined by the audience's mental input. The audience's cognitive process plays a crucial role in shaping Henry's onscreen subjectivity. This has been the case throughout the history of cinema – the audience gives integrity to each and every screen figure, ignoring the temporal and spatial discontinuities of montage. Otherwise, given the fact that each appearance of visually similar figures might very well produce a different character, cinema would be an art of clones – and this is indeed the fate of postfilmic image culture from *Battlestar Galactica* (2004-2009) to *Orphan Black* (2013-). *Hardcore Henry* parades and radicalises this innate tendency of cinematic multiplication, displacing the recognisable figure to behind the camera and asking the audience to be the judge in the court of consciousness. The composite quality of subjectivity – located at a place behind the camera and before the screen – is therefore magnified through the pretext of a video game format. The film moves from the representation of subjectivity to its *representability* that depends on spectatorship.[6]

This repetition is built into one's understanding of Henry's subjectivity as consciousness. The reiteration of the perception-image is the only evidence by which the audience can identify Henry as a subject, as if, to form an independent consciousness, the only way is to repeat. Even mirror reflections (one trick that *Lady in the Lake* employs to establish identification) are largely eliminated. Repetition is, again, nothing new in narrative cinema. The audience has to see one character enough times to remember its role in the narrative. But here cinematic subjectivity is only guaranteed by repetition (not representation). The joke is if you give a monkey a typewriter, with enough time, it will produce the complete works of Shakespeare. In the same vein, if the audience is exposed to similar perspectival images enough times, he or she will believe it is the incarnation of a consciousness, transitioned from a mere *en-deçà*.[7]

The concept of *en-deçà* (literally 'on this side') is first proposed in Marc Vernet's *Figures de l'absence* (1988). Vernet rethinks the issues of focalisation through a theory of the offscreen, the void from which the audience comes to identify with one subject or another and through which the character is said to express his or her subjective point-of-view. By repositioning the issues of the point-of-view, Vernet expands the so-called diegesis and brings the audience into the mix. Christian Metz revisits Vernet's audacious claims in *Impersonal Enunciation, or The Place of Film* (2015). With Vernet's *en-deçà*,

Metz reaches a tentative conclusion that 'I myself intend to propose the idea of subjectivity without a subject'.[8] That is, 'we can look *via* a character (which is precisely what Vernet shows so marvellously) without that character constituting a full or psychologically rounded subject, without our even knowing anything about him, *unless he is a character*'.[9] *Hardcore Henry* capitalises on the necessarily incomplete cinematic subject and thematises this point-of-view shot dilemma through artificial intelligence. Cinema figures subjectivity in the process of moulding a subject, always half-baked.

Cinema's Turing test

Metz's and Vernet's theoretical language finds its counterpart in the film's advertising. The *Hardcore Henry* DVD package introduces the film as follows:

> You remember nothing. Mainly because you've just been brought back from the dead by your wife who tells you that your name is Henry. Five minutes later, you are being shot at, your wife has been kidnapped, and you should probably get her back.

The invocation of the second-person pronoun accentuates the fundamental role that the audience has to play in the process: in order for Henry to remember, *you* have to be in his shoes. The spectator and the main protagonist are in the same situation of amnesia, starting anew. In order for Henry to be established as a subject, *you* have to remember. The repeated use of the second-person sentence structure also signals a process in which the film intends the audience to participate – to confirm Henry's subjectivity through repetition. The equivalent of this sentence structure in visual terms is the first person point-of-view shot in the film. This visual repetition is the basis of cinema's Turing test.

Alan Turing's 'Computing Machinery and Intelligence' slyly substitutes the question of 'Can machines think?' for 'Can machines appear to be thinking?' He fastidiously defines what a machine is while avoiding the definition of what thinking is (by objecting to other people's objections through the method of exhaustion). This is a shrewd move that enables him to imagine a thinking machine without defining thinking in an essential way. If one cannot define what thinking is, the next best thing is to appear to be thinking. How can one appear to be thinking? Turing's answer is a thought experiment. The reformulation of the problem is 'described in terms of a game which we call

the imitation game'.[10] The game is played with three parties: a man (A), a woman (B), and an interrogator (C). The interrogator only knows the other two parties by their aliases X and Y. C can then ask a series of questions to determine the sex of A and B, ideally through telecommunication, lest any corporeal qualities divulge A's and B's true sexual identity. Turing then asks the question, 'What will happen when a machine takes the part of A in this game?'[11]

What is neglected in Turing's original discussion is the *ad infinitum* questioning in the imitation game. He does not specify how many questions a machine has to answer before it passes the test. This is an aggregative process – the interrogator collects information in the process to judge cogently whether or not the machine appears to be thinking; and even here, the cut-off point is arbitrary. There is no guarantee that the interrogator can be absolutely sure that a human, not a machine, is talking to him. Moreover, this is also an intersubjective process. In order to ascertain the difference between human and machine, a third party has to come in. Put otherwise, artificial intelligence is determined by the interrogator's intelligence – in this sense, it could be said to be composite. Finally, Turing's scenario strips off any concrete representation of intelligence. The responses from both X and Y have to be transmitted through the means of telecommunication, discrete and immaterial. In this fantasy, intelligence is not about representation but about its representability through this aggregative and composite process. This is why Friedrich Kittler argues that 'in the Turing game, the so-called man coincides with his simulation'.[12]

Now it should be clear that cinematic subjectivity and artificial intelligence share the same epistemological structure – or at the very least, they partake in the same investigative process. Aggregation and compositeness are their twin pillars. One possible critique is that this characterisation of cinematic subjectivity is only a product of the computer age, determined by the discrete arrangement of the universal machine. Such is how one understands technological determinism.[13] To this I say all the better, since it reveals one latent aspect of cinematic subjectivity. While appreciating the experiential dimension of cinematic subjectivity that phenomenological film theorists like Vivian Sobchack rediscover in the late 1980s, I contend that this understanding should also be strengthened by a machinic approach to cinema as a technological medium. The subjectivity cinema proposes would have to share the characteristics of discreteness, aggregation, and compositeness. It is

only through the imitation game that one discovers and explores the 'ghost in the machine', both computational and cinematic.

In John Durham Peters' words, Turing's thought experiment 'is a fantasy of communication without bodies […] Turing wanted a sort of communication "Ghost to Ghost"'.[14] This ghost-to-ghost model of communication is similar to the situation the audience finds in *Hardcore Henry*; Henry's ghostly presence and his body parts are only sutured by the *en-deçà*, and the *en-deçà* is constituted by the audience's own cognitive process – again, 'on this side' of the camera, and thus anchoring the full apparatus. By depriving the screen of a fully-composed figure, the film imitates the imitation game. That is not to say the scattered body parts on screen are not crucial, but they are now following the logic of supplement, necessary but replaceable and fungible.[15] This is how *Hardcore Henry* differs from and radicalises other contemporary Turing fictions. In the film, the supposed camera-consciousness Henry responds to the stimuli in the filmic world. Without a voice program, any trace of his conscious action is only conveyed through the motivated camera movement. This subjective trial also has another side-effect: when one loses the objective perspectives (e.g. the establishing shots, the mirror to show where one is looking from, etc.), the audience's perception itself is turned into an ordeal of dizziness. The multiple iterations of the point-of-view shot inundate the audience with excessive e-motion. This is where one can see two different senses of consciousness as experience come into play.

The experiential dimension of subjectivity as consciousness returns us to the concept of *en-deçà*. The *en-deçà* is not merely the invisible core that might hold Henry and the audience together. It protrudes on screen. Every once in a while the screen shows signal distortions, its image pixelated to show noise interference. These are the moments the audience doubts Henry's consciousness – the technological interruptions are the mechanical, computing traces of a machine. How can a true consciousness be mediated this way? Henry's consciousness reveals itself as a medium, which is to say that it loses transparency in the process of communication. However, Henry's parkour-style movement on the streets of Moscow modulates the audience's proprioception; one feels moved by his motion up in the air and down on the ground.[16] The audience's own giddiness is evoked to endow the *en-deçà* with a probable body. Through shuddering, shaking, and shivering, Henry *seems* to have a body that is tangible – to one's tactile vision.[17] The mechanical and physiological traces of the *en-deçà* as the cinematic screen compete with each other; the competition forms another trajectory of

the *Hardcore Henry* Turing test. In moulding subjectivity as consciousness, the film tacitly reminds the audience that screen subjectivity itself operates between screen and audience, reaching out of the fourth wall to connect with our tactile sense trained by manifold interfacial interactions and video games in particular. Tactility and media convergence produce what I call 'phantom digits' in *Hardcore Henry*.

Phantom digits

Henry's sometimes pixelated vision is a sign of convergence, between his own artificially reconstructed and enhanced vision and digital cinema's own material basis – a matrix of pixels. These pixels, deep down, are numerical values, calculated in real time by algorithms (codecs) to control each dot's changing colour on screen. For most of the mainstream productions, these phantom digits appear quiescent. The picture elements swarm together to form pictorial entities. Pixel images are smooth. Only in some context, mostly on one's streaming laptop, these pixels would be exposed because of faltered internet transmission and decompression errors. One is familiar with such phenomena on YouTube or Netflix. But recently, Hollywood has been trying to incorporate this ground of image in its narratives – be it magical dope (*Lucy* [2014]), or invading video game units (*Pixels* [2015]), often without success, as if this recent technological development were still resisting the pull of cinematic grammar. Like various tricks in early cinema, pixilation seems too spectacular and jarring to be in service of narrative. The phantom digits still retain their uncanny ghostliness. Still, with the latest emergence of desktop horrors and video game narratives, some other digits seem restless.

Just like cinematic subjectivity is constituted both onscreen and offscreen, the digits have their offscreen doubles. As the substrate of the digital image, picture digits vary according to the compression and decompression demands of image transmission. These are phantom-like because one rarely sees how pixels swarm, split, and transform on screen in a zig-zag manner. They are always already translated into a smooth, polished image format. Another set of phantom digits is in front of the screen. The digits I am referring to here are the human digits of the audience: one's fidgety fingers in the digital environment. Now, when watching films on any platform, the audi-

ence might feel the urge to pause, fast forward, or rewind, craving to manipulate the flow of the images at will. The newly-gained manipulability of the image flow is inseparably linked to one's tactile sense and the ability to control the cursor. These are phantom-like in a different sense. Watching film now might feel like experiencing the situation recounted in Maurice Merleau-Ponty's *Phenomenology of Perception*: the viewer becomes an amputee, sensing the slight itch of the hand whose doppelganger (the cursor) is not there on the theatrical screen or the urge to reconnect with the remote control in order to scratch the annoying tingle on other viewing platforms.[18] One's phantom digits are technologically intertwined with media.[19]

This manual phantom is nothing new. Art historian Alois Riegl has already traced the 'optical' and 'tactile' (mental and material) qualities of the work of art.[20] Deleuze, when analysing Robert Bresson's *Pickpocket* (1959), asserts the peculiar function of the hand on screen: '[t]he hand doubles its prehensile function (of object) by a connective function (of space); but, from that moment, it is the whole eye which doubles this optical function by a specifically "grabbing" one'.[21] The two perspectives, plus Walter Benjamin's surgical metaphor in the 'Work of Art' essay, grow into the trend of tactile theories, spearheaded by Sobchack, Laura U. Marks, and Jennifer Barker.[22] Yet, the surge of tactile visualities since the 1990s might be a symptomatic response to 'digital' phantoms that arise with the expansion of computer culture. The digital sense is exorcised and reworked as the 'haptic' sensibility. The soft caressing of the haptic vision could be a displacement of the real, gnawing sense of the audience's hand. The aggressive nature of controlling the image manually is sublimated into a utopian vision of subject-object dissolution: let go of one's hand so as not to handle the image. Digital cinema, as its etymology already indicates, is a catalyst that helps crystallise such issues.

The latest spate of 'screen-captured' films and video game films like *Hardcore Henry* scintillatingly summons one's phantom digits. For the former, the film would appear to be the recording of someone's desktop, and the suspense comes from the diegetic user's live interaction with others, often embedded with multiple windows and live camera images.[23] Pedro Noel Doreste is the first to offer an astute account of this emergent genre. He argues that desktop horror films like *Unfriended* (2014) divest the viewer of his or her usual capability of interacting with the machine. Human-computer interaction is recast as a cinematic situation, the viewing subject disabled:

'watching a movie like *Unfriended* and having the actionable surface of a laptop trackpad a couple of inches from your body may simulate the feeling of amputees watching to scratch a phantom itch'.[24] The medial dismemberment is rechannelled into the audience's searching gaze – one's eyes serving as the moving cursor. In one's daily digital environment, any screen surface is actionable, either through one's touch or any other mechanical prosthesis. The 'actionability' of the surface calls for its manual correlate, a correlation that Alexander Galloway explicitly touches upon in discussing origins of the first-person shooter.

For first-person shooter games, Galloway claims that their '*gamic vision requires fully rendered, actionable space*'.[25] *Hardcore Henry*, however, could only provide an idea of such computational simulation. This exacerbates the situation of the disabled hand. If the audience is a first person-shooter geek, he or she might want to get in the action, to control Henry as reincarnated avatar. For critics like Marijeta Bozovic, they might want to turn it off for the film's ultraviolent and misogynistic Cold War rhetoric – to turn off one's brain as Bozovic describes: '[o]thers, blessedly including my own husband, had long ago fallen asleep'.[26] In either case, *Hardcore Henry* invokes a weird 'digitality' that urgently solicits the audience's manual action. One paradoxical effect of the film's digitality is that, through the dismemberment of the hand, Henry seems to be alive and autonomic. If one imagines that a videogame character's aggregate subjectivity is partially realized by the player's recurrent manual actions, then the film reasserts that Henry's subjectivity stems from the audience's inability to *touch* him.[27] This independence depends on the separation between audience and film, one's incapable hand and overstimulated brain. In the case of *Hardcore Henry*, repetition, aggregation, and compositeness are coupled with the inhibition of manual action.

Fig. 2: Akan's manual destruction.

Hardcore Henry does not seem to be satisfied with the implicit sense-making of digitality; it goes for allegorical overkill. Akan, the film's villain, is telekinetic. From the very beginning, the audience might be confused about why Henry's nemesis has such supernatural abilities. One justification is that, like most video games, the final boss has to look indomitable in order for the player to have even greater satisfaction in defeating him. That's certainly true when Henry finally tears his enemy into pieces by first mutilating Akan's hand to suppress telekinesis. He then jumps onto the floating clones' bodies, pulls out his own eye and its connecting wire, ties and tightens the wire around Akan's head to cut it into two halves. All this is gory and bloody in the extreme. But why the superpower? The true explanation might be that Akan himself is the audience's mirror image. The superpower he has is the true embodiment of the film's repressed phantom digits. His is the symbolic remote control of all the characters in the film, just like how a video game player could do to direct his or her own avatar. In order for Henry to truly attain an independent consciousness, he has to scrub off this all-encompassing manual presence. His subjectivity is finally birthed in the destruction of the hand.

Another layer of irony lies in the pairing of the optical and the manual. Henry's subjectivity is solely based on vision, not the player's manual interaction. In the media fantasy put forth by the film, cinema is purely optical, whereas video games are defined by their interactivity. With the elimination of the hand, cinema also symbolically defeats video games. This foundation attests to how cinema imagines itself in competing with other media – how

cinema 'dreams its rivals' in its ideological contestation.[28] Henry's final triumph points to cinema's optical superiority. That said, his vision, as provided by the film, is not unproblematic. Beyond prehensility (the allegorical substitute for video games) as the adversary, the optical realm is haunted by surveillant enunciation. And as Riegl, Deleuze, and a score of other scholars predict, tactile manipulability is indivisible from optical operability.

Operable intelligence

Fig. 3: Jimmy and the projected surveillant recursion.

In examining the longstanding trope of cinema as a surveillance machine, Garrett Stewart boldly argues that all montage is espionage: 'viewing invisibly vs. sighting unseen: watching versus spying'.[29] A dialectic, for sure, as these two modes of opticality persist in the flow of images interchangeably. Montage inaugurates an intersection of different gazes: two images, one seen, the other seeing. Any editing, in essence, is an espial episode. Inspired by Thomas Y. Levin's concept of 'surveillant enunciation', Stewart embarks on a genealogical survey of surveillance cinema from Fritz Lang's *M* (1931) to *Source Code* (2011) and beyond. His task is to excavate how suture theory's insight, long buried under its psychoanalytic and Marxist weight, comes to serve as the episteme of contemporary cinema: how the viewer is sewn into optical subjectivities in narrative construction. Optical operability interpolates the audience into the spying situation. Cinema, always keen to the invasion of other visual configurations, ironises its co-opted optical situation – finding a

way to put pressure on the meeting of watching and peeking to sabotage the suturing process and put viewing and sighting on display.

Suture theory's main thrust is montage, the alternation of shots that dynamises the exchange of looks. But what if digital cinema itself is no longer defined by the fissure of montage, rather by a continuous permutation of one image and its pixel transformation? This is William Brown's argument in *Supercinema* (2013): 'digital cinema has a "continuous" logic that pushes beyond the human understanding of space'.[30] No doubt that the old surveillance mode is alive and well. The new continuity, at times, no longer relies on a dialectical opticality. Take a scene in *Hardcore Henry* as example. At intermittent points in the narrative there is a mysterious figure, Jimmy, coming to Henry's aid in different appearances, sometimes as a professional white-collar assassin, as a guerrilla fighter, or as a Second World War colonel. The audience is puzzled as to why this character, after dying so many times, can resurrect almost instantaneously. When Henry finally enters Jimmy's lab, it turns out that Jimmy, who once assisted Akan to build a clone army, cashes in on the technology, since he is now totally paralysed because of Akan's 'phantom digits'. All the different looks are the clones Jimmy cultivated in the tank. After showcasing how he could remotely control all these duplicates with his visor, Jimmy finds out that Henry unwittingly transmits their location to Akan with the wet-wired visual GPS. The scientist then projects Henry's broadcasting onto the big screen, and the live feed creates an effect of mise-en-abyme through the inlaid projection. Henry's movement, with its transmission lag, turns into a pre-cinematic vision: the multiplied images trail behind the protagonist's gesture, as if they were Étienne-Jules Marey's motion observation experiment, inflected by wide-angle distortion.

This is the juncture when the screen is tainted with sudden opacity. Henry's subjectivity, based on opticality, is now revealed to be pure *intelligence* in both senses: intelligence first as consciousness to promptly react to external threats, then as a drone that collects vital data, perpetually hooked onto the internet. The aggregative quality of subjectivity turns into the accumulative storage of information. The audience, who believes in Henry's visual invincibility and possibly his subjectivity as well, realises Henry's consciousness is only part of a bigger network. It begs the question: What if Akan's company always controls Henry's action and his behaviour is always a programmed result? From this perspective, Henry is the ultimate operable intelligence, both as collectible information, stored and archived for military actions pending and ongoing, and as consciousness simulated by perception,

embodied – but at times split and pixelated – in the digital mediation of the posthuman. Operable is the key term here, since it designates passivity as well as activity. In the film, the deliberate erasure of such distinction implies a technological, networked imagination of consciousness. The protagonist Henry becomes a conscious medium that acts and is acted upon, and it is hard to tell whether or not he has the so-called agency – to borrow from Kittler, Henry might be the ultimate 'so-called man'. For contemporary cinema, the formula of 'all montage is espionage' should be supplanted with its consequent next step: all images are operable intelligence.

The intertwining of passivity and activity makes Henry's optical consciousness unexpectedly obscure. It loses the usual luminosity that consciousness projects to the outer world; all consciousness is consciousness of something, as the phenomenological axiom goes. Galloway, following Foucault, astutely observes that 'the beginning of a medium is that historical moment when something ceases to represent itself'.[31] That is, something quits mediating and reveals its mediation. The contemporary media environment, as it is suffused with discourses of surveillance, threatens with a concern both of mediation and of privacy; one is afraid that the camera might turn into a screen or a screen might be turned into an image-capturing interface. The axis between 'the look at the viewer' and the first person point-of-view shot no longer serves as a filmmaking taboo – they are already properly recognised, categorised, and reserved for special occasions for the maximum effect. The piercing gaze is conventionalised. The true fear now lies in the qualitative change of the screen and its deceptive transparency. If one always already knows the filmy, translucent screen is permeable while denying the fact at the same time, then the interfacial screen is sensorially *imperceptible* and intellectually *blinding*. It is not based on the representational dynamic of looks. From the very beginning, it hinges on imaging as such. This is one of the few moments that I would characterise as 'post-perceptual'.[32]

Stewart's formulation of failed sutures now evolves into something more sinister and sneakier. The screen now is both active and passive. Active in the passive sense: the screen clandestinely sends out intel that might or might not be acted upon. Passive in the active sense: the screen makes itself imperceptible when Henry hops around to poke around. All this rests on the radical subjectification of the camera-screen-consciousness. Espionage as discontinuity is replaced by the ultimate form of internalised surveillance: Henry's consciousness is pre-programmed, and it sends out data to Big Brother for any unprogrammed accidents. One has to wonder how Henry, if he is really

sentient, feels about his own status as this optical consciousness that uploads information to the internet at every second – not unlike how one's metadata is collected online by multinational corporations. In the end, even when Henry succeeds in defying Akan's phantasmal telekinesis, the audience is not sure whether he truly has a consciousness. But that question seems inconsequential now. What is crucial is that, by way of first person-shooter games, *Hardcore Henry* reveals aggregation, compositeness, and discreteness as the fundamental characteristics of cinematic subjectivity. The film summons the audience's phantom digits – both experientially in one's relationship with the screen and allegorically in the film's textual operation – in order to reclaim vision's supremacy and how it alone performs subjectivity. The ontological status of the screen is questioned but reaffirmed through the final elimination of tactility. With this narrative materialisation of consciousness, maybe *Hardcore Henry* could use a subtitle: An Avatar's Revenge. Turing's fantasy of disembodied intelligence lives on in cinema.

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Notes

[1] I am referring to Thomas Elsaesser's ambitious taxonomy of contemporary 'puzzle game' filmmaking. See Elsaesser 2009.

[2] More examples include *Oblivion* (2011), *Her* (2013), *Chappie* (2015), *Morgan* (2016), and many more.

[3] Prince 2011, p. 135.

[4] Deleuze 2005a, p. 73.

[5] Here my definition of subjectivity echoes Elizabeth Reich's and Scott Richmond's lucid introduction to 'cinematic identifications'. While recognising many limitations that apparatus theory – which presuppose a patriarchal, sadistic viewing subject – has for its spectator, they defend its undertheorised potential for articulating 'cinema as a site of psychic play' (p. 9). In other words, cinematic identification is never monolithic and hegemonic but diverse and interactive. The Turing test in *Hardcore Henry* clears a ground for perceiving how a subject (not necessarily a human) comes into existence. See Reich & Richmond 2016.

[6] In analysing Delmer Dave's quintessential first person film *Dark Passage* (1947), Vivian Sobchack argues how the film affirms the protagonist Vincent's subjectivity through an ethical encounter with his bandaged face, voice, and helpless eyes. All of these elements evoke an uncontainable, radical exteriority that points to an existence that transcends 'the merely visible' (p. 78). I would argue that 'the merely visible' is exactly what *Hardcore Henry* is about, as explained later in my discussion of vision and tactility in the film. For Sobchack, subjectivity is transcendental radicality, whereas in *Hardcore Henry* it is immanent repetition. See Sobchack 2011.

[7] Vernet 1988, pp. 29-58.

[8] Metz 2016, p. 102.

[9] Ibid., p. 103.

[10] Turing 1950, p. 433.

[11] Ibid., p. 434.

[12] Kittler 1999, p. 237.

[13] Elsaesser 2016, pp. 189-190.

[14] Peters 1999, p. 234.

[15] See Derrida 1998.

[16] In his *Cinema's Bodily Illusions*, Scott Richmond proposes the term 'proprioceptive aesthetics' to describe 'the cinema as such a technological system and its vocation of perceptual modulation' (p. 6). His argument mainly focuses on the body in the space and here I take it to the ground. See Richmond 2016.

[17] See Barker 2009.

[18] For the original discussion of the phantom limb, see Merleau-Ponty 2012, pp. 82-85.

[19] The largest online livestreaming platform – a service that allows the player to broadcast his or her desktop and in-game action to others – is called, not surprisingly, 'Twitch'. See Stephanie Boluk's and Patrick LeMieux's *Metagaming* (2017) for a detailed account on spectating e-sports, esp. chapter 5.

[20] See Riegl 1985.

[21] Deleuze 2005b, p. 12.

[22] See Benjamin 2002, p. 35. I am thinking about Sobchack's *The Address of the Eye* (1991), Marks' *The Skin of the Film* (2000), and Barker's *The Tactile Eye* (2009).

[23] Before this genre went mainstream, Patrick Cederberg's *Noah* (2013) already set the tone of later desktop horror films by dramatising adolescents' digital lives through live-time interfacial interactions on Facebook and chatroulette. Kevin B. Lee's *Transformers: The Premake* (2014) set another milestone by moving away from the obsession with private lives on the internet in this emerging genre to put forth how the desktop can be a crucial analytical instrument to examine networked archives (YouTube and Google Maps) and globalised film culture.

[24] Doreste 2016. p. 20.

[25] Galloway 2006, p. 63.

[26] Bozovic 2016. Bozovic's analysis treats *Hardcore Henry* as a cultural artifact to distill its rather perverted political and sexual discourse. Much as I appreciate her insights into the film's vexed narrative, her approach seems insufficient to accommodate the various eccentricities of the film.

[27] While watching *Hardcore Henry* indeed is not that different from watching a walkthrough video; most of the time the latter serves as a springboard for improved gameplay, an enhanced manipulability that the film insistently avoids.

[28] See Young 2005.

[29] Stewart 2015, p. IX.

[30] Brown 2013, p. 51.

[31] Galloway 2006, p. 39.

[32] This term originates from what I would call 'Duke media studies', whose center is Mark B.N. Hansen's theorisation of the 'post-cinematic image'. His basic argument is that 'the pixel is the operator, in our 21st-century media culture, of a fundamental transformation of the image that, I shall argue, begins to operate *without being phenomenally apprehended*' (p. 806). Shane Denson puts this in another way: 'post-cinematic cameras and images are metabolic processes or agencies, and their insertion into the environment alters the interactive pathways that define our own material, biological, and ecological forms of being, largely bypassing our cognitive processing to impinge upon us at the level of our metabolic processing of duration' (p. 208). While I sympathise with their approach and agree that the perceptual production of the image is changing irrevocably, I find their rhetoric of historical revolution lacking a sense of history, particularly in the media-archeological sense. My objection would be, 'Since when could the audience phenomenally apprehend the inner workings of the cinematic apparatus?' See Denson 2016 and Hansen 2016.