

Along the Folds: Sea and Spar and Portals Between

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A labyrinth is said, etymologically, to be multiple because it contains many folds. The multiple is not only what has many parts but also what is folded in many ways.
Deleuze (1993 [1988]: 3)

Abstract:

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1. Implications

Since we deny eternal recurrence (as we insist we have never done before), we acknowledge that inflections of time are unique and incommensurable, so wherever we now find ourselves it cannot be the Baroque of Leibniz or Deleuze; and yet we do seem to occupy a moment that ‘endlessly produces folds’ across both literal and figurative domains (Deleuze 1993 [1988]: 3). As we will see, various in-foldings of sign and information – renderings, objects, ‘objectiles’ – present themselves as indices of a cultural moment, demanding perhaps a correspondingly subtle or complex response in thought. Among the terms subject to implication in this essay are *computer games*, *literature*, and *theory*. What pleat or furling of discourse can possibly contain them?

Under one approach, *theory* can be recruited as interface between essentially distinct domains – the relatively fixed discourse of print versus the repetitive, recursive, and dynamic discourse of computation. This conception may be useful up to a point; but as Markku Eskelinen reminds, we arrive at an important limit when we notice that ‘[c]ontemporary theories of inter- and transtextuality (within literary studies) are based on print practices’ (2012: 61). Also noteworthy, here, is that Deleuze censures Descartes for persisting in ‘rectilinear tracks’ (1993 [1988]) in trying to solve the labyrinth of being:

Thus a continuous labyrinth is not a line dissolving into independent points, as flowing sand might dissolve into grains, but resembles a sheet of paper divided into infinite folds or separated into bending movements, (6)

We may want to exercise similar skepticism about our own recto-versitude, entailing perhaps a willingness (at least conceptually) to embrace infinite complexity in the unitary field of the page. Put most simply, *theory* may require careful handling when applied to less printable practices. Sheets of paper do not easily divide to infinity, but other media may be less constrained.

Theorists who acknowledge this problem introduce a second possibility, aiming at a more general poetics or semiotics that can account for many if not all forms of signifying practice. Building on the original insights of Espen Aarseth in *Cybertext*, Eskelinen takes up this program explicitly in *Cybertext Poetics*. In their own ways, Lev Manovich in *Language of New Media*, Ian Bogost in *Unit Operations*, and Noah Wardrip-Fruin in *Expressive Processing* work toward similar goals. However, while these unified-field theories make important contributions, they often betray a certain bias toward the discrete and coherent when it comes to interpretation of specific works. For instance, Bogost offers an intriguing treatment of an otherwise forgettable film (*The Terminal*), inspired by the tedium of transatlantic travel (15–19), but the attempt to understand cinema in terms of a ‘unit operation’ of ‘unrequited waiting’ requires at least an imaginative leap, if not a healthy travel budget. Detailed explorations tend to demonstrate, more than complicate, interpretive strategies – perfectly understandable in the context of works that seek to re-orient critical discussion, but nonetheless disturbing as theory reaches toward objects found outside its immediate index. Even with misgivings, we will not entirely disclaim this practice, since we are unable to go as far in our own area as Sandy Baldwin has recently done in electronic literature. He declares:

I confess not to care about this or that work of electronic literature. It is both a blindness and a cultivated response. I cannot become interested and I refuse to. I work hard at this indifference, seeking a general recognition of the literary as it takes place in digital writing, indifference to individual works and openness to the work of writing. (2015: 6)

Less radical in program, we retain a stubborn or retrograde investment in a pair of particular works, one a celebrated game and the other a more obscure exercise in textual generation. Given our less severe abstraction we will perhaps not see as far into the ‘work of writing’, but in our defence we are concerned less with *writing* than with emergent forms of sign play – a subject perhaps equally vast as ‘writing’, yet comparatively unexplored and so (we think) still in need of instance-based inquiries. If we are still tied to particular texts, they are at least cybertexts, works whose inherent multiplicity defies any neat, singular accounting. Indeed the cases we treat here may raise serious questions for any coherent theory of games and literary texts. Though we will propose a unifying logic to account for our oddly enfolded pair, the proposition is inevitably complex and requires, via David Myers’s essential concept of ‘anti-ness’, a more dynamic understanding of identity and difference on which more will be said below.

‘A fold is always folded within a fold, like a cavern in a cavern’ (Deleuze 1993 [1988]: 6). In our seam or recess we enfold the video game *Portal 2* (2011) along with a work of computational poetry called ‘Sea and Spar Between’ (2010). One is a successful, mass-market entertainment with all the hallmarks of a Triple-A title: vividly realised game-world, impressive cinematics, and a signature play mechanic that is both kinetically

engaging and cognitively challenging. The other is an experiment in generative text produced by a pair of academic writer-critics operating at least nominally within the literary canon of the United States. Its graphical dimensions are primarily typographic, and while spatiality is very important to the work, it presents us with a Cartesian plane of two dimensions, not the three-dimensional labyrinth of the video game. Where the game is quasi-cinematic entertainment, the poem-system belongs to the very different domain of conceptual, verbal art (possibly, indeed, as a kind of quasi- or neo-literature). As utterly distinct as they may seem, these works have at least two important axes of similarity.

2. First Axis: Folding

‘Sea and Spar Between’ and *Portal 2* are both instances of topological design. In Bogostian terms, they are works whose ‘unit operations’ consist of *folding*. In this respect they count as symptomatic of our moment of implication or involution.

In the game, the *portal effect* maps a distant region of the current game level to a sub-display within the main field of view, allowing players to move their avatar through the aperture in a way that violates Euclidean geometry. This transition effectively folds one region of visualised space (game-space) upon another. The game’s invitation to ‘think with portals’ effectively invites the player to understand and exploit this higher-dimensional spatiality. In this sense, the *Portal* series may represent a kind of Baroque turn in the computational aesthetic, at least in the (admittedly idiosyncratic) way that Deleuze refers to this cultural moment.

‘Sea and Spar’ operates verbally, syntactically, and typographically, but it too proceeds by folding. Its underlying program generates an exceptionally large number of four-line stanzas (more than 225 trillion) by exhaustively combining elements of two wordlists, one drawn from the poetry of Emily Dickinson, the other from Melville’s *Moby-Dick*. In its order of magnitude (10^{14}) the work hearkens back to Queneau’s *Cent mille milliards de poèmes*, published in 1961, notably a work in which the page is meant to be literally divided into strips or segments available for folding into a very large number (if not an infinity) of possible arrangements. Updated into the contemporary digital moment, ‘Sea and Spar’ puts algorithm in place of manipulation. Using a relatively compact set of compositional rules, the program combines each term in the lists with all possible co-elements, in effect folding one list on the other, or each word against all possible conjugates.

In terms of topology or information space, both game and poem-generator transform relatively simple structures (three dimensions for the game, two dimensions for the poem) into constructs extended into a higher number of dimensions. At this level their underlying similarity perhaps indicates nothing beyond a fundamental characteristic of computational texts: their dependency on systematic self-reference, or as Myers calls it, ‘recursive contextualization’ (2010: 23). Both examples evoke this idea thematically as well as structurally. The *Portal* games, original and sequel, engage the player repeatedly in arbitrary, sadistic challenges, so that they become in effect games about gameplay. The sequel emphasises this effect by adding a multi-player mode whose vestigial narrative is dedicated to an absurd fantasy of robotised user research. Likewise, ‘Sea and Spar

Between' data-mines the vocabularies of canonical writers with a combinatory method that foregrounds basic verbal structures. In the most general sense it is a *language poem* – a poem about the foundations of poetry in language – though its authors also claim it constitutes a 'reading' of Melville and Dickinson.

This underlying recursiveness indicates a larger cultural logic. Both participants in our oddly arranged union might also be seen as instances of what Deleuze calls 'the *objectile*':

[T]his is a very modern conception of the technological object: it refers neither to the beginnings of the industrial era nor to the idea of the standard that still upheld a semblance of essence and imposed a law of constancy ('the object produced by and for the masses'), but to our current state of things, where fluctuation of the norm replaces the permanence of a law; where the object assumes a place in a continuum by variation; where industrial automation or serial machineries replace stamped forms. The new status of the object no longer refers its condition to a spatial mold – in other words, to a relation of form-matter – but to a temporal modulation that implies as much the beginnings of a continuous variation of matter as a continuous development of form. ... The object here is manneristic, not essentializing: it becomes an event. (1993 [1988]: 19)

So far our forced enfolding may seem to yield certain resonances and intimations of unity, but so much may already have been apparent in our recognition of both game and generator as instances of cybertext. Works of this kind always proceed by self-reference in their generation of output from the formalised interplay of logic or algorithm. They are indeed 'events' or unfoldings in runtime. Cybertext theory begins with this point and has done much to elaborate upon it. In further pursuit of that elaboration we examine these objectile functions more closely.

3. Second Axis of Similarity: Overload, or the Sublime

While both game and generator depend on folding mechanisms, in each example those mechanisms reach or manifest important, inevitable limits. Recursion is a fraught procedure. In the game, portals come in two polarities (blue and red / orange, which may signify ingress and egress, departure and return, or some other opposition of movement). Only one instance of each polarity may exist at a given time. Firing a new portal of one colour instantly closes its predecessor. In this respect we reach the limit of our intimated Baroque revival, since these foldings of game space cannot proceed to infinity. The Leibnizian soul may be full of folds, but video games appear stubbornly secular or soulless. No matter how much of an 'objectile' it may seem, the game is nonetheless composed of software objects, which are constructs with real systemic limitations.

Without these limits the game world would swiftly turn spongiform, riddled with persistent voids. Maintaining such a structure would bring cognitive stress to the player, who would need to make visual sense of an increasingly complicated environment. It would also overload the computational platform, which would have to maintain local and distal coordinates for a large number of portals – technically conceivable – and render the

view through each portal on the fly – doing which would probably exceed the capacity of current systems quite quickly. Both the human and computational problem would be hugely exacerbated if two portals should overlap in a single plane, another eventuality ruled out by the game code. Veterans of recreational computing may remember an old system called HyperCard, in which it was possible to generate an error message that read: ‘Too much recursion.’ The stricture still holds, even if it less often enforced these days.

Though the dimensions of the problem are different in the poem-generator, it too places limits on its combinatorial folding. The Cartesian grid of stanzas implied by the generative program contains something on the order of 225 trillion elements. This is certainly too much information for any human reader to process. The fourteenth power of ten is in every sense *extremely large*. Allowing a 15-second scan, a complete reading would take more than 200 million years. The stanzas also comprise too much information for any readily available computing device to process. At .01 milliseconds per operation, generating all possible stanzas would take about 700 years. Accordingly ‘Sea and Spar’ only ever offers a minuscule subset of total possible output, a limited array of stanzas assembled on the fly for momentary display in a browser window. The text as a whole is not just unseen, but in practical terms un-seeable – embodying that unreadable domain of electronic writing that motivates Baldwin’s renunciation of particulars. Even in less extreme cases than ‘Sea and Spar Between’, electronic writing seems to overload the receiver. The contents of ‘Sea and Spar’ can be specified algorithmically, but in an ordinary human sense they cannot be definitively produced – in Baldwin’s terms, we ‘cannot take it,’ nor take it all in (2015: 18).

Now we come to what may be a larger truth about cybertexts, or at least those that push cybertextuality toward its limits: they tend to produce a mathematical, or in these two cases, a *topological* sublime – a level of possibility and complexity that overloads traditional cognitive structures, such as quasi-cinematic narrative (in the game) or lyric (in the poem). Through their engagement with computational self-reference, these works imply higher-dimensional relations that can never be fully understood by beings who inhabit our customary world, locked into three dimensions and unable to count to a trillion.

As if to underscore this point, each of these perhaps characteristic early-21st-century works countersigns its topological excursion with reference to an older register of the sublime – two crucial images of natural immensity. As the title ‘Sea and Spar Between’ announces, the blue-green design of the Web page, reinforced by the twitchy sensitivity of its event handlers, is meant to suggest a flickering, oceanic surface and the teeming presence of life beneath it. In introductory notes, the authors directly associate their hyper-numerous stanzas with ‘the number of fish in the sea’ (Montfort and Strickland). As Deleuze renders Leibniz on this biospheric expanse: ‘Not everything is fish, but fish are teeming everywhere’ (1993 [1988]: 9).

In *Portal 2* the image of immensity is not the sea but its gravitational partner, the Moon. The game is deeply moon-mad, tracing the origins of the portal effect to lunar dust brought back by the Apollo missions – a substance whose ingestion drives its discoverer insane. Two images of the moon (the second strikingly enlarged) are among the first things we see in the introductory level of the game, and most crucially, the moon becomes the final target of the portal gun in the final moments of scripted play. At the climax of the game, the player must break the demented Wheatley’s control of Aperture’s

reactor system to prevent (yet another) cataclysm. The solution, as always, lies in savvy portal-shooting; but this time the target must be the visible disk of the moon. Since we know lunar-dust paint makes any surface receptive to a portal, the implication is logical, but the action is nonetheless mind-boggling. It creates a non-Euclidean fold of literally astronomical proportions, stretching a quarter of a million miles from a cavern in the earth to the lunar surface – in Deleuzian terms, this is the mother of all caverns. This feat represents the greatest use of the portal gun, and possibly (in terms of the main *Portal* saga, at least) the last.

The full testimony of these natural countersigns would need more exploration than is possible here. We might observe for the moment that cybertexts seem to bring us back to nature in terms that do not conform to any so-called American century – neither the dazzling sea-surface of the nineteenth nor the lunar plains of the twentieth. Images of nature emerging from cybertexts seem at once more regular and systematic, and at the same time more utterly beyond human comprehension; which may again point back to the bases of cybernetic art.

4. Sublime and Anti-Sublime

Seen one way, our two examples might reflect not a neo-Baroque but polarisation around an irrupting sublime. Jon McCormack and Alan Dorin describe a computational sublime that operates in familiar, Kantian terms, simultaneously producing aesthetic pleasure and the terror of the incomprehensible (2001). The exhaustive overproduction of ‘Sea and Spar Between’ would seem to fit this scenario directly. The more discrete, self-cancelling circuitries of *Portal 2* appear more in line with the position taken by Manovich in ‘The Anti-Sublime Ideal in Data Art’, where he argues that such art must refuse the old sublime, translating mathematical or computational vastness into more humane forms:

For me, the real challenge of data art is *not* about how to map some abstract and impersonal data into something meaningful and beautiful – economists, graphic designers, and scientists are already doing this quite well. The more interesting and at the end maybe more important challenge is how to represent the personal subjective experience of a person living in a data society. (2002:11)

This apparent distinction would enlist our two examples – and by possible extension, games and cybertexts generally – as inverse terms in a zero-sum equation. ‘Sea and Spar Between’ unleashes a topological sublimity of which *Portal 2* permits only localised glimpses. The game takes us to the moon but also returns us, as President Kennedy specified, safely to the earth. The algorithmic poem envisions an ocean of language, and though it can realise this vision only in localised instances, its inherent vastness provides an immanent condition for reading. More often than not (perhaps always) the reader of ‘Sea and Spar Between’ finds herself lost at sea.

Yet this crudely dualistic interpretation of computational game and poem does not stand up well to scrutiny. The two examples differ, to be sure, yet they are not truly opposites but something much more interesting. The attempt to read *Portal 2* as platform for a retro-humanist anti-sublime runs into serious difficulties when we factor in a crucial

detail of the game's denouement. The central narratives of both games in this series pit the player, represented by an in-game character called Chell, against a homicidal artificial intelligence (GLaDOS, for 'Genetric Lifeform and Disk Operating System'), who sets Chell an increasingly difficult series of logical and kinetic problems in which failure generally leads to death. In the course of the second game we learn that GLaDOS is not quite the monster we know from the earlier game. For a large part of the main plot sequence GLaDOS becomes our ally, fighting against a usurping machine intelligence. In the process we learn that GLaDOS was constructed from a human template who was most likely Chell's long-lost mother. The consequences of this discovery are complicated and deeply ambiguous: at one point GLaDOS embraces her human stain, but only long enough to purge it conclusively from memory. She re-makes herself (at least ostensibly) as pure mechanism, but also reaches a truce with her rebellious daughter. If we and Chell survive the challenges of the second game we are ultimately set free from the diabolical laboratory. GLaDOS declares that her purposes are better served by a pair of robots, Atlas and P-body.

In other words, the insane corporate construct we repeatedly save from suicide no longer has even sadistic use for human beings. This development resonates with the game's historical context both in little and large – with the acute threats of the 2008–2009 economic crisis, as well as the ongoing loss of economic security to advancing automation. The game may spare us from the dire mathematics of an unconstrained topological sublime, but it does so with a final, vicious twist. The documentary backdrop to the game's sign-off anthem is literally a 'Notice of Termination'. At the end of scripted play, we find ourselves fired, automated into redundancy, literally consigned to a post-industrial, post-human wilderness.

This theme of substitution or replacement is far from incidental, since it indicates that the *anti-sublime* of *Portal 2* may have less to do with Manovich's concept of re-humanisation than with Myers's attempt to locate the aesthetic of computer games in a fundamental 'anti-ness.' *Anti-*, for Myers, indicates not negation or denial but a perverse and deeply playful substitution, as when a child designates a broomstick a horse. The stick is a horse, for purposes of play, but at the same time the player understands it is not an animal but a length of wood – not a horse but 'an anti-horse' (Myers 2010: 32). This observation will of course recall the logic of supplement familiar from deconstruction, but arguably the development of this concept with respect to games carries a unique signature.

All games engage in anti-ness, Myers argues, because play always carries an implicit, meta-communicative message: *we're only playing; this is just a game; everything that is, also is not*. Play itself exists as self-referential substitution for work, fate, obligation, struggle, or other kinds of non-ludic experience. Play is set apart from those aspects of existence by conventions like the magic circle, but the separation is always liminal, never discrete. Play and non-play displace one another within hazy limits, but do not foreclose upon each other's existence, at least so long as sanity prevails.

Taking up Myers's logic of substitution and displacement, we might assign to *Portal 2* and 'Sea and Spar Between' a more complex relationship than simple polarity. The game and the poem-machine manifest different responses to the topological sublime, but there is no question of perfective cancellation. Their combination does not have a zero sum; their disparity cannot be resolved by a singular re-folding. The logic here

seems closer to the superimposed opposition, or supplement, described by Myers. Or to recur to our Deleuzian framework, we might remember that the concept of the fold implies a (literally) complicated relation of identity. If our understanding of cybertext embraces both the cinematic game and the combinatoric poem, we can exclude neither but must bring both together in resonance. The exhaustive foldings of ‘Sea and Spar Between’ invoke the uncountable magnitudes of algorithmic possibility-space. The more conservative game, which ventures briefly into (simulated) astrophysical space, turns away from incipient immensity in favour of coherent tasks and puzzles. It returns to its cave, in Deleuze’s terms the primary site of folding, offering us not a worker’s but a robot’s paradise of autotelic enterprise. As the Aperture motto proclaims, ‘We do what we must because we can.’ Such is the virtue of cave dwelling. (Not for nothing is the founder of Aperture Laboratories named CAVE JOHNSON, a name that folds together primary involution with the political patron of Moon-madness, Lyndon Baines Johnson.)

Yet this happy short circuit of duty and desire cannot be fully insulated from the old logic of the sublime, or its new topological, ‘objectile’ idiom. We may be able to open only two portals at once, but the laborious labyrinth implied by this procedure is, in the final analysis, every bit as insanely great as Montfort and Strickland’s sea of words. With her indestructible robots, GlADOS will go on testing until the sun burns out – or until Valve releases a third instalment in the series, which seems less likely.

Myers observes that ‘[t]hough much of art and art forms – particularly literary forms – possess some portion of the recursive and self-reflexive characteristics of digital media, the latter possess those characteristics most obviously, most strongly, and most pointedly during computer game play’ (2010: 35). This assertion certainly holds within its immediate context, though that context may be crucially limited. It may be important, in thinking about computational art, not to restrict the view to games, but also to include such cybertextual cousins as electronic literature, no matter how hard it may be to confine their multiplicities within a single field of view. In the case of ‘Sea and Spar Between’ and *Portal 2*, bringing both game and poem into the theoretical project reveals how the anti-ness of cybertexts can illuminate larger themes of a deeply playful culture.

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