

3. Spaces Between: Travelling Through Bleeds, Apertures and Wormholes Inside the Database Novel

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In 2002¹, in the novella for *Bleeding Through*², I wrote:

We're a civilization of layers. We no longer think in montage and collage; we multi-task in layers more and more. We are more identified with the author than the narrative – just think about watching the director's commentary on a DVD. People are developing the techniques to respond to changing visual codes.³

Now, five years later, my response to these changing visual codes has deepened. It has altered how I structure essays, novels – all my writing, particularly my next database novel (due out in Oct., 2007), entitled *The*

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- 1 The present essay was first written in July 2007. It has been minimally updated with additional footnotes.
 - 2 *Bleeding Through: Layers of Los Angeles, 1920–86* is an archival database novel (over 1,000 assets) that was first exhibited in 2002, at ZKM (Center for the Arts and Media) in Karlsruhe. It was produced in partnership with ZKM and Labyrinth Projects (at USC). The interface design was co-developed by Rosemary Comella and Andreas Kratky, while Norman Klein wrote the story, and was interviewed in video as the narrator, then wrote an accompanying novella for the exhibition brochure. It was published as a boxed set in 2003 and exhibited at numerous media festivals.
 - 3 This passage did not end up in the final printed version.

Imaginary Twentieth Century.⁴ What have these past five years taught me, specifically about data narrative?

The Reader/Viewer

In media (games, interfaces, electronics at home and outside – cell phones), the role of the reader has altered noticeably during this decade. So many new platforms have become comfortable to the public: blogs, wikis, my-spacing, u-tubing, iPods, and this week, iPhones.

After two corrosive generations of digital media altering our lives at home, codes even for what a story contains have noticeably shifted. At the heart of this change is home entertainment replacing what used to be called urban culture. The infrastructure for public culture in cities is vanishing rather quickly, particularly bookstores and live theater. That is simply a fact, not a gloomy prediction.

Museums have finally turned into cultural tourism, an extension of home entertainment. Pedestrian life in cities continues to be increasingly dominated by cultural tourism as well – by what I call scripted spaces (by scripted spaces, I mean staged environments where viewers can navigate through a “story” where they are the central characters. Thus, themed, scripted spaces can be on a city street, or inside a game, or at a casino).

4 *The Imaginary Twentieth Century* is an archival media novel of 2,200 images (among other related features). In its earliest form, it was exhibited twice at ZKM, in Karlsruhe, first in October 2007 (soon after this essay was written); then in 2009. Then a number of additional exhibitions generated a second interface, based more on the viewer sorting out piles of cards, for a story that operated in clusters (2,200 images re-edited, with many additions). This version is navigated through comic psycho-geographical, interactive maps. The interface worked as software by 2010, was finally published in 2015 – as an online *wunderroman* (a machine that choreographs an archival tale). Then, to complete the cycle of this machine, in 2016, a print component was added; that is, a second, yet different telling of the novel – in a print book – along with critical and ironic essays in the back. The co-directors throughout this eleven-year odyssey are Norman M. Klein and Margo Bistis.

This reconfiguring of the viewer has massive consequences. It has altered our national politics so thoroughly that our republic has, at last, outgrown the “vision of the Founding Fathers”. As I often say, half joking, the Enlightenment (1750–1960) has finally ended – quietly, under the radar, like lost mail.

As I also point out, we have become tourists in our own cities; and through the impact of global entertainment, become tourists in our own bodies as well.⁵ We visit ourselves as avatars; we replace notions of the unconscious with good medication. We pharmacologically study our bodies as if they were lopsided chemistry sets with faulty wiring. The era of nano logic means that we are to be steadily invaded in almost microscopic ways (medically, pharmacologically, surgically; and then through branding, theming, etc.). It is hardly a surprise, then, that the viewer is increasingly a central character in media stories (games, immersive special-effects films, themed environments, etc.)

Horizontal Tuning

Remember the horizontal and vertical dials on old televisions? Foreheads would bulge. The Rockies would jitter and shrink. I, for one, did not realize that this was a sign of things to come. As finance capital, those TV analog controls have become infinitely, digitally, more horizontal than ever before; and even more jittery.

In response, our sense of space within narratives (games, films, hyper-text literature) has morphed. We literally morph many spaces into

5 See my *Freud in Coney Island*, in which I compare the stillness of US mass culture, in the face of crises since 2000, to medication and a low-grade nervous breakdown. But the high slickness of computer design, Hollywood blockbusters, of cable news talk shows all reinforce this cheerful fatalism, so much like the spirit of the picaresque as a symbolic order about decline as a slide, not a collapse (picaresque decline is experienced as slow but relentless – in class hegemonies that feel themselves slipping away, in prosperity failing across the classes, in armies steadily losing ground; when moral chaos is as normal as a bribe; when rogues take charge badly of a growing disorder).

one – time into space – as if we were copying how the global economy morphs labor markets, national boundaries.

It is the ultimate synchronic mode of spatial design. Paradoxes dissolve under its effect. So when you build a media narrative, paradoxes must be carefully brought back into its navigation, almost like re-introducing an extinct species into a lake.

Clearly, our civilization is a comic tragedy, a mess as contrary as any imaginable. And our republic is fiercely in paradox – under assault, clearly in decline. All this hardly suggests the end of “contradiction,” but indeed, this global economy pretends to be too horizontal, too much about consumerism for older forms of the dialectic (Marx for one, Freud for another, balance of powers in our national government for another).

We now imagine applying all this to a database novel. We need media story where the paradoxes are inserted carefully. We cannot return to the media enthusiasms of the 1990s, no more obsession with design, new software, and CG polish, with the avoidance of paradoxes. We need to get truly beyond the nineties media exceptionalism, to generate digital stories that are more uneasy, less about the new “flash,” the new gamer tropes.

And that does mean neo-noir. We also must not confuse late cyberpunk with fierce critique. Giddy apocalypses in graphic novels are simply heir to H. Rider Haggard adventures and Verne *voyages extraordinaires*. I sometimes love these overdressed jingoistic fantasies about chauvinist adventurers, though I am more of noiraaholic. As long as there is a corpse in low key lighting, I am hypnotized. Neo-noir space operas and FX adventures have wrapped these codes together; just as late minimalist design has been worked into the design of internet screens. This formalism coming out of neoliberal marketing has entered our poetics as well, complicating (even flattening) how we apply noir fiction, twenties graphic design, or noir cinema from 1925 to 1965. We should give up on CG polish, and not congratulate the Internet for wikis and folksonomy. That is like sponsoring the horizontal economy without allowing for much paradox.

And finally, we should never assume that modernism (1860–1960) solved how best to tell a digital story. That means a “nix” to blind worship

of dysnarrative as an end in itself. Finance capital (derivative loans, tax havens) is dysnarrative enough without our help. Most of all, that nix has to include forms that feature the “self-reflexive” viewer, as in plays by Luigi Pirandello or Bertolt Brecht, a John Cage event, or a Surrealist manifestation. No kneejerk retro-modernism (modernists and postmodernists alike were obsessed with powerful contemporaneity as form). For media narratives, I have lost my faith in chance techniques, in hypertext, in neo-minimalism, in clicking and clacking to your own adventure...

The Space Between

But then what is left to work with? A great deal, I believe. To set the mood, I'll begin with three possible backgrounds, then introduce seven tools for media narratives (not games, other modes). Finally, I will conclude with a fragment from an essay on database novels written thirty years from now.

I'll keep the pace brisk, as if we were out of time, but truthfully more because it is still historically very early. Global warming aside, we are in an era that lies “in between,” like Europe in the early 1840s, or the US in the late 1930s, or England in 1910. We can smell the gunpowder, but don't quite believe it. And we are certainly tired of old avant-gardist bluster. We should not trust noir cuteness, second-life jingoism, glib fatalism, Manichean abjection. We might easily be entering a golden age, quite by accident; and only culturally. Our political condition remains desperate, comical. However, Italy, Spain, England, France all had their golden ages while their population suffered severe declines. But how do we honestly manage that – in narrative? Between mass marketing and academic oligarchies, where is a truly honest place to start, to tell a story? The subject here is database, interface, digital archive.

The Virtues of Decline

Media culture may not have the patience to take the slow, ungainly steps needed to rediscover what literature and theater once delivered – in print media, for metropolises circa 1900. Yet, the potential emerging out of digital archiving remains vast – for groundbreaking modes of storytelling. To realize that potential, to keep an innocent eye, many established story codes will have to be scrapped (for the most part, as far as digital media story goes). That includes film grammar, the three-act screenplay, the well-made play, melodrama, Joseph Campbell tapes. However, we must construct a history of older forms, invent points of origin.

For example, the US and western Europe today remind me of Spain in the seventeenth century. While the population of Spain dropped by two thirds, extraordinary picaresque⁶ novels appeared – very raw. They amounted to the birth of the modern novel in many ways, if you extend their influence into England by 1720. (So much else to add, of course: Spanish theater, the (pre-)existential theater of Calderon; the scripted phantasmagoria of Spanish Baroque painting; as the response in Spain and the Spanish Americas to Baroque architecture from Rome.

But in the bone yard that was the Spanish empire, alternatives emerged. The former Spanish Netherlands flourished, even in the midst of collapse around it (religious wars, etc.). Similarly, in the US today, I

6 Picaresque novel: Baroque tale of a rogue, usually told in first person. This very well-known form began in sixteenth-century Spain (Lazarillo de Tormes, 1554, et al). In France, it took on the spirit of more sensual escapade (Lesage; also borrowing from Rabelais). In England, beginning with Defoe, it was redeveloped, by Fielding, Smollett etc. Also eighteenth-century philosophical picaresques, as political allegory: Swift, Voltaire, Johnson. The moralism of the nineteenth-century novel shifted the picaresque toward the *bildungsroman* (Mann, from Goethe). Modernists' fascination with the picaresque turned into structuralist and anti-structuralist episodic literature, and cinema. Consider also the twenties Soviet fascination with Sterne (Shklovsky), the revival of picaresque among modern novelists, and in cinema, as well as its crucial role in Latin-American fiction, from Borges forward.

can see exceptional growth. Consider the bizarre economic bloc where I live: California/Pacific Rim/East Asia/El Norte-America. I can already see Asia literally ending at the San Pedro Harbor in Los Angeles. The blurring of borders from Latin America is so advanced that cities utterly unlike Mexico are evolving in this Latino-identified, emerging LA.

What kind of database novels should respond to this economy – to its widening paradoxes? Advanced suburbanism remakes enclaves within the inner city. Consumerati move into these enclaves, next to paupers from literally another world. The children of immigrants are beginning to restructure the politics and material culture in LA. Eventually, all classes and ethnic groups will become immigrants.

Much of this paradox remains unnoticed in computer-driven story, in gaming, second lives, etc. Most of the contrariness that makes LA remarkable is still hidden – beneath Google Earth. Its human scale, its neighborhoods beyond the fancy shopping are not sexy enough to remember. Only the big-bang version of LA survives, True Crime rapper video games, and spinouts from Hollywood FX movies.

But in a more casual form, like a novelistic database, the scale can be much more intimate; also, much more detailed. Database novels do not have to blow up the universe to get to act three. They can hover uneasily on a human scale, even look unfinished, like an anthropology, more than interior decorating for the end of the world.

However, unfinished is too often considered a sin. Less “visual excitement” (less metallic, plasmic, or holographic) runs against the grain of media marketing. Too often, digital imaging means high finish. An unearthly shine, like a well-oiled haircut, passes for cheerful, upbeat. But truthfully, how often is high finish just a futile attempt at dignity, a way to sell rather than speak – that big smile during a low-grade nervous breakdown?

Truth is: we fall asleep on our monitors. Many American media artists are utterly “afflicted” by overwork, barely above water. They remain cheerfully haunted. Despite their/our best intentions (myself included), we still may be a culture better at forgetting than responding. And the support system for media experiment – for discovery through unfinished – remains very uneven.

That said, I'll run through my list of tools for database novels:

- New Points of Origin: The Book as Renaissance Computer
- The Aperture
- Bleeds
- The Space Between
- Wormholes
- Streaming or Gliding
- The Picaresque

New Points of Origin: The Book as Renaissance Computer⁷

Thus, new software is often shiny more than “new.” Clearly, some origins for new digital story are five hundred years old. In researching for *The Vatican to Vegas*, I discovered that book design by 1550 was clearly responding to a new software – to perspective. This software helped the commercial classes, military engineering, seafaring, mathematics, very much like the computer today.

By 1550, new designs for the index, appendix, footnotes and afternotes all enabled the book to contain, like a computer today, data essential to the commercial classes, in particular. So I structured my “history of special effects” as if the book itself were a Renaissance computer – or a Baroque computer, circa 1650, or its descendant by 1850.⁸

7 The first anthology to directly use the term is Neil Rhodes's *The Renaissance Computer: Knowledge and Technology in the First Age of Print* (2000). I first became obsessed with this parallel when researching the histories of emblem books, of Memory Theaters, cabinets of curiosity. By 1995, when I visited the campus at Microsoft, I found a library of these Baroque books there; and very elaborate interest among Microsoft teams (in the antique book as computer). That probably alerted me most of all.

8 Encyclopedic Enlightenment models of the book evolved by 1850. By that I mean the evolving dictionaries, and industrial manuals of the mid-nine-

Similarly, when I worked on *Bleeding Through* (with Rosemary Comella and Andreas Kratky), it became apparent that novels in the eighteenth century also tended toward data,⁹ as did stream-of-consciousness fiction in the early twentieth century.¹⁰

The Aperture

For the database novel, since it often relies on historic archives, these old forms offer “new” tools. Clearly, the act of reading a novel has always been interactive anyway – mentally interactive, that is. Absences set up within the narrative set the reader to work – “inventing,” filling in the blanks. No mode of hypertext can equal the evocative power of the reader mentally filling in the blanks.

teenth century, the positivist structuralist model for the scientific book, heir to Diderot’s *Encyclopédie*.

- 9 Eighteenth-Century Fiction: This was very much a model I could share in the design of *Bleeding Through*, as well, since the producer Prof. Marsha Kinder began as an eighteenth-century scholar; and both designers, Andreas Kratky and Rosemary Comella, had strong backgrounds in literature. What particularly fascinates me about the eighteenth-century English novel is its casual, conversational mode of departure: similar to what Barthes meant by “The World as Object” (3–12). A seemingly careless ease of discovery enriches newer forms (the novel), in their earlier stages of development. One can see much the same in Hollywood cinema, from 1921 to 1960, and in practically every world cinema imaginable. That disregard must take hold in the media design of database novels as well. We should all become Henry Fielding and Sterne, learn how to infuse the computer novel with “the gentle art of conversation,” with rigor that grows out of careless associative discovery.
- 10 Stream of consciousness fiction: To what degree is a streaming point of view something else when assets dominate: photos, etc. The archival spirit of Sebald’s novels suggests the problem – how the outside and the intimate are an aperture, a streaming of gaps, misremembering, and the ruins of action. Very apt for database fiction.

Folklore is obviously “interactive” in that way, since the characters are structuralist.¹¹ That is, the characters are cyphers, blanks for the reader to fill in. No wonder that small children expect their fairy tales to be read to them in precisely the same way each time, with the same text exactly. They need familiar absences in order to mentally enter, to use the hollow structured character as a vessel, an avatar.

All media relies on absences to tell story. These absences are the essence of each: Literature is blind; therefore, is visually imagined. Cinema is autistic, sees as a machine, not a character, therefore requires film grammar to heighten the absences. And so on. But in that case, what is absence within the computer? What blindness or deafness can be turned into mental interactive story?

It is impossible for any story to be non-linear. Even graphic animation begins and ends (Oskar Fischinger et al.). Similarly, the computer program is a code so linear, even a straight line is less perfect. Chance techniques are merely wider algorithms. Minimalism is essentially more polish, another feature.

The computer program is an almost cosmological form of cubist collage. So what possible absence can a computer program “honestly” generate, without adding finish, removing paradox, putting more greasy shine in your hair?

For *Bleeding Through*, I decided that holes within the stream of plot points were the easiest tool for absence – not unlike holes in games; also in literary fiction, in music; a figure/ground ambiguity in the plot itself. The non-heroine, Molly, was an old woman who might have murdered her second husband. But that was too many years back. You looked into Molly’s face for clues, some twitch at least. Nothing. She behaved with a

11 By structuralist interactive folklore, I mean the gaps that have been studied within the structure of myth and folklore, particularly in twenties Soviet structuralist linguistics, and in Lévi-Strauss. Even in the design of dolls taken from fairy tales (i.e. the Big Bad Wolf with Little Red Riding Hood inside his dress – gaps for children to mentally fill in, quite literally). The Transformer, the Barbie outfits ... and hundreds of examples in sim games, to build through inversion.

gentle absence, an absent-mindedness in her manner. No criminal secrets lined her face. No dead husbands rotted in her basement. There were no transitive clues anywhere, except the viewer filling in the blanks, building a fictional case, a story.

Thus, to make the absences in the novel stand out, the role of the viewer was repositioned. The reader is asked to identify as the maker or the engineer, rather than with character. The planned mental echo, enough to surprise, enough to immerse, was crucial to a database novel. Over a thousand images and film assets would stream with absences, like bubbles in a polymer wrap. Or like a stream-of-consciousness novel – where action itself is almost deleted by the character’s state of mind. Molly’s life was filled with secrets, and simultaneous distractions.¹² She was a Molly who never bloomed. She hated the creaking of her bed overheard in the street. She never lets the viewer listen in.

Most important: this is an authored story, where the viewer is the maker, not the author. The viewer is invited to guess, through research provided.

Before long, the viewer also drifts through Molly’s streets. The neighbor gradually becomes more interested in just inventing a crime; or being immersed in what crime leaves out. Thus, by the third tier (after the twelfth chapter), the viewer knows more than Molly, who selectively forgets anyway. But more in what sense? Molly clearly inhabits her own experience.

The viewer now meets characters Molly should have known, but didn’t. We travel thoroughly within a three-mile radius of her house. We discover that in classic noir films, more people have been murdered within those three miles than anywhere else in the world. So where do

12 “Simultaneous distractions” is a term I use in *The History of Forgetting*. A mental image (imago) so fierce that any image resembling it gets distracted. That is, even if it stands directly in front of you, it is erased, forgotten. Recent famous example: how 9/11 resembled the movie *Independence Day* – at first. Then an inversion of imago erased the movie. The gaps of mental imagos can be carefully widened or shrank – aperture – in computer storytelling as well.

you put the camera? Molly hated crime stories. Even film and photography partially erase Molly, and her city. The more photographic the image, the more apertures it suggests.

In *Bleeding Through*, the width of the aperture was controlled by key words. The effect may seem random, but actually it was planned. To repeat: In a database novel, apertures must be authored. They might *suggest* chance, but that is purely another fiction inside a fact. Chance is an assigned absence.

Baudelaire was a magnificent guide here. His theory of correspondence proved essential.¹³ However, only one aspect of this theory worked best – not the moment in his poem *when* Baudelaire evokes synesthesia¹⁴, but more broadly *how* he achieves this effect. How does he get the reader to smell and hear street noises between the letters and words? He orbits around this question throughout his poetry. Correspondence (not illustration) turns data into sensory fiction. It makes “living pillars ... whisper in confusion.”¹⁵

13 Baudelaire’s theory of correspondence: Usually associated with his poem “Correspondences”, but essential to his theory of modernity as well, of the gap (aperture) between codes of the eternal and of the transient (fashion). Baudelaire left these apertures in his poetry to enhance the feeling of the moment, of its dreamy precision and paradox.

14 Synesthesia became an essential goal in Symbolist art, in Rimbaud, later in Kandinsky; and earlier, in Baudelaire. The key for our purposes here: To erase one sense through another generates a sensory aperture. This thrill is extremely powerful. One can also bring McLuhan (and then French post-structuralist theory) into the discussion, around the trade-off when one medium substitutes for another (the wheel for the road, the telephone for the zone of hearing around you, etc.).

15 On Baudelaire’s “pillars whispering in confusion” (“Correspondences”, 1857.) Also: How “infinite things sing the ecstasies of the mind and senses” (Baudelaire 1857). In French: “Qui chantent les transports de l’esprit et des sens.” The verb “transporter” has the triple nuance: to convey, to transfer, to enrapture. It is a process of correspondence in itself. Baudelaire relentlessly selected verbs with multiple mental action, with seasoning. Or what Henry James mean by fragrant, one of many quotes: “their fragrant faces against one’s cheek, everything fell to the ground but their incapacity and their beauty.” (*Turn of the Screw*, ch. 8). Or the following from *The Golden Bowl* (II:2): “She should find him walking up

We apply correspondence to a stream of photos. The moments when the photos appear do not precisely match what the video narrator is telling us about Molly (I speak in a video insert while the images stream). The photos do not simply illustrate the city, or her story; they correspond, quite a different matter. Correspondence does not match like a documentary film. It leaves holes. The assets in *Bleeding Through* were carefully mismatched. They left room for mental leaps and sutures.

But the aperture cannot be too wide. If the gap is too wide, no mental leap can bridge it. Apertures should generally avoid purely surrealist automatism, as well as chance techniques – not just a throw of the dice or the I-Ching. They are “figure-grounded” ambiguity for the viewer. They echo (silently) Molly’s world in Los Angeles, from 1920 to 1986.

Like keyholes, apertures help us enter downtown, but not as cinema – not movie drama nor documentary – as a third form. This third form evokes story around the unreliability of film. Its aperture plays against mental pictures the viewer already has of Los Angeles (mostly from movies). It is a vivid anti-movie or anti-tour of a city.

Bleeds

The interface is an engine that generates gaps. Its navigation moves these gaps along. But how do these gaps help reveal character, setting, the conclusion? How do they fit well (but feel as uneven as life) in the story?

The width and paradox of the gap are its aperture. These apertures must be vivid enough to feel immersive – more like metonym than metaphor. For the philosopher Roman Jakobson, these apertures operate like a brilliantly engineered language disorder.¹⁶ For an instant, the reader cannot select. Meaning is impaired, like a charming aphasia: the

and down the drawing-room in the warm, fragrant air to which the open windows and the abundant flowers contributed; slowly and vaguely moving there and looking very slight and young...” (225).

16 See Roman Jakobson’s widely republished “The Metaphoric and Metonymic Poles” (1956).

visual mind cannot transfer the words back to speech. Momentarily, the hierarchy within language is suppressed. To restore contiguity, the reader substitutes, fills the gap. In a computer interface, the design-gaps force substitutions so vivid that the viewer literally enters the space that moves the story along – not symbolically, but as an act of navigation.

For *Bleeding Through*, the designers Rosemary Comella and Andreas Kratky devoted long weekends in LA to matching old photos to streets today – exactly. The past was black and white. The present was in color. Then, by simply “bleeding” (dissolving) the present slowly through the past, the color erased what was. The gap between color and black and white generated an aperture similar to how memory distracts, or even erases. Thus, Molly’s odd memory, the erasure of city (history of forgetting), and the unreliability of the photograph all coexisted in the same space. The interface reinforced a central idea that reappears throughout the novel. It sharpened that idea, gave it spatial simultaneity, through metonymy.

The Space Between

My newest database novel is also centered around a woman’s life, but with a very different working principle. Titled *The Imaginary Twentieth Century*, it reveals how the twentieth century was imagined before it took place. In 1901, if legends are to be believed, a young woman named Carrie was seduced by four men, each with their own version of the twentieth century. How they all wound up there (Scheherazade in reverse), and where they went afterward, is the engine. The archive includes 2,200 illustrations, photos, film clips, as well as a stochastic sound engine. In all of these, there are gaps carefully assembled, between imagining the future, confronting the present, and watching the future unfold (first museum interface by Andreas Kratky; other software designers would follow after 2008, for the second interface). The engine is a vast misremembering of the future, like an endless plastic surgery that never quite looks like the original.

The period, 1893–1925 (mostly until 1913), was stricken by a sense of “space between” – neither/nor. The full impact of industrial design came later. The world wars were only imagined. The fears of socialist revolution and feminism had not recharted human history. Even the telephones, the cars, the airplanes, the recorded sound, were all phantoms, compared to what happens after 1915 or so.

The interface, the voice-over audios, the constructing of the spaces between images – all must deliver apertures like spaces between. These had to resemble *fin-de-siècle* print – its unusual page layouts – but the blanks between pictures are everywhere, as spatial infinity, as abstraction. They were everywhere on the streets as well – ads on the windows, kiosks. Collages were simply an artist’s answer: spaces between, time overlapping.

Carrie’s story takes seven chapters essentially, in two tiers. Each of her suitors imagined a different future.

- A. The first is the moon as Africa (Verne and others as imperialist fabulators).
- B. The second was the dense mega-city, the metropolis – how to escape above or below the Crowd.
- C. The third was the anarchist rumblings of apocalypse and change – the world war that was coming, the feminist movements, the social revolutions soon to come.
- D. The fourth world is about building a body that was rebuilt for the future – a body without fatigue.

Each of the four worlds has a gigantic chapter of its own, in tier three (up to four hundred images apiece).

And finally, in tier four, Carrie sees what the imaginary future may actually look like, in 1924–25. The story ends, then retells itself for generations, in a vast archive assembled by the secretary of Carrie’s uncle.

Each character, each technological point of view, each city in the story/archive must jibe somehow, add to the comic tragedy. Each must reveal its distortions of the future. In our story, the new century is both a ghost and a noisy, crowded machine. It is industrial vision in a world

dominated still by agriculture (the pastoral machine). It is industrial archaeology, industrial photography – in Chicago, New York, Paris, London, Berlin, Berne, Greek hill towns, Los Angeles.

This is fundamentally a novel about seduction – sexual, futuristic, apocalyptic, utopian. The promises never quite add up. It is like plastic surgery failing to look like the original, no matter how many operations it takes. This imagined century delivers other than what it promises. It even delivers Carrie's legend, known finally even to Duchamp. He dedicates *The Bride Stripped Bare by Her Bachelors, Even*, his *Large Glass* to Carrie's legend. That legend becomes another space between in her life.

Even data fields are spaces between. They cannot generate conclusions and second acts in the same way as a novel or a film. Nor should they. So, the apertures become essential, to allow the view to mentally set the speed, determine the rhythm, enter the shocks.

Wormholes

The wormhole is a theoretical shortcut inside an interface. We know about wormholes among stars. Wormhole physics, like computer graphics, is a visualized subjunctive geometry. It is a map of phenomena that seem unfindable, except mathematically, except as echo.

The computer cannot help but evolve wormholes. Its theoretical space always becomes a topos, or a chronotope, or a topology. Simply put, that spiraling milky way of visual data becomes a sleight of hand, a brilliant architecture. Part of this effect is design. The computer program turns mathematical code into user-friendly visual icons and navigation. The wormhole is another space between, quite suitable to science fiction, time travel, being trapped in the wrong body, misremembering the future. The space between imaginary, geometric worlds, and action itself. Shall we ride the circle, or cross the isthmus of the wheel.

Each one of the suitor's worlds has its wormhole effects, ways to transverse, or simply dissolve, into a labyrinth no wider than you prefer.

Computer wormholes are another aphasic visual effect, another metonymic trick upon the eye. Their gaps are so slim, they are endless

(but never infinite). The geometry of a program allows you to imagine the four worlds, spaced between gaps set up by the narrator. You can reverse these gaps like a sock, turn Africa into the moon, flip the skyscraper upside down, become the body without fatigue.

Streaming or Gliding: The Animation of the Interface

In *Bleeding Through*, the images stream from left to right. In *The Imaginary Twentieth Century*, they glide, rather than stream, because the complexity of nineteenth-century illustrations was much more architectonic, had to be seen at once, for the mental gaps to emerge. Sliding resembles a stream of consciousness novel. Molly is a Molly Who Never Blooms. Gliding suits a more episodic mode of storytelling. The viewer can move in up to four directions, or seem to.

The viewer animates the archive in order to locate apertures that express the paradoxes, the contrary facts that are also fictions, the spaces between.

The Picaresque

This Baroque mode of storytelling relies on episodic breaks, relatively flat eccentric characters, and the wandering through the labyrinth of the world. Inside this world, space and time misbehave, as if you were inside the daydream of a careless god. You witness the decline of the future, along with its greatest promise. You are an epic failure, in a world of utopian misunderstanding.

I am quite convinced that the picaresque is an ideal form inside a database novel. Thus, by way of picaresque, I can invoke Cervantes, Grimmelshausen, Fielding, Twain, Potocki, Pynchon, hundreds of graphic novels, video games, Philip K. Dick and science fiction of alternative worlds. The picaresque story is often driven by a hidden archive, secret knowledge, a trace memory that never quite answers its questions. It is an oracle with a touch of senility.

The viewer navigates through these archives like an erring knight more than knight errant. The wormholes, the spaces between, the misrememberings, the magic that is mostly legend, all conspire, but with very little purpose. The guidance mechanism broke last winter. But something is still running, like a waiter at a bombed-out restaurant.

The picaresque lost its appeal in the mid-nineteenth century. Only in the past fifty years, from Latin-American magic realism to Pynchon to science fiction, has it achieved a comeback, of sorts.

Most of all, the picaresque is a pilgrimage through decline. Americans are particularly fascinated by picaresque now, because it fits into folklore as special effects, escapes into one volcano or another. Americans want to learn more clearly where their decline will lead. They want to see their alienation humanized as a dark joke.

Thus, *The Imaginary Twentieth Century* is a picaresque, perhaps as Duchamp, Twain, Musil, Wilde, Bierce, Woolf and Kafka might have assembled it, might have assembled its aperture. On their behalf, and for all the picaresque that these relentless databases may bring, I offer these two experimental novels, one on stream of consciousness, the other as a picaresque. I manage better when the subject is about loss, selective memory gaps. I am convinced that the computer is a broken necklace that continues to metastasize. It strangles us with user-friendly data. Unless we humanize its savage, comic aspects, our stories will remain as thin as bumper stickers.

For the as-yet-unknown master novelist reading this, I offer my unrestricted support. That is the purpose of this essay, to leave an aperture where newly engaged work can follow.

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