Neoliberal Forms: CGI, Algorithm, and Hegemony in Korea’s IMF Cinema

For anthropologists Edward LiPuma and Benjamin Lee, a compensatory virtue of the 2008 global credit crisis was the extent to which it made visible the otherwise unseen flows of contemporary finance, specifically the rapid emergence of derivatives trading. Trading in derivatives, once a much smaller-scale mechanism for hedging in a production-based economy, was by the early 2000s a primary mode of accumulation in a global environment thoroughly committed to circulatory capital. In 2004 LiPuma and Lee had expressed frustration: “How does one know about, or demonstrate against, an unlisted, virtual, offshore corporation that operates in an unregulated electronic space using a secret proprietary trading strategy to buy and sell arcane financial instruments?”1 But by 2012, the fog apparently had lifted, the crisis having “laid bare the underlying and underappreciated foundations of the financial field.”2 An important part of curing the ills of contemporary finance, it seems, perhaps more fundamental than its enormous scale and power, is seeing them at all.3 At stake is the invisibility of digital apparatuses that constitute networked transactional spaces, calculate financial instruments using complex differential equations, and even enumerate capital itself, which are so central to this modality of circulation that it becomes difficult to separate medium from message; indeed, LiPuma and Lee’s diagnosis of contemporary financialization might be read alternatively as a warning about the power of today’s technologies, a power that inheres not only in vast capacities for rapid calculation but also in their ability to remain invisible. “Mathematical technology,” they suggest, “seems so powerful that it absorbs the reality to which it refers.”4
For LiPuma and Lee, it is not art that yields visibility; their characterization of mathematics nevertheless resonates with the work of visual theorists and practitioners more interested in the broader role of digital technologies in culture. Lev Manovich, for example, points out that computers, as part of their primary function, disguise their mechanical operation in order to promote efficiency and maximize power, and Wendy Hui Kyong Chun argues that software is often designed to render “the visible (such as the machine) invisible.” In visual art, the digital apparatus has been variously defamiliarized: in the Wachowskis’ The Matrix (1999), falling numeric/symbolic fields signify the operations of both the computers that drive the matrix within the film’s diegesis and those that were used to make the film itself (fig. 1). And in similar terms, Joshua Portway and Lise Autogena’s remarkable art installation Black Shoals Stock Market Planetarium (2004) projects a computer display on the dome-shaped ceiling of a darkened room that tracks in real time actual stock trades from around the world, revealing ecologies of what the artists refer to as forms of “artificial life,” which are figured by glowing blips of light whose brightness accords with trading intensity (fig. 2). Even these cases, however, move from machine to metaphor: they are supplementary representations that only gesture toward hidden machinic operations, supplanting the actual code behind computer animations and global digital networks without actually showing those operations at work.

In these pieces, the mathematical apparatus of digital art is never offered up or exposed in the way that, for example, a stroboscopic flicker calls attention to the mechanics of projection or a freeze frame indexes film’s material relation to photography in traditional cinema. In a certain (highly debated) strand of cinematic apparatus theory of previous eras, to see apparatus was to see ideology; vision was critique. As Jean-Louis Baudry famously suggests in a 1970 article: “Concealment of the technical base will also bring about a specific ideological effect. Its inscription, its manifestation as such, on the other hand, would produce a knowledge effect, as actualization of the work process, as denunciation of ideology.” In contrast to traditional cinematic forms, views of the machinery of digital forms are either unintelligible before transcoding or else gestured toward in more notional forms, which present mathematical abstractions in more familiar or concrete terms. This remediation is a function of the digital image itself, which, as D. N. Rodowick has pointed out, is “no image at all, but information.”

One consequence of such an environment is the emergence of what LiPuma and Lee call the abstract symbolic violence of geopolitical speculative capital, which is “not accomplished physically by means of military force or colonialism” but rather appears in the provisions of World Bank loans and in IMF (International Monetary Fund) adjustment policies. As with the
invisible digital networks that govern this system, the economic power of speculative capital “damages and endangers the welfare and political freedoms of those in its path, and does so without ever revealing itself.”

Although they emphasize transnational corporations, they invoke here another late capitalist invisible power, namely, US hegemonic empire and, more specifically, its particular form from the early 1970s to the early 2000s. Then, according to David Harvey, the United States—after having emerged in the postwar period as a kind of “Empire Lite,” which used superior military power to protect “client regimes” that supported US economic interests—employed neoliberal measures to hold on to its power. This regime occurred in the context of what Giovanni Arrighi terms a signal crisis, the moment when hegemonic economies begin their decline and turn toward finance capital, which Fredric Jameson calls “free-floating” forms of value that, divested from

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**Figure 1.** Digital data visualized in *The Matrix*, directed by Andy Wachowski and Lana Wachowski (Burbank, CA, 1999), DVD.

**Figure 2.** A moment of intense trading in the *Black Shoals Stock Market Planetarium*, installation by Joshua Portway and Lise Autogena, 2004. Reprinted with permission of the artists.
the very economic theaters that initially produced national strength, reemerge as “spectres of value . . . vying against each other in a vast world-wide disembodied phantasmagoria.”11 In this context, the United States preferred, as Bruce Cumings puts it, “the virtues of a multilateral economism to the vices of direct coercion and intervention,” opting for what he elsewhere describes as “a light hold on the jugular.”12

Harvey’s account in this broad context reminds us that symbolic abstract violence requires the participation of less inchoate agents, what Chalmers Johnson describes as the “empire of bases” of US global militarism, which needs only to display its power en potentia.13 Thus, the violence of speculative digital capital is not just the byproduct of a new mode of systemic accumulation but also a de facto form of weaponry as hegemony shifts into more subtle registers. But given that the systemic operations here—US hegemony and global financialization—are also self-eliding, the problem of making the invisible visible returns in expanded scope. More to the point, how can forms of aesthetic representation work to make the conjuncture of finance capital and digital technology visible?

From Grendel to Frankenstein’s monster to Godzilla, one strategy that literature and cinema have often returned to is the monster that figures an everyday or ordinary social problem in terms that are distinctly out of the ordinary. A more refined figure for the present context is the CGI (computer-generated imagery) monster of contemporary action cinema, which not only represents the anxieties surrounding today’s massive capital flows and seismic geopolitical shifts but also speaks to questions of digital materiality, not least because it is itself a digital product. More specifically, I turn to three films released in the long wake of Korea’s IMF crisis—Bong Joon-ho’s *The Host* (*Koemul*, 2006), Shim Hyung-rae’s *D-War* (2007), and Kim Jeong-joong’s *HERs* (2007). The first two are big-budget CGI monster movies that foreground their own digital apparatus in relation to the history of US hegemony in the Republic of Korea (ROK) and its latest financial iteration in the IMF crisis, while the third seems to intuit uncannily the CGI logic and truth of algorithmic apparatus in relation to the specific history of these systemic problems. All three films offer allegories of American-Korean relations at this late juncture—relations of late capitalism, of late empire, and of late (and now strained) partnership in a massive cycle of accumulation—through the optic of digital production. In so doing, they are expressions of what I call Korea’s IMF cinema, which emerges in the context of the most significant financial crisis in Korean history (1997–98) and extends roughly through the start of the global financial crisis in 2008.14 The IMF crisis in the Republic of Korea is an important case study for thinking about this moment of global economic hegemony because it lays bare the asymmetric power relations that had undergirded the US-ROK partnership since its inception.
The subject of a good deal of public anger, IMF restructuring accelerated already nascent neoliberal reforms in Korea, encouraged a turn to financialization, ended the protectionist developmental state, and established conditions that were extremely favorable for American investment capital at the expense of Korean middle- and lower-class workers.\textsuperscript{15}

Not least because it is an art form rendered as much in the boardroom as in the studio, film in this period of crisis becomes self-conscious about its relationship to the mechanisms of global corporate finance and worries larger political and economic questions.\textsuperscript{16} In pointed contrast to finance’s fantasies of immaterial formlessness, which would correspond to the evaporation of capital’s impediments within deregulated markets, these films are populated by what I term neoliberal forms that epitomize the effort in this period of popular film to reflect on its innate proximity to finance, specifically on the proximity between its own material apparatus and the economic apparatus that the IMF crisis inserted into the center of Korean public discourse. These neoliberal forms are allegorical in the sense that they foreground their rhetorical orientation and frustrated relationship to their supposed referents. Paul de Man famously called attention to this aspect of allegory: in his account, allegory rejects the nostalgia for reference in symbolism and instead repeatedly gestures toward, while simultaneously eliding, “an unreachable anteriority.”\textsuperscript{17} As opposed to the symbol, the allegory always calls attention to itself as a linguistic operation.

At a time when computing technology claims the capacity to solve problems of indeterminacy, algorithmic recursion in these films reveals itself as a further flattened, instrumentalized version of allegorical repetition, and visualizing these processes offers insight into the emerging conflict between human practices and machinic apparatuses that defines our moment. Insofar as deconstruction has taught us to valorize the critical capacities that repetition entails, allegory in these films calls attention to their own tautological repetitions.\textsuperscript{18} Compelled by the discursive fallout of economic crisis, these films attempt to make visible not only the apparatus that drives cinematic representation today but also the radical complicities and genealogies of digital representation that cinema shares with contemporary military and financial technologies. Thus, part of the art of seeing the invisible digital is to recognize the surprising imbrications of artistic media of the present with current technologies of control and power, all of which mobilize digital logics to mitigate and master worlds full of contingency, complexity, and risk. Allegorical CGI monsters in these films thus function as a point of contact and collusion between the inhuman, machinic apparatus that pervades today’s control technologies and human life. As I will argue, these CGI monsters help to make visible the invisible forces that work behind the scenes of everyday life in an age of financialization.
War and (CGI) Cinema

Conceived well before the emergence of digital cinema but just after Ronald Reagan’s proposed Strategic Defense Initiative (aka *Star Wars*), Paul Virilio’s *War and Cinema* (1984) posits a deep interconnection between its titular terms. More than simply justifying war as propaganda, Virilio argues more radically that war and cinema are materially connected in an age defined by the “growing derealization of military engagement.” In a period of advanced radar systems, satellite imagery, and smart missiles, vision itself becomes the essence of weaponry. Perfecting the optical turn in warfare, which escalates from binoculars and flare guns to simulators and guidance systems to remotely operated drones, the *sight machines* of present-day military technology adhere to the motto that “winning is keeping the target in constant sight.” As the military theater of operations becomes increasingly complex, it is the cinematic mode alone that is capable of seeing the totality of war.

One consequence of this transformation is that military and cinematic technologies become radically intertwined, especially as the battlefield becomes increasingly electronic. Virilio offers a host of examples that carry on the legacy of nitrocellulose, which was used in both film stock and explosives: the Dykstraflex camera, created for the film *Star Wars*, was based on a pilot training system; the “Red Flag” military practice range used cinematic special effects in place of actual exposure to the Soviet defense system; and remote-piloted Scout aircraft employed television cameras to perform surveillance and targeting operations. In a later book, *Desert Screen* (1991), published after the first US invasion of Iraq, Virilio updates his vision, insisting that the new “weapons of communication” allow for a new “purely technical imperialism” in which “the conquest of the market is henceforth confused with that of a military supremacy.”

Computer-generated monsters are also significant in this context for their multivalent intimacy with the military. Having many current military applications, CGI was originally derived from military weapons technology—first adapted from analog, anti-aircraft computers—and developed through military-funded research and defense contracts. As Tom Sito puts it in his history of computer animation, “Despite a hagiography of counter culture and social freedom, CGI is as much a result of government funding as scratch-resistant lenses or Mylar,” and “without the incentives and open-ended funding from the feds, the kind of computer graphics we now take for granted would not have been possible.” Fueled by massive government funding of private-sector research and development during and after the Cold War, the rise of CGI and related technologies is part of a still-emerging trend in which, according to Timothy Lenoir and Henry Lowood, “the military-industrial
complex has become the military-entertainment complex” and, as such, “the training ground for what we might call post-human warfare.”

The uncanny tribute in *D-War* to CGI’s genesis in war making becomes obvious in this context, particularly in the depiction of sublimely large military legions, a trope that has become a commonplace in digital filmmaking (fig. 3). In the film’s first large-scale CGI battle scene, the armies of darkness mercilessly rout a small village in an exercise of absurd proportions: the residents of the village defend themselves with martial arts against the might of preternatural forces equipped with some kind of advanced missile technology, ironically freighted to lumbering prehistoric creatures. Because a tiny fraction of such an army would have been sufficient, the scene seems motivated not by any drive toward narrative or realism, but rather by the simple aesthetic desire to demonstrate the visual capacities of CGI, which correspond precisely to military capacities. The battle itself is *fait accompli*; the real interest here is instead in watching the machinery run.

**Hosting Hegemony**

*The Host* might be understood as a sensitive treatment of this relation between the Korean cinema and US military might. The film narrates the story of a monster that is the product of American military negligence and the havoc it wreaks on the city of Seoul, from the point of view of a family whose daughter the monster abducts. One way of conceiving Bong’s much-heralded genre bending is to read the machinic operations of CGI monsters in *The Host* as speaking to the impositions of US hegemony. The
The monster of *The Host* indeed offers a complex allegory of the complexities of US hegemony in Korea. Since its formation in 1948, the Republic of Korea has been a US ally in an asymmetric partnership, serving as an anticommunist bulwark for the United States in the global Cold War in exchange for economic and military support. The United States has thus been understood both as a central ally to the ROK and as a threat to Korean sovereignty. Since its inception, US military occupation of Korea has generally not controlled the local population by force, but has instead allowed its client regime to emerge and grow, while grounding any sense of futurity in a Cold War logic in which an anticommunist ideological position would flow seamlessly into an unchallenged commitment to capitalist expansion in terms favorable to US interests, providing at the same time models and opportunities for fostering the ROK’s own subimperial ambitions.27

There are several different and, in a sense, conflicting evocations of America’s presence in the film. The release of “Agent Yellow” to destroy the monster echoes not only the biochemical genesis of the monster but also the infamous use of Agent Orange by US forces in Viet Nam; confusion about the existence of the virus turns out to be the result of American military and medical incompetence. Perhaps most significant, the film as a whole was inspired by the controversial decision in 2000 of US Army mortician Albert McFarland to dump dangerous chemicals into the drains at the Yongsan Army Base in Seoul, and thus into the Han River, against vehement protests by environmentalists.

Of course, the key allegorical figure in the film is the monster itself (fig. 4). *The Host*’s monster is aggressively multiple: it swims, runs, jumps, grabs its prey with tentacle-like appendages, and even swings acrobatically beneath bridges.28 Though it feeds on human flesh, it is oddly gentle, even parental, with the two children it saves for a later meal. Furthermore, and amazingly for a film about a large genetic mutation terrorizing the residents of Seoul, the monster is not even the central preoccupation of the governmental agencies and military officials that dictate crisis response; the film’s real danger is rather a virus for which the monster is a presumed host, a shift reflected in the change from the film’s original Korean title, *Koemul* (meaning monster), to its English version.29 The monster thus seems designed to evoke something like the same complex mix of positive and negative feelings that the United States has generated over its long alliance with the Republic of Korea.

To further complicate the already complex semiotics of the allegory, we learn from the bonus features on the DVD version of the film that the monster was in fact the product of a US special effects company, a now defunct San Francisco-based firm called The Orphanage.30 In part an American product, both in the film’s diegesis and its production history, the monster in *The Host* calls attention to a larger problem of Korean sovereignty vis-à-vis US authority...
within its own national boundaries. The American figures interspersed throughout the film—from the serviceman who first fights the monster alongside Gang-du to the doctor who drills into Gang-du’s brain—assert their authority over their Korean counterparts, just as unnamed higher US authorities working in conjunction with the World Health Organization and the Centers for Disease Control in Atlanta intervene and decide to use Agent Yellow on the monster toward the end of the film, a decision, when announced in a television news broadcast, that is accompanied by stock footage of on-duty American soldiers, primarily in the Persian Gulf.

Perhaps in this context it makes sense that the monster both allegorizes and occasions US military force: US military mismanagement is the monster’s literal origin, but recognition of this irony leads not to correction but instead to an even more irresponsible American decision. Under the cover of cooperation, the brutish disregard of the US military for Korean interests causes the conditions in which further US intervention becomes necessary, thus echoing the clichéd tautology often seen in monster films in which one form of military technology (tanks, planes, missiles) faces off against another (CGI images) in a strangely mirrored conflict, one that uncannily resonates with the ironic situations in Afghanistan and other places where the United States had previously armed insurgents against other enemies and later had to face its own weaponry.

But if US hegemony appears as a general subject, the deeper focus of The Host is arguably the Korean experience of the IMF crisis. In the third preamble sequence of the film, a businessman, just after catching a glimpse of

Figure 4. The monster in The Host, directed by Bong Joon-ho (2006; Los Angeles, 2007), DVD.
the monster in the river below, jumps to his death off a bridge, evoking the phenomenon of IMF suicides, which became pervasive after the crisis. As Hsuan Hsu points out, given that the monster feeds on human flesh, and “since Bong notes that such suicides in the Han River happen ‘almost everyday,’ the monster’s growth may be directly correlated to the conditions affecting the Korean economy and those whose livelihood depends on it.”

The scene represents a double desecration then: the businessman is first driven to suicidal despair by financial hardship, and the subsequent defilement of his corpse literalizes the metaphoric language that describes the IMF’s actions as *vulture capitalism*. As Hsu points out: the film “turns out to be an allegory not just of U.S. military occupation but also of neoliberal market reforms.”

Indeed, the military’s strategy in the film, to double down on a certain kind of force when that force has been shown not to work, offers an ironic repetition of an economic strategy that had compounded the Korean debt crisis. After early attempts to scapegoat “crony capitalism” for the 1997–98 Asian financial crises, particularly in Korea, economists and historians have argued that it was rather a liquidity crisis caused in large part by neoliberal policy, made possible by what Laura Hyun Yi Kang calls “an unprecedented availability of credit and transactional mobility of speculative capital.” So if the cause of the liquidity crisis had much to do with the financial liberalization of the early 1990s that was, in Harvey’s words, “Clinton’s price for supporting Korea’s incorporation into the OECD,” then the IMF restructuring, in pushing greater degrees of financialization, doubles down rather than reversing course. If the solution to the US military intervention in *The Host* is more US military intervention, then the solution to neoliberal reforms in the IMF crisis is more neoliberal reforms.

One of the most brilliant suggestions of *The Host*, however, is the radical overlap of the two allegories, reflecting an awareness of the history of US hegemony in which neoliberal market economics complements rather than opposes neoconservative military aggression. Though in recent times considered mutually exclusive options—as different as Bill Clinton’s foreign policy was from that of George W. Bush—they have become increasingly viewed as related modalities of US hegemony. Nathan Hensley, for example, describes the “brute physicality” of the latter as emerging “with almost mechanical inevitability in conditions of material downturn.” In other words, where we might want to see the film simply as an allegory for the brute fact of US military might, that might appears itself as figure for a different but no less determinate form of US power: the economic power it exerts via its various financial instruments. Instead, in that case, of seeing *The Host* simply as an allegory, we might say that it is—like the monster itself—something more complicated: an allegory of an allegory.
The Host thus exposes the complexities of the US-ROK relationship in the long wake of the IMF crisis—a period in which neoconservative military escalation in the Middle East designed to secure US economic advantages becomes visible in relation to the imposition of US economic hegemony that had been proceeding for decades. It is not surprising then that one quintessential allegory for neoliberal financialization, understood no longer in opposition to neoconservative hawkishness, becomes the US military itself, for which the CGI monsters are ritual repetitions. So while neoliberal reform was more relevant to the shape of US hegemony in the Korean context, their stakes after the IMF crisis become clearer in relation to the neoconservative spectacle in the Middle East, to which the Republic of Korea contributed military support. The Host’s monster, an allegory of an allegory that brings together a range of political and economic effects, emerges as a potent figure for the historical complexities of this moment.

From Allegory to Algorithm

There is, though, more to the work that the CGI monster does in The Host. More than simply an allegory (or even an allegory of an allegory), The Host works in material ways to make the invisible operations of US hegemony in the Republic of Korea visible. A realization of practical mathematics, CGI uses software that performs geometric calculations to synthesize digitally captured and manipulated images with images filmed in live shots. As Rodowick explains, the goal is “to constitute a space that is mathematically definable and manipulable. It is as if the algorithmic construction of space seeks, in its definition of realism, to correspond to a world defined only by Cartesian coordinates and their algebraic manipulation of geometric shapes.”37 An emphatically geometric form and the image-product of algorithms that effect three-dimensional representation (fig. 5), the monster calls attention to the spatial logics it demands as the anchor of any scene in which it appears (belatedly of course in postproduction), as well the broader ideological geometries that constitute US hegemony. Both more and less than an allegory, The Host’s CGI monster is not only a figure for the operations of US hegemony and global finance; insofar as CGI is code, it not only represents but is the logic that underwrites financialization and a late hegemony that financialization in turn underwrites.

Like much of the software that stands behind contemporary finance, the development of advanced CGI depended on algorithmic calculations that only became possible with powerful computers. Many of these algorithms are recursive, breaking down a large task or problem into smaller incremental
versions and requiring massive numbers of mechanically processed progressive repetitions. Significantly, some of the reality effects of the highly refined CGI of the last two decades and the recursive algorithms that comprise them compute random variables and probability, falling under the rubric of stochastic systems, which combine deterministic and random elements. Such mathematics has had a profound effect on the contemporary world. In the late 1940s, Stanislaw Ulam, working as part of a team that developed the scientific basis for nuclear weaponry at Los Alamos, developed his Monte Carlo Method, which relied on repeated random sampling to obtain numerical data and was so named to invoke casino gambling. Wondering about how to calculate win-probability in solitaire, Ulam reasoned that it would be more efficient to play repeated games with a computer; with enough repetitions and data sorting, the results would cease to seem random. Stochastic volatility models have been used in derivative pricing to modify and account for deficiencies in the classic Black-Scholes formula and the Gaussian copula formula developed by David X. Li in the early 2000s (dubbed “the Formula that killed Wall Street” for its role in spurring the derivative boom and the 2008 financial crisis), both of which allowed the modeling of hugely complex risk. Algorithms here implicitly claim to overcome indeterminacy; recursion mitigates chance in stochastic systems, thus giving way to more predictable outcomes. The transformation of simple geometric forms into those that appear real in CGI (textured, idiosyncratic, and so on) also hangs on calculations of random variables based on chance, processed so that they behave as if they were not.

As moving three-dimensional images have become increasingly detailed and complex, stochastic modeling and sampling have become important in computer graphics, especially as the size of these images as files have posed

**Figure 5.** The monster of *The Host* in lower-resolution geometry.
a challenge for computing capacity.\textsuperscript{39} But as this mathematics and the algorithmic procedures that execute it become more prominent, even in the aspects of filmmaking like CGI that most explicitly involve the manipulation of digital forms, the artist does not engage so much with the mechanical apparatus of the machine, but rather with an abstracted version in the form of interfaces, which distance the user from the mathematics. Digital filmmakers work increasingly at the level of image with the help of software and less at that of code. Fundamentally a technology of mediation then, the computer interface, and in particular software, according to Alexander Gal-


doway, “is not merely a vehicle for ideology”; it is an allegory for it. That is, “The complexities and contradictions of ideology . . . are modeled and simulated out of the formal structure of software itself.”\textsuperscript{40} Software is thus allegorical in the de Manian sense, self-reflexively referring to the power relations that inhere in acts of representation themselves.

That ideology is so thoroughly embedded in the machine constitutes the central insight of Galloway’s book, whose title names the critique, \textit{The Interface Effect}. “A medium that does not mediate,” the interface is the control-society technology par excellence because it sublimes poststructuralism’s anxieties about presence and truth into the open-source logic of media systems: “What was once an intellectual intervention is now part of the mechanical infrastructure.”\textsuperscript{41} On one hand, the fate of allegory holds form: once a rhetorical mode that, \textit{pace} de Man, confronted the “painful knowledge” of “distance in relation to it own origin” and renounced the implicit nostalgic desire for identification in the symbol, allegory now names the simulation of rhetorical form that incorporates the deconstructive critical capacity into machinic operations.\textsuperscript{42} But this absorption, on the other hand, is also ameliorative: because the interface for Galloway is not primarily a thing—a screen, keyboard, mouse—but rather a “general technique of mediation evident at all levels,” the interface as allegorical device offers the opportunity to “gain some perspective on culture in the age of informa-


tion.”\textsuperscript{43} So although his control-society focus compels him to foreground how technologies repurpose and thus enfeeble deconstructive critique, he seems to apply the very de Manian critical capacities of allegory in order to read the ideological valances of interfaces by emphasizing their procedural characteristics. Given that the procedures of these interfaces involve algorithms, this machinic form of instrumental repetition seems to preserve the rhetorical function that de Man ascribed to allegory.\textsuperscript{44}

Algorithmic logics in \textit{The Host} emerge within allegorical structures, as if to reformulate the fundamental mathematical geometries that digital film production both mobilizes and elides, such that the very act of ascertaining form’s intimate relation to ideology constitutes its most crucial insight. We see this logic, for example, in the behavior of Gang-du’s family as they hunt
for and eventually confront the allegorical monster; all of their efforts seem uncannily to reproduce aspects of control-society infrastructure. Comically financed by gangsters whose usurious terms are reminiscent of the IMF’s bailout conditions, the family at first seeks the safe return of Gang-du’s abducted daughter, Hyun-seo (Ko A-sŏng), by randomly and repeatedly tracking through the sewers around the Han River, calling out the young girl’s name. Represented in a sequence condensed into a recursive montage, their method frustrates Nam-il (Pak Hae-il), Gang-du’s brother: when performed by human actors, algorithmic repetition amounts to tedium. Eventually, Nam-il thinks to contact his friend at, significantly, a telecommunications company. Eventually, Nam-il is able to identify the cell tower that transmitted Hyun-seo’s last call, crucially, by using the company’s computer.

Amidst the concrete pillars that support the Wonhyo Bridge, in a scene seemingly both defined by infrastructure and belying the film’s preoccupation with infrastructural aesthetics (fig. 6), the finale also suggests an algorithmic logic in which the monstrous problem must be addressed by a sequence of smaller efforts. There is a strangely episodic quality to the fight, consisting of a series of individual struggles in which the characters’ personal histories allegorically inform the fighting. These individual efforts then form a network of cooperation that succeeds in progressively weakening the monster before it finally dies. Harkening back to his university days spent as a student protestor, Nam-il launches a series of Molotov cocktails. Already reeling from the effects of the Agent Yellow, the monster frantically...
retreats, but when the homeless man who has joined Nam-il pours gasoline down the throat the monster from the underside of the bridge above, Nam-il fails to capitalize on this attack and drops his final projectile. Stepping into the fray at this precise moment, Nam-ju (Bae Doona) ignites one of her arrows and hits the monster on her first shot, redressing an earlier moment in the film when she had failed in a televised archery competition. These otherwise allegorical struggles become sequenced in a kind of networked aesthetics in which a succession of coordinated efforts gradually produces a desired outcome.

Gang-du’s role in finishing off the monster culminates in a moment that most indexes the digital infrastructure of CGI. Rather than solving the problem of Korean sovereignty thematized in the film (the Agent Yellow is actually very helpful), the death of the monster instead points to the greater truth of digitality over hegemony. Set ablaze by Nam-ju’s arrow, the monster makes a beeline for the river, but Gang-du intervenes, driving a metal pole deep into the monster’s throat. As it slowly expires, we see some of its blood trickling down the pole toward the digits on Gang-du’s left hand, which is halfway up the pole. He releases his left hand, and the camera pans to his right, which has been palm up, bracing the end of the pole. As he releases this right hand, we see that the end of the pole has left a circular imprint on his palm (fig. 7). As the physical imprint left behind by an otherwise immaterial digital monster, the circle on Gang-du’s palm and the straight pole he has appropriated as a weapon (itself a kind of interface) together become material traces of the binary digits—the zeroes and ones—that fundamentally constitute the monster’s computer-generated existence.\textsuperscript{45} The film echoes this binary thematics throughout, for example, in

\textbf{Figure 7.} Gang-du’s hand in \textit{The Host}.  

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the archery competition with its arrows and targets; in the bridge suicide that contrasts the circular ripples caused by the monster in the river with the linear architectural forms in the distant cityscape; and in the mourning scene in which we see from above the bodies of the family member lying prostrate in grief on the gymnasium floor, framed by what seems to be a basketball free-throw circle. It is not until the finale, however, that these visual thematics emerge in direct relation to the CGI object. As figures, the columns, arrows, and poles in relation to the final zero on Gang-du’s hands function like Barthesian puncta, which lay bare CGI’s artifice: the digital monster is revealed as the monstrous digital, reminding us that more fundamental than the blood that courses through its veins and flows down Gang-du’s pole to the monster’s informatic (and not organic) existence are the zeros and ones that constitute its digital materiality.

The Gina Algorithm

Although it is far from a CGI monster film, HERs seems to intuit the critical capacity of recursion as a lynchpin that connects military, financial, and aesthetic forms in its retooling of allegory as algorithm. A series of loosely related shorts about the difficult lives of three Korean American women, all of whom are named Gina, the film narrates their preoccupations, hopes, and frustrations as they seek solace and redress within what seem hopeless environments. A kind of CGI determinacy subtly lingers in the film in the way it arranges its central figures. Resonant with Galloway’s polytych, which he describes as “the distributed network as an aesthetic construction,” the film’s triptych structure presents successive vignettes about the different Ginas, each played by a different actor. They are not likely the same person, yet we are meant to understand them as part of a continuum. Though loosely organized to follow the trajectory of a sex worker’s decline, the film stages a series of repetitions that resist cohering into an overall narrative. A kind of typology, character here is, to borrow Aaron Kunin’s formulation, “a formal device that collects every example of a kind of person.” But rather than a single character standing in for a typology, the film offers instead a kind of recursive taxonomy that lends itself to systemic reading; discrete subjectivities only become legible within larger socio-economic frames. Bundled together, these otherwise separate narratives begin to display predictable patterns, a kind of Gina algorithm.

This algorithmic structure also resonates with the tautological atavisms of US hegemony in the Republic of Korea. Although there is no action-packed military conflict in the film, the specter of Korea’s military horizons reemerge with respect to the film’s interest in prostitution, a watershed issue.
in modern Korean history that is inextricable from US military presence. The film’s displaced preoccupation with this issue returns most obviously in the final section of the film when, in a military vehicle, Tim (Chris Devlin), the on-duty US Army corporal, picks up the hitchhiking Alaska Gina (Susie Park), who is on her way to see the Aurora Borealis. Later in the film Tim responds to Alaska Gina’s advertisement card. Though presented as a pair of chance encounters between strangers, their meetings invoke, on American soil, the history of military prostitution in Korea that has occurred under US military supervision and in partnership with the Korean government since the end of a similar system under Japanese colonial rule. The film also indexes the concomitant history of Korean complicity, of locals who benefited from the shadow economy, represented in the film by Lucas (Will Yun Lee), the LA policeman who earns money on the side by doing favors for a pimp, and K (Karl Yune), the guide who brings a Japanese sex tourist to a Korean-owned brothel in Las Vegas. In contextualizing the Gina stories in relation to US military prostitution, the film links these contemporary narratives of global vagrancy to the subgenre of Korean camptown narratives and their anti-American, antihegemonic associations.

Implicitly linking patterns of recursion to hegemonic tautologies, each section of the triptych proceeds similarly without being the same, relating bleak stories about women in precarious situations, struggling with rape, loveless relationships, clinical depression, alcoholism, and death. Under the generic rubric of what Lauren Berlant describes as a cinema of precarity, these stories explore not just individual examples of desperation and dependency but also what she calls, in systemic terms that resonate with the earlier discussion of tautology, a “neoliberal feedback loop” that functions to distribute and shape experiences of insecurity with great efficiency in contemporary life. Indeed, depicted as the objects of violence, abuse, exploitation, and brutality, the Ginas are very much at-risk figures; their daily lives are filled with victimization not only at the hands of men ambivalent to their well-being, but also of global economic forces that are invisible except in aggregate.

Spatializing this systemic precarity, the film calls attention to particularly inhospitable landscapes that seem bounded by rigid horizons, which function not as sites of futurity and progress, but instead as locations for highly bounded acts of wandering, like the tunnel that LA Gina (Kim Hye-na) scampers through at the beginning of the film. At the end of each section, the Ginas walk off into a long landscape shot until each meets the horizon, into which the respective protagonists seem nearly, but not entirely, to disappear (fig. 8). Though all located in the American West, these are not the landscapes of the classic Western that Jane Tompkins describes as opportunities to control or dominate one’s surroundings. Instead, viewed through a stationary camera, each Gina moves from foreground to background,
almost but not quite disappearing, moving in more or less straight lines to the vanishing point, guided by a road or railroad tracks, as if to emphasize the geometries they inhabit and the gridlines that define their spatial relations. Although the Ginias are not CGI figures, their movements in these scenes reveal in spatial terms their bounded geometric position as defined by the economy in which they circulate.

The lightly adumbrated story of a fourth Gina in the film, which frames the other three more developed narratives, subtly locates this economy in the wake of the IMF crisis. The opening scene of the film depicts a pre-immigration Korea Gina being spoken to by an unidentified man about her impending travel. Sensing her reticence, the man tells her, “It’s not like once you leave you can’t come back. You’re going for good reasons. It might be hard for two, three years, but afterward you’ll be better off.” Although their conversation is elliptical, one infers that she is going abroad to become a sex worker, a nightmare of flexible labor and one that became more
prominent in the wake of the Korean credit-card crisis, an epiphenomenon of the IMF crisis caused in large part by government incentives that encouraged consumer spending. Though these measures helped produce an economic recovery, it came at the cost of a dramatic increase in personal debt and credit-card delinquency, as well as a sharp decline in household savings. Faced with debt and limited prospects in a nation that regarded women’s employment as a low priority in the wake of the financial crisis, women like Gina had few employment alternatives, and after the crackdown on domestic prostitution in 2004 in Korea, many were openly recruited for sex work abroad, as a potentially lucrative recession-era job opportunity.\textsuperscript{52} In a 2006 special report in the \textit{San Francisco Chronicle} that told the story of a trafficked Korean sex worker who was desperate to find a way out of massive debt, Meredith May reported that the Republic of Korea is one of the world’s leading importers and exporters of the sex trade, despite the general wealth of the nation.

The recursive logics of \textit{HERs} thus uncannily mimics the patterns of contemporary financialization and recasts the drama of one shadow economy, that of camptown prostitution, within the context of the new economies of risk, a shift that echoes the way in which IMF restructuring gave rise to what Jin-Ho Jang calls an “Anglo-American economic system” focused on investment culture.\textsuperscript{53} As byproducts of financialization and US economic intervention in the post-IMF context—in occupying distinctively North American landscapes in a series that ends with an encounter between a Gina and an American GI (from whom one is tempted to say her name originates)—the Ginas invoke what is sometimes angrily regarded as a history of US culpability, resituating this history within the context of IMF vulture capitalism. The camptown economy is reimagined as a risk economy populated by free agents attending to their precarity.

The Gina algorithm, however, bridges the military camptown economy to those of neoliberal finance not only as two historically related modalities but also as recursive figures in a neoliberal feedback loop. They are not just the products of a financialized economy; they seem to help perpetuate its violence. Interestingly in this context of at-risk figures, the film seems ironically to valorize chance and risk in other forms. The homeless LA Gina wanders into a Korean church where Lucas happens to be the usher; she later fights her own fear and returns with him to his tiny home in a storage unit. Although Las Vegas Gina (Elizabeth Weisbaum) can’t bring herself to introduce herself to K at any of the meetings he arranges, they finally meet when K happens to call her service, not realizing that the woman who arrives is the same one whom he has been courting online. As previously mentioned, Alaska Gina coincidentally meets US Army Corporal Tim hitchhiking, and later as a client. In all three cases, prompted by a chance encounter,
each Gina takes a risk (or at least contemplates one) within a romantic context. In addition, the film thematizes risk in the form of gambling in literal and figurative forms: LA Gina ventures into uncertainty in fleeing her pimp; the entire milieu of Las Vegas Gina is defined by the casinos on the strip, which is her stomping ground; and Alaska Gina risks her very life in pursuing her spiritual quest.

Given the film’s ambivalence regarding risk, at once the object of fear and the fetishized site of possibility, perhaps it is not too strange then that, in the otherwise dystopian scenarios that HERs comprises, the endings of each section contain hopeful moments—with each Gina musing wistfully about palm trees or ice cream, or else shielding herself within a protective fantasy. Similarly, each section contains a set piece insertion that represents a moment of idealization when a crisply edited vision of happiness interrupts the otherwise bleak mise-en-scène. Los Angeles Gina plays out giddy domesticity in Lucas’s spartan digs; Las Vegas Gina imagines herself in a bath filled with vibrant flowers; and Alaska Gina fantasizes about a chance encounter with a moose on a desolate road. Echoed by the affective reprieve at the end of each section, these fantasies function not only to elide each Gina’s participation in the shadow economy, but more importantly to sustain fictions of freedom that mitigate harsh material conditions. Although they are clearly the victims of these bleak risk economies, they seem nevertheless to enter them not as sites of inevitable despair, but of possibility. Perversely calling attention to the material components of the feedback loop of contemporary finance that transforms the debt of the insecure into securities, HERs thus not only gives form to the ironies and limits of neoliberalism’s bounded freedom; it also demonstrates the many layers of complicity through which its subjects augment their geometries. This is a freedom made possible only by the concealment of the material apparatus and history that animates the economies in which they circulate. The point is to shed light on these concealments.

**And Liberty for All**

One important insight of the Gina algorithm is that precarity scales from individual to aggregate. In these terms, we return to LiPuma and Lee’s *abstract systemic violence* and its implied connection between military and economic forms of aggression as manifested in their description of the derivative as “a real economic weapon.” In the book’s final pages, after accounting for the weapon’s power, they designate the vulnerability of individual states. Even relatively large and stable economies are no match for it, they suggest, because their central banks have little control over the value of...
their own currency in the current regime of global derivatives; the strength of their domestic production economies cannot protect currency valuations; and radical fluctuations of currency have become so much the norm that it is impossible not to participate in this form of finance.\textsuperscript{55}

It is not surprising in this context then that derivatives trading ramped up in Korea during the 1990s. Official derivatives trading began in the ROK in 1996, the year before the crisis, with the opening of the national derivatives market, gradually expanding and diversifying after the IMF crisis as part of the wave of neoliberal financialization of the period. Even companies involved in Korea’s robust production/export economy turned more of their assets and attentions to derivative trading (most notoriously in KIKO, or “knock-in knock-out” options, a currency derivative), at first as a hedge against market fluctuations, but gradually in pursuit of profits that could outweigh those of the company’s traditional operations.\textsuperscript{56} Some economists have even argued that derivatives speculation in the form of derivative-based, credit swap contracts were a significant cause of the 1997–98 crisis itself. J. A. Kregel, for example, suggests that over-the-counter structured derivatives packages in the mid 1990s, which concealed risk and circumvented regulatory measures, composed more than half of the total lending in the Republic of Korea just before the economy collapsed.\textsuperscript{57} Precarity for both the Ginas in \textit{HERs} and nonhegemonic economies like Korea’s is a function of a forced absorption into a larger system that, crucially, is both enabling and oppressive. As the material form of spectral value, a kind of nonintrinsic secondary value, the derivative bespeaks a specific anxiety in late US hegemony from a Korean perspective, the fear not only that one cannot disentangle oneself from the hegemonic structure but also that one is a tautological reification, not merely a vehicle for hegemony, but a derivation.

A far less subtle figure of imbrication is the serpentine monster at the end of \textit{D-War}, the Imoogi that aspires to be a dragon, which wraps itself around the iconic US Bank building in downtown Los Angeles (fig. 9). Remarkably, the police in the film erroneously refer to it as the “Liberty” building, echoing (surely intentionally) George W. Bush’s famous mistake in his 2006 \textit{State of the Union Address} when speaking about a counterterrorism success in thwarting an Al Qaeda plot to destroy the Los Angeles building, which had apparently been a target for the attacks on 9/11/2001 and again in 2002. Ironies abound, not least in the way the mistake connects neoconservative rhetoric in which Islamic terrorists threaten American liberties to the global machinations of the, here bluntly allegorized, US banking industry as part of the IMF-Wall Street-Treasury complex in the name of financial (neo)liberalization. In the present context, Bush’s thesis statement in that speech, that “America remains at risk,” obtains an unintended implication: America remains at the mercy not only of terrorists who take advantage of lax defense measures but
also of bankers who prey on insufficiently regulated financial markets. *D-War* thus stages yet another tautology: we witness not just monster versus humanity, but also monster versus monster (as in the *Godzilla* films), as if the monstrous allegory of US hegemonic financialization in *The Host* had come back to life as an edifice, *sans* artifice, to challenge this literalized version of the Korean economy. Allegory in the basest of forms, it is the US Bank building versus a (would-be) Asian Dragon. Amazingly, the latter as return of the repressed in redressing the ills of vulture capitalism finds strange alignment, in the context of Bush’s speech, with the Islamic militants that seek revenge for American hegemonic aggressions in the Middle East.

But while this scene is unmistakably one of antagonism, the monster’s relation to the US Bank building also registers as an embrace. Hostile antipathy notwithstanding, the monster figures the problem of disarticulation within the structure of derivation as well as a broad anxiety about paired fates and complicity. This is also, then, a picture of the radical imbrication of two countries. In previous geopolitical modes, we might use the word *decolonization* and the discourse *postcolonial*, but because the partnership between the United States and Korea begins with liberation, it becomes difficult to imagine then what it means to liberate oneself from the condition of liberty itself, a point demonstrated by the surprisingly ambiguous anti-American beef protests that exploded in the streets of Seoul during the summer of 2008 in response to the terms of a new free trade agreement.58 Indeed, relative to Japanese colonialism, US hegemony in Korea is a postcolonial discourse.

Imbrication, however, describes not just a hegemonic relation here but also a technological one. At the level of digital apparatus, the Imoogi’s embrace...
of the building also figures the material connection between CGI monster, military technology, and figure of contemporary financialization. The scene thus denies abstract symbolic violence its subtlety. In terms that resonate with Virilio, military and financial forms of aggression become one and the same in this theater of digital representation. In a world in which the economy “is not only driven by software . . . in many cases the economy is software,” Galloway has recently suggested “that one cannot be neutral on the question of math’s ability to discourse about reality, precisely because in the era of computerized capitalism math itself, as algorithm, has become a historical actor.”59 In short, “After software has entered history, math cannot and should not be understood ahistorically.”60 The neoliberal forms of Korea’s IMF cinema, both unwittingly and self-consciously, gesture toward these relations, adding military forms to the mix. (After all, the helicopters in the Liberty building scene are also CGI images). By recursively indexing the machinic structures of algorithm-driven digital production within allegorical figures, these neoliberal forms attempt to materialize an apparatus that seems otherwise ahistorical. Korea’s IMF cinema is indeed an art of seeing the invisible. In implicitly answering Galloway’s exhortations to historicize the technologies of the present, the neoliberal forms in these films articulate a hope, perhaps against hope, to realize a sense of futurity that is not entirely derivative.

Notes

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Throughout this essay, Korean appellations conform to the way in which each person generally represents him- or herself by name. Notable exceptions include well-known persons, whose names are given in their best-known forms. For romanization from the Korean the author has used the McCune-Reishauer system, except in cases where the figure in question is well known to the West in a different spelling.

3. Ibid., 289.


9. Ibid., 28.


14. My periodization intends to be narrower and less state-complicit than *Hallyu* (the Korean Wave) and more focused on material conditions of cultural production than, though not necessarily in conflict with, “New Korean Cinema” or “South Korean Film Renaissance.” One might say that Korea’s IMF cinema is a dominant strain within the larger rubrics formed by these last terms. See Chi-Youn Shin and Julian Stringer, eds., *New Korean Cinema* (New York, 2005); Jinhee Choi, *The South Korean Film Renaissance: Local Hitmakers, Global Provocateurs* (Middletown, CT, 2010), 6–7; and David Martin-Jones, “Decompressing Modernity: South Korean Time Travel Narratives and the IMF Crisis,” *Cinema Journal* 46, no. 4 (2007): 45–67. See also, Kyung Hyun Kim, *Virtual Hallyu: Korean Cinema of the Global Era* (Durham, 2011), xiv: My account also addresses Kim’s unease with the question of whether or not Korean films of this period “constitute a countercinema” against “American cultural hegemony.”

15. For an account of the emergence of neoliberal economics in the ROK, see Jang-Sup Shin and Ha-Joon Chang, *Restructuring Korea Inc.* (New York, 2003), 66–76. Though the policies of financial liberalization began as early as the 1980s under the Chun Doo Hwan regime, these were limited in scope. They were accelerated in the early 1990s. Cf. David Harvey, *A Brief history of Neoliberalism* (New York, 2005), 111: “The Wall Street–Treasury–IMF alliance had, in effect, done to South Korea what the investment bankers had done in the mid-1970s to New York City.” See also Cumings, “The Korean Crisis and the End of ‘Late’ Development,” 52: “A mark of Washington’s unipolar pre-eminence and the potency of its foreign economic policy under Clinton is that even mainstream pundits found the International Monetary Fund to be the mere creature of Treasury Secretary Robert Rubin and Deputy Lawrence H. Summers.”


20. Ibid., 3.

21. Ibid., 92.

22. Ibid., 20, 109–11.


30. See Chung, “*The Host* and D-War,” 51. Chung discusses the other companies involved in the *The Host*’s transnational production. She also points out that special effects constituted 40 percent of the film’s overall budget. Given these circumstances, one might add capital itself as a referent for the allegorical monster, which is, in a sense, made of money.


32. Hsu, “The Dangers of Biosecurity.”

33. Ibid.


1990s as concessions for entrance into the Organization for Economic Co-operation and Development (OECD).


37. Rodowick, The Virtual Life of Film, 104.


41. Ibid., 52, 9.


44. Ibid., 72. Galloway parenthetically refers to and dismisses his own term allegorithm, coined in an earlier article, to describe what the game player has to do in order to win the game, which is interpret its algorithm, or “to discover its parallel allegorithm.” See Alexander R. Galloway, “Playing the Code: Allegories of Control in Civilization,” Radical Philosophy 128 (2004): 35.

45. I thank James Doernberg and Timothy Reynolds for pointing out these elements.

46. Galloway, The Interface Effect, 117.


49. See Lee, Service Economies, 134.


54. LiPuma and Lee, Financial Derivatives, 134.

55. Ibid., 167.

60. Ibid., 360. His emphasis.