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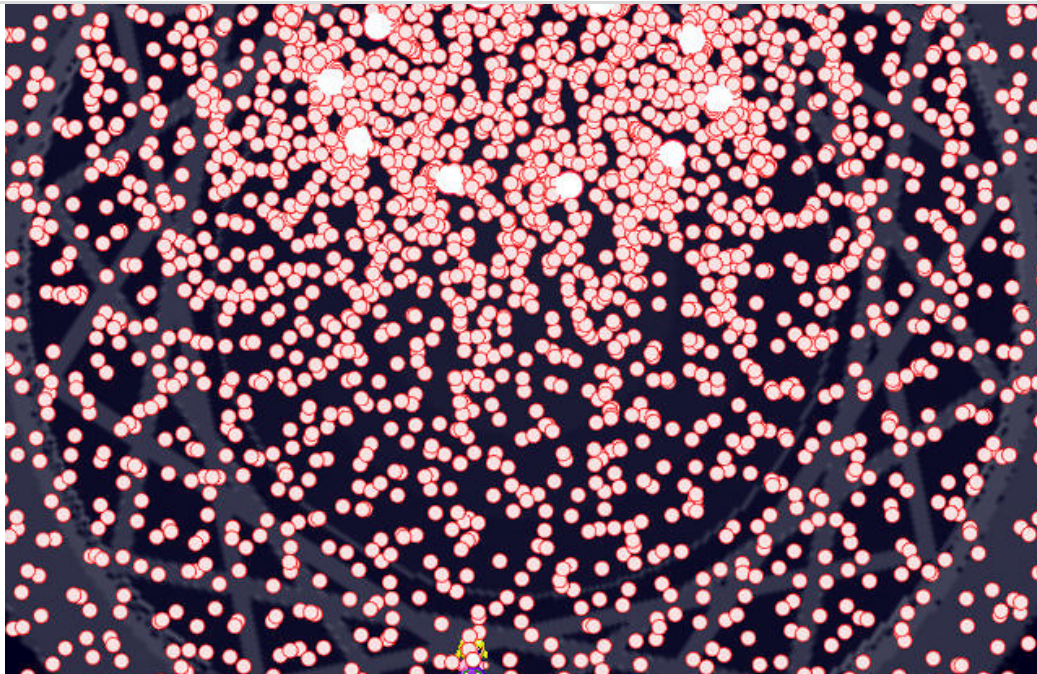
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The Danmaku Game as a New Optical Art, Part I

By Thomas Bey William Bailey

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Non-playable danmaku test / simulation programmed in Visual C++ and DirectX c 9.0

The ‘Apollo’ game center near Abeno Station in Osaka is indistinguishable from dozens of others scattered throughout urban Japan, yet is no less compelling for this fact: as far as total sensory environments go, there are few things like it, and the over-abundance of loudly competing sound sources makes it is easy for one to get ‘lost’ in here even with an easily understood floor plan. To that end, the game consoles in this establishment are organized by genre in their own compact micro-districts or “functional clusters” of three or four (an organizational strategy that is seemingly carried out on a much grander scale by Japan’s urban planners.) Slinking gradually from the main entrance to the rear of the establishment, I first have to navigate past a throng of uniformed high school students watching intently as one of their representatives dances for his life on the one-man stage of a *Dance Dance Revolution* spinoff. Similar dramatic scenes play out on the nearby musical instrument simulators, with wide-eyed and spiky-maned boys proving themselves to their peers by banging staccato rhythms on replicas of *wa-daiko* drums, or shredding away on pushbutton-powered guitars. The crowd noticeably thins out as I reach a room separated from all this energy expenditure, where an older and more sedentary gaming constituency - either oblivious or indifferent to the hyperactivity in the adjacent room - sits tranquilly in front of tooth enamel-white game consoles housing *mah-jongg* simulations or nostalgic arcade hits from the country’s sorely missed “bubble” decade. They languidly go about their business while enjoying canned coffees and Seven Stars cigarettes, sitting in close proximity yet effectively isolated in their private capsules of shuddering screen glow.

However, their disaffected behavior - which, coupled with their standard dress of pressed white shirts and loosened mono-chromatic neckties, makes their leisure time here seem like just an outgrowth of their office workdays - is somewhat miselading:

curtain”.] With their provenance in the Tokyo game workshops of ToaPlan and Cave (the latter rising from the ashes of the former almost immediately after its 1994 declaration of bankruptcy), the games’ common objective is simplicity itself: players, in a single or double configuration, navigate their personal spaceship icons through virtual battlefields of progressive complexity and difficulty while destroying enemy war machines, collecting both points and weapons upgrades for their efforts, and making sure to dodge the considerable amount of enemy fire.

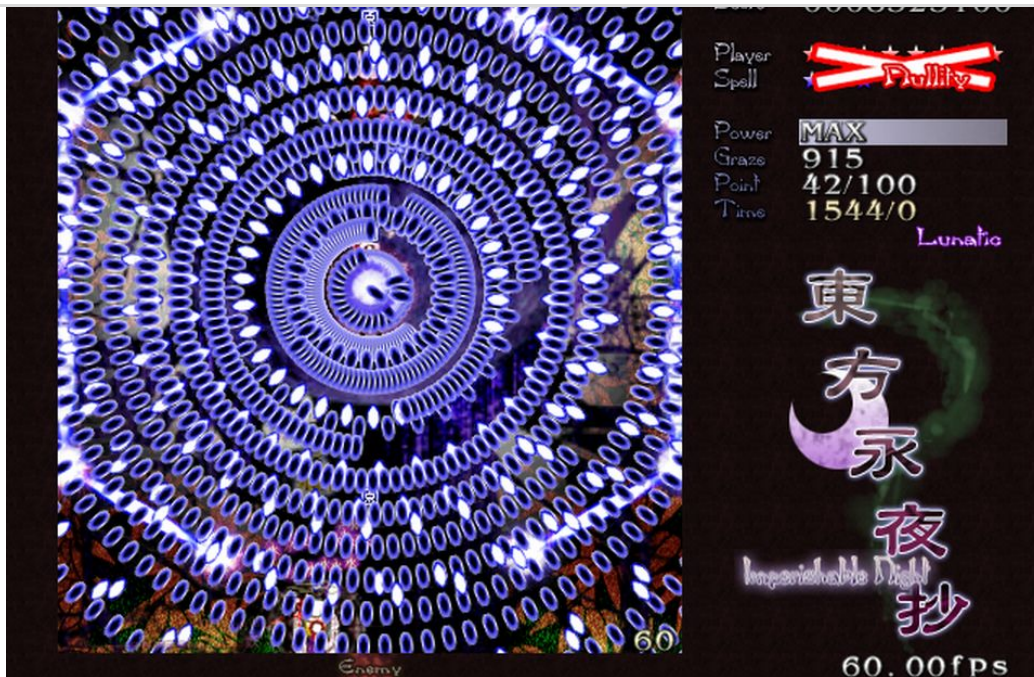


Mandala-like firing patterns in a game from the Touhou Project series

Despite this apparent banality, a minute’s worth of patience will reward the player with an aspect of these games’ visuality that is, in fact, highly unique - even if that uniqueness is merely a matter of taking some familiar visual elements to an extreme of saturated perception. Namely, the “enemy fire” in question greets the player as an amorphous mass of flickering color that seems to take on a life independent of its releasing entities: in the *danmaku* game, orb- or arrow-shaped projectiles form the atomic units of pulsating, multi-hued latticeworks and arabesques. Sometimes these designs will manifest as screen-swallowing circles with equidistant radii or spokes, or will wheel across the entire screen space in the form of undulating tendrils, or on other occasions will rain down like multi-colored confetti streamers. They will coalesce into individual strands of menacing webs, or spin wildly in double helix formations. In worst-case scenarios, such as the final battle of Cave’s 2004 hit *Mushihime-sama* [虫姫さま、 “Insect Princess”], an uncountable number of angry magenta orbs settle into an oppressive rolling fog, with seemingly no gaps through which to escape. A teasing,

the more superlative moments of *danmaku* exhibition being reserved for one-on-one confrontations with hulking end-of-level “boss” characters (e.g. the stage-climaxing super-villains of Cave’s 2010 tour de force *Akai Katana* [赤い刀、”Red Blade”] who summon up and hurl massive gunships that unleash their own hot-pink torrents of fire in turn.)

In keeping with the familiar game taxonomy that sees game genres being named for the action involved in them (e.g. “shoot ‘em up”), *danmaku* games have also been referred to more specifically as *danmaku kaishi* [弹幕回避, “bullet evasion”] games. Yet whatever relation one has to the ‘bullets,’ it would not be too much of a reckless leap in reasoning to name the “bullet curtains” themselves as the true iconic “stars” or attractions of these games (in most of these games, only cursory efforts are made to weave a narrative around the pilot characters or their antagonists.) Arcade gamers must learn very quickly, in order to make their sacrifice of 100-200 yen a worthy one, to view these tantalizing clusters of glowing globules or phosphorescent spear tips as the primary focus of their visual attention: no matter how well rendered the digital landscapes are in which the action takes place, or how intricately detailed any of the in-game objects may be, they must be treated as a kind of extraneous visual noise. The most successful *danmaku* players must hone a kind of visual essentialism that recalls the Optical paintings of Tadasuke “Tadasky” Kuwayama: his characteristic ‘concentric circle’ works not only presented an illusion of three-dimensionality, but conferred the illusion of being animated or ‘breathing’ objects as well (we could also refer to 19th-century harmonograph etchings for other designs in which concentric circles appear three-dimensional or spherical.) Showing another kind of kinship with Optical art works, the screen images of flaring bullet curtains can provide the viewer with a ‘post-exhibition exhibition’ in the form of entoptic phenomena: though appearing in a less unequivocally colorful form, the *danmaku* formations continue to twist and dance beneath closed eyelids for brief post-play periods.



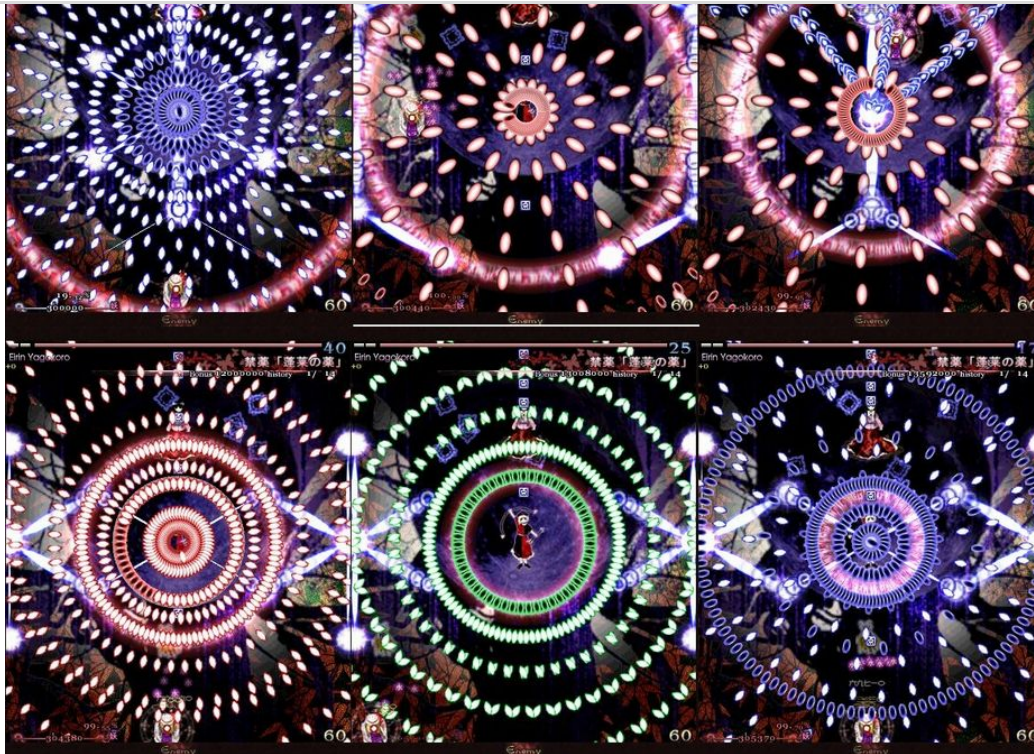
A danmaku-saturated screen of a game in the TouHou Project series

As with previous generations of shooter game, a variety of powerfully destructive ship upgrades are available to the player, which can allow the contestant to match the projectile torrents of the on-screen enemy and mount vicious pre-emptive strikes or counter-attacks, all the while adding more blaring hues to this strange kaleidoscopic portrait of virtual combat. As hinted at above, the games are staggeringly difficult, yet are 'beatable' in theory (especially now that quasi-legal ports for arcade emulator software like MAME make it unnecessary to feed hard currency into the machines to prolong one's virtual life.) The games are generally finite in terms of levels or stages, as well. Their playership is therefore not playing in order to gain some ontological understanding from the racking up of successive losses; a concept that Shuen-shing Lee identifies as being the prerogative of "second-level model players" (a "specific kind of player [that] is able to realize the implications of 'to lose' in an intentionally unwinnable form.")^[i] If there is a 'masochistic' component to these games, it can be attributed to the voluntary taxing of one's eyeballs as much, if not more, than the voluntary entrance into an arena where ignominious defeat is highly likely.

The novelty of facing off against claustrophobia-inducing swarms comprised of dozens of enemy units - whose individually limited attack and defense options combine in daunting examples of emergent cohesion - was already made famous by Williams Electronics' highly successful run of dystopian blast-'em-ups, beginning with *Robotron 2084* [1982] and arguably achieving 'peak controversy' with the blood-drenched shooters *Smash TV* [1990] and *N.A.R.C.* [1988]. The implausible, massively exaggerated, and perversely humorous carnage of the latter two earned them the sort of bipartisan condemnation^[ii] that would surface again after the games in the *Doom* series were revealed as a favorite pasttime of the Columbine High School shooters, and still again in

wholesale adopt the sanguinary images of human warfare - has been a component of the Japanese gaming industry since the advent of *Space Invaders* [1978] itself.^[iii] The Japanese gaming industry's more cautious approach to ultraviolence has not stopped American detractors from critiquing them on other grounds, though (e.g. that the exportation of 'addictive' Japanese video games stemmed from a kind of hegemonic, implicitly 'warlike' aggression towards the impressionable minds of Western youth.)

I would submit, then, that it is neither the exceptional level of 'swarming' and concomitant destruction endemic to *danmaku* games, nor the difficulty of achieving mastery over them, that make these games qualitatively different from previous variations on the 'shooter' game. Rather, it is something else that has always been inextricable from electronic gameplay: namely, these games' promise of a unique aesthetic that tests the limits of human optics within a simple agonistic framework that may or may not lose its pulling power as players become progressively immersed in the pure experience of flickering color. In the same way that George Slusser once declared cyberpunk fiction to be an "optical prose [...] less a world of conflicts than of textures,"^[iv] the games thrive more upon the aestheticization of bewilderment than on the commitment to a narrative that unfolds over each successive chapter or game stage. Even the reward mechanisms of certain *danmaku* titles underscore this emphasis on immersion in shimmering, bewildering beauty over the narrative functions of playing a 'hero' role and besting an enemy: see, for example, the technique in *ProGear* [Cave, 2001] by which the encroaching bullets of an enemy vehicle will, when destroyed by the player's special attack, transform into a stream of precious gemstones, which are then pulled towards the player's craft by a kind of magnetic force.



Examples of concentric designs in the firing patterns of 'TouHou' project, a fan-developed danmaku game

Now, for the sake of not downplaying the fact that these are, at best, hybrids of game and aesthetic object (and for the sake of not assuming readers' complete familiarity with the recent history of arcade games) some discussion of the games' strategy and mechanics is necessary here. For those who have spent some time in a video arcade or parked in front of a home gaming console, the mechanics of gameplay are highly intuitive, using the same control surface of joystick and multiple pushbuttons that have been used for hundreds of other arcade and home console games. Meanwhile, the top-down and vertically-scrolling view of the onscreen action, largely the preferred 'camera angle' for these games, traces its lineage back to one of the very first computer amusements (1962's *Spacewar!*), and was later adopted for such gaming industry goldmines as *Space Invaders*. The latter, of course, stands as one of the highest-grossing coin-operated machines at all time, its runaway popularity allegedly forcing the Japanese mint to ramp up the production of 100-yen coins (the Japanese rail transport system of the time was largely dependent on the use of coin-operated ticket vending machines.)^[v]

The flight controlled by players' 8-direction joysticks is modulated by a built-in limitation that disallows the simultaneous deployment of maximum agility and maximum firepower. In a continual test of "fight or flight" reflexes, players are required to either sacrifice firepower for agility, or vice versa, as the use of more powerful weapons generally causes a reduction in speed of movement. To this end, a popular control feature of *danmaku* gameplay is the alternation between an "A" attack and a "B" attack, with the former being initiated by repeatedly tapping a "fire" button and the latter

slowly advancing but powerful explosive drones, enveloping shields that destroy enemy ships on contact, and much more besides.

Danmaku titles, despite a high degree of overlap between their easily intuited control schemes, and the challenges implied by their taxonomic classification, do not share a common template for gameplay or for “look and feel.” While certain of the formative games in the genre (e.g. Toaplan’s *Dogyuun* [1991] or Cave’s *Donpatchi* [1995] and *Dangun Feveron* [1998]) are the heirs apparent to the overhead, vertically-scrolling ‘camera’ view of earlier airborne action titles, others like the more ‘bullet curtain’-intensive *ProGear* use a side-scrolling scheme. Meanwhile, the visual style within these the games has gradually deviated from the familiar metal-encrusted worlds depicted in “classics” like *Dogyuun* or *Batsugun* [both from ToaPlan, 1991 and 1993 respectively]: *ProGear* is notable for its distinctly ‘steampunk’ style of anachronistic visuals, *Dangun Feveron* profers a comically incongruous blend of galactic space travel and disco-dancing imagery, and *MushiHime Sama* [Cave / AMI, 2004] relies on a persistent ‘insect world’ motif, which conveniently ties in with present-day theorists’ relating the biological “swarm” to artificial intelligence (particularly Jussi Parikka’s contention that the superorganization of the swarm is “more than the sum of its parts...without an overarching organizational principle guiding the actions of the singularities under one umbrella.”)[vi]

Part II will appear in two weeks.

[i] Shuen-shing Lee, “I Lose, Therefore I Think: A Search for Contemplation amid Wars of Push-Button Glare.” Available online at <http://www.gamestudies.org/0302/lee/>. Retrieved January 10, 2013.

[ii] Though not citing *Smash TV* or *N.A.R.C.* specifically, I would point to the sentiments expressed in Simon Gottschalk’s protests as exemplary of the leftist critique of these games. See “Video-Games as Postmodern Sites/Sights of Ideological Reproduction” (*Symbolic Interaction*, Vol. 18, No. 1 [Spring 1995], pp. 1-18.) Protests from the center or right have gained much more traction in mainstream news reportage, and so I hope my readers will forgive me for not revisiting these arguments here.

[iii] However, this is far from an absolute assessment, and even *Space Invaders*’ parent company Taito has portrayed conventional warfare with titles such as the WWII fighter plane simulator *Sky Destroyer* (1983) and the Uzi-powered ‘commando thriller’ *Operation Wolf* (1987).

[iv] George Slusser, “Literary MTV.” *Mississippi Review*, Vol. 16, No. 2/3 (1988), pp. 279-288.

[vi] Jussi Parikka, *Insect Media: An Archaeology of Animals and Technology*, p. 47.
University of Minnesota Press, Minneapolis / London, 2010.

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