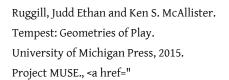


## Tempest

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#### CHAPTER 5

## Conclusion

Over the course of this book, we have explored the aesthetic, technological, and interactive elements that distinguish *Tempest* as a landmark video game. In the process, we have moved from a close, textual analysis to a broad, contextual one as a way to articulate as well as illuminate these elements. Our focus now is summative and explicative. We want to revisit our preceding analyses in order to clarify *Tempest*'s overall historical and cultural significance. We also want to situate the idea of landmark games and the process of defining them in the material and intellectual history of video game studies broadly. Understanding these artifacts and their import is vital to the theoretical, practical, and praxical development of the field, especially as it continues to expand across disciplines and institutions.

### Tempest Redux

One of the challenges of organizing a book so that it moves from the textual to the contextual—as we have in this volume—is that while it provides an excellent structure for developing a comprehensive view of a subject, it is less fit for offering a balanced view of the relative importance of any given detail. For this reason, we want to begin our descent into the conclusion with an expanded summary that lends some topographic relief to *Tempest's* history and context, thus clarifying how the network of meanings we have cataloged up to this point interrelate. Through such a big picture wrap-up, we mean to help readers draw their own conclusions (as well as consider ours) by delimiting in a concentrated form the peaks and valleys of our wide-ranging analysis of this landmark game. Such an alternative

approach, though brief, aims to acknowledge that the orderly prioritizations we chose for governing the majority of the book are not necessarily the best (and certainly not the only) ways to think about the subject.

We begin this overview with chapter 1, where we offered a thick description of *Tempest*, starting with the game's spare but distinctive aesthetics and proceeding through its technological and ludic innovations. Of particular pertinence was the relationship between the game's graphics and play, or rather, the ways in which Theurer's visual design seemed to experiment with the interactive and ideological possibilities of both on-screen and off-screen space. For instance, in Tempest, there is the essential (and at times maddening) fact that the shooter's movement is confined to the near rim of the tubes. In fact, Tempest's play very much hinges on this particular circumscription: the game is all about avoiding additional constraints to the shooter's movement (e.g., when Flippers reach the near end of the tube and effectively cut off the shooter's escape routes, or when Pulsars charge gutters and change the geometry of a tube).1 And yet, depending on the tube, this movement can actually controvert the sense of constraint. Moving endlessly—and seemingly frictionlessly thanks to the game's special control system—around the rim in either direction can connote a sense of freedom, albeit a limited one (the player cannot break free from the playfield, for example, or decide to traverse its depth). It is the freedom to travel without obstruction and at virtually any speed, the freedom to inscribe the playfield according to one's sensibilities.<sup>2</sup> Indeed, it is precisely because of the limitations of the playfield—which Theurer designed to appear obvious (even undeniable) and which the shooter's movement also reinforces by reinscribing them—that the possibility of endless spin exists. More simply, Tempest establishes limitations on the screen and then plays with those limitations, sometimes gently (as in the case of spinning freely around the rim of a closed tube), sometimes less so (as in the case of the game's invisible levels, which make play even more difficult). It is an early moment in the commercial and technological history of video games in which a designer is both exploring and commenting on the medium's meaning-making possibilities.

Tempest was innovative in other ways too, especially in terms of how it connected play and narrativity and explored the significance of play generally. The game's Skill-Step system, for example, not only enabled players to self-select their level of expertise or desired challenge, but in so doing also nuanced and described the play experience itself. It was Skill-Step that palpably evoked and emphasized tropes of progress, mastery, and the like,

incentivizing players to take on greater challenges (and thus part with their money more quickly) but also earn greater rewards (in the form of point bonuses, the respect of spectators, and so forth). As we explained in chapter 1, "In helping narrativize *Tempest*'s play experience in this and other ways—that is, in supplying the rudiments of a story to a game that did not readily seem to have one—Skill-Step provided a way to indirectly yet concretely supplement the game as a purely playful act, i.e., to give *Tempest* a tangible and interpretable significance beyond the refulgent but largely non-cognitive pleasures of simply doing."

In much the same fashion, but for a different audience, *Tempest's* Operator-Information Display (OID) also narrativized play, reporting usage data of all kinds to machine owners so that they could better understand how and by whom their machines were being played. In other words, the OID told the players' story. Play metadata of this sort has subsequently become integral to the practices of game development/management and play, assisting designers in clarifying their work and showing players how to better understand and enjoy theirs (i.e., the work of play and the pleasures of recognizing such work). As a result, today play and its study are often conjoined visibly and invisibly across the whole of the computer game complex, raising a host of important questions and opportunities for scholars, developers, and players alike.

In chapter 2, we conducted a generic analysis of Tempest, situating the game within but also outside of the Abstract and Shoot 'Em Up genres that Wolf outlines in his extensive video game classification system. Specifically, we diagrammed Theurer's creation as a generic hybrid, a game that violated as well as reinforced the stylistic and playful conventions of its day. For one thing, Tempest was both abstract and concrete in its visual design. The game's spartan and geometric iconography abstracts a series of mathematical formulations—themselves abstractions of concrete space yet ties those abstractions to a specific Greco-Roman aesthetic and ideology, that of Ptolemaic Greece and Renaissance Italy. Similarly, there is an ambiguity to the game's interpellations, with the cabinet artwork promising one experience and the software delivering another. The sum effect of these and other juxtapositions and disconnections both in-game and out is surprising and unconventional: in contrast to many of its contemporaries, Tempest managed to be commercially successful without hewing to generic expectation. It did not offer more of the same, and yet was not penalized economically or critically for its divergence. On the contrary, Tempest was compelling in part precisely because of its hybridity. As we noted in chapter

2, it was able to venerate the Shoot 'Em up and Abstract genres "without necessarily depending on them for semiotic and narrative weight."

Tempest's ambiguities are more than merely interesting or distinctive, however: in addition to breaking with tradition they prototyped it. Tempest's rudimentary multiperspectivalism, for instance—the way in which the game and its cabinet seemed to suggest both first-person and thirdperson perspectives simultaneously—forecast what is now commonplace in games: multivalent play. The inclusion of a multiplicity of distinctive but articulated possibility spaces within a single environment (e.g., first-person shooters featuring third-person play segments, third-person games with first-person elements, and so forth) is one of the ways in which developers have responded to growth, diversification, and technological development in the video game market. Likewise, Tempest helped pioneer the concept of playful authorship, that is, player contribution beyond the normal developer-player collaboration found in any game (computer-driven or otherwise). Tempest's Skill-Step system initiates play by asking players to make a design decision, as well as a ludic one: how difficult should the game be? Moreover, it couches this decision narratively, via numerical (level 1-11) and descriptive ("Novice" to "Expert") scales. In so doing, Tempest invites players to express themselves structurally—in terms of the ludus and the narrative—not just playfully, to set the parameters and context of the end experience in addition to abiding by them. Playful authorship, the dialectical (not just dialogical) contribution of the player to the game, has become a signature element of the video game medium. In fact, it is hard to find a game today that does not directly summon its players as developers, even if that summoning is only to select a game's difficulty level, item load out, avatar appearance, and the like.

In chapter 3, we outlined *Tempest*'s socio-cultural and economic contexts, concentrating on the years just prior to and just after the game's release. The late 1970s and early 1980s were astonishingly tumultuous, with a pandemic of armed conflicts, natural disasters, and political assassinations, not to mention the darkening shadow of the Cold War and its effects on political, economic, and military policy around the world. The period was also one of intense technological, technophilic, and technophobic development nationally and globally. Alongside revolutionary medical breakthroughs (e.g., the first artificial heart transplant) and thrilling pictures of deep space objects beamed back by galactic probes, were a spate of nuclear-related accidents (e.g., the meltdown at the Three Mile Island facility) and anti-technology protests (e.g., the Unabomber's attacks). The period was,

in many ways, an ideal incubator for a dream about—and subsequent artistic response to—terror and technology, a dream at the very heart of *Tempest*'s creation story.

More tangibly, and arguably more important to *Tempest*'s materiality, was the popular culture push into space-themed and computer-oriented (and enabled) consumption. The revelation of deep space and the penetration of the affordable personal computer into homes and businesses were accompanied by a concentration of space- and computer-themed movies, television, and video games. At the same time, the telecommunications and entertainment industries were cultivating and capitalizing on the hardware side of the new and now daily galactic and computational experience, deploying once futuristic technologies into the everyday of film production, cable television delivery, and information transfer. By 1981, space and computers had become ubiquitous—even if not readily apparent (e.g., the behind-the-scenes computer controls used in *Raiders of the Lost Ark*)—providing a fertile and perhaps inescapable intertext for *Tempest*.

One need only look to the flowering of vector graphics in-game and out for proof. Not only was the vector aesthetic prevalent in arcades and across a variety of game manufacturers and genres but in theaters, television, and at home (e.g., the Vectrex) as well. Vectors were everywhere, and as we concluded in chapter 3, seemed "to represent for the late 1970s and early 1980s popular imagination the enormous stored up energy of computers and offered waypoints for highly industrialized society that lead from the urban dirt and grime of the present to the pristine flux and fluidity of the future." This is certainly the aesthetic and narrative trajectory of *Tron*, Disney's big budget, critically acclaimed, and commercially successful vector film that was developed and released during that time. Vectors were the future made visible in the present, and *Tempest* was the embodiment of that visibility.

In chapter 4, we recounted *Tempest*'s industrial impact and explained the game's curious afterlife: while *Tempest* has its share of emulations, ports, remakes, sequels, and clones, it has never been able to pervade popular consciousness in quite the same way *Space Invaders*, *Pac-Man*, and other "brands" have. One reason is the game's particular combination of minimalist aesthetics and high-definition tacticity. This combination proved appealing to visual designers of other products—from movies to television ads—but made it nearly impossible to extend *Tempest* as a malleable franchise. *Tempest*'s look and feel are effectively *Tempest*'s alone; there is little room for significant transformation and extension the way Atari's *PONG* became Nintendo's *Super Tennis* (1991), which became Electronic Arts'

Grand Slam Tennis 2 (2012). Instead, Tempest's many imitations and few sequels are instantly recognizable as having emerged from the original's stock. Even Jeff Minter's seemingly LSD-inspired sequels bear an unmistakable likeness to their forbearer more than thirty years and many computational revolutions later. Tempest was, in other words, distinctive enough to become iconic yet too distinctive to become an endlessly renewable commodity. Tempest is the video game industry's haute couture, influential in its angles, textures, and layers, but far too conceptual to be imported in toto into everyday use.

Another reason for *Tempest*'s petrified celebrity flows from the travails of its parent company, Atari. Over the course of its history, Atari has gone from boom to bust many times, narrowly escaping extinction thanks to its sustained brand recognition and stable of iconic (if often stale) games. Each time Atari was sold off, its new owners produced yet another re-release of the company's arcade classics. Such "new" products, which ranged from simple ports for the latest generation of home consoles to complete remakes loaded with complementary and supplementary content, worked to constantly revivify the Atari brand and literally bank on the nostalgia that *Tempest* and other games could elicit. From this perspective, the worst decision a new owner of Atari could make would be to update or transform *Tempest*; the game's commodity power was (and remains) anchored to the early 1980s and all that era signifies. To update *Tempest* is to uproot *Tempest*, robbing it of much of what makes it valuable as an icon—its context.

Of course, the game's signifying power has produced all manner of *Tempest*-iana. Beyond the games *Tempest* inspired are the deeper fan creations, the (often) handmade *objets* that honor the game on a more personal level. From one-off tee shirts to art photos to pipe-cleaner sculptures, fans have exceeded the flattery of imitation and extended the soul of Theurer's creation many times into the real world through their handiwork. We would argue, in fact, that the game's truest liberty, its freedom from its own past, is found here. *Tempest* itself may be fixed in time, but its ongoing cultural impact is best observed, as we note at the end of chapter 4, in the lovingly homemade memorabilia that "recollects and shares forward an experience of engagement, luck, skill, frustration, patience, and captured imagination." This, we propose, is among *Tempest*'s most animated legacies.

Looking back over these and the other observations we have made in this book, it is easy to see why *Tempest* was a landmark video game. It was distinctive in its look, sound, and feel upon release, predictive in its vision

of play and player, and commercially and culturally memorable despite a modest performance in the marketplace over the long term. Moreover, it embodied in such a pellucid and uncompromised way the centrality of play to game design—not just to its end product—and the ways this play flows to and through the game and its players. As a result, and like all of the games in the Landmark Video Games series, *Tempest* is an historical and cultural cairn, an index to the aesthetic, technological, and ludic geographies and geologies of the video game medium as they have evolved over time.

But *Tempest* is also something more, or rather, the Landmark Video Games series of which *Tempest* is a part is significant beyond the specific histories its games index. As helpful as canon formation can be to the theoretical and applied trajectory of a field—and the Landmark Video Games series is in part intended to do this sort of work—there is a pressing and material reason to designate and define games as landmarks: preservation. Simply but paradoxically put, in a sense the video game medium is disappearing even as games and players proliferate. We explicate the nature and implications of this paradox in the following section, and in the process conclude our study of *Tempest* as a landmark video game.

# The Landmark Game and the Recorporealization of the Medium

As software, as bits of electricity flowing to and from computer componentry many times a second, video games are evanescent. They are always and only of a moment, and in fact can only ever be something other than unactivated instructions or unrealized electrical arrays because of the hardware that enables and processes their commands.

As hardware, by contrast, games endure. They are tangible in their media (e.g., cartridges, disks, hard drives), material in their interfaces (e.g., consoles, controllers, cabinets), and concrete in the spaces they occupy (e.g., living room, arcade, archive). Games as hardware are the objects of experience, the means of interacting with the playful possibilities games as software promise. To study and preserve games, then, is to study and preserve this materiality, always and initially.

Yet video game materiality is changing. Game media are starting to disappear, or at least exist differently. The expansion of networked connectivity and the realization of quick and reliable electronic content delivery and payment have made producing cartridges, disks, packaging materials,

and even gold masters cost prohibitive. In fact, rather than develop a title to sit on store shelves, it is now often more profitable and secure not to "make" a game—that is, to eschew production of a physical copy and its associated materials (i.e., packaging, instruction booklet, lagniappes, and so forth) in favor of an electronically produced and distributed one. Similarly, game interfaces are being transformed by the emergence of affordable and accurate sensor arrays such as the Microsoft Kinect and PlayStation Eye, which turn the human body itself into a game controller. The haptic intimacy between player, controller, and software—an inveterate staple of the video game medium—is being supplanted by a gestural relationship, one in which contact is secondary and game hardware is principally and overtly surveillant rather than assistive.

As scholars, we find these developments intriguing but not astounding (not yet, anyway). They are simply further proof of the medium's persistent dynamism, and that video games will always be remarkable to those who study them. As archivists, however, we are more watchful: indeed, these changes have our full attention. As games become differently mediated—in the sense that their individual storage containers, packaging, and dedicated controllers are discontinued—game archiving (i.e., collecting and preserving games as material artifacts) will start to narrow. Soon there will be no more new games to collect—at least not physically and in the traditional sense—and then game archives as material warehouses will only be able to traffic in the distant past, in a time when games could be held as well as played.

Computer game archives will endure, of course, in new forms, perhaps through holographic storage arrays capable of holding pristine digital copies of games themselves as well as all of the attendant development materials—concept art, design documents, licensing agreements, and so on—that provide the invaluable background so important to game scholarship.<sup>3</sup> But this is speculation. Sadly, and already, the distant past of computer games is eroding much faster than present-day archivists can preserve it. Game media and their hardware have long ceased to be made of strong stuff. In fact, for manufacturers to do so—for them to use quality and durable materials to produce products that are long-lasting, resistant to obsolescence, and easily reparable the way arcade game manufacturers such as Atari used to do with machines like *Tempest*—would be ludicrous. The industry and its public are accustomed to—and in fact depend on—regular and even tectonic technological, aesthetic, and ludic shifts in game hardware, software, play styles, and mechanics. To produce anything other

than that which is almost instantly replaceable by something newer would be to contravene an economic, cultural, and ludic model many decades in the making, and the bedrock upon which both the game industry and its study are built.

Obviously, the simultaneous transformation of games' future and erosion of their past makes the medium's materiality and the sense-making associated with it more tenuous. At the same time, it also makes less fungible materials—such as historical materialist scholarship—more concrete and important. Essentially, the evolving state of the video game medium—the general changing of its materiality—promises to transmute writings about game history, making them into archival objects as well as analytical ones. That is, projects such as the Landmark Video Games series will invariably take on a significance beyond that of just documentation and analysis. By preserving a disappearing materiality—or at least access to the temporality of that materiality—such projects will become primary sources for scholarly work on games. They will not only point to notable aesthetic, technological, and cultural moments in game history but in fact embody them. In other words, game work will become the stuff of game studies when games themselves—or at least games as expressly material and individual objects—have disappeared.

It is with that fast approaching ekphrastic moment and the responsibility concomitant with it in mind that we conclude this book. We hope that in illuminating *Tempest's* intriguing and interwoven geometries of play—even as the game itself has dimmed with the passage of time—our modest work will contribute in some small way to the preservation and persistence of game materiality, and, perhaps even more importantly, to future scholarship and understanding of that materiality.