Sonia Front
University of Silesia in Katowice
sonia.front@us.edu.pl

Hacking the Brain: Duncan Jones's *Source Code*

Digital cinema has reworked the geographies of time and temporality and has repeatedly effected new representations of human consciousness. These interests have been informed by scientific and technological developments, one of which is digital cinema's divorce from the photographic base, which has problematized the notion of reality and increased cinema's potential to manipulate space and time and to produce virtual worlds. Many of those virtual worlds are situated literally in the protagonist's mind. The character's mental space is presented as a navigable terrain that can be mapped, controlled, reinscribed and manipulated. This emphasis on consciousness in film, which has been called "the neuro-image" (Pisters) or "the mind-game film" (Elsaesser),[1] attests to the shift in digital culture that blurs the boundary between the virtual and the actual worlds as "the brain has become our world and … the world has become a brain-city, a brain-world."[2] Simultaneously, such a portrayal of the human mind serves to forefront temporality "as a separate dimension of consciousness and identity,"[3] and time as intrinsic to human experience.

---

[1] See Patricia Pisters, *The Neuro-Image: A Deleuzian Film-Philosophy of Digital Screen Culture* (Stanford: Stanford University Press, 2012) and Thomas Elsaesser, "The Mind-Game Film," in: *Puzzle Films: Complex Storytelling in Contemporary Cinema*, ed. Warren Buckland (Malden and Oxford: Blackwell Publishing, 2009), pp. 13–41.

[2] Ibid., p. 33.

[3] Ibid., p. 21.

The new representations of consciousness in film resonate with philosophical and scientific notions of time and temporality as well as with the discoveries of neuroscience, made particularly during the Decade of the Brain (1990–2000).[4] Sometimes neuroscience is combined with quantum physics to propose quantum theories of consciousness.[5] Furthermore, attempting to respond to the technological revolution, contemporary film cogitates about the influence of technology upon human life and the human mind. In many films various technological developments, often supported by bogus theories of quantum mechanics, permit the enactment of scenarios that for decades have been discussed only in philosophical texts on personal identity, in which their authors cut brains in half, teleport human replicas to Mars and make bodies swap their minds. These thought experiments have allowed the philosophers and filmmakers to raise questions about the nature of personal identity, its persistence over time and through change, and the significance of the body to personal identity.

With contemporary culture's fixation on the cerebral and the institution of digital technologies as the main mode of communication, these technologies offer the possibility of release from the limitations of the physical body. Striving to reflect that, contemporary film is populated with disembodied characters separated from their own minds or consciousnesses and / or physical reality. Treating the traditional Cartesian dualism as a point of departure, the digital age proposes its own revision of the mind / body split, and with it new definitions of the human that contradict the bodily-continuity theory. The theory that personal identity is tantamount to identity of body over time is irrelevant in the digital age as it is unable to deal with scenarios in which somebody's consciousness enters another person's body, as it does, for instance, in Spike Jonze's *Being John Malkovich* (1999), Tarsem Singh's *Self / less* (2015), Joss Whedon's TV series *Dollhouse* (2009–2010) and Rand Ravich's TV series *Second Chance* (2016), or scenarios in which technological interfaces of subjectivity that do not depend on corporeality are created, for example, in *ExistenZ* (David Cronenberg, 1999), *The Thirteenth Floor* (Josef Rusnak, 1999), *The Matrix Trilogy* (Lilly and Lana Wachowski, 1999-2003), *Avatar* (James Cameron, 2009), *Surrogates* (Jonathan Mostow, 2009), *Source Code* (Duncan Jones, 2011) and *Eternity* (Alex Galvin, 2013). While in these films the human

---

[4] For a list of films see Eric P. Wiertelak, "And the Winner Is: Inviting Hollywood into the Neuroscience Classroom," *The Journal of Undergraduate Neuroscience Education*, Vol. 1, No. 1 (2002), pp. 4–17.

[5] For an introduction to the subject see Harald Atmanspacher, "Quantum Approaches to Consciousness," in: *The Stanford Encyclopedia of Philosophy (Summer 2011 Edition)*, ed. Edward N. Zalta, accessed May 15, 2017, http://plato.stanford.edu/ archives/sum2011/entries/qt-consciousness/.

body is jacked into a computer to immerse itself in virtual reality, in other films, such as *Transcendence* (Wally Pister, 2014) and *Captain America: The Winter Soldier* (Anthony and Joe Russo, 2014), human consciousness is uploaded into a computer to function without the body or the organic brain. The bodily-continuity theory cannot be applied to these cases because it depends upon the classical notion of linear time, while technoculture has instigated a radical reformulation of space and time that inevitably impinges on the understanding of human identity. This essay is going to focus on Duncan Jones's *Source Code*, which does not completely reject the body but treats it merely as a host for consciousness, and thereby suggests that identity resides in consciousness.

In *Source Code* Colter Stevens (Jake Gyllenhaal) awakes on a Chicago commuter train trapped in another man's body, not knowing how he got there. A few minutes later the train explodes and Colter reawakens in a capsule that appears to be the cockpit of a wrecked helicopter. Via a videolink he gradually learns from Captain Coleen Goodwin[6] (Vera Farmiga) and Dr Rutledge (Jeffrey Wright) that he was a helicopter pilot in Afghanistan, where he died. Now he is in a military facility where his brain activity is being artificially supported to make it possible for him to participate in an experiment called Source Code, whose purpose is to inhabit an eight-minute window of Sean Fentress's life, captured in his memory and accessed via post-mortem activity of his brain. Colter's mind and Sean's body are hooked up together by a computer interface in a version of the "brain in a vat" experiment. While Colter repeatedly navigates the eight-minute period of the afterimage of Sean's brain, Sean's consciousness is already gone. Colter's mission is to gather more information about the terrorists who are planning to detonate another bomb later that day in downtown Chicago. The technology used to transfer Colter's consciousness into Sean's body is a computer programme which works by means of a bogus "quantum mechanics parabolic calculus":

> When a light bulb turns off, there's an afterglow, a lingering halo-like effect. … The brain is like that. Its electromagnetic field remains charged, just briefly, even after death. Circuits remain open. Now, there's another peculiarity about the brain. It contains a short term memory track that's approximately eight minutes long. Like uh…a convenience store security camera that only records the last portion of the day's activity on its hard drive. Now in combining these two phenomena, circuitry that remain viable post-mor-

---

[6] Goodwin might be a reference to Mary Shelley's maiden name, Mary Godwin. Mary Goodwin is also the name of a character in *Second Chance*, who, together with her brother, develops a project of transferring a dead man's consciousness into another man's body.

tem, and a memory bank that goes back eight minutes, Source Code enables us to capitalize on the overlap. Sean Fentress died on that train. Of all the passengers aboard, he was your possible link. You two share compatibility in terms of gender, body size and your synaptic maps.[7]

Colter's mission can be accomplished by the new technology enabling "time reassignment," that is, using knowledge of the past to affect the future. The creator of the experiment, Dr Rutledge, explains that Source Code allows access to the past of the same reality which cannot be changed, yet he claims that it "gives us access to a parallel reality"[8] simultaneously, which seems to contradict the previous explication. In fact, Source Code exceeds Routledge's expectations. Although inside Source Code Colter is supposed to inhabit only Sean's memory, this is only partly the case. First, if it were a memory, Colter would remember everything that Sean remembers, but in fact Colter has no idea who Sean is and tells Christina (Michelle Monaghan), a girl Sean is travelling with, that he is a helicopter pilot in Afghanistan: "Look, I can see that you think you know me. But I don't know who you are. My name is Captain Colter Stevens. I fly helicopters for the US army in Afghanistan," "I don't know what's goin' on!," "I don't know who Sean is and I don't know who you are!"[9] Second, each time Colter's consciousness is catapulted into Sean's body, his agency surpasses what has happened on the train and what is a part of Sean's memory. He revisits the whole eight-minute slice of space-time where he does not have to endlessly repeat Sean's actions. Rather than being a passive observer of what has already happened, Colter is an agent who brings new events, and with them new worlds, into existence. Each time he enters the Source Code, he creates a new alternative reality which continues its existence without Colter / Sean after the explosion. Third, the activity in the virtual realm affects the actual realm. This final recognition is formulated in the text message that Colter sends Goodwin: "You thought you were creating eight minutes of a past event but you're not. You've created a whole new world."[10] The message is received by an alternate Goodwin in the universe where the explosion was prevented, the Source Code has not been used yet and alternate Colter is waiting in the laboratory for a crisis. In that reality Colter is in a non-conscious state while his parallel reality counterpart's consciousness permanently occupies Sean's body.

---

[7] Duncan Jones, dir., *Source Code* (Vendome Pictures, The Mark Gordon Company, 2011).
[8] Ibid.
[9] Ibid.
[10] Ibid.

The film employs a number of metaphors by which it promotes the parallel universe interpretation. The branching lines appearing briefly next to the title of the film during the opening credits foreshadow the subject of the film. Another metaphor is that of a track when, for instance, the protagonist expresses concern about being "on the right track." He notes the non-identicality of the alternate realities when with each repeated visit to the train he observes, "It's the same train, but it's different."[11] After the freeze-frame, when Colter is unplugged from the life-support system and leaves his body behind to inhabit Sean's body, his second birth is represented by a high angle of the train redirected to a different track. Alternate realities and the contingency of the future are also symbolized by Cloud Gate, Anish Kapoor's sculpture in Chicago, which reflects and refracts images from a variety of perspectives. Each trip into Sean's memory ends with a blurry flash-forward to Cloud Gate which heralds contingent future(s) and symbolizes the multiplicity of selves that Colter splinters into in the process of mediation through technology.

The slice of space-time locked in Source Code and reconfigured by the new technology functions in the film as what Samuel Delany has called paraspace, a space that exists parallel to ordinary space; "an alternate space, sometimes largely mental, but always materially manifested, that sits beside the real worlds," where the conflicts of the ordinary world are worked out.[12] Scott Bukatman has described paraspace as equivalent to what Brian McHale has called the Zone, a kind of heterotopian space, that is, space "capable of accommodating so many incommensurable and mutually exclusive worlds."[13] The Zone, characterized by "a large number of fragmentary possible worlds [that] coexist in an impossible space,"[14] allows for a clash of worlds and of distinct ontological states, becoming in this manner the locale of ontological shifts.[15] The eight-minute paraspace of Sean's memory is a past chunk of space-time turned into a permanent present, "a discontinuous, multiplicitous, and thickened "now" that is intimately linked to both past and future, but which nonetheless takes shape in the present, where it resists localization."[16] This thickened "now," where ontological shifts take place in the fragmentary worlds, constitutes a node from

---

[11] Ibid.

[12] Samuel R. Delany, "Is Cyberpunk a Good Thing or a Bad Thing?" *Mississippi Review*, No. 47/48 (1988), p. 31.

[13] Brian McHale, *Postmodernist Fiction* (London and New York: Routledge, 2004), p. 44.

[14] Ibid., p. 45.

[15] Ibid., p. 60.

[16] Pepita Hesselberth, *Cinematic Chronotopes: Here, Now, Me* (London, New York: Bloomsbury Academic, 2014), p. 121.

which new timelines spring into existence, instigated mentally through technological mediation. In this node of paraspace, Colter splits into a kaleidoscope of selves, "the same but different"; he is and is not his other selves, to confirm Bukatman's statement that cyberspace does not suture the subject to any stable point of identification.[17] Colter's dislocation takes place by a movement through this intensely technological, decentering spatiality, and his locus of origin is shifted from his psychology to the modus operandi of cybernetic culture.[18] In cyberspace he is, phenomenologically and rhetorically, "*broken down* in the zones of cyberspatial simulation, there to await its reconstitution amidst these fields of data."[19]

With its reformulation of space and time, *Source Code* seems to recognize the need to expand the notion of reality in the information age to accommodate not only the physical but also the mental realm, because it can likewise trigger actual events. The new definition of reality needs to encompass subjective time. The paraspace of virtual reality problematizes the traditional distinction between objective time (clock time) and subjective time (the time of experience), and the assumption that mechanical time – though a cultural construct – is "real" while subjective time is impressionistic and therefore secondary.[20] The division into subjective and objective modes was generated by the loss of presence in the world, initiated by the scientific discovery of the earth rotating around the sun, which discredited human subjective experience of the sun revolving around the earth.[21] As a result, subjective temporality in which the sun moves across the sky has become disconnected from reality and deprived of its presence. We accept the told story as true and allow it to supersede the lived story, losing the distinction between them.[22] If, as is widely accepted, it is narrative that gives meaning to our experience, and narrative relies on the told story that has replaced the lived experience, our lives are emptied of meaning and we are absent from our lives.[23] Following mechanical time in all aspects of our lives, and the consequent division of temporality into subjective and objective modes, we withdraw our presence from the world, isolated in our

---

[17] Scott Bukatman, *Terminal Identity. The Virtual Subject in Postmodern Science Fiction* (Durham and London: Duke University Press, 1993), p. 180.

[18] Ibid., p. 226.

[19] Ibid., p. 180. Emphasis original.

[20] Jack Petranker, "The Presence of Others. Network Experience as an Antidote to the Subjectivity of Time," in: *24/7: Time and Temporality in the Network Society*, eds. Robert Hassan, Ronald E. Purser (Stanford: Stanford University Press, 2007), p. 177.

[21] Ibid., p. 178.

[22] Ibid., p. 179.

[23] Ibid., pp. 179–180.

subjective experience of reality. Mechanical time also presides over our private lives and the inner realm of the self so we "live out a temporality that leaves us always already isolated from our own being," and the self becomes "a mechanistic abstraction" itself.[24] Additionally, as Paul Virilio argues, this presence to our experience is sabotaged by the temporality of the network alienated from the present moment.[25] *Source Code*, along with other "neuro-images," subverts this distinction between subjective and objective time by envisioning the protagonist's mental worlds and allowing the viewer to inhabit those worlds. The twist of revealing the state of Colter's body in the lab at the end of the film, rather than earlier, testifies that, as Pisters argues, "contemporary culture has moved from considering images as 'illusions of reality' to considering them as 'realities of illusion' that operate directly on our brains and therefore as real agents in the world."[26] In this way, displaying an individual's life of the mind, contemporary media culture and its brain-screens manifest themselves as "machines of the invisible."[27] Through this, they rehabilitate subjective temporality and reinstate its "real" status in the world. Colter's experience is narrated directly as it is lived and thus the viewer is given access to his "real" subjective temporality.

The redefinition of space and time has paramount consequences for the conceptualization of human identity, as it requires a redefined subject that would inscribe himself into that space-time. Bukatman has called this new techno-identity established by electronic technologies "terminal identity," and has defined it as a "potentially subversive reconception of the subject that situates the human and technological as coextensive, co-dependent, and mutually defining."[28] If for phenomenologists the body is a primary medium for being in space, cyberspace – with its profoundly reworked notions of space and time – cuts off the ties between space and the body and thus demands a renegotiation of corporeality and its significance to identity. In *Source Code* this reconfiguration takes place in connection with an intricate web of spatio-temporal relations that explode the distinctions between real / imaginary, actual / virtual, present / absent, subjective / objective and past / present / future. The film continually switches between two space-times: the military facility where allegedly "the clocks only move in one direction" and "[t]here is only one continuum … and

---

[24] Ibid. pp. 179, 180.

[25] See Paul Virilio, *Open Sky*, trans. Julie Rose (London: Verso, 1997).

[26] Pisters, *The Neuro-Image*, p. 6.

[27] Ibid., p. 20.

[28] Bukatman, *Terminal Identity*, p. 22.

it cannot be unsettled,"[29] and Sean's memory module of malleable "tech-nologized time,"[30] where the "events are continually re-wound, re-lived, fast-forwarded, altered, or frozen, while characters break up into pixel-like glitches, produce uncanny mirror-images, or die a dozen deaths."[31] The clear distinction between the ontological status of the two space-times – the actual facility and the imaginary virtualities of the Source Code – is expressed by Goodwin and Rutledge who reinforce the distinction by the spatial coordinates of "out here," "on this end," in "real life," versus, by in-ference, in there, in the Source Code, in your mind. The train sequences are said to be unreal: they are a memory accessed via the post-mortem activity of Sean's brain, "a shadow. … an afterimage of a victim on the train."[32] Goodwin insists that Christina has survived "only inside the Source Code," that it does not enable time travel, and that she doesn't believe in the exist-ence of parallel realities in which she "took a different fork in the road," because, as she determinedly states, "This is real life here."[33]

However, once established, the clear-cut dichotomies are repeatedly undermined. Goodwin hides from Colter, and the viewer, his own death in a helicopter crash and the actual state of his body that appears to be a mutilated torso which cannot sustain a biological life; he is "quite literally, a body without organs: a brain in a head, with only half a trunk, held in a container on life support and physically connected to Source Code via a number of tubes, wires and data streams."[34] The camera and microphone are not employed to transfer Goodwin's image and voice to Colter, as we are led to believe, but to "transcod[e] an optic signal, paired with an au-dial track, intended for strictly neural recognition"[35] of his brain activity, manifested as text on the computer screen. Colter's body in the capsule and on the train is just an imaginary projection of his consciousness. The free-floating disconnected images of his future arrival at Cloud Gate at the end of each replay, crystallizing with each repetition, also contribute to the confusion in spatial and temporal consistency. The (un)reality of the train sequences is further complicated by war images that emerge from the pro-

---

[29] Jones, dir., *Source Code*.

[30] Petranker, "The Presence of Others," p. 174.

[31] Pepita Hesselberth, "From Subject-Effect to Presence-effect: A Deictic Approach to the Cinematic," *NEC-SUS: European Journal of Media Studies*, Vol. 1, No. 2 (2012), accessed May 17, 2017, http://www.necsus-ejms.org/from-subject-effect-to-presence-effect-a-deictic-approach-to-the-cinematic/.

[32] Jones, dir., *Source Code*.

[33] Ibid.

[34] Hesselberth, *Cinematic Chronotopes*, p. 123.

[35] Garrett Stewart, "Fourth Dimensions, Seventh Senses: The Work of Mind-Gaming in the Age of Electronic Reproduction," in: *Puzzle Films: Complex Storytelling in Contemporary Cinema*, ed. Buckland, p. 176.

tagonist's memory, an instance of the real appearing in the midst of the virtual / imaginary. Additionally, from the allegedly virtual realm Colter is able to phone his father. The unstable boundary between the real and virtual is further violated when the imaginary revisitings of the memory lead to an actual redrawing of the space-time continuum and the creation of a real parallel universe from which the up-till-then "real" world of the military facility can be contacted. Even Goodwin changes her mind when in the "real life here," she is "talking to a dead helicopter pilot,"[36] as Colter makes her aware, and consequently, to her, the interactions with Colter become more real than the science of Rutledge. It is only when the knowledge of Colter's "true" situation hits him that the differentiation between the two space-times crumbles, revealing "a crack in the Source Code," which is manifested by Christina's face beginning "to blur in a way reminiscent of a digital graphics error."[37] At this point, the protagonist realizes that he is a disembodied consciousness floating in the digital netherworld, and consequently he becomes aware of the power of his mind. He "frees his mind" and starts to truly transcend the limitations of the embodied world and engineer his own agency. It is at this moment that he decides to reroute the past and undo the explosion.

　　In Colter's case it is not only cyberspace but also quantum mechanics and its ontological indeterminism that contribute to the ontological crisis of subjectivity since he exists in two, and then more, continuums simultaneously. He is neither alive nor dead, and yet he still dies many deaths in the Source Code, and another one in "reality" when he is unplugged and his neural fusion with the electronics is broken, and his existence continues on a different plane in an equally "real" world, validated by the many-worlds interpretation of quantum mechanics. In this way, the death of the subject is staged continually in the film and results in "a rebirth on another plane, producing a strengthened continuity."[38] Contrary to other films featuring virtual reality, Colter's experience in cyberspace is not purely kinetic and perceptive. During the iterated trips to the Source Code, his consciousness is disconnected from the body to plunge into cyberspace but then it becomes permanently fused with another body to exist in a parallel reality without the prosthesis of technology. While in other VR films new technology constitutes an extension of the subject's body and can only be put into

---

[36] Stewart, "Fourth Dimensions, Seventh Senses," p. 176.

[37] Daniel Müller, "Narrations of Trauma in Mainstream Cinema: Forgetting Death in Duncan Jones' Source Code (2011)," in: *The Horrors of Trauma in Cinema: Violence Void Visualization*, eds. Michael Elm, Kobi Kabalek, Julia B. Köhne (Newcastle upon Tyne: Cambridge Scholars Publishing, 2014), p. 117.

[38] Bukatman, *Terminal Identity*, p. 281.

action with the participation of his body, in *Source Code*, in Colter's new life in Sean's body, the technology of Source Code is no longer needed. Colter goes from virtuality back to materiality and it is virtuality that becomes the means of this re-embodiment, legitimized by quantum physics. Death in the alternate reality entails the return to the actual world, while death in the "real" world as a result of disconnecting the interface allows for the separation of worlds and selves.

The conceptualization of identity in *Source Code* constitutes a thorough reinscription of the Cartesian mind / body split. If for Descartes the mind can be differentiated from the body, they are inseparable from birth to death. In contrast, in *Source Code* consciousness can be separated from the body to inhabit another one; it is not connected with one unique body. The film thus endorses a clear split between mind and body, yet does not completely dispose of the body. The duality between mind and body goes further in *Source Code* because here the protagonist almost does not have a body; it is the duality between mind and the brain in the head. It is therefore particularly true in his case that "Cyberspace is a celebration of spirit, as the disembodied consciousness leaps and dances with unparalleled freedom. It is a realm in which the mind is freed from bodily limitations, a place for the return of *the omnipotence of thoughts*."[39]

Although the film does not take up any of the existing quantum approaches to consciousness, it does attempt to provoke a philosophical reflection on the new cyberidentities. It prompts us to ask whether Colter's personhood is continued after the transfer of consciousness. One group of philosophers who write on personal identity support the view that the criterion of identity over time is the possession of the same brain and body. According to a less strict version of this view, the whole body is not necessary, but a sufficient amount of "the brain to be the brain of a living person."[40] If we were to apply this physical criterion view to Colter's situation in *Source Code*, the person in the lab is the same person as the helicopter pilot in spite of his mutilated body. Yet when it comes to the Colter in the lab, the Colter on the train and the one in Chicago, there is no continuity of the body or the brain as his consciousness occupies Sean's brain and body.

The most popular view of personal identity, however, is the psychological continuity theory of personal identity. One kind of psychological criterion is experience-memory, suggested by Locke and contested by some philosophers who claim that identity is preserved in the absence of episodic

---

[39] Ibid., pp. 208-209. Emphasis original.
[40] Derek Parfit, *Reasons and Persons* (Oxford: Oxford University Press, 1984), p. 204.

memory, for instance, in amnesia. The concept of the continuity of memory as a criterion of personal identity has been problematized in many films, for example, in *Total Recall* (Paul Verhoeven, 1990) and *Memento* (Christopher Nolan, 2000). Derek Parfit has revised Locke's view to claim that the psychological criteria of personal identity include not only continuity of memory but also other psychological connections, such as an intention and the later act, and continuity of psychological features and personality traits.[41] There is psychological continuity if there are "overlapping chains of strong connectedness," which is "the holding of particular direct psychological connections"; psychological continuity has the right kind of cause, and there is no other person psychologically continuous with the given person.[42] Psychological connection should have its "normal cause" which is the continuity of the brain (on the narrow version of this criterion, this condition is necessary but not sufficient), and no other person has the sufficient amount of that person's brain. Parfit notes that if "psychological continuity does not have its normal cause, some may claim that it is *not* true psychological continuity."[43]

Colter Stevens in *Source Code* suffers from partial amnesia at the beginning of the film; nevertheless, later he regains access to his past. He retains psychological continuity and connectedness but they do not have their normal cause. In his case, then, according to some philosophers, the psychological continuity is not the "true" one. Parfit, however, when discussing the case of teleportation in which an identical copy of a person's body and brain is created, claims that "this kind of continuity is *just as good as* ordinary continuity."[44] In the case of teleportation, the identical replica of a person would not be that person on the physical criterion and on the narrow psychological criterion, while the replica would be the original person on the wide criteria (according to which memory and other psychological connections have any cause). Similarly, in *Source Code*, Colter does not satisfy the physical criterion or the narrow psychological criterion, but he does satisfy the wide criteria. His psychological continuity is so strong that he is not even aware that a transfer to another body has occurred; he only realizes that when he sees the reflection of his "new" body in the mirror and the train window. Yet there is one problem here: one of Parfit's conditions of psychological continuity, as specified above, is that there is no other person psychologically continuous with the discussed person. In Colter's

---

[41] Ibid., p. 205.
[42] Ibid., pp. 207–208.
[43] Ibid., p. 209. Emphasis original.
[44] Ibid., p. 209. Emphasis original.

case, there is at least one copy of him in a parallel universe and it shares his past up to a point.[45]

The ontological shift connected with the interface of technology with the human subject as well as the radical reformulation of space and time thereby involve a redefinition of what it is to be human and indicate "the limits of the existing paradigms," rather than "*annihilation* of subjectivity."[46] *Source Code* implies that traditional approaches to the problem of consciousness and identity, such as the bodily-continuity theory or psychological continuity theory, are inadequate for describing identity in the digital era. The film challenges the definitions of the human that depend on embodiment, reevaluates the existing theories of personal identity and proposes its own definition, applicable to the information age. *Source Code* proposes that identity resides in consciousness and experience-memory, in the continued sense of self, while the continuity of the body and brain do not matter. It is the continuity of memory that is a guarantor of identity in the film as "[i]n an era of bodily transformation, change, and dissolution, the mere (and ahistorical) *fact* of physical existence is no longer a guarantor of truth or selfhood"[47] (Sean Fentress exists physically but his consciousness is gone). *Source Code* therefore redefines the notion of the human by rejecting the biological element as its essential constituent. The body is necessary but not essential – it functions merely as an interchangeable vessel for consciousness (although it must be compatible in terms of "gender, body size and your synaptic maps").

The continuity of Colter's consciousness enacted by the narrative structure of the film makes the viewer believe that the Colter in the capsule, the Colter on the train, the Colter in front of Cloud Gate and the Colter in the lab are the same person. This conviction is supported by the way in which the character's sense of self is presented to the viewer: thanks to subjective camera movement, we share his point of view and witness his mind's peregrinations. To the spectator, the life of Colter's mind and the events on the train are shown as "real" events, and it is only at the end of the film that they are exposed as his "brain-world"[48] or the "mindscreen," that is, in Bruce Kawin's formulation, a "personalized world, one that both incorporates the emphases and distortions of its organizing intelligence and ex-

---

[45] The problem of the integrity of personal identity in parallel universes is very complex. See my discussion in *Shapes of Time in British Twenty-First Century Quantum Fiction* (Newcastle upon Tyne: Cambridge Scholars Publishing: 2015), pp. 47–64.

[46] Bukatman, *Terminal Identity*, pp. 175, 180. Emphasis original.

[47] Ibid., p. 249.

[48] Gilles Deleuze, *Cinema 2: The Time-Image* (London: The Athlone Press, 1989), p. 210.

presses the mind's relation to its materials."[49] Although Colter's conversations with Goodwin are only possible thanks to the direct neural interface, to him, all the experiences are embodied: he inhabits his "previous" body, he talks, feels cold, sees Goodwin on the screen and hears her talk. Virtual reality is thus not only a pure mental realm but also sensory data. The transitions between the "actual" and virtual realities are seamless, corroborating Katherine Hayles's statement that "[i]n the posthuman, there are no essential differences or absolute demarcations between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot teleology and human goals."[50] Colter, as a new subject, appears as "a terminal of multiple networks,"[51] all of which he experiences as real. Yet although he is psychologically bound to his body, it appears interchangeable, a superfluous negligible constituent of his identity that he eventually does not mind trading for Sean's body, accepting, "It's the new me,"[52] if it is the only means to ensure the continuity of his existence.

Simultaneously, the film voices anxieties about the potentially dangerous consequences of the digital for human corporeality and identity. On the one hand, the dematerializing power of technology serves as a release from the burden of the physical body; on the other hand, however, it might be a source of manipulation and commodification that disregards the human body. As Vivian Sobchack points out, "The argument is that electronic space reembodies rather than 'disembodies' us. Although, to a certain extent, this is true, the dominant cultural logic of the electronic tends to elide or devalue the bodies that we are in physical space – not only as they suffer in their flesh and mortality, but also as they ground such fantasies of reembodiment."[53] One of the effects of this omission or devaluation of the body can be the "loss of moral gravity."[54] Accordingly, Dr Rutledge does not have any ethical qualms about the project. He uses Colter's mutilated body without his or his family's agreement for the "greater good" of the war on terrorism in which, Hayles predicts, conflicts will be solved by "'neocorti-

---

[49] Bruce F. Kawin, *Mindscreen. Bergman, Godard, and First-Person Film* (Princeton: Princeton University Press, 1978), p. 84.

[50] Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 2008), p. 3.

[51] Jean Baudrillard, *The Ecstasy of Communication*, trans. Bernard Schutze, Caroline Schutze (New York: Semiotext(e), 1988), p. 16.

[52] Jones, dir., *Source Code*.

[53] Vivian Sobchack, *Carnal Thoughts: Embodiment and Moving Image Culture* (Berkeley: University of California Press, 2004), p. 158 n. 43.

[54] Sobchack, *Carnal Thoughts*, p. 158.

cal warfare' waged through the techno-sciences of information."[55] As "a hand on the clock" which is supposed to have a "memory wipe"[56] after the first mission, Colter's body becomes, in Bukatman's words, "a site of almost endless dissolution" while "the subject is simulated, morphed, modified, retooled … and even dissolved."[57] This commodification of an individual in the context of political processes that exploit people as instruments in the war on terrorism, in which every sacrifice is justified, works towards the reshaping of the significance of ageing, suffering, abasement and mortality that digital technologies demand. Technology that valorizes Colter's existence does so only because it values information more than human dignity. Colter's body, which enables the transfer of his consciousness, becomes a vessel for information, to confirm Hayles's anxiety: "The great dream and promise of information is that it can be freed from the material constraints that govern the mortal world."[58] With his mind separated from the body, Colter repeatedly plunges into another man's memory which is not a repository of experience-memories that would constitute a component of Colter's or Sean's identity but an artificial and ephemeral memory created through repetition.[59] This, originally human, memory is now mere digital information, accessed directly by mental circuitry and communicated via a computer.

However, the protagonist manages to turn the degrading effects of digital technologies to his advantage, by which the film suggests the possibility that digitization allows for the reinvention of identity. Although initially trapped in the permanent present of Sean's memory and the morbidity of his post-mortem life, governed by the "meta-logic" of the network which mirrors socio-economic relations in which it is grounded, Colter seizes "a potential for diversity, for the creation of innumerable original 'contextually situated' spaces" offered by the "asynchronous times of the network."[60] He discovers the liberating aspect of the dematerializing power of the digital and modifies a definition of degradation and mortality. He regains his agency and reinvents his identity in the body of another man, no longer a victim of commodification and manipulations connected with advanced technologies.

---

[55] Hayles, *How We Became Posthuman*, pp. 13, 20.

[56] Jones, dir., *Source Code*.

[57] Bukatman, *Terminal Identity*, p. 244.

[58] Hayles, How We Became Posthuman, pp. 13, 20.

[59] Allan Cameron and Richard Misek, "Modular Spacetime in the 'Intelligent' Blockbuster: *Inception* and *Source Code*," in: *Hollywood Puzzle Films*, ed. Warren Buckland (New York and London: Routledge, 2014), p. 119.

[60] Robert Hassan, "Network Time and the New Knowledge Epoch," *Time&Society*, Vol. 12, No. 2-3 (2003), pp. 235–236.

The film indulges a fantasy, in Hayles's words, "that because we are essentially information, we can do away with the body," springing from the assumption that materiality and information can be separated.[61] The conception of the subject for whom the body is necessary but not essential adds yet another character to the assemblage of the posthuman. The posthuman, in Hayles's understanding, is a "collection of heterogeneous components, a material-informational entity whose boundaries undergo continuous construction and reconstruction."[62] Fusing neuroscience with new technology and quantum mechanics, *Source Code* unsettles the ontological underpinnings of what is included in the category of the human and proposes a new model of subjectivity in which the boundaries of an autonomous subject are fluent and in which purely biological grounds cannot serve to decide about the continuity of the subject.

---

[61] Hayles, *How We Became Posthuman*, p. 12.
[62] Ibid., p. 3.

Sonia Front

Hacking the Brain: Duncan Jones's *Source Code*

The paper concentrates on the new representations of human consciousness in digital cinema which reflect contemporary culture's fixation on the cerebral. As digital cinema's divorce from the photographic base has allowed to produce virtual worlds, many of them are situated literally in the protagonist's mind. The new representations of consciousness in film tap into philosophical and scientific notions of time and temporality as well as into the discoveries of neuroscience and quantum physics. Some of these discoveries represented in film offer the possibility of release from the restrictions of the physical body, which can be exemplified by Duncan Jones's *Source Code* (2011). In the film the protagonist's consciousness is repeatedly transferred to another man's body locked in the past segment of space-time, in which he splits into a multiplicity of selves. This provokes the question: is the protagonist's personhood continued after the transfer of consciousness? To answer that, one needs to take into account the bodily-continuity theory and the psychological continuity theory of personal identity, yet they can only partly be applied to *Source Code* because they rely on the classical notion of linear time. As technoculture has triggered a radical redefinition of space and time, what follows is the need for a reformulation of the understanding of human identity. The essay explores the film's designation of personal identity, applicable to the information age.

Keywords: *Source Code*, consciousness, the digital, time, personal identity, parallel universe