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Pipe Bomb: Exploding Code in the Work of René Magritte and Jodi

Following Michel Foucault's brief works of art criticism, the work of René Magritte, and www.jodi.org, this essay will attempt to carve out an interpretive zone in which to better understand the semiotic play at work between different orders of textuality in digital media production. To begin I will construct genealogy of critical image production surrounding Magritte's now classic 1928-29 painting *La trahison des images*, or *The Treachery of Images*. By tracing a slowly decomposing relationship between language and images through Scott McCloud's reductive materialism (*Understanding Comics* (1993)), Henning Pohl's ostensibly immersive code-space (*La trahison des images numériques* (2009)), Douglas R. Hofstadter's clever calligrammatic sketches (*Gödel, Escher, Bach: an Eternal Golden Braid* (1979)), and Michel Foucault's five part procedural analysis (*This is Not a Pipe* (1973)) – inspired in part by Guillaume Apollinaire's calligramme *Fumées* (1914) – a method for reading www.jodi.org emerges.

www.jodi.org is a frequently discussed digital media artwork by Joan Heemskerk and Dirk Paesmans (collectively known as Jodi) in which meaning is produced specifically through the dynamic interplay between code and output. A large body of new media scholars have adopted a similar critical framework for reading Jodi's website. This essay picks up where Alan Sondheim, Peter Lunenfeld, John Cayley, McKenzie Wark, Alan Liu, and C. T. Funkhouser each end his criticism of Jodi. Instead of reading narrative or ironic causality between code and output, I perform a kind of Foucauldian reading which emphasizes the disconnect between these two orders. Rather than reading various windows of a web browser

sequentially in order to construct narrative frames, the linguistic signs and plastic elements collapse into simultaneous and, more importantly, discontinuous arrays.

René Magritte, “arguably the most durable of Surrealist painters,” created *Ceci n’est pas une pipe* in 1926 (Harkness 1). *La trahison des images* (1928-29), *Les Deux Mysteries* (1966), and other variations on the pipe-theme followed (see fig. 1). A deceptively simple image, Magritte’s pipe is referred to in discourses of computer science and art history alike to trouble linguistic notions of image-making and to introduce concepts of self-reflexivity and recursion. The painting depicts a plain brown pipe, rendered in the naturalistic style of graphic illustrations or advertisements, with black cursive script, carefully lettered to read “ceci n’est pas une pipe,” which translates to “this is not a pipe” in English. Both the words and object float upon a near



Figure 1. *La trahison des images* (1928-29), René Magritte

white sepia field and cast no shadows. In the museum or gallery setting this image is typically framed, often decorated with ornamental carvings and gold leaf. Magritte's signature in the bottom right-hand corner of the image is unmentioned in most close readings of the work, including those collected in this paper. Perhaps taken for granted as a hold-over from earlier eras of art history, the unquestioned signature assumes an autonomy disallowed by other aspects of the composition. These central features, text and pipe, reference one another and in this way they perform a paradoxical operation similar to that of the famous Liar Paradox in which Epimenides, a Cretan, declares "all Cretans are liars" (Hofstadter 17). The paradox gives rise to irony, which, when mistaken for the purpose of the painting, resists further reading.

This initial level of irony is reflected in Scott McCloud's *Understanding Comics*, which offers a cursory history, vocabulary, and basic theory of comics in the format of a non-fiction graphic novel. McCloud's comic avatar, oscillating between tour guide and Comics 101 professor, narrates nine lessons ranging in content from practical education in the techniques, vocabulary, and history of comics, to more general theoretical considerations of narrative, temporality, and representation. In Chapter 2, "The Vocabulary of Comics," McCloud begins his discussion of the icon and cartoon with a two page reading of Magritte's *La trahison des images* (see figure 2).

Standing in front of *La trahison de images*, McCloud's comic book avatar lectures for nine of ten frames on the material and mimetic aspects of Magritte's pipe. The two page spread is divided metrically into twelve square frames, the book's standard chapter title graphic replacing the top two frames of the left page (McCloud 24). The remaining ten panels enclose repeated black and white representations of Magritte's image, the spread's strongest visual element, faithfully accompanied by McCloud's less complex cartoon avatar and standard text bubbles.

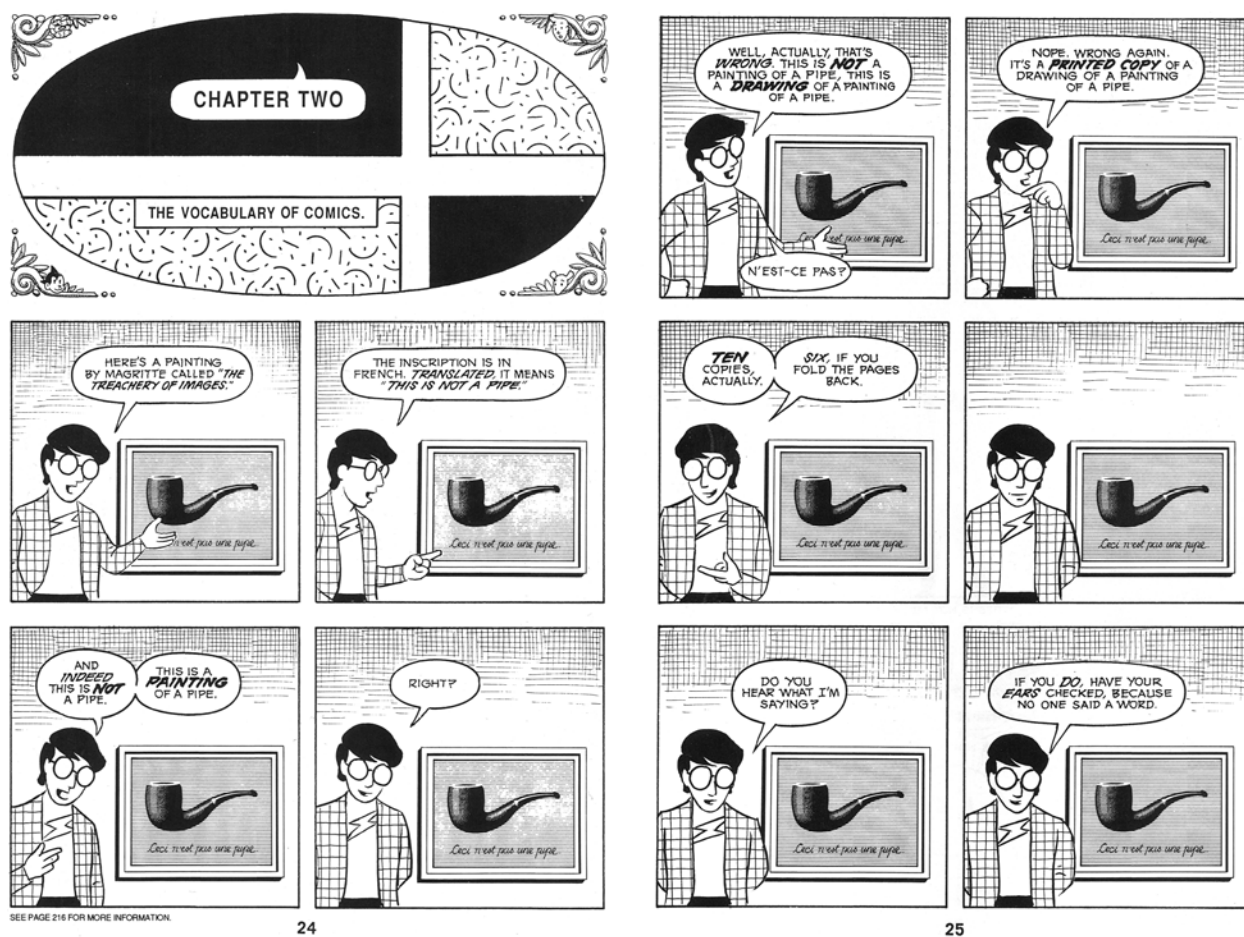


Figure 2. *Understanding Comics*, Scott McCloud (pages 24 and 25)

The static repetition of such similar imagery effects a stark composition, in contrast to the playful variation underlying page layouts throughout the book. Slight discrepancies in line and tone along with subtle posture changes in the cartoon figure exposes McCloud's pre-digital production methods of redrawing his avatar over and over and perhaps pasting a photocopied *La trahison des images* in each frame before Bob Lappan, the book's letterer, pens the text into each word bubble. Page 24 and 25 are the only occasion of such specific mechanical reproduction of another artists' work in *Understanding Comics*. The gridded panels of Magritte's painting begin to recall Andy Warhol's matrices of screenprints.

Like most viewers of *La trahison des images*, including Foucault, McCloud engages first with the obvious question: if not a pipe then what is it? "My God, how simpleminded!" writes

Foucault, “[t]he statement [“this is not a pipe”] is perfectly true, since it is quite apparent that the drawing representing the pipe is not the pipe itself” (Foucault 19). However, whereas Foucault will redouble back on this statement by injecting language into the image, McCloud will proceed down this line of material reasoning to sustain a merely ironic position toward the work. The first two panels of the lecture begin with an introduction and translation of both the title, “The Treachery of Images,” and the subtitle, “this is not a pipe” (McCloud 24). Continuing in the next panel McCloud smugly sets up his first joke, “and indeed this is not a pipe/this is a painting of a pipe” (McCloud 24). In the last panel McCloud mockingly asks “right?” before allowing the page break to act as visual pause to support the comic timing of this first joke (McCloud 24). The punchline positioned at the top of the next page explains “this is not a painting of a pipe, this is a drawing of a painting of a pipe/n’est-ce pas?” (McCloud 25). But McCloud is just getting warmed up. “Nope...wrong again...it’s a printed copy of a drawing of a painting of a pipe/ten copies actually/six, if you fold the pages back.” The fourth panel on page 25 following these three materialist reductions of the pipe-form depicts McCloud standing silent, apparently quite pleased with himself, in front of *La trahison des images*. At first, this still panel seems unique when compared to *Understanding Comics* at large because it depicts neither narration nor an illustration of some concept. However, the last two panels of page 25 reframe the still panel as another comic pause, demonstrating McCloud’s last point on the material nature of sound and its incommensurability with comics.

Digging deeper and deeper from “painting of a pipe,” to “drawing of a painting of a pipe,” to “printed copy of a drawing of a painting of a pipe,” to finally “ten printed copies of a drawing of a painting of a pipe,” McCloud represses the image of the pipe further and further for both ironic and educational intent. His compounded statements, a sequence of seemingly firmer

and more fixed textual representations of the Magritte's painting, adjust the location of the pipe down a rabbit hole of material and medial constraints. There is seemingly no end to the material qualifiers he could add to Magritte's image, reducing the painting to a Modernist study of medium specificity. On the bottom of the page 24, a footnote directs toward the last page of the book in which McCloud notes "[t]he Original (sic) painting, "The Treachery of Images" by René Magritte, resides at the Los Angeles County Museum of Art. Our thanks to the museum for allowing us to imitate the image" (McCloud 216). Never missing a chance to assert further medium reductionism, McCloud emphasizes "original" by capitalizing and underlining the term and makes sure to use the word "imitate" rather than "reproduce." Too absorbed in his lesson, he forgets to explore the mimetic or semiotic aspects of Magritte's cursive script which deserves similar dislocation. This omission is made more glaring by McCloud's continual reliance on the presumably intrinsic correlation between image and text throughout *Understanding Comics*.

Henning Pohl follows McCloud's logic to the next alleged limit point set within the digital image. *La trahison des images numériques* (2008) or *The Treachery of Digital Images*, is a large-scale projected computer visualization created by Pohl and exhibited at the 2009 Digital Assembly Conference at the University of Florida, Gainesville. The digital visualization showcases an exploded version of Magritte's painting, *La trahison des images*, in which the individual pixels of the image slowly undulate in and out of the image plane, constantly deforming and reforming the recognizable image of Magritte's pipe and text. The altitude of each pixel is based on unique color values thus approximating a pointillated three-dimensional histogram (see figure 3, 4).

With the lights dimmed, Pohl's wall-sized video installation mimics the familiar glow of an idle computer monitor. Aesthetically referencing the tropes of classic Windows screensavers

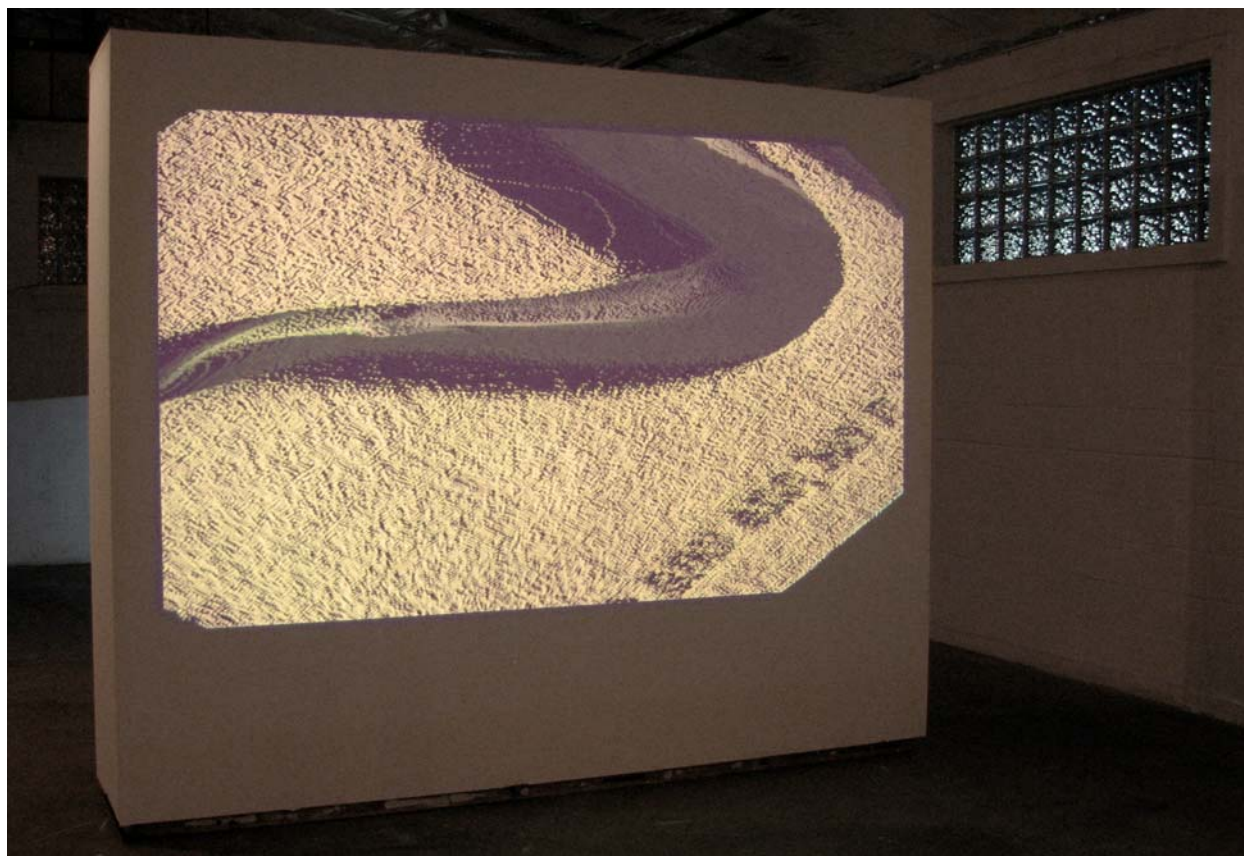


Figure 3. *La trahison images numériques*, Henning Pohl (installation view)

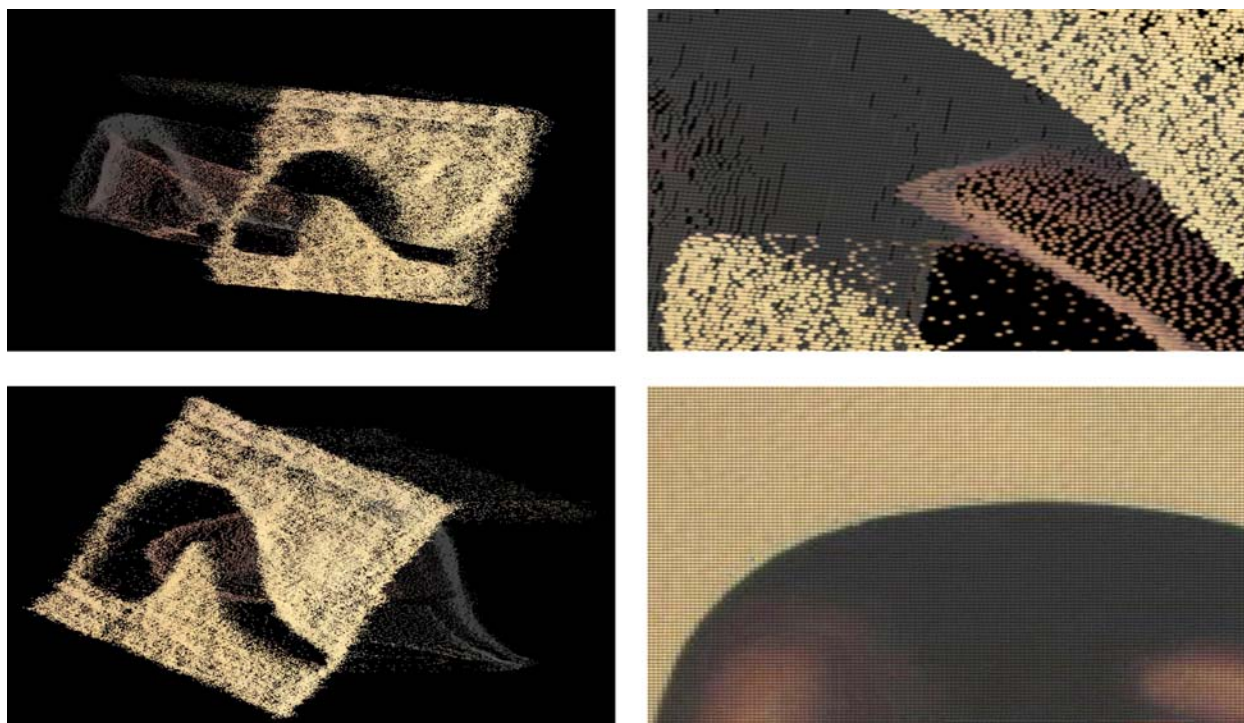


Figure 4. *La trahison images numériques*, Henning Pohl (screenshots)

like *Curves and Colors*, *Flying through Space*, and *Mystify Your Mind*, or Apple's more recent *Flurry* screensaver, *La trahison des images numériques* exploits both three dimensional particle matrices and digital rotation algorithms to revisualize Magritte's pipe. The underlying movement inherits all the signs of a measured computer science exercise where palpable code loops steadily increment all variables like the impossibly granular gears of some whirring micro-clockwork. However, the speed, scale, color, and complexity of Pohl's work produce a calming and strangely numinous atmosphere. Particulate clouds of delicately shaded points of light gather and disperse on the gallery wall. As the points rotate, a subtle grain suggests the organizing image directing the distillation and dissemination of each spatial coordinate composing the gridded star system. Often the bodies of viewers are encased and illuminated by the calculated glow of *La trahison des images numériques*, which in a public setting becomes reminiscent of the introspective spaces common to most natural science museums, butterfly gardens, and planetariums. As in Giselle Beiguelman's *Code_Up* (2004) or the Wachowski brothers' *The Matrix* (1999), Pohl's visualization stages the fantasy of hacking into the imagined interior of two-dimensional media spaces, casting code in the role of a pseudo-mystical subterranean force driving the digital.

By manipulating the discrete data local to a JPEG version of Magritte's painting, Pohl suggests that this isn't a pipe or a painting of a pipe but is instead a digital image composed entirely of discrete data. Like *Code_Up* which rehearses the digital aspects of Michelangelo Antonioni's *Blowup* (1966), Pohl's visualization performs a series of transformations on the information contained within a digital file to produce extra-imagistic meaning. Ignoring some of the more specific aspects of the JPEG format such as the data included in the header, Pohl creates a two dimensional array of values based purely upon the pixels composing the image.

Rather than simply presenting a three dimensional topography or bump map generated from the X, Y, and hexadecimal value of each element in the array, Pohl abstracts the data further by converting each singular hexadecimal number into three discrete red, green, and blue (RGB) values. Finally, Pohl's now five dimensional array (X, Y, R, G, B) is set in motion and projected into a two-dimensional space viewable by any standard monitor. The end result behaves like a three-dimensional static particle system, each value retaining its original RGB coloration and only occasionally coalescing into human-readable patterns.

It is as if Magritte's pipe has been "smoked" in the way Hollywood special effects producers use particle systems to create smoke, fire, dust, and sand. Unlike McCloud's attempts to distill materiality down to traditional media types, Pohl "smokes" both the pipe and the text, implicating both within a transcendental image-space beyond medium specificity which promotes the fantasy of diving into data. Initially following a similar logic, Douglas Hofstadter promptly summarizes that "the only way not to be sucked in is to see both [the pipe and the text] merely as colored smudges on a surface a few inches in front of your nose" (Hofstadter 701).

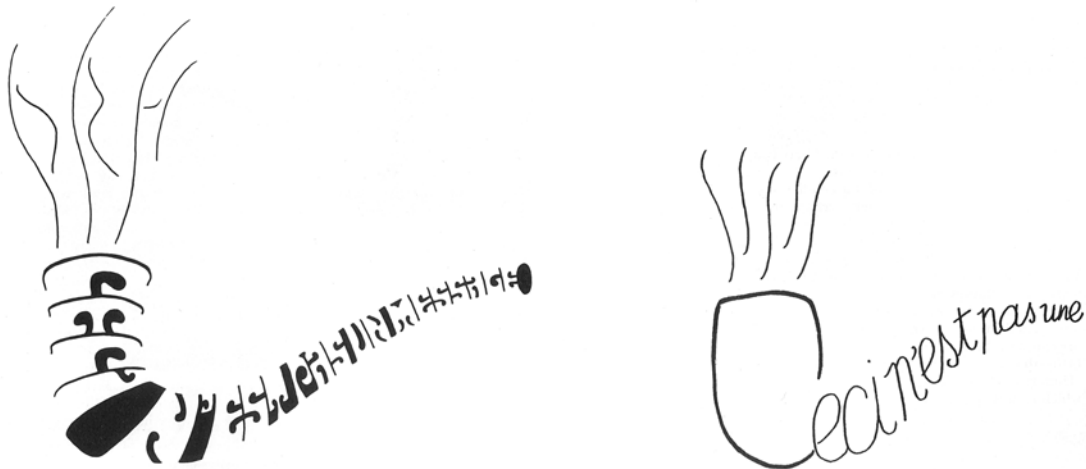


Figure 5. *Smoke Signal* and *Pipe Dream*, Douglas Hofstadter

In *Gödel, Escher, Bach: An Eternal Golden Braid*, Hofstadter introduces his concepts of the “strange loop” and the “tangled hierarchy” illustrated by Gödelian mathematics, M. C. Escher’s art, and Bach’s fugues. A strange loop occurs when “by moving upwards (or downwards) through levels of some hierarchical system, we unexpectedly find ourselves right back where we started” (Hofstadter 10). The formal systems in which strange loops occur are known as tangled hierarchies reminiscent of what Marie-Laure Ryan categorizes as metaleptic relays. In *Gödel, Escher, Bach* Hofstadter further posits that the strange loop is the process by which animate beings arise from inanimate matter and the tangled hierarchy can act as a model for consciousness. In the last chapter of the book, two drawings are presented, entitled *Smoke Signal* and *Pipe Dream* (Hofstadter 702-703). Each drawing is a calligramme based on Magritte’s famous phrase “ceci n’est pas une pipe” formed into the shape of the pipe-image traditionally presented as graphically decoupled text and image (see figure 5). In his footnotes to the English translation of Foucault’s *This is Not a Pipe*, James Harkness explains that “a calligram is a poem whose words are arranged in such fashion as to form a picture of its ‘topic’ ...the calligram is associated closely with Apollinaire—who was, in fact, one of Magritte’s favorite writers” (Harkness 60). It is worth noting that Hofstadter does not make mention of Foucault’s *This is Not a Pipe* published in France eleven years before *Gödel, Escher, Bach* even though both scholars are invested in exploring the calligrammatic aspects of the Magritte’s paintings, directed in part by Apollinaire’s poem *Fumées*.

The first of Hofstadter’s calligrammes is entitled *Smoke Signal* (702). In this drawing the phrase “ceci n’est pas un message,” or “this is not a message,” is carved out, in white, from the black silhouette of a pipe. Hofstadter recalls the artistic distinction between figure and ground exploited so often in the paintings of Magritte. “When a figure or ‘positive space’ is drawn inside

a frame, an unavoidable consequence is that its complementary shape—also called the ‘ground’, or ‘background’, or ‘negative space’—has also been drawn” (Hofstadter 67). In *Smoke Signal* the lettering itself is not drawn but instead Hofstadter rendered the negative space between each letter in black thus inverting traditional rendering techniques. The hidden phrase “this is not a message” blends with the blank white space of the page. Three groupings of thin, drawn lines float above the bowl of the pipe spelling “DRH” and repeating the three-letter pattern that runs throughout the book, narcissistically referring, like many of the book’s puzzles, back to the author himself: Douglas Richard Hofstadter. On the opposing page, *Pipe Dream* renders the phrase “ceci n’est pas une,” or “this is not a,” in black cursive script mimicking the form of a pipe (Hofstadter 703). Five wavy lines float above the bowl signifying smoke.

The inclusion of smoke is a strange addition to Magritte’s pipe which in its original form broadcasts no smoke. Like McCloud’s “wavy lines” floating above his avatar’s tiny pipe, “assuming it is a pipe,” in a later chapter of *Understanding Comics*, Hofstadter’s lines are a “cartoony way of telling you there’s smoke coming from the pipe” (McCloud 127-128). McCloud compares the rendering of smoke to the representation of invisible forces like smell concluding “symbols are the basis of language” (McCloud 128). Part of what is useful about Hofstadter’s contribution to the discussion of *La trahison des images* is his refusal to separate the linguistic elements of the painting from the visual elements. Whereas both McCloud and Pohl drive relentlessly and in opposite directions toward discovering the materiality of the pipe-image, never questioning the semiotic play of the text which prompted their pursuits, Hofstadter unknowingly follows Foucault’s calligrammatic logic in order to pierce image with language. However, Hofstadter’s calligrammes depart from Magritte in one crucial way – in that his

images includes a conventional comic icon signifying a sense of smell not signaled in the original.

Smoke signals are a long distance form of visual communication and like Morse code or text messaging; the smoke signals must be decoded by an audience to sustain interpretation. Like Pohl's Hollywood particle system, Hofstadter smokes Magritte's pipe and blows two illustrative smoke rings while simultaneously supplementing each with the smoker's embedded speech. Playing Epimenides to the tune of Magritte's pipe-theme, Hofstadter's *Smoke Signal* self-snuffs itself only inasmuch as its "message." Similarly, *Pipe Dream*'s shapely script leads one to the question: "this is not a what?" Both blanks become filled in, the language pierced by the contour of the pipe. Likewise the pipes are shot through with language.

However, because of the premature deployment of a strange loop, Hofstadter's drawings transform from smoke signals to smoke screens, effectively obscuring further investigation of the drawings in exchange for an uncannily familiar ironic position. The paradox in this case begins to feel like one of Scott McCloud's comics. Hofstadter's strange loop occurs when "if you find the message, it denies itself—yet if you don't, you miss the point entirely. Because of their indirect self-snuffing, my two pipe pictures can be loosely mapped onto Gödel's [Incompleteness Theorem]—thus giving rise to a 'Central Pipemap'" (Hofstadter 702). This "central pipemap," again, begins to feel like a pipe dream, to quote the title of Hofstadter's second drawing. Though much more sophisticated than McCloud's investigation of the pipe's materiality, Hofstadter succumbs prematurely to the logic of his strange loop, another joke form which begs further reading.

FUMÉES

Et tandis que la guerre
 Ensanglante la terre
 Je hausse les odeurs
 Près des couleurs-saveurs

Et je fu
 m
 e
 du
 ta
 bac
 de
 Zo **NE**

Des fleurs à ras du sol regardent par bouffées
 Les boucles des odeurs par tes mains décoiffées
 Mais je connais aussi les grottes parfumées
 Où gravite l'azur unique des fumées
 Où plus doux que la nuit et plus pur que le jour
 Tu t'étends comme un dieu fatigué par l'amour
 Tu fascines les flammes
 Elles rampent à tes pieds
 Ces nonchalantes femmes
 Tes feuilles de papier

Figure 6. *Fumées*, Guillaume Apollinaire

Foucault's short, playful text, *This is Not a Pipe*, appropriating Magritte's slogan, begins with a close reading of René Magritte's famous painting *La trahison des images* (1953) then works quickly to deconstruct the painting from within a history of both visual art and linguistics. Using the logic of the calligramme borrowed from Apollinaire (see figure 6), Foucault suggests that Magritte's painting contrasts two main principles of classic painting: the separation between linguistic signs and plastic elements and the equivalence of what he terms "resemblance" and "affirmation" (Foucault 53). In both Foucault as well as Rancière's aesthetic theory, there is a moment in the history of classic painting in which a linguistic element intrudes into visual rhetoric allowing paintings to "speak" effectively saying "this painting *is* that thing" (Harkness 8). In Saussurean linguistic theory the sign is arbitrary and words never *refer* to an object

intrinsically. In this same way Magritte's Surrealism does not *resemble* any independent or exterior model. Resemblance, says Foucault, "presumes a primary reference that prescribes and classes" copies on the basis of rigor of their mimetic relation to itself (Harkness 9). *La trahison des images* combines linguistic sign and plastic elements to undermine affirmative resemblance. This gesture, for Foucault, brings into being pure "similitudes" and "nonaffirmative" verbiage which play within disoriented volume and unmapped space inside Magritte's frame. On the last page of the book, Foucault lists his procedure, five steps which work as a kind of "similitude program" for reading works given the correct parameters:

1. To employ a calligramme where are found, simultaneously present and visible, image, text, resemblance, affirmation and their common ground.
2. Then suddenly to open up, so that the calligramme immediately decomposes and disappears, leaving as a trace only its own absence.
3. To allow discourse to collapse of its own weight and to acquire the visible shape of letters. Letters which, insofar as they are drawn, enter into an uncertain, indefinite relation, confused with the drawing itself – but minus any area to serve as a common ground.
4. To allow similitudes, on the other to multiply of themselves, to be born from their own vapor and to rise

endlessly into an ether where they refer to nothing more than themselves.

5. To verify clearly, at the end of the operation, that the precipitate has changed color, that it has gone from black to white, that the “This is a pipe” silently hidden in the mimetic representation has become the “This is not a pipe” of circulating similitudes. (Foucault 54)

With similitudes the reference “anchor” is gone. Hierarchy gives way to a series of exclusively lateral relations: “similitude circulates the simulacrum as the indefinite and reversible relation of the similar to the similar. Painting becomes an endless series of repetitions, variations set free from a theme.” Foucault ends the book with a gesture towards Warhol, whose image of the Campbell’s soup can is drained of all referential meaning through mechanical reproduction and repetition. This process applies to www.wwwwwww.jodi.org, itself a fallout from this same history of mechanically reproduced images.

In the penultimate chapter of *The Laws of Cool: Knowledge Work and the Culture of Information* (2004), entitled “Destructive Creativity,” Alan Liu investigates his notion of the “destructive avant-garde” by curating four exhibits. One of these exhibits features www.wwwwwww.jodi.org as a “retro-avant-gardist” advancement of noise, illegibility, and destruction. Liu performs a close reading of the Jodi website in which “the future of computing according to Jodi is a readymade bomb, an icon of the original avant-garde of destructivity” (355). Though suggestive of the potential of Jodi to unleash code into the world, Liu builds his close reading by splitting the substance of www.wwwwwww.jodi.org into two discrete parts: output and source (see figure 7, 8).

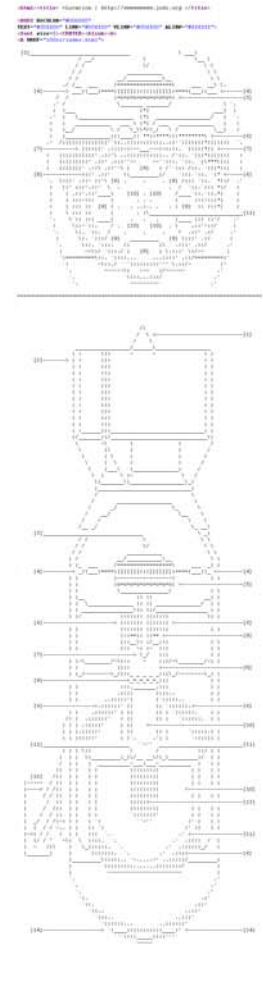
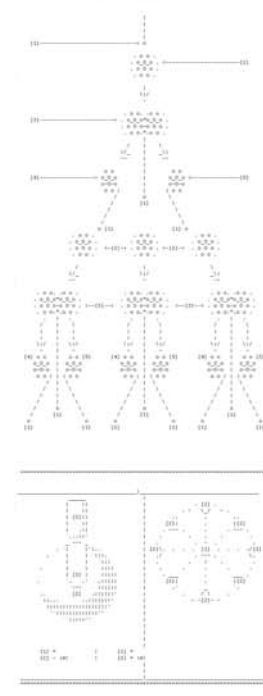


Figure 7. www.jodi.org, Jodi (output above)
Figure 8. www.jodi.org, Jodi (sourcecode right)



Wwwwwwwwww.jodi.org begins with its address. A recognizably satirical location, Jodi has created a host name for *jodi.org* entitled “wwwwwwwww” in order to play off of the standard three w’s of the World Wide Web. Liu writes “the very domain name spoofs the imperialism of the World Wide Web to the power of three” (Liu 348). Modern browsers in conjunction with web hosting services and domain providers are slowly fading out this signifier in favor of the more direct “name dot com” formula for domain addresses. Once entered into a web browser the address forwards the user to Jodi’s public server which hosts their domain *jodi.org* along with subdomains like *wwwwwwwww.jodi.org*, *404.jodi.org*, and *asdfg.jodi.org*.

Upon clicking the link or entering the address, *wwwwwwwww.jodi.org* fills the browser window with blinking neon green lettering on a black background. Liu historicizes the aesthetic noting that “these ASCII characters are ‘tinged by nostalgia,’ as Peter Lunenfeld says, because they simulate the look of an early DOS- or CP/M-based personal computer screen” (Lieu 349). Though the text first appears as chaotic button smashing, on second glance only certain types of characters are used and when used, there appear to be mini-patterns within the jumble of jagged text. *Wwwwwwwwww.jodi.org* “reveals intricacies of local, self-similar, recursive, or chiasmic patterns hinting at some molecular rather than organic level of order” (Liu 349).

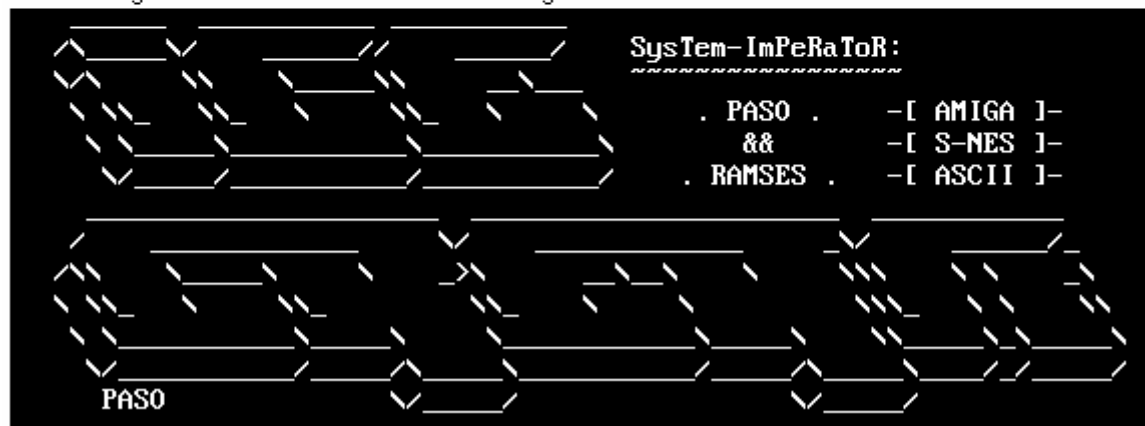
Whether prompted by historical awareness of the tropes of digital media productions or just curiosity, the source code of *wwwwwwwww.jodi.org* acts simultaneously as the pipe to this text and text to pipe. The code begins with an `<html>` tag as requisite for writing with Hypertext Markup Language (HTML). The very bottom of the page will have the inevitable `</html>` completing the text which will be compiled by the browser. Following this opening formatting tag is the title “%Location | <http://wwwwwwwww.jodi.org>” wedged between the open and closed `<title>` and `</title>` tags. The percent sign in the title doesn’t appear to have any

significant function in HTML or when compiled in a browser. With no traditional `<head></head>` tags, the header of this particular HTML file is made up entirely of the title. The body of the file continues this minimal style of coding by simply setting the background color to black (`BGCOLOR="#000000"`), changing both the text and visited hyperlink colors to the maximum saturation of green (`TEXT="#00ff00" VLINK="#00ff00"`), coloring any active hyperlink white (`ALINK="#ffffff"`), adjusting the font size to five (``), centering the paragraph (`<CENTER>`), animating the paragraph to blink (`<blink>`), bolding the text (``), and finally making the text within the body a hyperlink to an address within a local folder on the server (``). The HTML code ends at the bottom of the page with a closing body tag (`</body>`) alongside the final HTML tag (`</html>`).

Ocluding most of the code space is a mass of text in the body of the HTML code. When viewed with a wide enough browser panel and with a fixed pitch font like Courier the text reforms into legible ASCII art, a pictorial system which uses standard American Standard Code for Information Interchange (ASCII) typable symbols to make marks (see figure 9). This method of rendering is typically used one when image files are nonfunctional or forbidden on various online platforms like chat rooms and certain forums. Jodi has chosen to employ the technique on another limited canvas: the HTML code of their websites. Scrolling down the typographical imagery, there are exactly 60 inches of ASCII art (at screen resolution of 72dpi) when set to at least an "80 character width" (Liu 351). This standardized dimension matches common printing procedures of early home computing. If printed, one would discover blueprints more clearly articulated than those scrolling on the screen. But what type of schematic is hidden in Jodi's source code? Florian Cramer notes a famous example of back and forth translation between print and code in his essay *Digital Code and Literary Text* (2004):



Original ASCII on the Commodore Amiga



Same ASCII on the IBM PC

Figure 9. Example ASCII Art

The source code of Phil Zimmerman's cryptography program *Pretty Good Privacy* (PGP)...[contained] algorithms [that] were legally considered a weapon and therefore became subject to U.S. export restrictions. To circumvent the ban, Zimmerman published the PGP source code in a book. Unlike algorithms, literature is covered by the United States's First Amendment of free speech so the book could be exported outside the U.S., scanned, retyped, and translated back into an executable machine program (Cramer 265).

A studied eye can see that Jodi's hidden schematics depict "the Manhattan Project's Fat Man and Little Boy atom bombs together with a diagram of the fission pattern of these bombs" (Liu 352).

Jodi makes explicit through their renderings of Fat Man, Little Boy, and the process of nuclear fusion, digital media's academic history, technical precursors, and direct ties to the US military industrial complex. Rendering the bombs and the process by which they function on the web implicates Dr. Vannevar Bush, the inventor of the Memex, who was the first Presidential Science Advisor, in office during the Manhattan Project. Bush is a seminal figure in the history of modern information culture and was directly engaged with inventing new weaponry during World War II. The first packet switching network and historical predecessor of the Internet, ARPAnet was created in direct response to the fears of nuclear fallout concerning the aftermath of a nuclear exchange between the United States and the Soviet Union. *Wwwwwwwww.jodi.org* ties these three trails together through the conflated history of their ASCII art blueprints.

Loading *wwwwwwwwww.jodi.org* in various browsers drastically alters the reception of the website. In most major browsers including Apple Safari 3.1.2, Windows Internet Explorer 7.0, Opera 9.64, and Google Chrome 1.0, the green wall of jumbled ASCII symbols does not respond to the <BLINK> tags embedded in the source code. Due to this newfound stillness, in Internet Explorer, once clicked the hyperlinked text turns white until the browser's history is cleared rather than immediately returning to neon green. Also, whereas all other browsers use a nonpitched font to render the source code when requested, Internet Explorer by default uses a variable pitched font rendering Jodi's source code illegible as ASCII art. Of the current major browsers only Mozilla Firefox 3.0 still recognizes the <BLINK>s which animate the enclosed text to turn off and on at the rate of a standard computer cursor, approximately 0.8 seconds per cycle.

Beginning with Alan Sondheim's typology of the codework genre in *Introduction: Codework* (2001), many digital media theorists have written about Jodi. Sondheim sets Jodi within a category of codework which posits a difference between the sourcecode and output for some textual effect:

Works in which the submerged code is emergent content; these are both a deconstruction of the surface and of the dichotomy between the surface and the depth. I think of Antiorp's and JODI's dynamic sites for classic examples. These works are the rhizomatic roots of the tree (I recognize the botanic problem here). In order to understand what's going on, it helps to look at source code (which can be part of the content) (Sondheim).

Sondheim's metaphors of deconstructed surface and rhizomatic depth are evocative in the way Henning Pohl's visualization promotes the fantasy of diving into the hacked interiority of code. Like Sondheim and Pohl, Peter Lunenfeld also dives in stating "the source code comes up as a text document, and what is revealed is that there is a whole layer of pictorial, ASCII text art 'below' the surface" (Lunenfeld 84).

Metaphors of depth, however, promote a hierarchical narrative counterproductive to an interpretive reading of the relationship between text and code. Most theorists take the opposite approach, imagining Jodi to be a deconstructed singular surface. John Cayley, towards the end of his essay "The Code is not the Text (unless it is the Text)" (2002) writes that "Jodi takes us to another point in the taxonomy of code-as-text, a relatively extreme position where code-as-text is, perhaps, all there is...Here, the actual code is a text, an artist text" (Cayley). Similarly, in *From Hypertext to Codework* (2002), McKenzie Wark insists that "[t]he 'texts' JODI produces

hover somewhere at the limit of what a text might be...a classic JODI Web page may spit all kinds of “punctuation art” across the screen. This work is neither writing nor visual art but something in between” (Wark). Alan Liu waits to discuss Jodi until the second to last chapter of *The Laws of Cool* agreeing that “as others have remarked, the source code and rendered screen have an uncanny way of interpenetrating each other in Jodi’s art, reversing or flattening the functions of instrumentality and appearance until they become a single layer of experience” (351). C. T. Funkhouser, reserving mention of Jodi for the appendices of *Prehistoric Digital Poetry: An Archeology of Forms, 1959-1995* (2007), writes that “computerized deconstruction of the surface of a poem...is significantly activated by artists such as Sondheim, Mez...and JODI (sic), because the dichotomy between the poem (or writing in general) and code is diminished in contemporary production techniques” (Funkhouser 263).

Thus, the tendency within digital media criticism is to instrumentalize www.jodi.org as a limit point or solution to the discussion of how text and code relate. The conflation of text and code as one in the same dynamically inconsistent object threatens not just a potential readership of such sites but also assumes a new kind of indexical value within the digital. As with the discourse surrounding Magritte’s pipe (or not-a-pipe), it is tempting to become fixated on the objects of interpretation which appear structurally stable or easily decoded. By neglecting a calligrammatic approach to investigating how meaning is constructed some basic questions are omitted from the discussion. Just as Magritte’s pipe is not a pipe, Jodi’s bomb is not a bomb.

A secondary text could be written using this essay as a guide in order to conduct an experiment to execute Foucault’s five part “similitude program” upon Jodi’s work. A brief outline of the process might look like this:

1. Employ a calligramme with *wwwwwwwww.jodi.org* because there exist simultaneously in the aggregate image, text, resemblance, affirmation, and a common ground (the Internet).
2. Allow negations to multiply to discover that none of it is a bomb. “Is this an image of a bomb? Or an image of text shaped like a bomb? Or an image of text shaped like the drawing of a bomb? Or thousands of small images of bombs making up text shaped like a drawing of a bomb? (A more thoroughly Derridean reading is in order.)
3. Once collapsed under the weight of its own uncertainties, investigate the letters insofar as they can be confused with drawn forms without the assistance of the Internet as a common ground.
4. Allow similitudes to begin to proliferate, referring to nothing but themselves (this step of the process is still a mystery until set into practice.)
5. Check that *wwwwwwwww.jodi.org* has changed from “a bomb” to “not a bomb” in the sense that the circulating similitudes which compose the website have been unveiled.

The hypothesized result of such deconstructive efforts would be to loosen an interpretive space in which one could begin to read *wwwwwwwww.jodi.org* in ways which escape the ironic

implications dictating the critical reaction to the website. By destabilizing irony into a dynamic process of engagement a more nuanced understanding of Jodi's work emerges.

At the conclusion of *Cybertext: Perspectives on Ergodic Literature* (1997), Espen Aarseth proposes an overlap and near conflation of his theory of ergodic literature (literature which requires “nontrivial effort” (page) for a user to traverse the text) and the tradition of anamorphosis in early modern painting. Drawing a parallel between the two processes, Aarseth suggests that anamorphosis, the process by which a viewer must adopt a nonstandard viewing angle to reveal a perspectively warped image, is a “solvable enigma” which produces aporia and epiphany, the master tropes of ergodic literature (181). To reduce both the ergodic and anamorphic to a solvable point of resolution reasserts the structural nature of source and code and begins to suggest states of fixedness problematic to reading digital texts like www.jodi.org. Instead, anamorphic subjectivity suggests the opposite. Rather than reifying a specific subject position in front of a painting, image, or artifact, anamorphosis radically critiques all subject positions as tenuous and fraught. There is no prime viewing angle. The anamorphic skull in Hans Holbein's *The Ambassadors* (1553) is not a *memento mori* in the sense that it reminds the viewer of her mortality but rather because it proves that there is no correct subject position, that subjectivity in itself is never true. As Lacan discusses in the *Four Fundamental Concepts of Psychoanalysis*, subjectivity exists only in terms of this impossibility of being fixed.

In *WYSIWYG or WYGIWYS? (What You See is What You Get or What You Get is What You See: Notes on the Loss of Inscription)* (2002) Giselle Beiguelman writes “a very popular and curious tag, [`<content = no cache>`]...is extremely fascinating not only because we know that our culture links written data to memory, but also because an interesting paradox emerges in the

context of online writing in a memory built up in space, what prevails is an architecture for forgetting” (171). This architecture also inscribes a certain subjective loss which runs counter to Florian Cramer’s ideas of losslessness in “Digital Code and Literary Text.” Cramer writes that:

[t]he Internet and computers run on alphabetic code, whereas, for example, images and sound can be digitally stored only after they have been translated from analog visuals and sounds into a numerical code, which—unlike the translation of conventional text into digital bits—is lossy, i.e., not fully reversible and symmetric, translation...Digital data and algorithms can be losslessly stored in nondigital media like printed books as long as they are translated into signs coded according to the logic of an alphabet, as is done, for example, with programming handbooks and technical specification manuals for Internet Standards” (Cramer 265).

Beiguelman’s architecture of forgetting, with its inherent notions of loss, translates analogue anamorphic subjectivity into digital lossy subjectivity. In the way Holbein’s *The Ambassadors* emblemizes the instability of subjectivity, perhaps Jodi’s www.wwwwwwwww.jodi.org emblemizes a calligramatic lossy subjectivity discussed as “digital any-space-whatever” in Mark Hansen’s *New Philosophy of New Media* (204).

Following from Lacan, Hansen discusses Robert Lazzarini’s sculptural installation *skulls* (2000), and the way in which their anamorphic design fails to resolve into proper perspective no matter what angle the distorted objects are viewed from. As Hansen writes, *skulls* “‘makes sense’ visually--only within the weird logic and topology of the computer” (202). The radical disconnect between our human perception and the native logics of the digital any-space-whatever

create a sense of trauma within our bodies. *Wwwwwwww.jodi.org* relays the trauma of the atom bomb through the history of digital media. A dynamic exchange oscillates between mimetic representations of exploded code and linguistic trauma of speechless, unintelligible text to trigger an affective explosion: bomb, not-bomb, bomb, not-bomb...

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