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Modular spacetime in the “Intelligent” Blockbuster: *Inception* and *Source Code*

Following the popular success of narratively complex films over the past two decades, there has been a recent tendency for overt temporal tricks, puzzles, and formal twists to appear in films aimed directly at mass audiences. A prominent example is Christopher Nolan’s blockbuster *Inception* (2010), in which a team of corporate spies led by Dominick Cobb (Leonardo DiCaprio) is hired to infiltrate a business magnate’s dreams and implant an idea that will alter his (and his company’s) future. In its labyrinthine plotting and temporal convolutions, *Inception* is paralleled by the minor hit *Source Code* (Duncan Jones, 2011), in which soldier Colter Stevens (Jake Gyllenhaal) is projected into the mind of Sean Fentress, a passenger aboard a train that is about to suffer (or rather, has already suffered) a terrorist attack. Reliving Fentress’s final eight minutes repeatedly, Stevens must find the bomber who destroyed the train.

Both films comprise multiple sequences or narrative “modules”, occupying self-contained spaces and temporalities. David Bordwell has suggested that the spectator’s progress through a film’s narrative can be seen as a metaphorical journey through “architectural volume,” and asks: “What, then, is the spectator’s itinerary? Is it string-straight, or is it more like the baffling ‘crooked corridors’ that Henry James prided himself upon designing?” (Bordwell et al, 1985, 37). The answer, in these two films, is neither. Eschewing spatiotemporal continuity, the narrative structures of *Inception* and *Source Code* are too complex to be illustrated through the metaphor of a single through-line. At the same time, both films are nonetheless intrinsically architectural. They not only feature intricately designed narratives, but also foreground and thematize the architectural processes involved in their own narrative construction; they feature characters who are programmers, designers, and architects; and they deploy a range of spatial metaphors – including lines, layers, and circles – that evoke the activities of a design studio rather than a film studio. These metaphors appear throughout the films’ scenography, mise-en-scène, and dialogue, translating narrative relations into visual form; they enable the two films to explore relations between spatialized time and temporalized space, psychology and technology, narrative architecture and urban space.¹ In this chapter, we explore the spatiotemporality of these films, and investigate the role that graphic metaphors play within them. Ultimately, we argue that the films’ metaphors can be oriented around two competing logics: speed and memory.

Modular spacetime and modular narratives

¹ Indeed, the centrality of metaphor needs to be acknowledged when considering complex narratives. In recent writing on the subject, a whole range of new metaphors has come to be used to describe such films: for example, database narrative (Kinder, 2002) forking path narrative (Bordwell **2005??? OR 2006**), ‘multiple draft’ film (Branigan 2005), puzzle film (Buckland 2009), and ‘mind-game’ film (Elsaesser 2009).

Cinematic “modular narratives” foreground and segment narrative time through processes of reordering, repetition and recursion. They tend to present an analytic perspective on time, exploring the ways in which rearrangements of narrative temporality trigger epistemological and ontological shifts for characters and viewers alike (Cameron 2008). Both *Inception* and *Source Code* can be classified as modular narratives. *Inception* offers a variation on the “anachronic” narrative. Anachronic narratives disturb the temporal hierarchy of classical cinema, in which there is a narrative “present” from which any temporal shifts (notably flashbacks) depart, and to which they return. They interleave past and present to the point where it becomes unclear what the “main” narrative timeline is, or whether there even is one. *Inception* achieves its anachronic effect by having characters move between different dream worlds, in which temporal disjunction is always accompanied by spatial disjunction. *Source Code*, meanwhile, exemplifies the “forking path” narrative, in which we see multiple iterations of the same scene; each is set in the same space (and replays the same stretch of time) but, due to minor but crucial variations, follows a different narrative trajectory.

Despite destabilizing temporal relationships, both *Inception* and *Source Code* **grapple with ways of making them legible**. For example, they both provide narrative clarification through various expository mechanisms. In *Inception*, characters often pause to explain the rules of the procedure that allows them to enter, move through, and manipulate people’s dreams; indeed, the first hour of the film forms an extended lesson in how the dream narratives in the second part of the film will function. By contrast, *Source Code* selectively withholds information (for example, about where Stevens is, and why he was chosen to participate in the US military’s “source code” project), in order to engineer a climactic revelation. Nonetheless, it too explains many of the rules underlying its looping narrative early on – notably, the fact that the “source code” is a technology which allows characters to “replay” the experiences of other characters, as if in an immersive videogame.

Both films’ attempts to clarify their unstable temporalities often involve spatial metaphors. In *Inception*, virtual movement through each dream is figured as movement through a different architectural space (for example, the gridded streets of a city, the corridors of a high-rise hotel, or a concrete ice base). The overall duration of each dream experience is, in turn, indexed to a spatial journey undertaken by the slumbering bodies of the dreamers (for example, a journey on a bullet train, a long-haul flight, a car chase). Characters also repeatedly discuss their movement between the “levels” and “layers” of the film’s multiple realities. Such graphical metaphors map the characters’ convoluted journeys onto spatial coordinates. In this way, they allow viewers to visualize the connections between the films’ various narrative modules, and to make sense of the characters’ movement within and between them.² As we discuss later, *Inception* also features further, more elaborate and sometimes more ambiguous, spatial metaphors.

² The films thus invite readings that draw upon what Garrett Stewart terms “narratography,” which involves “the reading of an image and its transitions for their own plot charge” (2007, 7).

In *Source Code*, Stevens's repeated immersion in the same eight-minute memory is mapped onto the train's journey along a commuter line into Chicago. The film features a less complex narrative, so it does not require quite as extensive a verbal and visual lexicon of metaphor as *Inception*. One dominant metaphor is enough: "tracks". Stevens's return to the film's main narrative "track" is always ironically accompanied by the same question from his travelling companion Christina (Michelle Monaghan): "Am I on the right track?". When Stevens loses motivation later in the film, he is played an audio track of his father talking about him after he died, which inspires him to "get back on track." This metaphor is also used by Dr. Rutledge (Jeffrey Wright), designer of the "source code" software/hardware, and so the film's main supplier of narrative exposition. To clarify Stevens's situation, he explains that his invention exploits the fact that the brain has a "short-term memory track that's approximately eight minutes long. Like a convenience store's security camera that only records the last portion of the day's activity on its hard drive." Of course, this explains nothing. If anything, it obfuscates, providing Stevens (and the films' viewers) with an added layer of meaning to interpret, thereby helping distract Stevens from his moribund physical state, while distracting viewers from the film's narrative implausibilities. By contrast, the train tracks approaching Chicago are more useful, providing Stevens with spatiotemporal signaling by which he can orientate himself. For example, noticing that the bomb is timed to engulf both his train and a passing freight train, Stevens deduces that the bomber must have been nearby, watching both. The spatial alignment of the trains thus helps Stevens locate the bomber. Through the metaphor of "tracks", *Source Code* explicitly maps physical transport, mental transport, and media transport onto each other.

Indeed, both films exist at the interstices of these different modes of transport, involving their protagonists (or rather, their protagonists' virtual avatars) in relentless motion, searching for a way out of their virtual environments. Stevens finds himself stuck on a train that continually approaches but never arrives at its destination. Cobb and his team become trapped in the dreams of business heir Robert Fischer (Cillian Murphy), their bodies too heavily sedated for them to wake themselves from within. As a result, though their physical bodies are recumbent, within the films' virtual environments sitting tight is not an option. In the case of *Inception*, characters' motion comprises complex trajectories through three-dimensional urban grids, as well as the Escher-like space of the ice base. At the same time, these labyrinthine trajectories are bounded by vehicular movement. Even when sleeping, their physical bodies are in constant linear motion: along train lines, on flight paths, or through city streets. In the case of *Source Code*, Stevens's movement is more bounded, involving running "up and down" the enclosed space of a train compartment. It is, however, equally unrelenting, as are the repeated Steadicam tracking shots that follow him through the train - stylistic metonyms for the repeating linear journey of the train itself, and his journey through Fentris's memory.

Both films spatialize time. They do so through setting, creating an environment within each narrative module that is conducive to the reassuring repetition of generic movement (notably, the high-speed chase). They also do so through metaphor, mapping characters' disorienting movement between

narrative modules onto stable spacial forms, helping (or pretending to help) characters and/or viewers visualize the temporal relations between these modules. One might therefore suggest that these films epitomize a drift towards spatialization that is already embedded in the modular narrative's analytical orientation. Certainly the idea of spatialization has a long history. Henri Bergson felt that modern technologies misrepresented time by projecting it spatially, hence rubbing it of its fundamental flow and duration (1910). Joseph Frank argued that the multi-perspectival, urban-set novels of Joyce and Woolf were examples of "spatial form" (1991 [1963]). Fredric Jameson influentially framed contemporary culture in terms of a "spatial turn," characterized by "the will to use and to subject time to the service of space" (1991, 154). The notion of spatialization has also, more recently, been applied directly to contemporary complex narratives.³ For example, arguing that such films mark a radical break from Deleuze's "time-image" (2005 [1984]), Todd McGowan frames them as fundamentally atemporal (2011, 33). For McGowan, these narratives reveal a collapse of "temporal thinking" that parallels the spatialization associated with digital technologies. Compressing time and bringing us within reach of the object of desire (from narrative conclusions to consumer products), such narratives and technologies can be used to unmask and overturn the future-oriented, instrumentalist perspective of capitalism (27-28).

We wish to suggest, however, that this grand theoretical notion of time subsuming itself to space is perhaps too simple and aphoristic an approach to the complex spatiotemporal dynamics of these films. Though they make temporal experience legible as spatial inscription, they also enact a temporalization of space. For example, though Cobb employs an architecture student to design three different dream worlds and so underlines the spatial aspect of the virtual environments that subtend *Inception*, the film insistently places time-constraints on this design process. Testing the abilities of Ariadne (Ellen Page), Cobb gives her two minutes to design a maze; the 'drawing' that results is both a graphic object and a high-speed process. A temporalisation of space is also evident when Cobb takes Ariadne on a tour through his dream of Paris, and shows her how to reconfigure it. Her changes involve spatial convolutions, such as a gigantic mirrored door that bends space and forms the threshold of a new street. Observing the result of her on-the-fly design process, Ariadne comments that a particular building "feels like it's creating itself," and notes that her "mind functions more quickly" inside dreams, further emphasizing the high-speed processual operations through which these virtual spaces are created. An analogous process occurs in *Source Code*: the space of the train, presented repeatedly as the location of Stevens's mission, is in fact a projection of time past, looped and altered with each iteration. The train, and the mission itself, are artifacts of psychological and technological processes unfolding in time.

The characters in these films inhabit dynamic rather than static modules of

³ Recent software that allows the user to visualize screenplays in different ways – as charts, flow diagrams, tag clouds, etc. – provides further evidence of the contemporary urge to approach narrative via both metaphoric and graphic spatialization. For an overview of the different ways that screenwriting programs can and could visualize screenplays, see McKie 2008.

spacetime, each moving at different speeds and in different trajectories. This is represented most strikingly through vehicular movement. In *Source Code*, the train provides the spatio-temporal vehicle for the narrative, while in *Inception*, voyages into dream states are predominantly undertaken from within speeding vehicles (via air, rail and road). Similarly, the trajectories of the vehicles within which Cobb and his team sleep form spatialized countdowns, ticking off the units of a finite period of time within which they need to complete a set of tasks. The difference between spatialized time and temporalized space is here just a matter of emphasis.

Lines, layers, and loops

Is it possible to articulate the spatiotemporal relations that exist within and between the narrative modules in *Source Code* and *Inception* more precisely? In this section, we explore the various illustrative metaphors offered by the films themselves, and argue the relevance of an additional metaphor which incorporates both spatial and temporal vertices: the timeline.

The opening images of *Source Code* initially suggest a freedom of movement through all three dimensions, as a series of aerial shots takes us over, around, and through the cityscape of Chicago. Quickly, however, the film settles on the line as its key visual motif and the dominant trajectory of its motion: the camera follows railway tracks from above, as the ill-fated train approaches downtown Chicago.⁴ Sean Cubitt argues that *Source Code* can be interpreted as a rendition of digital time, likening the film's combination of temporal rigidity (its eight-minute sections) and fluidity (high-speed movement, slow motion effects, etc.) to the computational processes of the various cameras used to shoot it – notably, the varispeed Phantom HD. We wish to suggest that the film also evokes the digital processes associated with image playback. In light of the location of the action on a train line, and the temporal countdown that restarts with each return to the train, could Stevens perhaps be regarded as occupying the metaphoric spacetime of a particular mode of media transport: the digital timeline? Each time Stevens relives the memory of train's last eight minutes, he moves along an eight-minute video track that plays within his head. Indeed, Stevens himself could perhaps be regarded as a metaphoric playhead, moving forwards and backwards along the passageways of the train's compartments, trapped within a sequence that he is himself generating. When Stevens's physical body is finally unplugged at the end of the film, his heart monitor flatlines, assuming the appearance of an audio track with no media left on it.

Inception also involves movement along various timelines, whose linearity and horizontality is paralleled by the lateral vehicular movements that form the basis of the characters' spatiotemporal journeys: the high-speed train at the start of the film, the flight from Sydney to Los Angeles, and the car chase in New York City. In addition, based on the assumption that "in dreams, the mind functions fast, so time moves slow," *Inception* posits the idea that time

⁴ Of course, *Source Code* takes place on two separate narrative tracks: the looping eight-minute track of the train journey and the non-looping temporality of the film's physical reality, in which the characters are 'running against the clock' to prevent the detonation of a nuclear bomb in Chicago.

in each layer of dream extends exponentially (one minute in reality = seven minutes in the first dream = 49 minutes in the dream within the first dream, etc.). This relation sets up the notion of layers of timeline *nested* within each other.

The narrative metaphors most commonly expressed by characters in *Inception* are those of "levels" and "layers." Both are apt. The metaphor of "levels", like the "replaying" metaphor in *Source Code*, evokes the architectural form of a video game; the metaphor of "layers" evokes the interface of popular media production applications including Photoshop, After Effects, and Final Cut. As we shall discuss in the conclusion, both computer game and media production interfaces return us to an emphasis on design as a spatiotemporal process. However, for now, we focus on the fact the these metaphors imply a vertical relation between the films' different narrative modules. *Inception* comprises multiple layers of reality and dream: notably, the top layer of reality, and Fischer's three layered dream, which Cobb and crew access by sedating themselves to sleep ("going under"). As well as moving horizontally within specific spatiotemporal layers, characters move vertically, to ever lower layers of Fischer's dream. The film also intermittently moves through the layers of Cobb's own unconscious, accessed initially via an elevator, at the bottom of which (in the basement) he tries to entrap his traumatic memory of the suicide of his wife Mal (Marion Cotillard); the deeper Cobb goes, the more narrative back-story the viewer acquires. Narratively, in *Inception*, downwards is the only way forwards. By implication, reality is what exists at the surface, at ground level, thus constituting the film's horizon line. Paradoxically, in order to go up a layer (towards reality), characters have to fall (for example, off a chair, down a liftshaft, or off a bridge) in order to experience the "kick" that jolts them back to consciousness.

Source Code is less emphatic in terms of verticality. The connections that link the horizontal movement of the train, Stevens's capsule, and his supervisors' control room are kept deliberately unclear. Within the train itself, however, there are two levels. Yet, though Stevens repeatedly ascends to the upper level (for example, to retrieve a gun from the conductors' car), the only time he stays there for an extended period is when he calls his father. These crucial few minutes lift him out of his relentless quest to find the bomber, which involves constant movement back and forth along the train compartment, and connect him with his own past. Beyond the space of the train, there is also a notional verticality in the film, which corresponds to the paradigmatic axis. In structural terms, the film's syntagm (the horizontal arrangement of sentences, narratives, or timelines) intersects with its paradigm (the vertical menu of semantic, generic, or ontological models that might be inserted into it). Each iteration of the narrative represents a different paradigm, determined by Stevens's motivation and strategic thinking. Drawing upon his experience and knowledge of the previous iterations, the narrative creates a layering effect, in which each linear trajectory 'builds on' the memory of the previous eight minutes.

The vertical connections between the different "layers" in *Inception* are altogether more precipitous: from the fall off the skyscraper that takes Cobb and Ariadne to the meticulously constructed dream-world that he lived in with his wife Mal, to the fall of the elevator in the hotel, and the fall of the van into

the river.⁵ It should be emphasized that the guiding metaphor here is not just that of a vertical line; it is that of a vertical *timeline*. The van's fall off the bridge constitutes a timeline for all the events that take place in the two deeper layers of dream: when the van hits the water, the characters asleep in the van will wake, whether or not they have completed their mission. Because the van drives off the bridge a few seconds too early, the time available in the lower dream levels reduces exponentially. Cobb's solution to this problem is simple: "Move fast!". Subsequently, repeated shots of the van in mid-air provide a spatial marker of how "long" the characters have left. As if this is not sufficient a temporal constraint, the characters also need to wake simultaneously in each dream layer in order to feel the cumulative force of gravity associated with three kicks so they can move all the way back up to reality. Each kick thus needs to be timed to coincide with the others. This is not an easy task, considering that time moves at different speeds on each dream level; careful timekeeping is required to prevent both characters and viewers from being left behind. Unsurprisingly, *Inception* is full of verbal time markers.⁶ Characters repeatedly provide summaries of how much time is left on each of the three dream levels. Both the van's spatially vertical trajectory and the film's narratively vertical trajectory between layers are thus precisely measurable, and repeatedly measured, using clock-time. Ultimately, the kicks occur at the moment the van hits the water, in a perfect alignment of the three different dream timelines, which also serves as the film's climactic resolution and provides its characters with a final "out point."

Verticality also forms the basis of a particularly intriguing narrative complication just before this climactic moment, in which up and down are superimposed. As the van drives off the bridge, the hotel dream one layer down suddenly moves into zero-gravity, and Arthur (Joseph Gordon-Levitt) finds himself crawling along walls and ceilings. Unfortunately, the zero-gravity also means that he cannot give his colleagues their wake-up kick by pushing them off their chairs, because they are already experiencing the free fall of the van in the next dream up. Paradoxically, Arthur has to load them into an elevator and sabotage it so that *it* free falls, in the hope that when it hits the bottom of the lift shaft and *stops* falling, it will create the same surge of gravity as that felt when falling off a chair. The ambiguity about what is up and down within the dream worlds extends to the film's camerawork. As Arthur crawls along the ceiling of a hotel corridor, one can only assume that the camera not the actor is upside-down. Elsewhere, the camera's shifting axis is even more overt. For example, various shots of characters falling asleep and waking up involve the camera tilted at 90 degrees to the horizontal. When Cobb and Mal decide to escape their dream limbo by committing suicide, they lie down on railway tracks; the verticality of the tracks within the frame provides the promise of an express line back up to

⁵ Garrett Stewart has noted the tendency for contemporary films to present time shifts via "a precipitous optic plunge through space itself as if it were time's own inroad" (2007, 134).

⁶ *Source Code* also features numerous temporal markers, such as the comment by a commuter that the train is running ten minutes late. However, given the film's more straightforward narrative trajectory, these references usually provide an ironic commentary on the narrative rather than clarifying it.

reality.

The cumulative effect of such shots is of a spacetime whose centre of gravity is continually shifting, like that of a rotating disc within a gyroscope, mounted on an axis that is itself in motion. Horizontality and verticality become interchangeable, each one turning on the other and, in turn, contributing to a loss of gravity for the characters. This loss of gravity is exemplified by Stevens's "capsule." Our introduction to this spatiotemporal module comes in the form of a close-up of his face, framed almost upside-down. We hear what we shall soon know to be his controller's voice, asking if he is ok. "Where am I?", he asks in turn, "I'm dizzy..."; "Adjusting your rotation," she replies. A motor whirrs, and the shot rotates through 320 degrees, until his face is upright. Over the course of the film, Stevens is framed within the capsule at various angles. When he finally discovers the truth about his physical condition, a series of arcing camera moves place his body at one moment on a vertical axis, and at the next on a horizontal axis. It is not clear if what we are witnessing is a series of expressive camera moves (reflecting Stevens's disorientation), or realignment of the capsule within the film's diegesis; but it barely matters, as the capsule itself, of course, is just a "manifestation" of Stevens's mind.

Both the zero-gravity hotel and the gyroscope-capsule reflect the fact that both horizontality and verticality in *Inception* and *Source Code* are nested within a top-level spatiotemporal metaphor: that of circularity. In *Source Code*, circularity manifests itself in the form of a narrational loop in which a single timeline is metaphorically bent so that its ending becomes the antecedent to its beginning. In addition to this temporal loop, Stevens's missions also involves an iterative loop: each time his controller sends him back onto the train, she inputs a command line that presumably causes the "source code" program to start again from its first line of code. In *Inception*, the metaphor of circularity takes on a physical form, in the shape of the spinning top that serves as Cobb's "totem." The top is an *aide memoire*, which signals to Cobb whether he is dreaming or awake. If it stops spinning after a while and succumbs to the downward pull of gravity, he is in the film's top layer – reality. If it continues spinning, it demonstrates that gravity is exerting a gentle *upward* force and that he is below ground level – in a dream. Again, the motion of the top can be likened to the spinning of a disc within a gyroscope, a circle within a circle. At the end of the film, Cobb returns home, reunited with his children, and spins the top one last time. The final shot cuts to black before the question of whether it falls is answered. The film teases us with the possibility that its entire two-and-half hour narrative has in fact been spun on its axis, that we have been watching the film the wrong way up, and that Mal was right all along: down is up and up is down.

Spacetime, speed, and memory

The progress of characters through the narratives of both *Source Code* and *Inception* involves movement within and between spacetimes with shifting axes. Characters find themselves variously fighting, testing, or succumbing to forces pulling them in different directions. Are these forces technological or psychological? Both films play upon the confusion between the two; their

narratives revolve around a notion of transport that brings together psychology, movement, and mediation. The characters are transported psychologically, entering into other minds, bodies, and worlds; they are transported physically, through the motif of constant vehicular movement; and they are advanced along various timelines (layered, nested, looped, and parallel), embodying the concept of a media "transport."

In this section, we suggest that various forces that operate on the films' characters can usefully be framed with reference to speed and memory. While speed links space and time through physical coordinates, memory does so through order, association, and repetition. Both are integral to the narratives of *Inception* and *Source Code*. In each case, temporal deadlines structure the action: characters must move quickly through space in order to achieve their goals. These spatiotemporal itineraries are graphed along notional timelines. The films' insistence on speed applies both to the timelines within each module and to the relations between modules, which are defined by the fact that the characters are located within an immediate environment (a train, an airplane, a van) that is traveling at high speed. These parallel velocities produce relational effects, which include the experience not only of acceleration but also of deceleration and inertia. Paul Virilio suggests that the sensation of inertia can be seen as a byproduct of speed; he uses as an example "the moment when two trains seem immobile to travellers while they are really launched at top speed one beside the other" (1991, 108). The slowness of the van falling from the bridge (signified by the use of slow motion) is a relational effect, produced by the fact that the dreamers inside are moving more quickly through time in the next "layer" down. So too is the effect of hitting the bottom of the elevator shaft: immobility within one dream makes it possible to feel the acceleration within another.

Memory also plays a role here. In both films, characters move through spaces generated from others' memories. In *Source Code*, Stevens's repeated movement through the train comes to resemble the ancient art of memory, in which orators remembered their speeches by imaginatively projecting key images into virtual spaces and then retrieving these images as they moved through their speech (Yates 1966, 3). For Stevens, small details - a drop of coffee on his shoe, a character quirk, a throwaway comment - become mnemonic resources that help him orient himself. For example, whenever Christina says "Everything's going to be all right", the train erupts into a fireball; through repetition, this cue quickly becomes source of dark humour for Stevens. Cobb and his team also treat memory as a resource to be exploited. By using prior knowledge to place an emotionally-charged object in Fischer's safe, they project an image into the space of his dream which he will remember when he awakes, and which will in turn change his future behaviour. Within the context of modernity and postmodernity, both Stevens's and Cobb's repurposing of the art of memory can be seen as fundamentally instrumental. Memory enables speed, since foreknowledge of territory and resources enables rapid action, and control over the future.

Is it perhaps this relationship between speed and memory that underpins the popular designation of these films as "intelligent"? Intelligence (of characters, and of viewers trying to keep up with the narrative) involves achieving command over narrative details (a memory of what has passed) as well as a

certain cognitive speed (are we fast enough to keep up?). Of course, though viewers may have the luxury of a pause button, the films' characters do not: their only hope is to move fast enough to allow more time for present action. The intelligence of modular narratives thus parallels military intelligence, which brings together foreknowledge and adaptability, and computer intelligence, which leverages stored data in the execution of high-speed processes. Though *Source Code* involves many implausibilities, the militarization of its technology is not one of them.

At the same time, just as it is too simple to subsume time to space in these films, so is it too simple to subsume memory to speed. As Wendy Chun observes, our contemporary digital moment is defined by the "enduring ephemeral." Images and texts do not disappear as a result of digital media's erasability; rather, they are constantly recycled (2008, 167). Memory in *Inception* and *Source Code* operates according to a similar logic. It is not a solid, storage-oriented memory, but a memory produced through repetition; so too, digital memory is defined both by its "impermanence and volatility" (164) and by its tendency to endure as a virtue of repetition.⁷ In *Source Code*, the execution of Stevens's quest involves a repetition of memory by means of digital technology; however, his own memories also begin to creep in, necessitating a telephone conversation with his father that is separate from the instrumental quest of the main narrative. In *Inception*, the speed-oriented thrust of Cobb's mission is also overtaken by memory. "Never recreate places from your memories," Cobb warns Ariadne. Ignoring his own injunction, he dreams about his wife and children every night; he uses an elevator as a mnemonic device, moving vertically between memories, each mapped onto a different floor. At the same time, he tries to lock away the traumatic memory of Mal's death in the basement. Of course, he fails. Rising up from his deepest unconscious, she refuses to be contained; her presence seeps up through the layers of Fischer's dreams. In addition, *Inception* also includes flashbacks: additional narrative layers that provide us with back-story about Cobb's relationship with Mal, scenes which themselves also seep into Fischer's dream, and so complicate his horizontal momentum.

At the same time, though Cobb is himself a prisoner of memory, he discusses his aspirations in terms of spatial navigation and architecture: he thinks he has "found a way home," while relishing having "a chance to build things...that never existed." In order to be reunited with his (and Mal's) children, he embarks on the most complex world-building job of his career. Cobb wants to return to his past family life, yet also, in his excitement at creating the new, bristles with modernist zeal. This dual pull of memory and speed is epitomized by his totem. The spinning top not only tells him if he is dreaming, but also triggers memories of his children – and of Mal, who previously owned it. At the same time, it communicates this information through speed – not as space traversed, but as cycling and repetition; the top turns on its axis, a visual metaphor of the film's spinning narrative axis.

⁷ "If our machines' memories are more important," writes Chun, "if they enable a permanence that we seem to lack, it is because they are constantly refreshed so that their ephemerality endures, so that they may store the programs that seem to drive our machines" (2008, 167).

Memory and space turn upon each other.⁸ The image of the spinning top evokes the instrumental project that has animated the film, as well as the possibility of a loss of control triggered by the return of the past.

Circles and spheres

Inception and *Source Code* have an architectonic logic based on lines, planes, and layers aligned along horizontal and vertical axes. These axes fit within a broader dynamic of circularity. Our metaphor of the multidirectional spinning of a gyroscope emphasizes the fact that both the nature of characters' movement within the films' narrative modules and the alignment of their narrative modules with each other is relational and dynamic. It also draws attention to the limits of narrative visualization.

Early in *Inception*, when introducing Ariadne to his dream, Cobb draws two semi-circular arrows pointing at each other: one signifies creation and the other experience. He uses them to explain that dreamers create their environment as they experience it. *Inception* narrates both its characters' movement through an environment and their shaping of that environment; its main characters are architects and user experience designers, and the film's narrative focuses on how they design and navigate Fischer's dreams. In *Source Code*, by contrast, Stevens himself is merely a player, as if in an immersive military simulation whose rules are only gradually explained by his superiors on a need-to-know basis; designing credit is shared by Rutledge (the inventor of "source code") and Fentris (the man whose perceptions Stevens is projected into).⁹ Consequently, the narrative focus of *Source Code* is different from that of *Inception*. As Sean Cubitt notes, "The film is an enquiry into how to live in a world where decision-making is not only remote but automated (and that goes for the mass transit system where most of the action takes place, as well as the Beleaguered Castle laboratory where Colter's body is held)." Yet Stevens repeatedly resists this automation. At the end of a particularly unsuccessful iteration of the train journey, he asks Christina to say "Everything's going to be all right", so as to expedite the explosion that will return him to the capsule. Indeed, Stevens ultimately

⁸ This neither/nor-both/and logic is captured by Garrett Stewart when he writes that the sense of duration particular to the "timespace-image" in many contemporary films is "neither a thrust or vector of motion not a layered "sheet" of time but rather the glimpsed relativity of each to the other in the immanent technology of the digital array" (2007, 127). In other words, the logic of these films involves a dialectic between speed and memory.

⁹ There is a secondary distinction to be made here too. *Inception* downplays the technology by which character can enter and shape dreams; its creators are unknown, and the technology itself remains discreetly packed away inside leather briefcases. In addition, when Cobb teaches Ariadne how to reshape dream worlds, he does so from within a dream; we never see the process by which the film's "media production" technology functions in the real world. *Source Code*, by contrast, places far greater emphasis on its technology; Rutledge's control room is full of monitors, wires, and flashing lights; Stevens's physical body exists in an incubator surrounded by a room full of wires and monitors. At the same time, of course, *Source Code* also sidesteps the question of precisely how its technology interacts with its users' brains.

achieves such mastery over his seemingly pre-configured environment (at least, within the eight-minute track of his mediated train journey) that even the bomber can only look on dumbfounded.¹⁰

The environments in which both films' narratives unfold are thus themselves shaped and reshaped by the characters' actions within them. Seemingly static spaces are revealed to be in a constant state of transformation, shifting in relation to temporal processes.¹¹ In both films, spacetime must be understood as a real-time process of creation and/or computation. In terms of the spacetime that both we and the main characters perceive, we/they are effectively in a computer-generated sphere – as in *Street View*, or rather, as in a computer game, which appears to present us with a Cartesian space, but actually just involves real-time rendering of the space immediately around us. Each film addresses a contemporary experience of spacetime that is inflected by data flows not geometric coordinates. Rather than acting as stable spaces within which narrative motion takes place, these CG spheres become interfaces for both registering and responding to the dual pull of speed and memory, manifested via invisible forces that include digital technology, trauma, military power, terrorism, and capital flows. Together, these forces keep the spatiotemporal axes of *Inception* and *Source Code* in constant motion. They thus entail a drastically different narrative architecture than that describable Henry James's metaphor of a "crooked corridor" or even that of a (non-linear, but still static) "database narrative." Both films point towards a new conception of narrative, in which spatiotemporal relations are dynamic, and can only be apprehended by analyzing spacetime as the cause and effect of a series of processes. The metaphoric brilliance of Cobb's circle is that it encapsulates the narrative head-spin of "mind-game" films, as well as illustrating how the dizzying spatiotemporal relations of *Inception* and *Source Code* are generated. By doing so, paradoxically, it also points to the limits of narrative visualization, and of these two films' own graphic metaphors. It simultaneously redeems spacetime and undermines it.

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¹⁰ Conversely, the designers in *Inception* sometimes lose control of their own creations. When a freight train barrels down the middle of a New York street, one might be forgiven for wondering if one is witnessing a spatiotemporal glitch whereby a narrative module from *Inception* has become scrambled with one from *Source Code*.

¹¹ Wolfgang Ernst suggests that, in the context of digital media, the static spatiality of the archive "is being replaced by dynamic temporal storage, the time-based archive as a topological place of permanent data transfer" (2004, 49-50). As Wendy Chun puts it, "digital media is truly a time-based medium, which, given a screen's refresh cycle and the dynamic flow of information in cyberspace, turns images, sounds, and text into discrete moments in time" (166-67).

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ABSTRACT

In large-budget complex narratives such as *Inception* (Christopher Nolan, 2010) and *Source Code* (Duncan Jones, 2011), we find the deployment of radical anachronic and forking-path structures, with their accompanying thematics of trauma and ontological displacement. Yet to a great degree these disorienting movements through time are clarified by being mapped onto space (as movement along a linear track, or down through the layers of a spiral). Such examples might therefore appear to affirm the prevalent contemporary argument that contemporary digital culture produces the 'spatialization' of time (Stewart 2007) or even that it opens up a perspective on the 'atemporal' (McGowan 2011). However, we argue that such arguments move too quickly to foreclose the temporal possibilities articulated by these large-scale modular narratives. For just as *Inception* and *Source Code* make temporal experience legible as spatial inscription, they also enact the radical distortion and temporalization of space. In these films, the return of memory involves the reordering of spatial experience, while the parallel, enchained or nested 'time zones' in these films are themselves manifested as spaces in transition (most obviously, by functioning as self-contained modules within moving vehicles). Time in such films does not somehow 'escape' spatial mediation, but its variegated flows, cycles and bifurcations nonetheless entail a constant remaking of space. A proper understanding of these films' narrative strategies may thus require a rethinking of the still-prevalent tendency (inherited from modernist thought) to think of space and time as separate and competing dimensions.