

TECHNO-CINEMA¹

Jamie Skye Bianco

I. Control: "Vor dem Spiel ist nach dem Spiel"

Matter, in our view, is an aggregate of “images.” And by “image” we mean a certain existence which is more than that which the idealist calls a *representation*, but less than that which the realist calls a *thing* [...].

Henri Bergson, *Matter and Memory* 9

“Vor dem Spiel ist nach dem Spiel” or “the end of the game is before the game.”² Tracing this paradoxical second epigraph of *Lola Rennt (Run Lola Run, 1999)* and inverting Eve Kosofsky Sedgwick’s useful notion of “thick description,” a “thin description” of *Lola*’s opening sequence follows:³

Foucault’s pendulum violently swipes the screen, strung up to an oddly gothic wall-clock sporting a fast-moving Chronos that then swallows its own image. Time merging from the belly of time, the image movement of *Lola* unfolds in a massive and meandering flow of human bodies, across which a “mystery of unanswered” (*Lola*) onto-epistemological questions are posed along with their indeterminate grounds:

[In translation] Who are we? Where do we come from? Where are we going? How do we know what we think we know? Why do we believe anything at all? Countless questions in search of an answer an answer that will give rise to a new question and the next answer will give rise to the next question and so on. But in the end, isn’t it always the same question? And always the same answer?⁴

The movement swirls to a rest, an interval, in which the rules of the game are stated by the security guard, “The ball is round. The game lasts 90 minutes. That’s a fact. Everything else is pure theory.”⁵ At this point the soccer ball is kicked into the sky, becoming the viewer’s trajectory and movement, and as we and the ball fall back to earth, the meandering bodies on the ground organize themselves into the main title, with the ball coming down onto the forming multitude, opening up as the “O” in *Lola*. The ball falls into the “O,” swallowing the image once again and becoming a now-animated *Lola* already running. Falling, swallowing, and emerging transmogrified, the image and we are always running, always movement in play and always opening onto the emergent.

And *Lola* runs in three experiments or 20-minute rounds—all in an attempt at continuity. In “theory” she must find 100,000 DM with which to save her boyfriend, Manni, who in his attempt to prove himself to several members of organized crime, acts as a courier for their cash and then proceeds to lose it on Berlin’s U-Bahn.

And *Lola* runs. She runs in three 20-minute cycles or rounds. In each the ends are changed even though she encounters the same bodies and forces along the way; however, in this play on the Butterfly Effect,⁶ each round reaches out to several virtual futures because of the slightest modulation of time from run to run. The game is rebooted but the game remembers. And so, “The end of the game is before the game.”

The source of the second epigraph is the S. Herberger, the 1954 World Cup winning “German soccer coach” (Whalen 33). The film’s first epigraph is taken from “Little Gidding” by T.S. Eliot, which reads, “Wir lassen nie vom Suchen ab, /und doch, am Endt allen unsern Suchen, / sind wir am Ausgangpunkt zurück/ und warden diesen ort zum ersten Mal enfassen,” translated as, “And the end of all our exploring/will be to arrive where we started/ and know the place for the first time.” Coach Herberger’s tactical comment, however unintentionally,⁷ emphasizes the intensive temporality and feedback loop of the game as play and movement itself. And though Eliot’s quotation might be read as a metaphoric motif of the cyclical human voyage or perhaps for the processes of psychoanalytic trauma and forgetting, I would argue that given *Lola*’s kinesthesia, Eliot here should be read through dynamism or through the time and movement that it takes to accomplish the “exploring.” Our arrival at the same coordinates “where we started” now carries the active accumulation of a new condition.

“The end of the game is before the game” summons the cinematic event (“film” and “spectator”) to the end/s of a game, one in which control-

ling or configuring the conditions and movements of play and the playing field is itself the game. Winning consists only of the continuation of play, and continuity necessitates a learning curve of losing first. By these constraints, whereby losing allows for the continuity of play, Lola must lose the first round of the game in order to continue to the second round and likewise on to the third round. Productive continuity becomes the process and object of play and losing then becomes winning. The loss here is not equivalent to psychoanalytic lack. Quite the contrary, losing is the fullness of memory in what has already occurred, what is perceptually present and what is virtually to come. Losing is also the desiring force by which the game continues to move and to play. By extension, as a successful navigation of objects, winning the game discharges play and movement and exhausts the desiring force to continue. Successful navigation of the third round of the film ends *Lola's* game. Lola's and our running is ultimately constrained by the running time of *Lola*, and winning becomes a true end and something of a permanent loss.

Following David Kazanjian and David Eng's use of loss in *Loss: the Politics of Mourning*, I intend loss to indicate dynamic and material remains, and in the case of *Lola*, the remains of movement and an energized memory. Therefore, the end/s of the game lost become the possibility of the game continuing, and as Eliot's lines tell us, a game that is the same and new with each round. The lost game has an accumulated temporality and play, a history for the future that finds itself at the same initial coordinates but not at the same initial conditions as the prior round. The same game becomes new, and we "know the place for the first time" as repetition with difference.

Keeping in mind my first epigraph in which Bergson asserts that images are matter and matter is imaged, Tykwer offers the following:

I always start with the image. I get an image in my head and I start wanting to get it moving [...] because the film is really fast moving and you have to have time [...]. The time-space continuum gets taken right off its hinges without anyone really noticing [...] in a synthetic, artificial world.

DVD Insert, *Lola Rennt*

Not unlike Kracauer's notion of "the cinematic significance of the reveling in speed" (*Theory of Film* 42), the "synthetic" world that Tykwer describes is one in which experiments with images in non-human time and space are

made. Using Bergson's ontology, these experiments might be described as experiments with matter in *non-human* durations and extensions. Let this be part of a definition for technoscience.

Techno-cinema and my reading of *Lola* are movements in a larger project that tracks the designed technoscientific capture and catastrophic release of temporalities, force and complex matters in order to produce affect and modular control.⁸ The project takes together the practices and productions of technoscience and cultural, critical and literary productions, studies and theories. I have suggested that in part technoscience might be thought as experimentation with matter in non-human time and space. Technoscience as reality-by-design is also, then, reality-in-the-making. *Technoscience makes futures without loyalty to any past(s), all while charging itself on the affects of histories.*⁹ As methodology, technoscience is 1) instrumentality, know-how, "systematic treatment" (OED) or *techné*, and 2) epistemes, the fields, states or facts of knowing, or *scienza* in mutual constitution.¹⁰ The powers of technoscience are the captured forces of post-human or beyond human temporalities and materialities occurring *by design*, but also in excess of their designs. And given the controls and design parameters of the prototype and of the design, the law of unintended consequences can find its way through the dynamisms of energy and matter. Therefore, what begs examination is what Ronald Bogue has called the "aesthetics of force."¹¹ Force operates through energy, matter and time as affect. And affects are being programmed, designed and modulated by control parameters and thresholds.¹² Technoscience brings the body and the body brings technoscience to resonate across a multitude of material and energetic scales wherein macroscopic and microscopic, complex and virtual dynamics operate. And despite mechanized production, the sheer power of controlled affective forces as well as the presence, puissance, and accelerated potentials of technoscientific dynamics demand a political aesthetics that might engage these faster and more intensive material and energetic dynamisms. Critical and constructive engagements with force, its capture as power, its affects, and the control functions that deploy, modulate and threshold time, matter and energy are vital. Technoscience offers critical experimentation by which designed incursions might intensify or capture energy in systems of material power, or bifurcate onto emergent aesthetic and political open-systems.

Creative though not necessarily controlled open-systems experimentation captures a set of initial tempo-material conditions for a technoscientific flow or techno-cinematic event, as in the case of *Lola* and

as we will explore in *Memento* (2000), and *Requiem for a Dream* (2000). This experimental design programs what technoscience and the techno-cinematic can affect, do and make. The admixture of any capture, design, program or plan operates as an “abstract machine.”¹³ Deleuze defines an abstract machine as a “matter-function” over and against a “substance-form.” An abstract machine functions as an attractor, as the virtual counterpart to emergent structure, or as an open-system’s gross material tendencies. This “matter-function” or capture and control of force are the function and constitution of fields of modular power, of volatile bodies,¹⁴ of reterritorializations,¹⁵ and of becoming. Given these open, material capacities and tendencies in movement across variegated spatial and temporal domains, technoscientific and techno-cinematic experimentation operates via assemblages, and from E-bombs to biochemistry to digital media, they operate beyond the particular extensive and durational scales and capacities of the human sensorium. And given their dynamism or tempo-material flux, these experiments can always exceed their designs and controls.

Lola, then, is a technoscientific film, wherein image/matters (film) operate across a modulated space-time continuum. If we take the perceiver as Bergsonian matter/images (observer), then there are multiple scales or interplays of movement, image/matters and matter/images. This assemblage of technoscientific film and perceiver, constitutes the techno-cinematic event. Given the energetics and affectivity of image/matters, technoscientific cinematic events are able to “jump scales” (Smith 60 and Clough and Schneider 340) of matter, space, and time to the techno-cinematic, “synthetic, artificial world” that Tykwer describes in *Lola*. The techno-cinematic event is the running together of color and light at different speeds and intensities as the flow of energy and matter that are perceiver and film. We are a new, mobile entity, and our running game of *Lola* ends with the third run when *the event* has optimized and extinguished the energies and motion of running. This event is a non-causal repetition game, a reterritorializing, re-coding game modulating its temporal loops and durations for the optimization of its forces and energetics across the topographies of the image/matters that constitute it.

With technoscience and the techno-cinematic event, the affects of multiply-scaled time and space are far more *sensible* and the thresholding and induction of designed affects (catastrophe, capture, and control) are far more *possible*.¹⁶ We are made faster, slower, livelier, deader, more non-organic, more narrowly centering, and far too loosely centrifugal; we are made. It is in this morphogenetic making that I take Judith Halberstam and Ira

Livingston's story of *Posthuman Bodies* to fit. And as we are made, we are making as well as N. Katherine Hayles' story of *How We Became Post-Human* tells. Agency, power and force are not lacking; they are chaotically distributed and captured and controlled everywhere. In this speedy material constructivism that constructs modular sociality (and not the reverse), how do we engage the deadly productions emerging in the technoscientific opening up of slow and rigid liberal humanisms onto variable post-humanisms?

II. Capture: "Remember to forget"

Memory [...] is just the intersection of mind and matter.

Henri Bergson, *Matter and Memory* 13

Christopher Nolan's *Memento* (2000) counts backward, but the numbers begin to change scale and duration before we reach zero. *Memento* opens with photographic capture. A Polaroid of a man's head blown off un-develops, returns to the Instamatic camera as the gun leaps into the hand that once held the snapshot, and pulls both the bullet back into the gun's body and the man's head back onto his body. The gun has saved this man's life by un-shooting him in the causality of this chain of images. Clearly, causality and linear, irreversible temporality are unhinged in this game.

Cut to: Leonard: "So where are you? You're in some motel room. You just, you just wake up and you're in [...] in a motel room. There's the key. It feels like, maybe, it's just the first time you've been there, but perhaps, you've been there for a week, three months. It's kinda hard to say. I don't know. It's just an anonymous room." Leonard's spatial and temporal dislocation echoes the image/matters of Leonard sitting on the bed in one such nondescript, black and white motel room. Contrary to the prior scene, he tracks through the motions of the voiceover chronologically. Of extra-bodily environs, Bergson argues that "the objects which surround my body reflect its possible action upon them" (21). If this be so, these objects of Leonard's motel room and the montage of the film evoke paralysis for Leonard and for the observer. *Memento* as a techno-cinematic event breaks away from the observer at the end of each sequence. Leonard and the observer must actively trace the "reflect[ions]" of the surroundings with concerted force, which constitute their captured possibility or intensive energy for action. In this game of concentration and in order for these mementos and memory

to act rationally upon these images, Leonard goes about matching Polaroids and tattoos to faces, places and actions as does the observer, matching sequences that unfold in narrative, non-narrative, proactive and retroactive temporalities.

The method of this techno-cinematic game is contraction and dilation. Sequence endings are segmented against every other preceding sequence, such that each beginning does not remind or parse together the image/matters of *Memento* passively. This disorder of place and time undoes any suturing in what is an active, symbolic disordering. Rather than subjectivizing the observer, the disorder brings the movements of the film affectively to the observing body and autoaffectively to the film in its own movements. Exposures are produced constantly, extending what is intensively behind the current image. With nothing missing or lacking, we begin the constant effort, like Leonard, to parse and match the unfolding and unmatched pieces. *Memento* produces a past through the production of unmatched futures, a thinking-forward rather than a thinking-back.¹⁷

In Leonard's voiceover from somewhere-else, we learn the techniques of knowing out of time or place, from somewhere-else, out of chronological memory. According to Bergson's definition of memory, mind and matter are always out of joint, but this occurs differentially in *Memento*. In *Memento*, mind out of joint is matter of a particular dysfunction that "interrupt[s] the current which goes from the periphery by way of the center, and, consequently, to make it impossible for [a] body to extract, from among all the things which surround it, the quantity and quality of movement necessary in order to act" (*Matter and Memory* 21). Leonard's overlaid topography of tattoos, mnemonic traces carved and inked in Leonard's flesh, reads us an abundance of correspondences between memory traces, Freud's *Wunderblock* writ too large and overexposed. Leonard's mind has unfolded from its encased bodily matter onto all the visible surfaces of the surrounding matter. Perception and memory, for Leonard, are one and the same.

Bergson argues that the centering of the human image by itself (autopoiesis) occurs in that most perception is already memory of the sensible, and of the flesh.¹⁸ The present is then an amalgam of the sensible past and the perceived present as well as the affective energies moving to action in "compassable" futures.¹⁹ For Leonard, though, the center through which the extraction of necessary movement can circulate is spread out across the surface of the visible and merged with perception and sensation. Leonard traces the distantiation and differentials of speed, matter and spaces across surfaces of the visible, including his own body, and the techno-cinematic

observer must do the same. However, unlike Leonard, the observer's perceptions meet with distinct, sensate memories in the flesh. Therefore, Leonard's surfaces are not memories but mementos. For Leonard, the multi-scaled dynamics of the surface trigger a tilted "quantity and quality of movement necessary in order to act." For example, the injunction inscribed on the Polaroid of Teddy, "Don't believe his lies," becomes a generalized, "don't believe Teddy," since there can be no distinction made between perception and memory, Teddy and his lies. Leonard's mementos are intensive affects, image/matters made in advance not to be remembered but made *to prompt to do the next*.

With this collapse of mind and memory, *Memento*'s techno-cinematic image/matters tilt the centralizing observer out of her centering by disrupting the temporality and direction of the current of images. In some sequences, what happens at the end is followed by its possible precedent. In other sequences, chronological flashbacks of Leonard engaged on the telephone are undercut by chromatic and spatial disjuncture with other images. The telephone sequences are shot in black and white and on a reverse (180°) angle, appearing inverted as mirror or negative images. The current of images is broken up into tributaries, an open-system or a rhizome, in which all are resonant but do not seem to fit together. The centering matter/images of the observer are forced to return constantly to the discontinuous surfaces of *Memento*. More importantly, we are paralyzed and inhibited in our narrative, chronological, and cinematic memory. The image/matters of *Memento* affectively force actions of forgetting: forgetting how we have conditioned sensation, thought, and action; forgetting chronology and the structures of narrative genres; and, forgetting our acts of centering.

Cut to: Leonard in full-color, leaving a cheap motel room, with no necessary trace of correspondence to where we have been before. He moves into the world through the gate of the motel's front desk, tracking telephonic traces, messages received and held, and a Polaroid of Teddy, the resurrected-dead, exceeds itself as the moving image Teddy opens the door to the world of "Lenny!" Our capacity for storage is unhinged like Leonard's when the formulaic temporality of the cinematic event is generically disordered, but we are also not in sync with Leonard's temporality, which is a fleeting and perpetual present.²⁰ For Leonard and for us, the seeming function of the game of *Memento* is to search the traces, the mnemonics for lost time. But since time can never be lost nor ever could be found, the game is more intensive in a tempo-material sense. A slippage of discreet and random moments are cut-out and marked in Leonard's bio-technic record of

tattoos, Polaroids, maps, police reports, directions, and topographies of identity and direction. The techno-cinematic event, unlike the film, is a loop without memory. The event has no beginnings or endings but rather rolls a vertiginous summoning of inserts without the master shot. The centering observer diverts the images through a forced chronology only to lose her sense of location by the end of the interval. And the afterburners of sensation and revelation are an affective rhythm, a jagged undulation, the flush of losing what comes next but happened before, and the practice of what remains.²¹

However, the end/s of *Memento* and Deleuze seem to add dynamic refinement to Bergson's oddly static sense of surface or surroundings:²²

What is essential is not to remember, but to *learn*. For memory is valid only as a faculty capable of interpreting certain signs; time is valid only as the substance or type of this or that truth. And memory, whether voluntary or involuntary, intervenes only at specific moments of the apprenticeship, in order to concentrate its effect or to open a new path.

(*Proust and Signs* 91, emphasis added)

Deleuze suggests that the contingencies of space-time and substance are radically dynamic and agential. The time of *Memento* will validate only the "substance" of Leonard's manufactured signs, collected and made to prompt and to forget. In order to play at the techno-cinematic game of *Memento* we must *learn* to remember to forget, to become forgetting in order to be prompted to continue and to act anew. This play is marked in many recursive, unrecorded and differentiated repetitions of Leonard's, "So where are you? You're in some motel room. You just, you just wake up and you're in [...] in some anonymous motel room." *Memento* is a rhythm and a repetition of thrown attempts to set the "grounds" of memory upon which an epistemology of chronological continuity in knowing might be, but never will be, found. Instead, Leonard and we are made to feel vertigo atop mountains of signs inside and outside of a unified, real time.

Continuity in *Memento* is losing without winning the game, but as with *Lola*, continuity is necessary to the play. And our attempt at remembering what came before but happened afterward leaves us blank when we are sent through yet another "before" sequence that swipes the board of the game and demands yet another futile strategy of sense and memory. Leonard expresses, "memory is unreliable," but he is also caught in the melancholia

evoked by remains, “I can’t remember to forget you [his dead wife].” How can we *go on* or *know* if we cannot expect a consistent strategy of sense, a contiguous remembered cinematic form and formula? “Remember Sammy Jenkis,” as Leonard’s tattoo prompts; remember that as matter/images with and among other matter/images we are not and cannot be memory, but rather memory *becomes* us. We cannot safely circulate into sedimentation as the centered being of memory or thought; but might remember just long enough to forget. Remember that the future will learn us, or as Patricia Clough insists, we might “give thought over to a future that [we] have not always fully grasped [...] as [we] are drawn to the future by it” (*Autoaffection* 2). *Memento* is a game that insists against the sedimentation of memory but instead demands active learning. We might forget enough to allow thought its affect upon our centralizing memories and to allow thinking to act anew. To go on, we can learn to trace the summoning of the future, that is, we might condition sensation and affect.

Whereas chronologically re-scripting might seem a sensible strategy to capture and control the affects of the techno-cinematic event’s image/matters, *Memento* offers the Sammy Jenkis prompt. Leonard develops techniques “to concentrate [memory’s] effect” differentially given the more obvious tendencies of his short-term memory loss: the remains of his sensible memory, on the surface, discontinuous, merged with perception and the energies of affect. He learns to act, affect, and swerve the future, “to open a new path” onto the *unknown* or unthought by the fluid matters of visible and corporeal scripts. In *Memento*, Nolan plays around the slowly looping cinematic “formula” as a processual threshold or the limit of a function, wherein the *known* is a function of storage, repetition and time. The capacities for the material storage of the cinematic event are modulated using our conditioning to the *known* affects of narrative, genre and the visible. Narrative filmmaking captures and striates the cinematic event in a singular threshold or a tightly looped, closed trajectory. These design parameters execute control functions that slow movement to meet the capacities of the human sensorium and modulate image/matters to a cinematic bio-circuit. This generates a designed affect, a retracing of the already familiar, already experienced, and symbolically *known*. What is most salient for the striated narrative, like all closed formulas and methodologies, are the machinics of repetition, with little or preferably no difference, working with the machinics of synchronization in which time binds movement. The capacity or force function to capture time in a closed system allows for control and repetition machined to design.

III. Catastrophe: bodies at rest and in motion

There are then, in short, divers *tones* of mental life, or, in other words, our psychic life may be lived at different heights, now nearer to action, now further removed from it, according to the degree of our *attention to life*.

Henri Bergson, *Matter and Memory* 14

Darren Aronofsky's *Requiem for a Dream* (2000) is a tightly looped trajectory, but played to the extreme. The control functions so tight and quick that the *Requiem* summons death. From the opening, the a-cinematic dirge is relentless and synched to televisual temporalities in *Requiem*'s opening television commercial for self-help videos:

WEeeeeeee've gotta winner! WEEEeeee'e've gotta winner!
 WEEEEEEEEE've gotta winner! [...] BE excited! BE, BE excited!
 [...] Three things is [sic] all I did to change my life. ~~RED MEAT. Refined SUGAR.~~ [...] Juice by you! Juice by you! [...] Join us in creating energy! [...] Tappy Tibbons 'Month of Fury' will revolutionize your life in just 30 days or your money back!

This revolution ends life. Tappy Tibbons promises the attractions of a dream, the American Dream, but what becomes of dreamers at the death of the dream, especially an extinguishing dream that does not happen with sleep but with eyes wide open? Take Bergson's construction of a centering image among images-light with differing speeds and some at the speed of light. At what point does the composition of forces and image/matters in contact and flux compose a system, haecceity, or body?²³ What are the forces of centrifugal attraction that allow the body to coalesce or of centripetal force that dissipates the body? Can an autopoetic, entropic, organic body open up enough to admit a dream, and what happens if the body opens up to much in pursuit of the dream? Chasing dreams that never come true is the game of *Requiem*, and it plays at death.

From *Lola* and *Memento* we learn that memory is simply continuity in the agglomeration of sense memories in bodily matters. Therefore, disjunction in time and multiple temporalities begin to swerve the forces of material centering and centrifugal attraction. These force-filled breaks bifurcate matter/images onto new matter/images. In the human assemblage, this is both necessary and dangerous. Forgetting to center or programming a change

(a dream) is an opening onto new sensate matters and temporalities. When the centering does not hold, these catastrophic breaks effusively extend matter out of which either our slow, macroscopic human bodies give way to death and extend into what Deleuze and Guattari call “the body without organs” (*Thousand Plateaus* 150)?²⁴ As autopoetic and entropic organisms, humans remain open to the movements of unstriated matter/images from “the body without organs,” and we are able to experiment with our degree of openness. Centering is itself a process of programming ourselves as living matter/images among the dead. But Manuel DeLanda argues that given their dynamism, non-organics are very much “alive” but live across different degrees or scales of extension and duration.²⁵

Requiem is a programming or design experiment with the forces of organic and non-organic life in which the intensification of centering on particular sense memories through the use of drugs causes a sliding of the sensate and centering scales away from organismic durations and extensions. In *Requiem*, the biological/organic temporalities that heavily threshold the image/matters of narrative and montage are also overcome by the affects of chemical/non-organic life, becoming what Kracauer in *Theory of Film* called “the transient” or fleeting images, “blind spots in the mind” or images beyond our habitus, and “special modes of reality” (52-59). Reading Kracauer’s subjective description of *representational* affect through Bergson’s deployment of a material mind, we sense a great irony at play in the plosive collisions of sound and image/matters in the techno-cinematic event of *Requiem*. We *sense and feel drugged* in this explosion of intensive powers and control that normally bind the apparatus to the organic clock. The game that *Requiem* plays out is the relentless organization of non-organic rhythms, temporalities, diffractions, and affects decentering the capacities of the observer.

Prelude: *Requiem* rolls the bio-technics of television into the bio-chemicals of heroin and love; in other words, Harry steals his mother’s television set, pawns it for heroin, and shoots up the proceeds with his best friend, Tyrone, and his girlfriend, Marion. The non-organic life values of teletechnological and biochemical affects are exchanged. In a 180° series of Harry moving about the living room, Harry steals the television in a split screen with POV shots from Sarah through a keyhole in the closet. The accelerating and disorienting logic of the images continues to modulate as Harry meets Tyrone in the hallway, followed by long tracking image/matters across the front of the building as they roll the TV down the street. When they reach the pawnbroker, a low angle, hand-held, fish-eye lens

captures them and begins to transform the image/matters until we find them back in Marion's apartment with speedy time-lapse jumps and insert shots of the processes of cooking, shooting and absorbing heroin. The hallway and the front of Sarah's building are the only two images that align with an organic human temporality, spatiality and light refraction. This mix of image/matters offer a techno-cinematic event wherein *we* are jonesing for a fix, rushing ahead to get it, getting high and becoming chemical in the vein. First round of the game, and we are captured by the forces of non-organic play.

First Movement: "Tappy's inspiration series is not available in any stores and is 100% money back, satisfaction guaranteed!" The television circulates back through Sarah once she retrieves the black box from the pawnbroker. She hops up and plops back into the easy chair, frustrated by the lack of televisual transmission or reception. A substitution occurs. The telephone reaches out to her and pulls her into the television set through the telephone lines and the mail service—an offer to be a contestant. She dreams of being ON TV, thin, young, svelte, happy, never widowed, never lonely, but thin is the only real possibility. The image/matters of "Sarah" are captured in the flesh of our matter/images, and Sarah begins to program herself and us "thin" with diet pills and tranquilizers. Sarah dreams through her television double and television family, but must settle for dieting on grapefruit and eventually bottles of uppers and downers in the company of a terribly vindictive refrigerator. Second round of the game and the non-organic life force of speedy dieting, and lonely Sarah forcibly transverses us.

Second Movement: "Get the juice now! Dial 1-900-976-JUICE! [...] Dial the last 'E' for excitement!" Harry dreams himself becoming Prince Charming for the beautiful, Maid Marion. Their love is like no other, but this is something less than human. The image movements of Harry and Marion "in love" are chronically and bodily dismembered. We find Harry and Marion in time-lapse gaps and mismatched split screens, particularly provocative because they reach out to touch one another and the image movements of bodily segments do not parse together. The body parts do not fit. They are both slowly transformed into disposable limbs with necessary holes, Harry's gangrenous injection site and Marion's mouth, vagina and anus. Third round of the game and bodies are becoming mismatched body parts.

Third Movement: "All major credit cards are accepted!" Tyrone dreams of being his dead mother's perfect son but must settle for failing the perfect score and heroin withdrawal in prison. The image/matters of Tyrone, an

African-American, are suspiciously chromatic and fleshy. As with Harry and Marion, image movements of Tyrone's love are dismembered and de-humanized. Unlike Harry and Marion, Tyrone's play in the newly purchased mirrors cuts up his and his girlfriend's bodies when they are at a distance, but in proximity, the bodies become effusively organic, chromatically reflective and nearly metallic and their swirling and undulatory movements. Hanging over the bed and capturing symmetrical, spooning sex, the image begins to spin, not unpleasantly, and is then shockingly arrested by another flattened static image. Tyrone and our sexual high are cut short. This trajectory will be repeated with the image/matters of Tyrone in the car with Brody, swelling and metallic, to the gunshot, and again, getting high on the road trip to Florida to the Georgia prison work crew and bedtime withdrawals. Fourth round of the game: undulation and disruption.

Fourth Movement: "More passion for living than you ever imagined!" Marion dreams of becoming a famous fashion designer and a beautiful body but must settle for becoming a junky and a prostitute. The image/matters of Marion naked in the mirror repeat Tyrone's naked body in the mirror but with such difference. Marion's image is pale, deathly, gray, and still, and like Tyrone, the image cuts away sharply. Unlike the image/matters of Tyrone, a cut back to Marion in the mirror occurs. The interval marks the possible qualities of Marion's "divers tones of mental life"—without and later with heroin—producing a "divers" repetition of the body in the mirror but with a different "degree of *our* attention to life." Attention here means attending as well as concentration. And the image/matters of Marion are produced repeatedly as those of the flesh that differ in degrees of attention to livingness and that "oscillate wildly," to use Peter Hitchcock's eponymous title and description of millennial bodies. We see urbane and lovely Marion at the dinner table, prostituting herself to her shrink, radically break into an image movement wherein she stabs the back of his hand. Later, she is static and floating in the tub, and the image breaks into an underwater shriek of horror. Marion, most intensely, is a haecceity of an affective *aesthetic* of force, for the oscillating *feel* of beauty and horror, made harsh and palpable when in the final sequence the elegant fragility of her makeup and dress, chromatically metallic in this scene only, shatter into a bludgeoning series of pornographic image/matters in Little John's sex show. Fifth round of the game: the body is a shifting topography.

Coda: "Juice it up!" Our addiction for *Requiem* is a force of attraction, of gravity and of intensity, cycling periodically as movement and rest, as suction and expulsion, of radical change and compensation for these losses/

remains. And we become this movement in this techno-cinematic game as the affects of Sarah, Harry, Tyrone, and Marion's off-kilter bodily assemblages strike us. Transversed by the continuous forces of non-organic motion and plosive modulation, how many speeds or oscillations can be sustained before spinning out onto the body without organs? *Requiem's* game ends with a relentless "hip-hop montage"²⁶ of bodies-come-undone to an erratic and crashing techno-aural rhythm during which these image/matters, coalesced as bodies, open onto the body without organs. Sarah and the television become monstrous together, and Marion fucks herself into becoming Little John's public sex show.

Taking our gains from being played by *Lola*—continuity in running—and from being played by *Memento*—continuity in a memory that must be actively forgotten to continue—*Requiem* would seem to be more direct, more programmable in its play. Deleuze and Guattari famously query, "how to make a body without organs?" But how might we open onto the new without rupturing the organic rhizome when we need to forget in order to experiment, to run, to learn and to become? The image/matters of *Requiem* are autocatalyzed, self-programmed, and recursively designed to dismantle themselves through the forces of attraction to other image/matter assemblages, and in *Requiem* they are catalyzed, programmed, and designed to do so across our flesh, a becoming-dismembered, dehumanized, drugged, gangrenous, penetrated, and withdrawing. As a game, *Requiem* is a flash grenade of "subjective" filmmaking (DVD Insert), a term reminiscent of Kracauer's "'subjective' [cinematic] movements'-movements, that is, which the spectator is invited to execute" (34). And this execution, flowing across our flesh in the cinematic event, this rhizome of accelerating and bifurcating image/matters does not die but rather becomes our sense perception and our sense memory. The play of *Requiem* suggests that *continuity requires thresholds and control*. Non-organic life can be both too fast and too slow when organic life encounters it. Perhaps organic life and human life have such a terribly narrow threshold for continuity that control and capture, especially technoscientific control and capture, provide small machines, designs and programs for the ordering of times and space.

Requiem for a Dream offers a techno-cinematic vision too fast, a biotechnic montage too sensible to process its energies. Yet without the active "discharge" (again, we are entropic and autopoetic, a fatal combination), the effects of such a bombardment of affect are still in the flesh. *Requiem* is a game of coming together in attraction and coming undone through centering and dissipation occurring simultaneously. Charged by the affects of

our dreams [...] our autopoetic moving sound-images violently capturing and centralizing us into a controlled, contained and individualized scope, we disallow any other future. The American Dream in Aronofsky's tale of four Brooklynites is a funereal procession whereby desiring images are captured into a repetition pattern, hardened and slow images moving in an accelerating stream wherein affective capacities are thresholded into a constrained capacity for action unto death and dispersal. Each of the four characters attempts to compensate for entropic (energetic and material) loss and also attempts to construct through what remains. By chemically altering their rhizomatic fields, the rhythmic and resonant centrifugal attraction that keeps bodies whole is put out of sync and loosened from the organic threshold. They and we are caught up in an unbalancing sensation of forces, in the deterritorialization of the human body.

Furthermore, if our needs are programmed by dreams, and in the case of *Requiem*, The American Dream, and these dreams are not probable or even possible, we will experience withdrawal. Withdrawal itself is an affective energetic consisting in variegated sense memories across a bodily topography. Withdrawal is the body's forcible attempt to re-member a prior sensate balance. These "abstract machines" called dreams can kill us then in their ever-receding retreat and in our ever-constant pursuit. The forces and attractions of the dream and The American Dream constrain and threshold our bodily memories to their pursuit at all cost. What psychic "height," to use Bergson's phrase, does the dream offer and at what distantiation from its pursuant action? These abstract-machines that become dreams render our bodies desiring-machines and are affections of power moved into sensate actualization. These image/matters as abstract-machines and ultimately fleshed out as desiring machines seek out transformative and forceful encounters. Sarah's television (regardless the content, although the Tappy Tibbon's self-help regime adds yet another abstract force function to the televisual flow) reaches out into her living room with the force of transformative transmission and toward reception or encounter. Sarah, with her bodily memory of smooth rhythms of fullness, becomes a jagged loneliness, amped in chocolate, schizoid on uppers and downers and terrorized by a mean-spirited and ravenous refrigerator. For Tyrone, Marion and Harry, heroin begs the vein and the opening of skin and vessel and in return offers a rhizomatic perceptive, affective and active shift. But begging becomes demand becomes command becomes death as with the accumulated sense memory of Harry's gangrenous shooting arm. The game: forget compensating for loss such that we might go on and become new. Harry never

forgot the black hole in his arm, and we all fell through its vortex. Game over.

IV. Techno-cinematic events

The brain is the screen. I don't believe that linguistics and psycho-analysis offer a great deal to the cinema. On the contrary, the biology of the brain—molecular biology—does. Thought is molecular. Molecular speeds make up the slow beings that we are.

Gilles Deleuze, "The Brain Is the Screen" 366

Techno-cinematic events are processual and heterogeneous assemblages of bodies rather than discreet objects, film and perceiver. There are three force functions in motion in techno-cinematic events. Techno-cinema pursues 1) the play or game of *affect-by-design* and the catastrophic and recursive reterritorialization of tempo-materiality in the process, 2) the *thresholding* or *capture* of the material attentions and intentions of the matter/images constituting the observer, and 3) the *control* of these thresholds across the observer/filmic event-in-progress in order to modulate material affectivity, "Like the monster, like the spiral, they are reborn from their metamorphoses" (Deleuze, *Proust & Signs* 86). We are running the *Lola* spiral, remembering to forget *Memento*, and becoming-monstrous, post-human, or perhaps, the necessary death for the *Requiem*. The techno-cinematic event is one of *captured and controlled* energetics and dynamics as expressed in post-humanist practices. Techno-cinematic events are material processes shot through with the energetic capacity to auto-affect their own material constituencies and to affect other bodies *by design*.

Technoscience fictions in general and the techno-cinematic fictions discussed here are deterritorializing events at the critical threshold of reterritorialization: a reterritorialization that includes and captures our organic, bio-circuited vision machines, and, more intensively, our sensation machines along with the bodily apparati that become these techno-cinematic events. The multiply-scaled physics of these image/matters and image-systems are non-organic, nor are they the rhythmic composition of living assemblages. This collision of matter, speeds and rhythms signals the end of "the age of mechanical reproduction"²⁸ as well as the end of the "precession of realist simulation"²⁹ and calls for aesthetics of force. The human-

ist game is no longer running in *Lola*, no longer remembered in *Memento*, and no longer alive in *Requiem*, where the dying dream becomes the entropic, spinning death of the dreamers. Given the irreversibility of this constructivist onto-epistemology of affective becoming over-stabilized being, copies and originals are only modulations of ever-evolving matters and affective auras. We bio-circuited image-systems or techno-cinematic bodies are the sum movement of this running, forgetting and spinning, pulsing splatter in *Lola*, *Memento*, and *Requiem*. Ultimately, recursive and looped techno-cinematic events are volatile systems captured, summoned by the virtual, unfolding the possible futures of a particular image system as a volatile but rhythmic material event, as cinematic technoscience fictions.

As *Lola*, *Memento*, and *Requiem* move across the patterns of rhythm and vibrations to which their soundtracks beat, techno-cinema is an involution of what John Johnston calls “machinic vision,”³⁰ in which the initial conditions of these cinematic systems unfold through a tempo-material flux in which perceptive simultaneity meets multiple non-human sensations, as in *Requiem*’s television world explosion and “hip-hop montage,” *Lola*’s body-clocked spirals and repetitions, and *Memento*’s sheets of reversing time and erased memory. The perpetually produced present splits off from its relationship to organicism, linear historicism, and narrative temporalities, extensions and dimensionalities. We follow the differential play of technoscientific forces and the modulations of intensities and haecceities that flow across these techno-cinematic experiments, tracing these sensate and affective image systems. Bio-circuited by design, inhuman or perhaps post-human in their visual conduction, these events are a confluence of organic and non-organic life forces. But the dynamics of multi-scaled materialities and temporalities produce the most voracious and differentiated forces in terms of the modulation of organic sensation. And as I have argued earlier, these techno-cinematic events are controlled productions of affect *by design* as well. It is the thresholding of force, temporality and matter through intention and the intension of affect, capture, and recursion by design, a design that is always exceeded in its very recursion, that makes technoscience the open-ended “reality studio.”³¹ In addition, critical experimentation, and in these particular cases, the techno-cinematic experiments of Tykwer, Nolan and Aronofsky may also, by design or capture, induce bifurcation and work through the powers of capture beyond bifurcation. Technoscientific and techno-cinematic experimentation exceed their initial parameters or initial conditions in a given open-system at a point where control meets catastrophe.

V. Affect and the apparatus: the dynamism of force, matter and sensation

The cinema doesn't reproduce bodies, it produces them with grains that are the grains of time.

Gilles Deleuze, "The Brain Is the Screen" 372

What of these sumptuous physicalities through which the cinematic experience strikes us, captures our attentions and perhaps intentions, and at certain times, throws us for a loop? These chills, rhythms, and sensations cannot only be expressions and three-part metaphors for spectatorship, its libidinal economies, or the ideological apparatus of cinema. Baudry's articulation of the apparatus of cinema in "The Ideological Effects of the Cinematographic Apparatus" expresses a remarkable similarity to Bergson's idea that the human matter/image centers itself in relation to other images, producing a subject that is a process. For Baudry, though, the *filmic complex* centers the *human body* and produces a static viewing subjectivity. This subjectivity is a material function that has become strangely disembodied and immobilized by a material apparatus capturing "the eye which moves [and] is no longer fettered by the body" (350). This removable, Cyclopean eye stripped of its stereoscopy and purified of any astigmatic or myopic defects becomes an unchallenged and coherent processor of image/matters. And these image/matters that are shot in temporal and spatial correspondence to this culturally void eye's positionality in space analogically becomes a correspondence between organic temporality and the "real-time" of narrative film. Subsequently, the eye's position and temporal correspondences to narrative cinema establish a subjectivity of uncontested meanings emanating from the flow of image/matters produced by the filmic apparatus. The "subject" for Baudry comes to be defined through the construction of these meanings. This concept of meaning as subjectivity assumes real-time *in continuity*, an analogue to narrative cinema in his view, necessitating the machinics of memory, which of course do not occur in real or continuous time.

Baudry and other apparatus critics, unlike semiotic and psychoanalytic critical engagements, do offer an opening onto a material encounter with the cinematic. However, memory and thought have been forced into a rigid spatio-temporality and taken out of the body and matter itself in order to stabilize the production of meanings and subjectivity. The energetic body and its dynamic positioning become an undifferentiated totality that have been replaced by a subjective analogue with one eye. In addition, memory

has only come to serve the continuity of the eye as it serves to register and remind ideas, much like a play-back machine. This is strange mix for a material theory of film. Bits and processes of body, memory, time, space, and the apparatus are parsed and imbricated in highly selective combinations, excluding many other affective, bodily and tempo-spatial movements, processes, and positions, utterly eliminating the dynamism and agency of non-subjective bodily matters and the non-human elements of the apparatus. Indeed, there are serious critical problems raised by cutting the eye out of its body and plastering it across a passive, centered, and abstracted “subject” possessing no capacity for material or energetic sensation or affect.

Baudry has inverted Bergson’s thought, but their mutual concern for the centering movement produced in humans is important for cinematic theory. However, Bergson’s construction remains a complex, material *process* wherein the human, ideology, and “meaning” are image/matters in circulation among others. That the actual physico-material encounter of the cinematic event is left unattended is to miss so much of the affect (ideological and otherwise) of techno-cinematic events. How is it possible for the materialist critic to stand outside of time, matter and force in both the cinematic and critical events? The temporalities of *Lola*, *Memento*, and *Requiem* do not offer a continuous narrative subjectivity, but rather a disjunctive and affective continuity that is resonant, rhythmic, repetitious, tonal and sensate. And though an ideological narrative might certainly be produced, the effects of affect, sensation and force are left behind. In addition, if we take Baudry’s emphasis on the production of subjectivity by cinematic meanings, we must go back to this plethora of substitutions, analogues and metaphoric correspondences. Here, the engaging creativity of the analytic or interpretive narrative begins to capture a variety of disparate and descriptive image/matters, centering them, capturing them together in a controlled and abstracted network. These practices can be very productive, but they sometimes exclude or cannot account for the *material encounters* between matter/images and image/matters. Baudry suggests that the disembodied eye functions “as if” the body is “defective” (354), and the subject “unable . . . to account for his own situation” (*ibid*). The necessarily hidden instrumentation of the apparatus must then substitute “ideological formations” (*ibid*) for the true subject of the eye. I would suggest that the unaccounted analogy of formal, bodily defect and the substitutional metaphor of content offer us little or nothing about the “objective reality” (346) of the cinematic event and the physico-material impact of image/matters of varying speeds, saturations, densities, volumes, dynamisms, and rhythms. Baudry

himself exclaims, “To seize movement is to become movement, to follow a trajectory is to become a trajectory, to choose a direction is to have the possibility of choosing one, to determine a meaning is to give oneself a meaning” (350), and yet he seems unable to account for the very material and affective conditions he describes. Deleuze in *Cinema II* offers a more interesting and not unrelated construction of spatio-temporal subjectivity that remains physico-material, “the only subjectivity is time, non-chronological time grasped in its foundation, and it is we who are internal to time, not the other way round” (82). The aesthetics of force are required.

VI. Force-filled aesthetics of sensation, affect, capture and control

Beauty, here, is not perceived in relation to good form, but to a temporal element, or *process, movement, dynamism*—a ‘haecceity’ The beautiful, in this new definition, is a processuality, a continual movement. The determination of beauty becomes temporal, not reflective: an open-ended process, a feeling of flowing, rhythm, or ‘becoming’. Indeed, a refreshing concern with sensation, rather than desire or pleasure, requires us to think about sensation as a rhythmic experience [. . .].

Barbara Kennedy, *Deleuze and Cinema: the Aesthetics of Sensation* 30-31

Filmic image/matters are engaged with human matter/images such that the milieu of the techno-cinematic event is constituted by its own affect and not phenomenologically produced by the isolated “observer” as a historical or psychoanalytic point-of-view or even as an ideological filmic montage in real-time and space. The capture of attentions and intentions or intensities nonetheless demands further attention, as these are forces, force fields, and tempo-material vectors, which cannot be ideologically, semiotically, or psychoanalytically identified by analogically draining off their respective affects, energies, motions and powers. Caught in the centering actions occurring at the affective register of the human image and processing at organismic speed, techno-cinematic events stage openings, bifurcations, and catastrophic breaks in order to threshold the workings of image/material capture and control. These technoscientific, cinematic images produce fluctuating speeds and worlds beyond the capacities of the organism and beyond humanist or realist scales of time and space. The

simultaneity of human and non-human temporalities makes for contemporaneous worlds that technoscientific cinematic events make “visible.”³²

This exploration of the technoscientific cinematic event intends to add to the small body of work that has begun to elaborate and construct aesthetics of force. In the quotation heading this section, Barbara Kennedy also articulates the need for a material and political “aesthetics of sensation” of the cinematic event. Her emphases upon the processual, affect, and materialities beyond analogic meanings, libidinal excitations, and the “form” of subjectivized organisms or organismic subjects are Deleuzian modalities, suggesting that resonance, movement, and rhythms are tempo-material modulations. What of the tingling *socius* we become as a cinematic body, the vibrancy and vibrations, the “creeps” and revulsions, and the micro-material and corporeal experience of the cinematic as a biotechnological process? I have argued that the techno-cinematic event can be thought and sensed through an affective game of several bodies: movement and sound image/matters of the cinema and the moving matter/images of the perceiver.³³ The striking forces of the cinematic as well as the videographic, televisual, and “technotext[ual]” (*Writing Machines* 25) should be pursued in terms of sensation and affect, and with few exceptions such as the affect of horror or pornography, studies on Carpal Tunnel Syndrome, and the forces of evil that Marilyn Manson apparently deploys, affect has received sparse critical attention. The meetings of force-filled sensations becoming affect undergo additional forces of critical capture, organization, striation, and control, and thus, affective criticism faces the complexity of reflexive recursion as well.

The capture of attentions, intentions, and intensities, the thresholding of temporal scales and speeds, and the control of the scales and speeds of matter are precisely those virtual attractors around which the material of a haecceity, composition, assemblage, organization, structure, or institution tends and becomes. In this manner, *Lola* sets into motion a force-function, an attraction, whereby the tendencies of the techno-cinematic event are strongly drawn to reboot. The game is restarted three times, always with a difference tending towards an optimization. Conscious of the processes of capturing attention and intensity, *Lola* is programmed to “grab the viewers and drag them along” to the play and pull of repetition with a difference, set by the modulation constitutive of “the sheer unadorned pleasure of speed.”

VII. For the duration: swallowing Chronos

The present is not at all a natural given of the image.

Gilles Deleuze, “The Brain Is the Screen” 372

In each of these techno-cinematic events multiple tempo-materialities play in multiple spatio-materialities. Aronofsky pursues a line of slipping bodily detection, bodies that escape the threshold of human sensibility and legibility. Nolan, in *Memento*, traces a similar line of departure in terms of human memory. The traces of memory on Lenny’s body reset the world with each erased episode. Likewise, Tykwer allows his film to chase the clinamen, the moment of divergence and bifurcation, such that the ends of these lines of flight are irreconcilable as possible futures such that, “each sheet of the past is a continuum [...] of variable speed” (Deleuze, *Cinema II* 119). *Requiem*’s organic hyperbodies pulse too fast for their organizational striations. In the confluence of all three of these techno-cinematic events, *Lola Rennt*, *Memento*, and *Requiem for a Dream*, pulsing, spinning resonators, Harry, Sarah, Marion, Tyrone, Leonard Shelby, Lola, and we become sped-up and transversed by sensation and immanent post-human affect. And the physics of non-linear dynamism and “grasping” from within time seem provocative motions in the aesthetics of force, techno-cinematics, and emergent critical engagement with technoscience.

The City University of New York

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Notes

1. This essay is indebted to Patricia Clough, Peter Hitchcock, and David Kazanjian and is supported by their kind guidance. My gratitude to Patricia for ongoing investment and shared technoscientific research, constant appreciation for Peter's witty theoretical challenging, and unending thanks to David Kazanjian for extremely generous readings. Errors belong solely to me.
2. For my purposes, the "game" is synonymous to a controlled experiment, be it a video game or gene splicing.
3. Sedgwick discusses "thick description" (21) in *Touching Feeling*. She likens a thick description to close reading. By contrast, what follows is a wide tracking description of the opening sequence of the *Lola*.
4. Indeed, we discover that the answers are not all the same even if the procedures applied to answer the questions are.
5. Proximate extension and duration of space-time are controlled. "Everything else" is an experiment in probabilities.
6. The Butterfly Effect is a popularized example of Complexity Theory. A butterfly flapping its wings on one side of the planet initiates a minute disturbance in the immediate environment that ripples across the atmosphere. Ultimately, the climactic turbulence probabilistically accumulates into a huge weather phenomenon on the other side of the planet.
7. Herberger's tactic of pre-game mapping was an attempt at the scientific rationalization of the game of soccer. Thanks to Peter Hitchcock for this insight.
8. Pointing to these connections between affect and control, see Patricia Clough, "Affect and Control: Rethinking the Body 'Beyond Sex and Gender.'" Gilles Deleuze in "Postscript on Societies of Control" briefly outlines the function of control following Foucault's socio-political account of regimes and segmented movements. Antonio Negri in "Value and Affect" makes the connections and notes disjunctions between classical, Marxist models of political economy and an affective, technologized economy. These brief essays, as well as Manuel DeLanda's "Non-organic Life" are present in the thinking of this essay, but I am unable to address them fully here.
9. In *Intensive Science and Virtual Philosophy*, Manuel DeLanda furthers the work of *A 1000 Years of Non-Linear History*, an critique of chronological, causal and evolutionary fictions, operating on trajectories akin to thermodynamic systems wherein, "Optimal design or optimal distribution of energy represented an *end of history*" (My italics, *1000 Years of Non-linear History* 13-4). In *Lola*'s epigraphs and as demonstrated in Patricia Clough's *End(s) of Ethnography*, "ends" suggest both aims and closure. While the flattening of temporalities and materialities into linear ends and systemic closure produce the narrative fictions of History, world-producing technoscience fictions produce open, self-organizing systems.** As such these emergent entities cannot be expressed simply as an effect of a linear history, but rather the movements of an intensive and unfolding material world. Given technoscientific involutions or "folds" of space-time and matter, relations of power and matter cannot be determined by a linear past or by an evolutionary history either. On the technoscientific plane, causal evolution, history and "the" past can only exist as energetic capture. And as

Deleuze, Manuel DeLanda, and Patricia Clough insist, the making of history and the capture of power occur as thresholds designed to “control” (“Postscript” 4) the flow of bodies, matter and space-time itself. They reach through many possible futures-as-now, in other words, from and through the virtual. When the *past* is narrated as “history,” it is a forceful movement of matter and energy *made* to swerve the *present* toward a specific future designed within parameters of capture and control. They argue that technoscientific practice shares the practice of critical experimentation with virtuality, dynamic space-time, and affective relations of force and energy.

^{**}An “open-system” is an ecology or material circuit, which is open to receive energy and matter/information. This is usually contrasted by a “closed-system” which is only open to energy. “Open-systems” are also referred to as “far-from-equilibrium systems” and “closed-systems” as “equilibrium systems.” Ilya Prigogine, in a controversial elaboration of non-linear dynamics in far-from-equilibrium systems, suggests that at a “critical threshold” (Nicolis and Prigogine 59) dynamic systems successively reach Borgesian “forking paths” (*Labyrinths* 19) and tempo-material “*bifurcation*” occurs (*Exploring Complexity* 72). Nicolis and Prigogine point out, “We can easily understand why this phenomenon should be associated with catastrophic changes and conflicts” (72). Therefore, all open, self-organizing systems, including open techno-cinematic events and technoscientific fictions, are open-systems of bifurcating emergence. As such, they are experimental universes unfolding non-linear, multi-dimensional and durational, complex, chaotic, if not catastrophic, realities that register affectively. For an excellent critique of the work of Prigogine, see, “From Epilogue to Prologue: Chaos and the Arrow of Time” in N. Katherine Hayles *Chaos Bound: Orderly Disorder in Contemporary Literature and Science*. I am struck by the resonance of her chapter title and *Lola*’s second epigraph.

10. The OED defines technoscience as, “Technology and science viewed as mutually interacting disciplines, or as two components of a single discipline; reliance on science for solving technical problems; the application of technological knowledge to solve scientific problems.” Not surprisingly, the first use of this term could be found in 1960 in the *American Political Science Review* describing emergent military policy. Paul Virilio’s definition of technoscience is worth noting, “technoscience—the product of the fatal confusion between the *operational instrument* and *exploratory research*” (*The Information Bomb* 1). My larger project questions the possibility of separating know-how from knowing in the production of the “operation,” “instrument,” and “research” that make up Virilio’s notion.

11. See his essay, “Gilles Deleuze: The Aesthetics of Force” in Paul Patton, ed. *The Deleuze Reader*.

12. Witness, “Shock and awe.”

13. Force function staging the capture of matter and force into affective power (*A Thousand Plateaus* 141).

14. This term is taken from Elizabeth Grosz’ eponymous and invaluable book on corporeal feminist philosophy.

15. “Territorialization” is a term for particular physical phenomena taken from Deleuze and Guattari’s *A Thousand Plateaus*. Along with “deterritorialization” and “reterritorialization,” territorializations are movements in which material vectors are captured and constituted within the “plane of consistency” or a generalized, heterogeneous, material topography. “Territorialization” is a specific stratification and temporality of a particular material vector.

16. Catastrophe opens up relative stability to the emergent, whereas control thresholds or captures the emergent to achieve a modular stability.

17. In “Theses on the Philosophy of History,” Benjamin’s parable of the angel of history facing away from the oncoming future is an image of thought pulled from the past rather than thought pulled to the future. Thanks to Peter Hitchcock in *Oscillate Wildly* and David Eng and David Kazanjian in *Loss: the Politics of Mourning* for the memento.

18. In *Matter and Memory*, Bergson writes of this centering, “My body, an object destined to move other objects, is, then, a center of action; it cannot give birth to a representation” (20).

19. The “compassable” futures in Bergson and Deleuze are futures that probabilistically could happen but do not once a specific future actualizes. Their attractions remain with the present and coming futures as the virtual.

20. Deleuze notes this quality as, “Voluntary memory proceed[ing] by snapshots (*instantanés*)” (*Proust and Signs* 57).

21. Again, loss and losing here are not lack but rather a process or even a flood of accumulation opening onto something else. The determination of the necessary or pertinent and the capture of remnant value in the present generates a protected eddy in the current, the “remains” or the actual beside the virtual.

22. An odd disjunction does occur in Bergson wherein matter and images are described dynamically except in the context of the centering matter/image of the mind. As quoted above, “The objects which surround my body reflect its possible action upon them” (21), suggests that the matter/images described as “objects” here do not have the same circuitous power of centering and extraction that the matter/image of the human does. In part this may be due to Bergson’s lack of attention to futurity.

23. A term from Deleuze, imported from John Duns Scotus, haecceity indicates the “thisness” rather than “is-ness” of a material conglomeration, designating a dynamic process of what becomes an entity versus the demarcation of being.

24. Deleuze and Guattari use this term to designate undifferentiated matter and forces.

25. The “half-life” of uranium is 240,000 years. See Manuel DeLanda, “Non-organic Life” in *Incorporations*.

26. Darren Aronofsky, quoted on the DVD’s “Anatomy of a Scene” describes these montages as, “sharp sounds with sharp images and [putting] them one after the other and basically form[ing] almost a musical piece.” This construction of montage is provocatively sensory, rhythmic and affective rather than ideological along the vein of the Eisenstein’s montages of contrasted content and meaning, a more analogic, allegorical, socio-political practice of montage.

27. To borrow Paul Virilio’s title.

28. Benjamin’s beautiful essay offers, “The destructiveness of war furnishes proof that society has not been mature enough to incorporate technology as its organ, that technology has not been sufficiently developed to cope with the elemental forces of society” (*Illuminations* 242). Two interesting analogues, human maturity next to mechanico-technological development, and cyborgian incorporation of the machine offset by the “elemental forces” of the social, articulate the very transversal of tempo-materiality and control that is the technoscientific.

29. See the copy machine precariously and unsuccessfully re-inscribe the authentic while dismantling Platonic idealism in Baudrillard’s fun and furious *Simulacra & Simulation*.

30. Johnston introduces this idea in “Machinic Vision.”

31. *Storming the Reality Studio: A Casebook of Cyberpunk and Postmodern Fiction*, a collection edited by Larry McCaffery, makes similar connections between Cyberpunk’s and world-making capacities. In my larger project, *Technoscience Fictions*, I pick up where this invaluable collection leaves off, Afro-Futurisms and Post-Cyberpunk.

32. And the obverse, at times political and corporate forces make human temporalities and matters “invisible.”

33. “Neither things nor minds exist, there are only bodies: astral bodies, vegetal bodies” (*Proust and Signs* 92).