1. Alternate Realities: Playing within the Transmedia Present

While games have a long social history, computer and video games have only recently developed into a significant cultural form. From the labs and arcades of the 1960s and 1970s to the personal computers and home consoles of the 1980s and 1990s to the digitally distributed and networked video games available on nearly every electronic device today, digital games have grown steadily in popularity over the past fifty years, especially throughout the Americas, Europe, and East Asia. Alongside the proliferation of popular screen-based gaming genres such as first-person shooter, real-time strategy, and massively multiplayer-online-role-playing games, a more peripheral and experimental form of gaming emerged in the early years of the twenty-first century. This new form, whose boundaries are still in flux, goes by several names, each of which stresses different features of the broader category. These designations include pervasive games, immersive games, transmedia games, search operas, unfiction, and chaotic fiction. The most popular examples—including The Beast (2001), I Love Bees (2004), and Year Zero (2007)—have most commonly been called alternate reality games or ARGs.

Unlike screen-bound video games, ARGs are not constrained to any single medium, hardware system, or interface. ARGs use the real world as both a platform and a medium, even as they complicate the concept of realism in a digital era. As transmedia writer Sean Stewart explains, ARGs incorporate a range of media—"text, video, audio, flash, print ads, billboards, phone calls, and email to deliver parts of the plot" ("ARG"). The stories that organize most of these games are nonlinear and broken into discrete pieces that players actively rediscover and reconfigure. Thus, ARGs encourage players to form

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1. This message, which requires decryption, was published in the original Speculation alternate reality game introductory hub. The epigraph's encryption method, known as a Caesar shift, substitutes each character with another at a fixed interval (in a Caesar set to the order of two, as in this epigraph, A becomes C, B becomes D, and C becomes E, and so on). For more, see criticalinquiry.uchicago.edu/nexus_x

2. Most video game publishers and console manufacturers are not required to report global software and hardware sales publicly. Nevertheless, consumer market research agencies such as Media Create and the NPD Group audit, analyze, and publish sales figures, primarily in East Asia, Europe, and North America. An increasing number of video games are also making their way to Australia, Russia, South America, and even the Middle East and Africa via digital distribution and mobile platforms. For example, the Valve Corporation, a company responsible for one of gaming's most successful online marketplaces, Steam, has recently opened content servers in Brazil and the Ukraine and has reported that "outside of Germany [Russia] is our largest continental market" (Todd Bishop, "How Valve Experiments with the Economics of Video Games," Geek Wire, www.geekwire.com/2011/experiments-video-game-economics-valves-gabe-newell). Beyond sales, global video game distribution is evident in terms of diverse and multilingual online communities and the countries represented in global gaming events like the World Cyber Games.


4. While not wholly satisfying as a designation, alternate reality game provides a stable marker. Indeed, a similar case arises with the genre name science fiction, which, though in some senses less descriptive and inclusive than alternatives such as speculative fiction, remains dominant and conventional because of a long history of usage. We will use primarily ARG throughout this essay.
networks which are largely participatory, collective, and sometimes transnational in scope. Unlike challenges in standard video games, which are designed for individuals to solve given enough time and persistence, most ARG puzzles mobilize a range of specialized knowledge across disciplines and a pooling of effort. ARGs are never single-player games.⁵

ARGs borrow from earlier artistic, literary, and social forms. Their genealogical roots stretch back to diverse gaming practices such as nineteenth-century English letterboxing, the Polish tradition of podchody, the practice of invisible theater, the situationist art practice of dérive, scavenger hunts, assassination games, and live action-role-playing games (LARP).⁶ However, a major difference between these older genres and recent ARGs has to do with the way they reflect and complicate two key concepts—gamification and convergence culture—that characterize the historical present.

First, gamification is a design strategy that uses motivation-oriented game components, including leaderboards, achievement systems, and other metrics to motivate various forms of consumption, education, employment, and industry.⁷ Whereas older forms of social play often functioned in contrast or even outright resistance to industrialized labor, work and play blur in the postindustrial period of information economies and cognitive capital.⁸ Corporations recode workplaces as campuses, playgrounds, and homes-away-from-home. At the same time, new forms of affective labor have become commodified through the statistical analysis of social media networks, the offloading of product testing to early adopting customers, and off-site customer service call centers.⁹ Aside from the corporatization of leisure and the invisible labor that often structures consumption, websites such as Chore Wars (2007), apps such as Foursquare (2009), and products such as Nike+ (2010) gamify daily routines like taking out the trash, going out to dinner, and running. Such software motivates users through extrinsic goals, automated scoring, and virtual prizes that are digitally tracked and shared over social networks. Gamification has also played a major role in ARGs, which convert daily media interactions into games and obscure the distinction between everyday lived experience and alternate realities. Following Bernard Suits’s utopian philosophy, Jane McGonigal, the designer of ARGs such as Superstruct (2008) and Evoke (2010), has gone as far as to suggest that “reality is broken” and can only be saved through games that turn “a real problem into a voluntary obstacle” and activate “genuine interest, curiosity, motivation, effort, and optimism” among their players.¹⁰

A second distinguishing feature of ARGs relies on the aesthetic experiences made possible by digital computers, distributed networks, and (in some cases) locative technologies. The appearance of the form of Alternate Reality Games has had much to do with a process of total subsumption characterized by a spread of nearly ubiquitous digital media and network access across the First World and the rise of what Henry Jenkins calls “convergence culture.” Jenkins describes “convergence” as “the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behavior of media audiences who will go almost anywhere in search of the kinds of entertainment experiences they want” (CC, p. 2). If “convergence represents a cultural shift as consumers are encouraged to seek out new information and make connections among dispersed media content,” then ARGs adopt the techniques of a participation-oriented, collaboration-savvy, and information-based culture to tell stories across numerous media (CC, p. 3). Instead of operating as combinatorial multimedia, ARGs tap into a more continuous transmedia flow that complicates discrete media objects in favor of mediation as an active process.¹¹ Transmedia describes a relationship between media that is proliferating rather than additive. ARGs, in particular, tell a single story that passes through and alternates between media—even those “new” media that have already been absorbed into the fabric of everyday life—to make their differences and intersections sensible. Unlike the products of convergence culture, especially multimedia franchises that often erase media distinctions in favor of the diegetic totality of a seamless world, the transmedia aesthetic of ARGs depends on narrative fragmentation and transitions between multiple interfaces. In sum, ARGs address the ways in which media mirror capital through the logic of gamification and relate to the contemporary media ecology through transmedia design.

Like contemporary entertainment industries, finance capital depends on the convergence of multiple media

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5. The 2008 game Free Fall is a single-player transmedia experience that lasts for only about ten minutes. Jeffrey Kim, Elon Lee, Timothy Thomas, and Caroline Dombrowski call Free Fall an ARG; see Jeffrey Kim, et al., “Storytelling in New Media: The Case of Alternate Reality Games, 2001–2009,” First Monday 14 (1 June 2009), journals.uic.edu/ojs/index.php/fm/article/view/2484/2199. Though it makes for an interesting limit case, we do not include it within our definition because of its lack of social and networked interplay.


7. For a critical discussion of gamification, see Patrick Jagoda, “Gamification and Other Forms of Play,” Boundary 2 40, no. 2 (2013): 113–44. For applications of gamification to areas such as business, marketing, psychology, and design, see Robert Jr. Hunter, The Gamification Handbook: Everything You Need to Know about Gamification (Brisbane, 2011). Also see Byron Reeves and J. Leighton Read, Total Engagement: Using Games and Virtual Worlds to Change the Way People Work and Businesses Compete (Boston, 2009); Gabe Zichermann and Joselin Linder, Game-Based Marketing: Inspire Customer Loyalty Through Rewards, Challenges, and Contests (Hoboken, N.J., 2010); and Gabe Zichermann and Christopher Cunningham, Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps (Sebastopol, Calif., 2011).


into exchangeable and abstract equivalents that can be transmitted through electronic devices or platforms. A similar process is, then, visible in video game systems and day traders’ consoles alike. As Friedrich Kittler observes, “once optical fiber networks turn formerly distinct data flows into a standardized series of digitized numbers, any medium can be translated into any other. With numbers, everything goes.” McKenzie Wark observes this same problematic in the context of games, writing, “it doesn’t matter whether you think you are playing the bond market or Grand Theft Auto. It is all just an algorithm with enough unknowns to make a game of it.” As an emerging genre of digital games, ARGs navigate a number of contradictions that characterize convergence culture. On the one hand, these games encourage open, participatory, and collective modes of play. On the other, the ARG form would not be possible without techniques such as gamification and viral marketing, as well as the convergence of media industries around specific reception platforms. A number of ARGs, for instance, have attracted audiences by subordinating their content to that of an established intellectual property, including the story-world of films (A.I. Artificial Intelligence, dir. Steven Spielberg, 2001), television shows (Lost), video games (Halo 2), and even top-selling albums (Year Zero). The tendency of such games to commodify player contributions has not merely resulted in anomalous assimilation of ARGs by major corporations, such as Microsoft and Google. The corporate development of this experimental gaming practice constitutes, from the very start, an inherent context and historical possibility of the ARG form.

This essay explores ARGs in relation to media and capital through the case study of Speculation, a game we directed and cocreated with students at the University of Chicago and Duke University throughout 2012. A key motivation for producing Speculation was the question: Is it possible to create a critical game in a twenty-first century world in which gamification and convergence culture are already core components of contemporary capitalism? Through the ARG form—once saturated with the paradoxes of control, corporatism, and capital—Speculation attempts to mobilize a passionate community of players and produce a platform for thinking within and through our contemporary information economy. It is precisely because of the form’s complex capacities and dependencies that ARGs offer a rich environment from which to engage with digital media culture and its relationship to the pervasive game of finance capital. Speculation—an experiment that emerged from our thought about the culture of Wall Street investment banks since the 1980s, the 2008 global economic downturn, and the 2011 Occupy movement—appropriates the strategies and logics of finance capital in a medium already caught up in the contradictions of neoliberalism and what Gilles Deleuze calls societies of control. Though gamification often puts play in the service of labor and convergence culture carries inherent complicity with multinational capitalism, Speculation entails a range of play forms and transmedial practices that are not all reducible to the strategies of finance capital.

Methodologically, Speculation builds on the techniques of practice-based research that have recently been explored under the rubric of comparative media studies. In particular, the game sought to complicate the longstanding opposition between practice and theory. As an ongoing, year-long development characterized by challenges, failures, readjustments, and active interplay, Speculation was a process of thinking through digital media. Moreover, the game attempted, at every step, to blur conventional divisions between creators and consumers, designers and players, artists and researchers. Rather than understanding digital games primarily as preprogrammed products to be developed, tested, then finally played, we consider the process of designing and producing Speculation to be synonymous with playing the game. From brainstorming to development to execution to performance, Speculation functioned as an open laboratory for designing play as well as playing with design. Designers and players cocreated the game while exploring concepts related to social networks, spatial and temporal storytelling practices, contemporary finance culture, and transmedia ecologies. 

2. Speculation: From Rabbit Hole to Alternate World


14. The Beast served as a promotion for A.I. Artificial Intelligence (2001); The Lost Experience accompanied ABC’s Lost (2004–2010); I Love Bees was a tie-in with Microsoft’s Halo 2; and Year Zero accompanied the Nine Inch Nails concept album of the same title.
15. We are thinking here of the Microsoft-commissioned I Love Bees (2004) and Google’s Ingress (closed beta beginning in 2012).
17. For an elaboration of comparative media studies, see N. Katherine Hayles, How We Think: Digital Media and Contemporary Technogenesis (Chicago, 2012), and Comparative Textual Media: Transforming the Humanities in the Postprint Era, ed. Hayles and Jessica Pressman (Minneapolis, 2013).
18. As Hayles has observed, following media scholars such as Kittler and Bernard Stiegler, “we think through, with, and alongside media” (Hayles, How We Think, p. 1).
The Speculation video was distributed widely to communities of gamers, electronic literature enthusiasts, new media students, and other prospective players. This brief video introduction revealed the game’s themes, hinted at the possibility of a secret code hidden between its frames, and ended with a URL that led to Speculation’s primary hub or nexus. Alongside this digital rabbit hole, the designers also distributed business cards belonging to the game manager and protagonist (NEX), modified actual Zimbabwe currency into a fictional currency called MetaBux, and disseminated postcards featuring the game’s twisting timeline (fig. 1). These rabbit holes were each designed to lead players back to Speculation’s primary home page at speculation.net. This website featured an assemblage of textual and social media tools necessary for players to engage the digital labyrinth of the game as a community. Upon exploring the first nexus, players confronted a large, red numeral set by eight smaller icons and eight long, blank password fields (fig. 2). When clicked, each pixilated icon led to a short puzzle or ludic challenge. These modules operated according to different genres of digital games, from cryptograms and quizzes to financial simulations and interactive fictions. Rather than simulate the processes of finance capital, Speculation’s mechanics engaged, in an aesthetic and ludic fashion, with the logics of complex derivatives, international currency evaluation, high speed algorithmic trading, and even the psychology of investment bankers. Completing these games produced documents related to important moments in the history of Speculation.

20. The complexity of Speculation and the necessary time investment by players led to a reduced number of participants over the course of each run. Nevertheless, combining Google analytics for the game’s two runs—from the first rabbit hole on 1 April 2012 to the final post about the second version of the game on 16 December 2012—the homepage accumulated 3,489 unique hits (and 35,902 page views). The primary player discussion forum generated 1,883 posts during the two rounds of gameplay (speculation.net/WE/index.php). Though the anonymous nature of participation limited the demographic data we could gather, 77.4 percent of the player visits originated from the United States, including all fifty states, with the most traffic coming from Illinois, North Carolina, New York, California, and Virginia. An additional 9.2 percent of the visits originated in Canada. All of our site-specific challenges happened within the United States and Canada, but participants could play the majority of the game online. Other significant sources of visits, making up approximately the final 13 percent, included Australia, the United Kingdom, the Netherlands, and Germany.
of finance or the fictional world of Speculation. Nestled within each document, whether via encryption or as part of the file structure, were eight passwords. These passwords operated as keys to unlock each Speculation nexus. Once typed into the original interface, the large, red icon would change, revealing a hint that would lead players, collectively, to the next level of the game. The complete ARG featured eight such levels that included approximately sixty-four ludic challenges, sixty-four financial documents, and sixty-four unique passwords.

Though games and challenges were central to the Speculation experience, the ARG took the structure of a novelist piece of electronic literature about a near-future world by including both a lengthy Q&A dialogue titled “The Document” alongside each level and an evocative narrative hidden within the source code of the game itself. In Speculation’s diegesis, a group of the world’s eight most powerful corporations and eight wealthiest investment banks form a transnational conglomerate called MetaCorp in 2024. MetaCorp offers to bail out the recently collapsed Eurozone and, in the process, effectively seizes control of the world’s economic systems. The conglomerate accelerates global capital through the production of unregulated forms of complex derivatives, which can be traded at a scale and speed far exceeding human perception. The primary narrative concerns a series of near-future characters who are communicating with present-day players using a form of transhistorical communication technology called the Histrion. These characters are all related and, in different ways, are resisting MetaCorp. In particular, the 2036 emergence of NEX, an artificial intelligence, poses a substantial challenge to MetaCorp. Players are enlisted in the resistance organized by NEX and learn about the characters through a number of narrative forms, including interviews, journal fragments, short prose stories, corporate documents, audio files, short videos, and ASCII art (fig. 3).

The challenges that comprised Speculation also conveyed information about the game world alongside the passwords needed for progress. Throughout its run, the transmedia experience included stock trading simulations, matching games exploring naturalization of credit, and various cryptograms designed by Nicholas Gessler. There were live “brain training” sessions programmed by Luke Caldwell and performed at the University of Chicago, Duke University, and Vassar College using EEG interfaces to measure and modulate players’ attention. Ainsley Sutherland produced text-based adventure games that were set in abandoned investment bank offices and narrated from the perspective of a MetaCorp employee, a rat, and even a sentient heating, ventilation, and air conditioning system. Alongside these substantial contributions were a plethora of other activities we designed with the help of students, including interactive meditations on microtemporal trading algorithms in the form of side-scrolling shooters; a mininarrative distributed across Craigslist’s “missed connections” and “for sale” indexes; double-encoded slow-scan television transmissions distributed aurally; swarms of cryptographic puzzles from Morse codes to Vigenère ciphers; an epic poem fragment cowritten by dozens of players; a GPS hunt for flash drive dead drops in three different cities; a community-building challenge on social networks like Facebook; an extended brainstorm about alternatives to Wall Street “brain drain”; information and ASCII art buried in speculation.net’s source code; collaborative speculations about the future of finance; a two-hour internet relay chat with the game’s main characters; and more. Each of these elements expanded the world of Speculation but also served as a self-contained artistic experiment with textual and ludic forms. Speculation’s transmedia impulse, however, was not merely additive. The gameplay participated, actively, in the assimilative nature of multinational capitalism. Rather than settling for the distance of allegorical fiction or satire, this ARG recuperated multiple genres, forms, and media. This process of absorption took place during the months of production, prior to the game’s launch, as well as in response to player suggestions during the execution of the game’s two runs.

As an ARG, Speculation may be described as a digital game, but it nonetheless departed, in a number of significant ways, from conventional video games. A key difference had to do with the quality of player engagement, which relied on collective (rather than merely single- or multiplayer) gameplay. Throughout the entire run, participants had to discover fragments of the story by locating various artifacts and deciphering codes. Their task was to identify the story’s major characters and reconstruct some version of the key events. Many of the puzzles were extremely difficult, requiring, for instance, knowledge of website architecture, social media, formal logic, code

21. For example, one set of passwords that you can enter at the Critical Inquiry hub for Speculation is RabbitHole123, TrailHead456, Paranoia789, Apophasia987, PuppetMaster654, Jazz321, AlternateReality000, and FinalEvent111. You can test these at criticalinquiry.uchicago.edu/nexus_x.
breaking, literary analysis, and text adventure game conventions. Therefore, in order to compile anything resembling a complete narrative, players had to merge puzzle solutions and acquired artifacts. In this way, the narrative involved an irredicibly collaborative dimension that unfolded across forums, wikis, live chats, and social media.

In this ARG, the title and core concept of speculation took on valences of financial risk and risky thought that, while appearing at times politically and ethically opposed to one another, could not be entirely disentangled. The term *speculation*, in one sense, suggests a contemplative distance. Early in the game’s development, the creators understood the *Speculation* ARG to be a cultural intervention into Wall Street practices, producing critique through game form. Deeper into the development and execution process, we found the game to be a speculation about the nonhuman (and often inhuman) practices of financial modeling and algorithmic processing that are central to the trading of stocks and commodity futures. At another level, *Speculation* addressed the worlding ethic common in speculative literature and game worlds. Our ARG’s generative (rather than merely representational) practice of worlding, which was derived in many ways from science fiction, also shared the world-making qualities of the financial speculation and derivative contracts. The players of *Speculation*, as much as the designers, elaborated the tensions and contradictions proper to this sense of speculation through processes of self-reflexive contemplation, networked collaboration, and playful metagaming. We will later return to this conflated form of financial, philosophical, literary, and ludic speculation through our elaboration of the concept of derivative worlding. But, first, it is important to explain how this concept was derived through the ways in which *Speculation* both borrowed and departed from earlier ARGs.

### 3. Speculative Derivations: The Beast and Superstruct

Two previous games, *The Beast* (2001) and *Superstruct* (2008), are particularly clarifying to *Speculation*’s project. These games sought to use ARG structure in ways that were formally innovative (in the case of *The Beast*) and sociopolitically ambitious (in the case of *Superstruct*). Both games, however, failed to think through the foundational interconnection of form and politics that enabled ARGs to emerge as a key form of contemporary convergence culture in the early twenty-first century. In departing from these games in *Speculation*, we sought to make a formally multifaceted sociopolitical intervention while actively engaging convergence culture and the politics of gamification. Through both its design and gameplay, our game acknowledged the complicities of ARG form with finance culture and digital media industries while seeking to subvert their techniques and conventions.

To date, *The Beast* has been perhaps the most visible and, among both game enthusiasts and scholars, the most discussed ARG. This science fiction murder mystery, developed by 42 Entertainment and released by Microsoft in 2001, ran for three months and included three million visitors to the main site. *The Beast* was designed as a promotional tie-in to Spielberg’s film *AI*. Most of the game’s source codes and cryptic emails sent by NEX.

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22. The term *speculation*, in this sense, put the game in dialogue with contemporary discussions within the philosophical movement of speculative realism. For more on speculative realism, see for instance, Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency* (New York, 2008); Graham Harman, *Guerrilla Metaphysics: Phenomenology and the Carpentry of Things* (Peru, Ill., 2005); and Ian Bogost, *Alien Phenomenology, or What It’s Like to Be a Thing* (Minneapolis, 2012). While this point would require additional development, it is worth noting that the game was filled with myriad cyborg, animal, and machinic actors that complicated the notion of human agency and stressed the ways in which processes like the rapid pace and enormous scale of financial trading fail to correlate with our expectations and experiences.

23. See Kim, et al., “Storytelling in New Media.”
clues and story segments were released online through websites created specifically for the game. A significant internet community developed around this game, including a self-organized group called the Cloudmakers. The Beast introduced several distinctive features of ARGs. First, the game was a transmedia design. Especially by 2001 web standards, it included a significant network of websites, emails sent from characters, voicemail messages, and faxes. Negotiating this decentralized assemblage of sites and locating puzzles was oftentimes as difficult as solving them. Along with the puzzles, the core story was neither linear nor unified in its delivery. It required active effort on the part of players to piece together. Second, unlike standard video games, the puzzles that made up The Beast called for collective interactions among thousands of players with specialized skill sets. In fact, the Cloudmakers alone exchanged 43,000 messages by the end of the game. The capacity of the game community to collaborate as effectively as it did caught the game designers off guard. Initially, the creators constructed what they thought would be three months worth of game content, but the community of millions banded together to solve all of those puzzles in a single day, requiring the team to go immediately back to the drawing board. Third, The Beast was what McGonigal calls an "immersive game." That is, instead of investing in a virtual environment that promises immersion through graphic realism and mimetic detail, The Beast co-opted "real environments to enable a virtual engagement with reality," thereby integrating play "fully into the online and offline lives of its players." It announced, at every turn, “This Is Not a Game.”

This dimension of the ARG created a paranoid aesthetic and provided players with experiences of apophenia—of seeing meaningful patterns and connections everywhere. Speculation expanded on many of the innovations of The Beast, but it also departed from it in a critical way. The Beast, like many ARGs, served as a promotional tool for a commercial product. That game was conceived, as McGonigal notes, as an alternative marketing campaign. Unlike these campaigns, Speculation was a stand-alone experience, an aspect of the game that was so unusual that it led some players to wonder whether the game would, at its finale, reveal a connection to some mainstream creative property. While drawing on the methods of viral marketing to attract players, Speculation sought to foreground intersections between the ARG form and its dominant economic motivations in order to invite critical interrogations of finance capital. Importantly, these critiques were not mounted through scholarly print media but through the game itself. The ARG form, with strong historical connections to commercial gamification and viral marketing, offered an opportunity for subversive strategies to operate in the belly of the beast rather than through a more distanced critical form.

A second ARG that served as both an inspiration and point of departure for Speculation was Superstruct. In 2008, Superstruct, produced by McGonigal at the Institute for the Future, employed gaming to “forecast” and confront real-world problems. The premise of the game is that a near-future supercomputer called the Global Extinction Awareness System has run a series of environmental, economic, and demographic simulations and discovered that human extinction will take place in approximately twenty-three years. The computer subsequently identifies five specific superthreats that could wipe out humanity. The roughly eight thousand players who reportedly participated in Superstruct had to brainstorm solutions to large-scale global crises. Players joined the Superstruct community, filled out fictional profiles that would enable extended role-play, and learned about so-called superthreats by viewing news reports from the future. As the experience began, Superstruct players cooperated to form “innovative ecologies.” For example, some participants responded to economic threats by imagining what they called the “natural currency ecology.” This organizational system reenvisioned “capital systems as tied, not to gold or GDP or other commodities, but to environmental measures, linking sociability to sustainability.” Other players responded to mounting food shortages by envisioning what they called the “Appleseed ecology.” These participants imagined a gaming platform that would help farmers share information about urban farming, including rooftop and vertical gardening.

The Superstruct design departed in a number of ways from The Beast, but it still produced an alternate reality that unfolded, through play, in physical and virtual environments. Self-identifying primarily as a serious game rather than an entertainment product, Superstruct grappled with social, political, and environmental problems through game form. Instead of accruing individual points, Superstruct innovated by assigning a single cumulative score to the entire game community at the conclusion of the experience. Success, here, was understood in collective terms. Not merely through its scoring mechanism but also through its mechanics, Superstruct crowdsourced the creation of original content from the players. Through digital media tools and social media networks, the experience transformed participants from passive consumers into active producers who themselves generated “innovative ecologies.”

Speculation borrowed many of these features while also departing from Superstruct in some important ways. For all of its ludic properties, Superstruct was more of a collective brainstorming or forecasting exercise than it
was a game. McGonigal’s project required participants to create content by role-playing twenty-three-year older projections of themselves, a narrative constraint that resulted in a critical distance at once playfully liberating and politically debilitating. Speculation, as we will see, embedded numerous game genres into its overall design that players approached as themselves: twenty-first-century subjects encountering transmissions from the future. The metaphor and structure of games was a core component of the participatory reflection about the deadly serious game of American finance and the culture of Wall Street in 2012. Instead of divorcing form from content, we imagined Speculation as an emergent process or an interactive forum that would transform with the ever-changing player collective, embodying possibilities for political change within the players as they worked through the game. While not always fun, the game form interpellated participants as players and invited an active play with the emerging diegesis set as much in the present moment of play as in a speculative future.

4. Puppet Masters and Jazz Players

A swarm of particulate agents, flocking and spiraling around some strange attractor, is overlaid on top of satellite imagery of Hurricane Sandy (fig. 4). Embedded next to this collage, a heavily edited photograph of Google’s server hardware melts into whorled corkscrew alongside a crashing red stock graph. These images were created by Speculation’s players to mark the cultural valences produced by two very different storms. On 2 November 2012, in the sixth level of Speculation, players discovered an entry posted on the game’s forum by the protagonist, NEX, which read, “What does it take to transform the normal into the queer? The commonplace into the bizarre? How do you world without words?” Below these questions, players found a hint that read “[img]URL[/img]” along with a series of eight prompts that alluded, suggestively, to narrative and character details that made up the ongoing game world. This challenge had been designed to guide players to create eight images in order to earn one of the eight passwords that they needed to progress to the next level. With this basic framework, however, the designers had little sense of what range of responses they would receive or how they might play back as the scenario progressed. This challenge, meant to motivate players to create game content, was a risky departure from the manner in which the game had unfolded up to that point. The first five levels of Speculation had, after all, given players access to digital mini games and code-breaking activities that required them to solve puzzles rather than to cocreate the game.

The day after the Speculation designers posted the image-creation challenge, players began to wonder about the nature of the task and post images in response to the eight prompts. In order to promote participation and collaborative creation, the designers (role-playing the character of NEX) engaged in an active exchange in which

30. Forum post, speculat1on.net/WE/viewtopic.php?id=184
31. One previous eco-activist ARG, Tomorrow Calling (2007), came to a premature end during precisely this type of crowdsourced task: one that required players to take photographs and upload them to Flickr. Though that game had maintained a base of approximately one hundred players up to that moment, this creative task never reached the participation quota that the designers, Jim Wolff and Andrew Sides, had established for player advancement. At that point, players abandoned the game. The fate of Tomorrow Calling did not befall Speculation.
they began to combine the players’ images into collaborative collages (fig. 5). Designers modeled the remixing process for the players without knowing what kind of response each contribution might yield. The resulting assemblage of cocreated images included interpretations of textual passages from the game narrative, art pieces by key game characters, visual representations of characters that had previously only been described in prose, blueprints of science fiction technologies, parodies of advertisements from the game world, and a logo for a central antagonist, MetaCorp.

This moment from the middle of the Speculation experience demonstrates the ongoing collaboration between players and designers. The interplay represents a significant departure of ARGs from many video games in which players reverse engineer processes that have been encoded by designers.^{32} Admittedly, many ARGs incorporate traditional puzzles with single correct solutions and (following the dungeon-master language of Dungeons and Dragons) dub their designers puppet masters. However, in practice, ARG players are rarely puppets, and, given the unpredictable behavior of player networks, designers cannot hope to be masters of much. The image-creation challenge of Speculation privileged a mode of interactivity available to ARG designers that Stewart calls “jazz” (“ARG”).^{33} Like improvisational musical forms, Speculation left “blank spaces” in the narrative so that players could contribute, and these contributions became in turn material for further inventions by the designers, facilitating the emergence of the play community as a space of cocreation (“ARG”). At many moments, players took the role of codesigners of the game. Similarly, designers took the role of players both in the sense of actors in a theatrical performance and of ludic participants.

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32. As Wark quotes Alexander Galloway, “to play the game means to play the code of the game. To win means to know the system. And thus to interpret a game means to interpret its algorithm (to discover its parallel algorithm)” (Wark, Gamer Theory, p. [21]).

33. For Stewart, jazz exists alongside other modes of “power without control” and “voodoo.” Each of these modes were employed in Speculation to differing degrees. Through power without control, the designers encouraged players to contribute to the narrative in a defined way (through a collage challenge) without giving them overwhelming control over the game’s development. In posting the initial prompt, for example, the designers left open the possibility of selecting certain player contributions and rejecting others. Similarly, a dimension of voodoo (allowing players to offer “raw materials” from which the designers would compose the story) played a role in this challenge and the broader game, as player-created designs and characters were admitted into the game’s core world. However, it was jazz that best defined Speculation’s core interactive method (“ARG”).
It was the jazzlike interplay and coconstruction of a shared space that ultimately defined Speculation’s core strategy of derivative worlding, which we elaborate in the next section. For the remainder of this section, we focus on the transformation of Speculation from a preprogrammed interactive criticism of Wall Street to an improvisational cocreation between designers and players. During its run, Speculation featured a number of experiments with representation, narrative, temporality, technology, and other concepts. Here, we focus on three examples organized around the idea of space that demonstrates the transformation of the game’s design philosophy from the logic of puzzles and video games toward the improvisational play of jazz. The game modules that experimented with space included a series of text adventure games, a GPS-based dead drop challenge, and, finally, the game’s player-led discussion forum.

An early module developed for the Speculation world was a series of text adventure games that, alongside a text-based console complete with an input field, offered visualizations of the narrative world in the form of navigable, panoramic photographs that allowed scanning and zooming in a three-dimensional space. Instead of interacting with this visual space through mechanical means, however, players could only progress by inputting text instructions (fig. 6). For example, in the first level, players enter an empty MetaCorp office. When they type “Examine window” into the console, the program responds, “Buildings block the view. They are all the same model as this one. . . . On the window is a plant.” Following this discovery, players must examine the plant, dig through its dirt, find a keycard, use that keycard to unlock the door to the next office, and so on until they uncover a secret memo about the financial consequences of global warming that contains a password necessary for progress to the next level. This minigame privileges spatial exploration to linear plot development. In Jenkins’s sense, it allows players to enact a prescripted narrative by exploring a series of empty MetaCorp offices and unlocking doors between them (“GD”).

The spatialized text adventure module served as an interactive commentary about the way that many Wall Street investment banks themselves conceptualize and use space. As Karen Ho argues in her ethnography of Wall Street, investment banks rely heavily on the concept of the global in order to construct a top-down version of the market in which money is “governed by universal logics which naturalize and predetermine its workings and effects.” On the contrary, Ho (much like Speculation) approaches the “Market” as a bottom-up and emergent assemblage of “a set of daily, embodied practices and models” (L, p. 31). One way that Wall Street constructs and promotes abstract concepts such as the market is through a strategy of “global presence” (L, p. 311). As Ho explains, invest-
ment banks such as J. P. Morgan often claim a “global” extension by virtue of having offices in countries outside of the United States, even if, in most cases, those offices are completely empty. Through *Speculation*’s navigable text adventure minigames, set primarily in empty MetaCorp offices around the world, players engaged procedurally and spatially with the narrative of global presence produced by investment banks. This critical statement, however, was essentially built into the digital environment by the game designers and consumed by the players. While this text-based game, as a discrete piece of software, was clearly produced in advance of its play, examining detailed logs of player interactions changed the design of later iterations. *Speculation*’s players, like many early adopters of contemporary video games, became covert beta testers, tracking bugs, glitches, and other inconsistencies on the community forum as they explored this alternate reality.

A second spatial experiment in *Speculation* was a module that required players to move from their computer screens out into the physical world. This challenge included a prescripted task but allowed considerably more latitude than the text adventure game in terms of group organization and play style. In the fourth level, players found a secret message encrypted using a Vigenère cipher, with a corresponding key. A second spatial experiment in *Speculation* thus turned a fixed place into a dynamic atmosphere infused with curiosity, paranoia, apophenia, and attentiveness. The paranoia, in particular, crept into the game design process, as designers snuck out at all hours of the night to leave signs, spray-paint messages, and dig holes to drop their flash drives. Though still asymmetric, the game took on the character of hide-and-seek and overlapped with quotidian academic life as classes and meetings continued even as developers attempted to avoid players.

A third experiment of *Speculation*, the one that most substantially altered the flow of the game from designer-created spaces to cocreated spatiality generative of improvisational jazz, was the space of the discussion forum that organized the game’s player network. As a result, “the requirement of being ‘global’ is not simply about how widespread a bank’s business is but rather how it ‘leverages’ its presence and capability” (L, p. 312). To achieve a sense of global presence, without overextending themselves, Wall Street investment banks maintain empty offices in many places throughout the world, and correspondingly, they focus their material infrastructure, people, and energies on even fewer places such as New York, London, and Tokyo. Such an approach allows investment banks to target their resources and be exclusionary in their sites of capital investment while the empty office secures an entry point, a slight foothold, and a particular global image. (L, p. 313)

38. As a result, “the requirement of being ‘global’ is not simply about how widespread a bank’s business is but rather how it ‘leverages’ its presence and capability” (L, p. 312). To achieve a sense of global presence, without overextending themselves, Wall Street investment banks maintain empty offices in many places throughout the world, and correspondingly, they focus their material infrastructure, people, and energies on even fewer places such as New York, London, and Tokyo. Such an approach allows investment banks to target their resources and be exclusionary in their sites of capital investment while the empty office secures an entry point, a slight foothold, and a particular global image. (L, p. 313)

39. These are the memos from which the Occupy movement drew the language of the 99 percent and the 1 percent.

40. For more on subversive transformations of space in conditions of everyday life, see Michel de Certeau, *The Practice of Everyday Life*, trans. Steven Rendall (Berkeley, 1984).

41. An archive of the original forum is located at speculation.net/WE/index.php.
The network space of Speculation became less a cyberspace to hack into than a shared hub from which to proliferate out. In place of the self-contained virtual world of cyberspace, players engaged in a more active type of worlding to which we now turn.

5. Derivative Worlding

Hidden away in the source code of Speculation’s homepage is a short poem:

It was a bright cold day in April, and the clocks were striking eight.

Next, noumenon of my nightmares, fire of my wall.

I am an invisible thing.

eXchange was spiteful.

The sky above the north tower was the color of a reticle, projected onto a dead world.

I am a sick man . . . I am a derivative man.

It will be like so, but won’t be.

Call me JP.

As Speculation’s players almost immediately discovered given their apophenic reading style, each line of this poem is derived from a classic work of literary fiction. Alluding to 1984, Lolita, Invisible Man, Beloved, Notes from the Underground, Galatea 2.2, and Moby-Dick respectively, JP’s poetry reads like a ransom note, a patchwork of sources deployed to camouflag e the identity of the writer. But, in Speculation’s transmedia reality, who is being held hostage? JP, as both players and designers discovered together over the course of Speculation’s playthroughs, turned out to be exactly what he claimed in this opening statement: “a derivative man.”

The financial derivative and transmedia derivation came to be closely related in the Speculation gameplay. First of all, the game explored the financial derivative. This type of derivative is essentially a contract—an agreement among parties. More specifically, as Richard Godden explains, a derivative “is an instrument for translating volatility into security insofar as it assesses the cost of risk, for a price.” These financial tools do not take as the object of their trade either goods or labor but instead risk itself. In the form

44. For the Unfiction thread (from the first run of the game), see forums.unfiction.com/forums/viewtopic.php?f=14405&t=8572000. For the Reddit discussions (from the second run of the game), see www.reddit.com/r/speculation. Unfortunately, the player wiki (from the second run of the game) is no longer available at speculation-wiki.us.to
46. Though hacking was not the game’s key mode, it is worth noting that one player attempted to hack a stock-trading simulation game in an early hub of Speculation to gain the password without having to play the game. This player exploit prompted the game designers to play back and foil subsequent attempts at circumventing the game.
47. Criticalinquiry.uchicago.edu/nexus_x
49. Derivatives can now be created on anything, for instance the risk of whether a tornado will pass through northern Illinois next week. Moreover, one kind of derivative, the VIX, is calculated from the amount of volatility of a selected group of stocks (also called the fear index). This derivative has no underlying asset but is an abstraction from a certain set of relationships, thus taking on an even greater degree of abstraction.
of a “future,” for instance, a derivative is essentially “a bet on an anticipated price” and also a form of insurance that protects a buyer against the risk of market fluctuation. Derivatives as such are nothing new—these instruments, for instance, already played a key part in the tulip mania that precipitated the Dutch crash of 1637. However, beginning in the 1980s, a number of developments transformed the volume and nature of derivatives trading. In these years, investment banks developed over-the-counter (OTC) derivatives to further engorge their profits. By the late 1990s, speculative practices, facilitated by derivatives such as forwards, futures, and options took on an expanded scale. This change took place with the passing of the Gramm-Leach-Bliley Act that repealed the provisions of the Glass-Steagall Act of 1933—a major piece of legislation that prevented commercial banks from speculating in financial markets (see L, p. 7). Moreover, shortly after this act, in 2000, David X. Li developed a groundbreaking formula (a Gaussian copula function) that allowed investment banks to calculate complex risk on mixtures of derivatives. This series of financial, legal, and technical innovations, among others, raised the annual value of financial derivatives from a hundred million dollars in 1980 to nearly a hundred trillion in 2000.

Financial derivatives, as Edward LiPuma and Benjamin Lee have argued, can be described as “strategies of representation.” We also view them as processes of worlding. Following Rob Wilson, we understand worlding to be a sustained process of imagination rather than a static worldview. As Wilson notes, “‘Worlding’ as an active-force gerund, would turn nouns (world) to verbs (worlding), thus shifting the taken-for-granted and normal life-forms of the market and war into the to-be-generated and remade.” Worlding is thus an effect of interrelated strategies—aesthetic, cultural, and political—that generates new forms of life. In this sense, the market itself is not merely a natural or “normal” phenomenon reflected by derivatives. Rather it is a concept that is actively produced by investment banks and other financial actors. On an economic level, Wall Street has been instrumental in generating the hype and developing the financial instruments (most centrally derivatives) that have produced a cyclical atmosphere of crisis characterized by perpetual bubbles and crashes, booms and busts.

Derivatives, as a critical instrument of neoliberal finance, generate economic relations and a world of high-risk, high-reward transactions. However, they also produce a world by making possible new social configurations. As Max Haiven notes, “finance digests the world, transforms social processes into metrics of risk, volatility, and profitability based on the market adjudication of price, splits them apart, and bundles them back together. In this way, finance governs and disciplines multiple levels of social actors, transforming social life into a matrix of risk and response.” This form of worlding and social production is achieved as much through the culture of Wall Street as through the technologies that have enabled high-frequency trading.

Speculation sought to foreground the ways in which Wall Street constructs the very concepts (for example, the market and global presence) that produce a vision of a volatile world defined fundamentally by risk. The game did so through interactive aesthetic renderings of processes that covered a spectrum from human practices (for example, the racist and sexist Wall Street hiring practices) to nonhuman processes (for example, black boxing or the algorithmic trading that takes place at temporal scales outside the range of human perception). Additionally, the game explored the temporal dimensions of finance. Derivatives monetize the future, intensifying and accelerating capital’s imperative of continual expansion by converting the future into a market to be exploited. Speculation both mirrored and sought to complicate this temporal logic with the imagined technology of the Histrion, through which communications are sent from the future back to our present and from our present into a possible future. This central narrative logic complicated the linearity of cause-and-effect and posited a Möbius strip continuum. Temporal complexity was enacted in another way through the unfolding of Speculation’s gameplay, as players became co-creators who both responded to and directed how the future unfolded.

The logic of the financial derivative bears greater similarity to the logic of transmedia derivation than the surface-level wordplay suggests. This connection becomes most evident through the proliferation and bundling of the game’s user-generated content. The core product—the game of Speculation—often derived its value from something else: namely, the risks taken by designers and the community of players while cocreating the game’s world. Indeed, in this instance, the game adopted the very logic of the “affective economics” on which, according to Jenkins, convergence culture relies. In this economic model, “the ideal consumer is active, emotionally engaged, and...
"As Jenkins clarifies, "Watching the advert or consuming the product is no longer enough; the company invites the audience inside the brand community" (CC, p. 20). The model that Jenkins describes, accelerated by Web 2.0 social media technologies, is not merely a part of the transient new economy witnessed during the dot-com boom of the late 1990s (itself a key symptom of the proliferating financialization of the same period). Instead it belongs to a broader and longer lasting infrastructure that Tiziana Terranova has called the "digital economy." 59

The digital economy relies on free labor and posits a gift economy that it seeks to make unproblematic and untether from broader forces of multinational capitalism. As Terranova notes, "Simultaneously voluntarily given and unwaged, enjoyed and exploited, free labour on the Net includes the activity of building web sites, modifying software packages, reading and participating in mailing lists and building virtual spaces." The complication of free online labor is that it is "pleasurably embraced and at the same time shamelessly exploited." 60 Terranova’s larger point, which has been elaborated by other new media critics, is that the internet has never been a fully democratic public sphere but rather an infrastructural form of contemporary capitalism that depends on the primacy of both financial techniques and digital technology. Of course, free labor, as Terranova observes, is not always a form of exploited or involuntary labor. 61 At the same time, it is important to note that so many internet applications, sites, and social media platforms derive their value from the uncompensated contributions of the very people who buy into them.

Speculation explores the relationship between contemporary finance, on the one hand, and the cultural values that underlie convergence culture on the other through a process that we call derivative worlding. This term captures the worlding that is already proper to financial derivatives as well as Speculation’s own transmedia game and narrative aesthetics. Speculation’s derivative worlding operated simultaneously through participation in and complication of a process of deriving value from free labor and social relations. Speculation did not claim an outside position to the finance capital that was its object, nor did the game promise players a total demystification of financial abstraction. In its design, the game acknowledged that finance does not merely posit fictions that obscure an underlying reality but instead produces a reality—a world—through its unique logic. 62 Many of

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60. Ibid., pp. 74, 78, and see p. 75.
61. See ibid., p. 91.

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Figure 8. In Nick Gessler’s *Stock Trading Simulation* game module (2012), redesigned by Mark Govea, players buy and sell blue chip stocks over a four-year period.
the game mechanics simulated derivative bets and reproduced financial logics, as in games that explored stock trading (fig. 8) and international currency trading (fig. 9). If players wanted to discover passwords that would allow them to progress in the game, they were forced into complicity with the very system that the game-generating protagonist, NEX, claimed to oppose.

Other game procedures and processes relied, by virtue of their design and platform selection, on the related structural ideologies of software. For instance, in certain levels, players had to investigate the source code of websites in order to find passwords and hidden narrative excerpts. In these moments, far from shifting its focus away from financial processes, Speculation emphasized the fetishistic parallels between finance and digital media. As Gooden notes, Karl Marx’s reading of the fetish form of capital (the misrecognition of social relations as object relations) takes a more extreme form in finance capital. Here, “a higher order of misrecognition occurs, since relations between commodities are misconceived as relations between monetary entities.”

Through derivatives, commodities, already a reification of social relations, are further abstracted and reified into financial instruments. As Alexander Galloway and Wendy Chun have both observed, a similar fetish (what Chun playfully calls “sourcery”) is evident in discussions of software. As Chun points out, discussions about software frequently conflate written human-readable code with the event of program execution. The concept of “source code,” in particular, is imbued with an alleged power that belongs to more complex social and machinic relations. Thus, Speculation sought not merely to expand the digital literacy of players by calling their attention to the layers of code that made up the game, and the limits of their interpretability, but also drew additional links between that code and the social, financial, and technological processes it so often distorts.

Speculation participated in financial (and technological) logics, but it also complicated the type of risk inherent in contemporary financial derivatives, which remain

64. See Wendy Hui Kyong Chun, “On ‘Sourcery,’ or Code as Fetish,” Configurations 16 (Fall 2008): 299–324. Galloway observes, “software requires both reflection and obfuscation” (Galloway, The Interface Effect, p. 64). Admittedly, software requires exacting symbolic descriptions that leave little room for ambiguity but, at the same time, through the use of layers (a user interface, assembler, machine code, all the way down to voltage levels), software conceals. To return to the example of websites that were a common element of Speculation, the HyperText Markup Language (HTML) used to create these sites was not visible to users unless they chose to view the source code.
In many ways, JP became an avatar of our own designer experience of playing Speculation: the fratboy forum dweller, the successful investment banker, the phony salary man, and, finally—and most substantively by the second playthrough—JP, the politically driven hacker and identity thief. In a careful push and pull with players over the course of a year, we cocreated a distinctive and deeply flawed character who tarried in real time with the ongoing speculations of our players. The original white, male, upper-class fall guy transformed, consistently within the rules of the world that we had produced, into a transient, transgendered, and transmediated child who was ultimately responsible for the emergence of NEX: the character with whom the game began.

This form of worlding, the production of a new subjectivity, was made possible by the transmedial and productive capacities of contemporary capitalism, but it would be a mistake to reduce the process of play that yielded JP to a mere symptom of gamification, convergence culture, or finance. Evolving JP in the midst of gameplay was a risk, but the risk taken through the game’s ongoing collective speculation was not identical to the risk inherent in financial speculation. In the months leading up to the subprime mortgage crisis, investment bankers used financial derivatives to reduce risk by disseminating it among multiple investors only to spread toxic assets and push, in the process, the global financial system to the edge of systemic collapse. Whereas the speculation leading to the 2008 financial crisis enriched the very few at the expense of the vast majority, Speculation employed the willing few to establish critical positions not outside but inside the metaphors, mechanics, and game strategies of finance capital. The forms of play that the game...
inspired were both procedurally and conceptually difficult. They were rarely, in a conventional sense, fun. These processes did not yield new products, consumers, or markets. The game's play did, however, self-reflexively bring into sharper view the capacities of the creative collective that shaped the transmedial world of Speculation and differentiated it from the world of finance.

6. Conclusion: The Matter of Finance

In finance, leverage means going into debt to increase the power of available capital. For the last four decades, the US government has implemented monetary policies through the Federal Reserve and fiscal legislation to facilitate free market exchange, leading to a huge national debt that will ultimately have to be paid by future taxpayers. Leverage here means privileging the rich, those who can afford to invest, at the expense of those who cannot. The resulting massive shift of wealth has impoverished the middle class and pushed the working class to the brink of disaster. Speculation enacts a different kind of leverage, using the current appetite for computer games and the relatively new ARG form to enact a form ofwording that critically interrogates the systemically risk-laden world generated by financial derivatives and other practices of investment banks. It strives to contribute to a different kind of cultural imaginary, one that can see the lurking catastrophe of finance capital and imagine possibilities for change.

Speculation posed a modest challenge to this presumed totality of finance in a number of ways, demonstrating that while financial derivatives may achieve a world-making power in our historical moment, they are not equivalent to the world. Finance is not the neutral abstraction of market forces and global networks that its advocates make it out to be. Even financial transactions have concrete foundations and consequences—a materiality that Speculation attempted to foreground at every turn. At the start of the game, we did so through the distribution of repurposed and massively devalued Zimbabwe currency purchased on eBay—a consequence of hyperinflation generated by global financial markets that had its most devastating impact on the poor (fig. 10). At a similar moment, we distributed business cards for the game's protagonist with the GPS coordinates of an enormous server warehouse in New Jersey (a facility the size of three football fields) that serves as the grounding infrastructure for those allegedly immaterial and hyper rapid algorithmic trades that have enabled Wall Street's success. Later in the game, we emphasized the material reality of the global presence of investment banks of J. P. Morgan through text adventure games set in the empty offices that these banks purchase to produce an illusion of totality. Perhaps most pointedly, the second run of Speculation told the story of Eva: an impoverished laborer who works for MetaCorp through virtual telecommuting from outside of the US. Eva's story gradually made players aware of circuits of capital that connect coltan mines in the Congo and the violent conflicts surrounding this precious substance to the electronic and mobile devices that contain tantalum capacitors and fuel the games of the overdeveloped world.

Speculation comments on all of these material contexts and undercuts the fantasy of infinite exchangeability maintained by finance. After months of intense and daily gameplay, in each of its two runs, Speculation itself reached its material limits. But through this process of engaged speculation, the game mobilized players as cocreators of something that sometimes seems impossible in this present: a future not already used up in advance by debt and derivative contracts but rather one that encompasses the possibility of a more open, sustainable, and just world.

67. The Zimbabwe dollar failed because the government printed out absurd quantities of the currency with nothing to secure it. The hardest hit, of course, were the poor and those who saved as opposed to investing in the market. A fifty trillion dollar note now sells on eBay for under two US dollars. One Speculation document that explored this situation was a memo revealing a plot by MetaCorp to stimulate the failure of cash through similar hyperinflation, forcing everyone to convert to electronic currency, which is easier to track and surveil.