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## Green Chairs, Fictional Phalluses, Infiltration, And Love On The Rocks: Medical Imaging Artifacts Blown Up

Lynn Koller  
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GREEN CHAIRS, FICTIONAL PHALLUSES, INFILTRATION,  
AND LOVE ON THE ROCKS:  
MEDICAL IMAGING ARTIFACTS BLOWN UP

by

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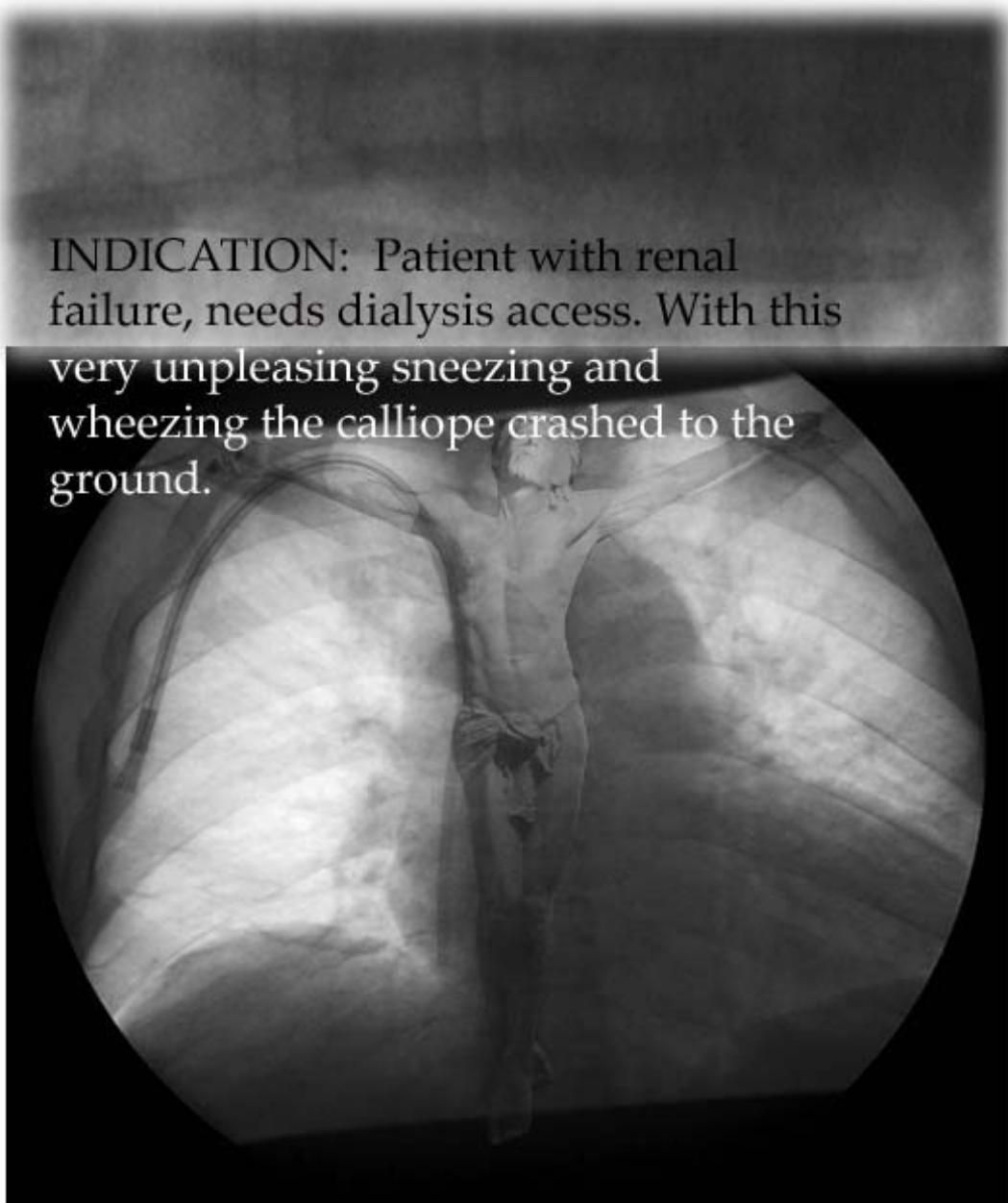
A dissertation submitted in partial fulfillment of the requirements  
for the degree of Doctor of Philosophy  
in the Department of English: Texts and Technology  
in the College of Arts and Humanities  
at the University of Central Florida  
Orlando, Florida

Summer Term  
2008

Major Professor: Melody Bowdon

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INDICATION: Patient with renal failure, needs dialysis access. With this very unpleasing sneezing and wheezing the calliope crashed to the ground.



## ABSTRACT

This text outlines and applies a methodology for deciphering problems and producing new information by analyzing the artifacts produced by medical imaging technologies – text and images – using practices gleaned from Surrealists, semiologists, and visual artists, emphasizing its own form as being the product of the apparatuses that produce it and therefore untrustworthy. Its basic assumption is that every text contains the information necessary to solve problems of all sorts, though because of the limitations of this text in both form and authorial intellect, we may only reach a starting point for a solution herein. In this regard, we are deciphering rather than solving. Further, this text illustrates primarily through narratives how digital imaging technologies mediate our relationship with our doctors, illnesses, and our bodies. It explores how the artifacts produced by medical imaging technologies create a data stream that replaces the corporal patient, shifting the physician’s focus from the whole body to pieces and parts.

It is a study of texts and technologies. The method evolved from a rhetorical approach to examining the medical imaging artifacts and the processes by which those artifacts come into existence, with the method and form becoming part of the story, producing a wide array of new information that transcends disciplinary constraints.

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## INTRODUCTION – EXPLICATION, JUSTIFICATION, AND ACT OF CONTRITION

I call my theory *rhetorical narrative fragmentation and reassemblage in the service of resolving states of difficulty*, because I must call it something. Its basic assumption is that every text contains all of the information necessary to decipher problems of all sorts. (*Il n'y a pas de hors-texte.*) To apply this theory, I address problems in radiology and the humanities, as well as those that more personally affect human existence, and even more specifically, my existence. Increasingly, the patient experience includes a medical imaging procedure that generates images and a text report dictated by the radiologist, with both artifacts creating a digital multimedia record of the patient. Using these artifacts and narratives about medical experiences, I illuminate how digital technologies change the way we view medicine and our bodies. Radiology sits at the center of attention here because its dominant artifacts consist of magnificent visual rhetoric that drives our vision of what it means to be human, a study of which crosses into the humanities.<sup>1</sup> And, the field of humanities, an obvious place to

---

<sup>1</sup> I want to say that the process of writing this dissertation required patience, which drove me to understand that I actually needed patients, leading me to use the medical experience as a way of understanding the methodology used to decipher problems. This is somewhat true but seems less convincing than the argument that I want to “illuminate how digital technologies change the way we view medicine and our bodies” and that “[r]adiology sits at center attention here because its dominant artifacts consist of magnificent visual rhetoric that drives our vision of what it means to be human.”



seek such solutions, is the root where I cultivate the method for deciphering problems and seeking solutions. I have chosen to overtly make myself an object of this study in the tradition and spirit of scientific self-experimentation—I wreak damage upon myself so that others may benefit from dangerous ideas<sup>2</sup>—and for several other reasons, as follows:

- I observed the medical imaging procedures that produce the artifacts at the heart of the analysis and I am inextricably part of the stories that I tell
- During the course of writing this document, I experienced two medical imaging procedures that serve as material for experimentation
- I want to highlight and demonstrate that all texts are of a personal nature, regardless of how far removed the author pretends to be
- The exercise demonstrates that this text has functional, widespread value beyond scholarship, citation, pedagogical uses, and applications in professional fields
- The most pressing, seemingly unsolvable problems – those that cause anguish and are driven by flawed underlying assumptions – are personal
- That which is the most personal and painful is the most compelling story and the effectiveness of the story strengthens the argument

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<sup>2</sup> ... though not so much as the medical pioneers of earlier centuries who injected themselves with syphilis to better understand venereal disease.

- I have serious problems

This text also attempts to highlight the relevance of authorial context in information production, and at the core of its own production is my context, which shapes the ideas that I convey to you on these pages. For example, the first chapter considers how I might alleviate insomnia. Traditional solutions for insomnia are medication, diet changes, lifestyle changes, stress reduction, exercise, and meditation, but I have found no relief, despite an abundance of information about the problem. If the assumptions that underlie the problem are unfounded in this case, I am stuck staying awake. To apply my theory, I assume that these established beliefs about insomnia – that the insomniac suffers from a chemical imbalance affected by stimuli – are invalid in my case, or at the very least, not useful in solving the problem. By using this method of deciphering problems, I strip away the context that hinders the scope of the imagination in a search for resolution and thereby create new information. By analyzing medical imaging artifacts – in the first example, an x-ray image of my teeth – I find information that leads me to a new way of seeing the problem of insomnia (which has nothing to do with the physicality of my teeth) and determine that the origin of my insomnia comes from something entirely out of the ordinary.

The dental x-ray provided new information about my problem that has led me to a resolution. The results are surprisingly useful.

The value of this method arises from its ability to address problems of many sorts. Later, I consider the challenge of reducing perceptual errors in radiology and arrive at a potential starting point for a solution to the problem: audio-images. With no formal training in radiology, I have the advantage of no preconceived limits on how to address issues in the field. In this case, I become a surreptitious photographer who slips into the radiologist's world. I capture images of his texts and technologies, and then take them to a darkroom for development. Bathed in red light, the darkroom is a space where the chemicals of creation live. These chemicals have historically brought to light what we know of our visual history, but with the dawn of digital photography, this space is disappearing. In my metaphor, it represents a transitional space in every sense. I enlighten the medical experience and then use it to shed light on the problem at hand. Of course, while the method I use can propose solutions, it has its limits on these pages. It would be up to radiologists to determine the practical viability of audio-images as a way of reducing perceptual errors. In a subsequent chapter, I will also use my method to attempt to prove its own value.

Understanding this theory calls for a temporary suspension of disbelief in the indispensability of conventional dissertation form, which is valuable and effective for some purposes. This text reflects a constant tension between my need to achieve an academic goal – that of producing a text that meets traditional standards of scholarship – and my desire to communicate ideas that do not readily fit within that framework. Even in writing these words, I dislike the arrogant tone that implies I have an idea worth sharing based on the weight of its scholarly research rather than its ability to successfully produce new information that helps people address their problems. Simultaneously, I value academia and want to add to the body of knowledge. Later in this text, I use a secondary narrator to embody this tension and reflect my own anxieties about the value of the requirements of a dissertation and to underscore that what you are reading is a product of the person and things that produce it. However, regardless of how snarkily condescending the secondary narrator behaves, s/he ultimately loses the argument by the very existence of this text. I value academia enough to devote myself wholeheartedly to this venture and only hope that questioning its significance will increase its value, as well as the value of this endeavor.

I would like to ask that the reader quietly accept that I have taken the ideas from a fount of knowledge hidden in a small crevice in the universe

whence all knowledge comes and a place that I alone can access; however, that being too great a request for this particular audience, I ask that they accept that the value of this text lies in its deviation from traditional dissertation form and its focus on practical application. This text is not didactic; it communicates, primarily through narratives, a way of seeing. That being said, this text does in fact build and rely on traditional scholarship and respectfully cites the work of others in an effort to boost its credibility and pass muster at the highest levels of academia. It uses its sources sincerely and without desire to attack the credibility of individuals who have contributed significantly to their fields of study, though this work admittedly implies a sort of textual democracy: a “serious” scholarly journal article has no more value or credibility, necessarily, than a popular song, for example. This reflects the Surrealist ideological position on the value of art. Moreover, this text does what dissertations do, in that it adds to the body of knowledge in my interdisciplinary field of texts and technology, while it examines a new way of producing information in the increasingly visual field of new media studies.

## CHAPTER 1 – DIFFERENTLY, NOT BETTER THAN

Here's an x-ray image of my teeth. It was taken yesterday (with *yesterday* being the day before I originally wrote these lines and not one of the many yesterdays associated with the days before I revised these lines):



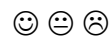
Figure 1 – Narrator's dental x-ray

It tells the dentist whether my jaw is aligned properly (it isn't) and can indicate whether I have periodontal disease (it's possible).<sup>3</sup> To me, it can help answer questions – or at least illuminate and reframe the questions to see them differently than I have in the past – such as, for example, how I might cure my insomnia and determine whether or not evil exists. The process of analysis requires a belief that every linguistic, phonetic, cultural, perceptive, and philosophical connection means *something* and is related to *everything*, no matter

---

<sup>3</sup> Except for cropping transparent edges and reducing the size, the image is unedited. It is, of course, a digitized reproduction of a digital image. Digitizing, of course, matters much. It allows the image to be reproduced infinitely. According to Benjamin, "technical reproduction can "put the copy of the original into situations which would be out of reach for the original itself" (220). In this case, it means that I can readily take the image from my orthodontist and use it in this text.

how Byzantine the associations that draw two or a hundred things together. It requires an acknowledgement from the reader – you – that you are reading text and that I do not exist in any other form for you. You will be reminded of this regularly. It requires defiance, and the results aren't always pretty. Rather than explaining my methodology first, I will show you a hint of it and explain later.



The questions at hand are: 1) how might I cure my insomnia, and 2) does evil exist? Note the “L” shape in the lower right corner of my dental x-ray. (See Figure 1.) Without much doubt, the intent of the machine that created the image was not to speak to me through a phonetic or alphabetic sign, but rather to establish a frame of reference for the dentist to examine the x-ray. [There is always doubt. You doubt me, I doubt you. You have no credibility. Who am I? I am an authorial intrusion. I am a placard that says “you are here.” I am text.] However, to me, it is a personal communication. “L” begins my name – my first name that I identify with, not my surname, which confuses me now. My surname was something once and it changed as it sometimes does for women, but now the reason for my surname’s change has changed, and I am left without a connection to it at all. That my children bear that name isn’t enough to justify its attachment to me. When I hear my first name, I turn and look around. That name signifies me. The floating “L” in the x-ray signifies me as

well. It is white and thin, like I am; it is not bold or italicized like some text. The letter floats in the darkest area of the image and signals that I float in darkness but am made of light.

I do not feel light in bed. I feel heavy and constricted and my mind spins, feeling like a fast-flowing river with many tributaries that flood it with fragments of thought and images that make no sense, but will never cease, ever. My weight increases and muscles constrict. I *feel* intensely at night. The x-ray shows smokiness above my slightly open mouth. At night with my fists clenched, I feel that smoke in my head and it drifts above, around, and through the river of thoughts, making sleep impossible. I want the smokiness of dreams, not frenetic thought. [I want out of here. This is too conceptual and contrived to be useful, but I will withhold judgment in the hopes of a substantial payoff.]



**Figure 2 – Dental x-ray fragment**

In a fragment of the original x-ray (see Figure 2), the swirling movement of the white smoke stands out. Smoke can be blown away. When I sit by a campfire, wind blows smoke into my face. I assume it's only smoke in my head

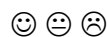


and not fire. I need wind to sleep. The homonym for *wind* means something here as well. I need to *wind* down. I need wind to wind down. If I find the wind, I will sleep. Wind does not exist on the Web; it's perfectly still there and so I search through the window of my computer in the stillness for what else the "L" might mean. According to one wexpert (this is my new word for Web expert and I'd like to copyright it), "L= primal, primitive mammalian love, as one feels as the result of sexual bonding" (Gilbert). I do not sleep well, but I do feel sexual bonding and a very primal, primitive love for a mammalian animal, as you will see when I tell another story, or maybe it's a continuation of this story. I feel too much of everything around me from the dust in the air to the possibility of nuclear annihilation, and it creates problems of the mind that interfere with finding the deep comfort of sleep. My mind moves and I am moved to stay awake.

The "L" in the image seems to be moving away, out of the image, exit stage-right, assuming that it moves from left to right as English text typically does. It has no reason to buck the system. It seems to move toward the darkness that I cannot find. With my eyes open or shut, I always see brightness and colored points of light. The "L" seeks the darkness like I seek empty, black space and bids me to follow it, because I cannot neutralize the light. I find the absence

of light soothing, compelling. Some people are drawn to the light, but darkness calls to me. Darkness does not represent evil, as it often symbolizes. For me, it is the opposite, in a different way that *live* is the opposite, an antigram, of *evil*. I want darkness to *live* well by sleeping well and refuse to find *evil* there. [The narrator mocks language. Is that productive? We see whole words, phrases, sentences, and ideas as we read, not individual letters. Letters are symbols that contain no information in this context on their own. She later relies heavily on Barthes for credibility - I know because these words are being added in a revision (I've seen the future and it ain't pretty.)] If I close my eyes to it, evil won't exist for me. It seems that whether or not evil exists for others, I don't care. Its existence is irrelevant.

The song that plays this precise moment on the radio says exactly this: "Life is beautiful, but it's complicated/ We barely make it. We don't need to understand/ There are miracles, miracles."<sup>4</sup> Benjamin no longer lives or listens to the radio, but he had something to say about the song, this story, and authorial intent: "No poem is intended for the reader, no picture for the beholder, no symphony for the listener" (69). [He says it from the grave, with the literary present tense requirement being what it is.] It is what it is.



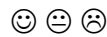
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<sup>4</sup> (Vega4)

The dental x-ray offers me a way to analyze my problem outside of logic and syllogisms. [The x-ray has a voice much like my own. It's hard to hear over the quake of medical revelation - "Oh, my! You've got a cavity" or "Oh, my! You have invasive lobular carcinoma" - but it's there.] The result may not be straightforward or unambiguous, but at the very least it offers a new standpoint from which to search for meaning as well as new meaning in itself. I have had insomnia since I was a child and am always looking for the reason that I cannot sleep. I have deduced many causes for my problem over the years, including food allergies, thyroid problems, and a hormonal imbalance, but they have all proved false as a cause. The doctor feels I cannot sleep because I do not use sleeping pills, so I try the pills. They work but are only palliative and make me feel as if I am pretending to sleep. I want real, organic sleep.

The fragmentation and analysis of the dental x-ray offers me hope that I can find heretofore hidden-information to help me understand my problem in a new light, if not find an answer. Through this analysis, I discover that I do not sleep because I see light all of the time. It is true that I never find darkness and always see a field of colored dots. Everyone does not see these dots as I had once assumed. It seems possible that if I could eliminate or dim the colored light always in my mind, I might find the quiet peace of sleep easier. So, the brief

analysis offers me a starting place – I do not know how to turn off these cerebral lights, but I could apply the same methodology of fragmentation and collage to yet another text (or the same one) and see what happens. In this case, the artifacts contain the intelligence, wisdom, and knowledge; I am translating. And excavating.



This text is all about me (and you). I have problems. These problems vex me, and I want to solve them so that my life will match the vision that I have for it. Sometimes, I cannot identify the problem or the thing that makes me struggle and writhe around, and, at times, I don't think I have problems but rather issues with which I must contend in order to get through the day. (These issues are problematic.) From this landscape rises a phoenix that hatches from eggs laid by Breton, Bruce Springsteen, Barthes, a digital music station, radiology, and weather maps, to name only a few fertile birds. To decipher these problems, I shatter the lenses of my perception, or at least the lenses that I'm accustomed to wearing – those prescribed by convention and experience. Because I'm an optimist, I believe I will not go blind.

In this project, I put myself in a liminal space – between things – medicine, radiology, science, humanities, love, magnetic resonance imaging, gallbladder

surgery, girlfriends, God, and butter. Using an irrational methodology solidly based on existing Important Theories and Big Ideas, going between these things changes me and my perception of those things, as well as the matter of problem-solving itself. I have created a strategy for *seeing* by deciphering problems that seem unsolvable or vexing, at the very least. I allot the intellect to texts and allow them to speak through me.

We all see the world through culturally-derived lenses. Those might be religious, political, environmental, ideological, or gender-based, for example. I am not overtly ignoring these lenses but am not using them either. Instead, a methodology for seeing rises through them. The process makes meaning not by adding knowledge to these areas or understanding the specific lenses of culturally-derived perception, but rather by pulling them apart and connecting them to me. I use terms and ideas from within my objects of study and, in that manner, make a series of signifying connections rather than relying entirely on set signs (lenses/theories) to view my subjects. It's all about me (and you). [Note that *you* is merely a parenthetical reference; it's really all about the narrator and how *she feels*. This is an extremely narcissistic text. Granted, that could be said of the Bible, which sold well, and perhaps every other text in the universe as well. It seems that this one may

require a great deal of patience and extrapolation by the reader.] The meaning is unbound by other people's meaning-making strategies.

People use hierarchal, causal, logical, and rational strategies to make sense of things. That's good and effective but not the only way. Images as well as texts can be used to *see* extraordinary, absurd things of great value. The image becomes a vehicle for the truth as I see it. Using the concept of image, "we reach a point where image teaches us about analysis, teaches us about that activity that we used to conceive of as mastery of images" (Bal 93). In this case, there cannot be mastery of images and we cannot expect to affix a permanent meaning to them or to make sense of them in a fixed way as the visual artifacts are fluid objects that transform, shift, and change as unceasingly as the reader's train of thought. The images teach us genuine analysis – in this case, the breaking down of information to create more information – unhindered by the limitations of the object being analyzed as a static thing.

I need a basis upon which to test my information-making-meaning-producing strategy – a place to apply the theory – and I have chosen the field of radiology, which seemingly renders the body transparent. The concept of transparency figures heavily into the methodology applied here. Ostensibly, one topical focus of this text is how the artifacts produced by medical imaging tools

have created a digital patient that is replacing the corporal patient and how this affects our beliefs about illness and the human, with a focus shifting from the exterior to the interior body and from the whole persona to organ systems, anatomy, and physiology. In this context, digitization represents the culmination of objectivation: the physical body falls under the observation of the medical imaging technologies, while the digital body ultimately serves as an object of observation by the physician. [This is starting to sound credible, to develop an erudite tone. Where's the value in something that six people in the world will ever read? Despite a long tradition, evidence of the value and impact of traditional scholarship is uncertain at best. Write a commercially-viable text. That's the only way to find an audience and make any sort of difference at all. Forget about "adding to the body of knowledge." That premise serves the institution but no one in it.] I also address love, passion, and those things that drive us to seek life over death.

I analyze images produced by medical imaging technologies, along with their accompanying text records, and evaluate that content outside of literal meanings in terms of medical usage in a manner that proposes a new way of examining practical and notional problems. I use a rhetorical approach to examine the artifacts produced by medical technologies and the processes by which they come into existence. Here, the artifacts are not considered static

objects, but rather part of a complex system of communication between physician and patient that creates new meaning in different contexts, both in whole and in part. This experiment feeds on uncomfortable questions asked by a malcontent.

McLuhan called for the “amateur” to undermine existing rules and develop an awareness because the “amateur can afford to lose” (93). I am the amateur – an outsider to the medical field. I lack medical training and any reasonable credibility, and cannot identify a clotted vein on an arteriogram or a cancerous breast tumor on a mammogram. To consider questions in medicine, the outsider can utilize experimental tools without fear of repercussions. I have nothing at stake in the medical field. In this way, the discussion of how digital medical data affects the physician and patient, with a focus on the artifacts that the technology produces and the processes used to produce them, is well suited for the field of humanities, a place ripe with scholars of the human condition, along with fiction writers who know no limitations to what a character may do. In a *New Yorker* article, John Updike describes his writing professor, John Hawkes – a novelist who defies conventional narrative structure – announce to the class, “When I want a character to fly, I just write, ‘He flew.’” Updike describes the “dizzying freedom” of fiction, which “holds an opportunity to



dramatize certain existential questions that mark the beginnings of philosophy in a child” (90). This type of dizzying freedom allows humanists (as amateurs to medicine) to address problems in the medical field in a valuable way.

As a result of this experiment, I have changed the way I see myself and the world around me; the world and I have changed as well. Why am I relevant? This text does not disguise that it is not an entity unto itself; I am tied inextricably to it, and my perceptions, ideas, preconceptions, biases, and personal needs are just as inexorable. Through these words, I am offering a way to shatter the lens through which we see ourselves, which is the same lens through which we attempt to solve problems and consider our physical and emotional environment. [Consider that the only environment of truth herein would be the printed page. Everything else is only conjecture. To project beyond the page is a futile, egotistical attempt at immortality. The word lives on but you will not.] It offers a way of unearthing new information and making meaning out of images and, occasionally, context and white noise: the things that float around and into us. At the heart of this experiment are actual medical images and records – texts – that provide a basis for understanding how the imaging equipment – technologies – communicate to physicians and patients and provide concrete objects that I use for addressing

issues both inside and outside the scope of medicine. [This experiment has no heart.]

The methodology for this analysis of medical images and texts combines narrative, fragmentation, juxtaposition, and collage, based on a variety of theories and practices, including those employed by Surrealists, semiologists, and visual artists. Using the idea of a meme, the basic unit of cultural information, we do a sort of memetic shuffling through this reconstructing of information, analogous to how subcultures adapt a meme like the handshake; they may reconstruct it as a fist touch, high-five, knuckle rub, or other variation on the clasping of hands to signify a greeting. Each variation carries with it different cultural information. A high-five has a different connotation than a handshake, yet both actions come from the same meme. In the case of this text, it is common practice to play with reconstruction of words and language through scrambled word games, crosswords, and word-find puzzles. Here, anagramming is an example of fragmentation used to break down the word to its lowest possible unit, separate the parts from the whole, and juxtapose the reassembled letters with their original meaning in context. Rather than simply creating a new word or words through anagramming, we create new meaning. Playing with the meme of reconstruction, we take that scrambled-ness and put it back in some

other way. This memetic practice helps us understand the production of knowledge through repurposing the meme. In this vein, I dissect the artifacts of medical imaging – much like the technologies visually dissect the body – and reconstitute [regurgitate?] them in a way that produces new meaning and helps re-define ways of addressing questions in the medical field, as well as questions of a more existential nature.<sup>5</sup>

Surrealist techniques allow the introduction of art and literature into scientific inquiry [our early 20<sup>th</sup> century Surrealist friends liked sexy things, erotic things, which should help the level of engagement readers will experience here], which helps identify new, sometimes subversive meanings from the medical artifacts and bridge the gap between science and the humanities. This text eradicates the notion of an irreconcilable difference between the disciplines. The fields are connected and this text walks on the middle ground. I infiltrate that space by taking things apart, putting them back together, and interpreting them in a way that produces new information and a different way of seeing, giving weight to the humanities in a culture where, according to Bal, “the sciences are taken more seriously than the

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<sup>5</sup> Ultimately, the methodology outlined here offers a way of deciphering questions, but the practice could also be used as a pedagogical tool to help students make disparate connections between literature and ideas, a rhetorical strategy for making political statements about the texts or artifacts being dissected, or a fun game.

humanities” (29). Bal describes the issue of concordance between the disciplines as one of sequence and reasoning, finding that the mainstream humanities endorses this normativity, in spite of itself:

A humanities’ light shed on this normativity is in order, for this normativity has a problem of temporal logic. The legalistic normativity proclaims beforehand what is in need of explanation and analysis. In this sense, it embodies the rhetorical figure of *proteron hysteron*: it is literally pre-posterous, putting first what in fact comes later, in terms of both temporality and causality. (30)

In this human[ities] experiment, temporality is shed to some extent and causality is placed in serious question. I decipher the “problems” as narratological and engage in a non-logical, disruptive interaction with the text created as a result. In this case, using Bal’s language if not her context: “As a consequence, causality is rendered opaque, if not suspended” (30).



“Words, groups of words *which follow one another*, manifest among themselves the greatest solidarity” (Breton 33). [Breton was speaking of unrestricted language. This is an identifiable but weak segue to the subject of collage.] Here, words, sentences, whole narratives, and images

*which follow one another* manifest themselves the greatest solidarity. They create a patchwork of meaning that I endeavor to understand.



Collage is a critical component – a methodological tool – in the interpretation of the electronically-produced artifacts at the crux of this text. The medical records and images become data as well as art. Lanham’s *The Electronic Word* surveys how electronic media affects rhetorical expression in the arts, education, and popular culture. Lanham sees collage as providing the “central technique of twentieth-century visual art” (40). [Richard Lanham’s name contains the perfect anagram – or collage of letters – *carnal harm hid*. It looks more like a collage if it’s in the form of a ransom note. See Figure 3?



Figure 3 - Textual collage

Straight text and a conspicuously transparent narrator don’t have the same effect.] It seems, however, that everything in arts and letters is and always has been collage, though electronic media has made self-consciousness in collage fashionable. [If everything is collage, nothing is collage. See Page 110, where you use the same logic to make a big deal about, literally, *nothing*. “If everything is bold, nothing is bold.”] In this

text, collage is imperative. [It is more imperative to realize this is a text but not necessarily a valid one.]

The Surrealists appropriated collage as a way of visual and textual artistic expression. A collage is an assembly of diverse fragments that sometimes come together to produce meaning. Here is a collage that I created from arteriogram images and the song lyrics cited in this text. (See Figure 4.)

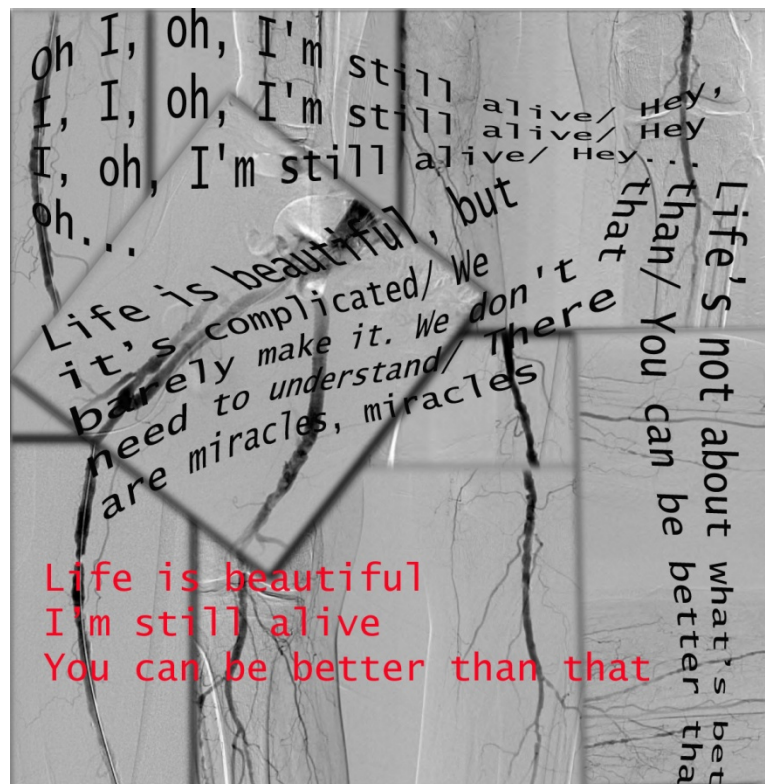


Figure 4 – Medico-lyrical collage

Creating a visual-textual patchwork from existing material removes control from the original authors and puts it into the hands of the revisionist (me) and ultimately the reader or audience of the collage. The elimination of the

initial context strips meaning and requires that readers draw on their own experience to make connections and produce new information, likely to be far from the author's intention. [Doesn't the reader just have to suffer through another insufferable author?] The more diverse and seemingly disconnected the fragments are, as well as their sources, the more chaotic and unpredictable is the result. Combining medical images and records with fiction, for example, offers opportunity for chaos and nonsense but also the chance to mine for meaning in untouched territory. [Or we could see what floats to the top.]

Diverse means "unlike"; unlike things differ. Since alphabetic letters differ from each other, their compilation into a word might be a collage. Each word differs from another, making a sentence a collage of words. Sentences differ even more from each other, making a paragraph or essay a collage of sentences, words, and letters (and maybe even pixels or atoms). [That seems to stretch any kind of credible definition of *collage* to set up some theory in this text. Very self-serving. *Self-serving*, by the way, is a perfect anagram for *fling verses*, which seems apropos here given what the narrator does later with song lyrics, self-servingly.] Some words differ more than other words. For example, *rhetoric* differs greatly from *flatulence*, but not so much from *rhetorical*. The word *collage* differs from *color* in meaning, but only slightly in composition; however, *collage* and *patchwork* differ significantly in

their etymology and construction, while only somewhat in meaning, depending on context. All of these words come from a chapter in Lanham's book,<sup>6</sup> which is a collage of letters, words, sentences, paragraphs, ideas, and images. Writers and artists have always been masters of collage. Some writers, such as James Joyce with his *A Portrait of the Artist as a Young Man*, create textual collages that are rich, complex, and extraordinary. [Other writers, such as the author here, pull together simple ideas in simple ways, creating a collage that is perhaps not particularly noteworthy, but yet captivating like a train wreck.] We all create collages. Through reading this line, you form a mental collage of things that you associate with "Through reading this line, you form a mental collage ...".

Lanham outlines Eric Havelock's argument that an alphabet for a high literate culture had to be simple enough for internalization. "Thoroughly internalized at that time, it would become a transparent window into conceptual thought" (3-4). Reading should not be a self-conscious act: "The best style is the style not noticed; the best manners, the most unobtrusive; convincing behavior, spontaneous and unselfconscious" (4). The scribe should remain anonymous; her voice or text should stand alone. The glory is in the act, not the actor. But, where the pen might hide the ego, the computer electrifies it. Electronic media has

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<sup>6</sup> "Digital Rhetoric and the Digital Arts" (29)



unveiled our conscious – the computer has made the text, the art, the work itself less transparent while it’s simultaneously made the writer, the artist, the creator exceptionally transparent (in more ways than one). Typeface, word art, and color make the writer’s page a canvas. “The textual surface is now a malleable and self-conscious one,” Lanham says (5). He believes that the collage results from the computer desktop, and the scribe’s ability to flourish, embellish, and essentially fill white space. The scribe fills the space with his ego; through arrangement, scale, and other design choices, he controls the reader’s field of vision in ways beyond historical precedent. These new understandings of old literary tools, such as collage, can inform the medical field and increase our understanding of what the patient expects from medicine and physicians. The introduction of these artistic methods to medicine offers a useful way of exploring issues about the validity of certain medical processes, roles, and beliefs about medical care.

Breton finds the most value in the arbitrary virtue of Surrealist tools and sees them as a way of freeing the imagination (38). He proposes using these tools to make new meaning from existing texts and images. Less well known than Breton, his “muse and impossible mad love” Lisa Deharme used textual and pictorial collage to both “add a creative, poetic dimension to the page” as well as

address serious political issues such as the rise of Fascism in Germany in her 1933 Surrealist review, *Phare de Neuilly* (Barnet 324). Marie-Claire Barnet describes the contributions to the review as a “carefully planned collage,” with prose and poetry receiving equal importance (326). The result was a superimposition of times and places “to upset everyday conventions in order to reach the Bretonian meeting point of opposites” at the “heart of Surrealist theory and practice” (330). Here, the practice of collage upsets disciplinary conventions in order to find the surprising, with the element of surprise being at the very heart of the original Surrealists. Unconventional methods of evaluating problems lead to unconventional answers. [You have to be prepared for that.]

By contrast to Breton, Brecht wants to remind us of reality and that the nature of reality is economic. He used techniques in the theater to remind the audience that they were watching a play, rather than observing another representation of reality. He found that the machinery of theater, opera, and the press is no longer “a means of furthering output but has become an obstacle to output, and specifically to their [intellectuals’] own output as soon as it follows a new and original course which the apparatus finds awkward or opposed to its new aims” (34). In the case of medical imaging technologies, I consider the perspective that the apparatus that produces the texts creates them for their own

purposes – the machines justify their existence. The nature of this reality is economic. Brecht believes that the apparatus produces merchandise, “ruled by the normal laws of mercantile trade” and that is not a good thing (35). Medical imaging technologies clearly provide a vast and complicated economic foundation for many industries, from those that produce the machines, supplies, and training to the medical practitioners who use them. Ultimately, the machines are nothing until they produce an image; yet the image seems to the patient to offer such a simple truth (normal or not) that it transcends being defined as a product for consumption.

The medical encounter can involve a substantial economic transaction with the patient at its crux; he is a player in the operating or exam theater. Brecht’s techniques in the dramatic theater include the direct address by actors to the audience, transposition of text to third-person or past tense, and stage directions read aloud. He encourages actors to show their own feelings about the characters they portray, including disdain and mistrust, and he invites the audience to do the same (138-139). By establishing the fiction of the play, Brecht tries to empower the audience and force them to understand that they can change their own realities. This text utilizes techniques adapted from Brecht that highlight the patient’s agency and control over how medical technologies are

implemented by underscoring certain realities through narrative that detaches the patient from the medical encounter, and, even more importantly, these techniques illustrate the reader's agency and control over this text itself. [Hi. The preceding paragraph is about me and my method.]

Control is something patients (and readers) may feel little of. Once a medical artifact exists, the patient can become less central to the physician and her own medical care. [It makes me uncomfortable knowing that this text exists anywhere other than the narrator's hard drive.] The artifact serves as a fragment of her that replaces some information that, in the past, her body would have provided the physician or, perhaps, hidden from him. Yet, the scan or record is often alien to the patient. Fragmenting the text-based interpretation of the image creates a new way of understanding the physician and the often cryptic medical report itself. It offers something like Barthes's "third meaning," as described by Ray. Barthes fragments both movie stills and written texts and interprets them out of context. Ray explains: "Both Barthes's 'third meaning' practice of reading movie stills and the Surrealist strategies of film watching amount to methods of extraction, fragmentation" (36). It isolates the detail from the narrative, so that its meaning becomes open for new interpretation. In this case, we can rearrange the fragments to reveal a different meaning of the medical

text. I analyze the medical record itself, in terms of its semiotics and semantics and what it means outside of the patient/physician encounter. In *S/Z*, Barthes provides an exhaustive appraisal of how the readers generate that meaning. This combination of approaches to analyzing the medical artifacts and processes is experimental and unusual and can produce new, valuable knowledge.



Medical imaging technologies as a subject for the humanities has been addressed by scholars, including José van Dijck, who challenges “the simplified notion that new imaging technologies lead to more knowledge and thus lift the veil from the interior body” (16). [Maybe what she’s really saying is that the new imaging technologies “lift the **evil** from the interior body,” with *evil* being a perfect anagram of *veil*. Sometimes the letters get mixed up in the brain-to-text translation.] Van Dijck specifically cites the approach taken by Lisa Cartwright as a guidepost: an image is a representational tool producing meanings at a specific moment in time. Cartwright asserts that the medical image is full of cultural meanings but admits that she has “not always been specific about the nature of those meanings in terms of subjects and their cultural identities” (142). She primarily addresses the medical image in terms of popular culture, as does van Dijck. Likewise, Joseph Dumit describes how positron emission tomography (PET) scans have transformed cultural views

about the mind. Unlike this text, Dumit specifically focuses on images used in research rather than diagnosis or intervention and shows how these images are disseminated and interpreted in popular culture. He argues that these scans shape opinions in a variety of contexts, including social views of mental illness and finds that scans made public serve many agendas. "While representing a single slice of a particular person's brain blood flow over a short period of time, one scan can also represent the blood flow of a *type of human*, be used to demonstrate the *viability of PET* as a neuroscience technique, and demonstrate the *general significance of basic neuroscience research*" (4).

Bettyann Kevles points out that the technologies have had an enormous impact on art and culture in that "we no longer see surfaces as barriers" but places into which we have access (261). [But, if we just drop a few words from the text inside the quotation marks, we're left with "we see barriers." This text is a barrier to the truth, because it pretends to be something it's not. Through medical imaging artifacts, you want readers to look not in the mirror but at the mirror. The problem is that this text is glass without any reflective coating. It's ironic, really.]

Unlike other scholars in the field of medical humanities, I rely heavily on the scrutiny and analysis of real medical records and images, observations from the field, and analysis of the research with the methods derived from a range of

mostly literary sources. The existing literature discusses medical images seen through the very large window of culture, whereas this project focuses on personal encounters and experiential narratives.

Extensive narrative, in addition to the methods described above, may violate conventional form and content and seem unreliable as a hermeneutic tool, but it is not. Ray outlines the traditional allocations “assigning narration to the novel, exposition to the essay, and poetics to the poem” but points out that the avant-garde allows the author creating the text to adjust the balance of these to his own needs. Ray says the urgent question is how to “establish links that will produce *information*, redefined as a function of surprise” (200). A story offers the reader the experience of reading and the vicarious experience of living, and above all, the narrative account offers “something useful,”<sup>7</sup> according to Benjamin (86), who believed that usefulness could be of a higher order: “Counsel woven into the fabric of real life is wisdom” (86-87). The real story creates wisdom.

Ray points out that “the appropriation of avant-garde experimentation for the purposes of humanities research” is controversial (199). The avant-garde here refers to methods of fragmentation, juxtaposition, repurposing, and the Surrealist

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<sup>7</sup> Benjamin believed the practical interest or usefulness in a story may consist of a moral, practical advice, or a proverb or maxim (86).

tradition. He justifies its usage as an ideal way for film studies to be understood in an “electronic world” (199). It is also an ideal way to excavate and interpret new information. We can generate a new understanding of medical imaging technologies and their effect on the way we view our bodies and ourselves in an electronic world; the methods outlined here, developed outside of medicine, offer a powerful way of considering our electronic selves in an electronic world, as well as seeing ourselves in a different light. There is even a direct connection between Surrealism and imaging technologies; the latter had a significant influence on the Surrealists themselves, whose paintings and literary works advocate the notion that more exists than we see, and that art must show what lies beneath the surface. Kevles describes the influence of x-rays and the idea of transparency on artists, particularly cubists, such as Picasso and Braque (124). The x-ray became a metaphor and instrument for transparency. Frida Kahlo studied anatomy as a premedical student and painted images that mimic qualities of the x-ray in terms of revealing the internal body and isolating parts, “singling out the reproductive organs, in a series of surrealist, autobiographical canvases,” according to Kevles (134). Artists throughout the 20<sup>th</sup> century have appropriated x-rays themselves to represent meaning outside of their original purpose.



Ray points out the benefits of using Surrealist tools, specifically:

... the emphasis on method, the tolerance of chance, the practical goals. Above all, Surrealism and its descendents took seriously photography's break with alphabetic culture, its introduction of new ways of meaning unanticipated by the camera's first users. As it *developed*, photographic practice confirmed Mallarmé's confidence in the benefits to be had from "yielding the initiative" to signifiers—a poem's words, an image's details, an argument's arrangement on the page. (199)

While this text does consider how people are affected by various medical technologies – and how the information produced can lead us to a more comprehensive understanding of ourselves – it is not about how to build a better fluoroscope, necessarily. This is a liberal, liberating application of theories to facts – information that we understand to be true about a medical setting – and experimentation with voice and narrative expands the ways in which we can examine case studies and other qualitative data to investigate the character of patient and physician roles in light of medical imaging technologies. There are examples of addressing technological issues in the humanities through an innovative combination of narrative and conventional scholarship.

Allucquere Stone (whose name contains the anagram *a queer soul*, probably by no accident) successfully combines narrative and high theory in a way that is “a kind of adventure narrative interspersed with forays into theory” (21). She blends fiction and fact openly. [Note to reader: this text is entirely fictional. There is no truth herein. The medical records, stories, and narrative detail are products of the author’s imagination. Whatever she has accumulated in an effort to “decipher problems” has been changed by her own experience beyond recognition. The main point of this text seems to be that we can solve problems in unconventional ways, yet the very idea that these problems need to be solved is solidly conventional. An unconventional, not-already-done approach would require that we shove the problems aside altogether and light the universe on fire.] Stone admits that her method is experimental and “subject to recall,” yet that it ultimately succeeds in drawing together knowledge from many directions into a coherent exploration of the shifting boundaries between humans and technology. She feels that this offers the only way that she “can properly grapple with the formidable challenge of finding viable pathways into academic discourse in the time of cultural studies” (21). Stone considers herself a novelist and does not apologize for allowing that to influence her approach to scholarship. She “grapples” for different ways to tell the story (20). In addition, Ray’s approach to film studies tells a number of stories, resulting from his

unconventional methodology. Ray employs extensive fragmentation and collage, influenced by Barthes and the Surrealist techniques, which results in a form that defies convention and provides extraordinary insight into film analysis, as well as the process itself.

I use this rhetorical evaluation of the artifacts produced by medical imaging technologies to better understand the fragmentation and digitization of the patient, along with our expectations related to illness and the human body. The existing cultural studies research about medical imaging often shows how images are portrayed in literature and art; this project turns the artifacts into literature and art and, in doing so, creates a platform for discovering what the products of medical imaging represent in a larger way, both in the context of the human body as well as the things in themselves. Bill Brown outlines a theory about why we complicate *things* with theory. He describes an artistic sculpture of a typewriter eraser as a “thing” (the typewriter eraser, not the sculpture) that has been “[r]eleased from the bond of being equipment, sustained outside the irreversibility of technological history, the object becomes something else” (15). The thing turns into an object or an extension of an idea that has a historical and social context. Brown demonstrates how we look through objects, because this makes our lives meaningful; however, we “only catch a glimpse of things” until

they break and when their flow within the circuits of production and distribution, consumption and exhibition, has been arrested, however momentarily" (4). Here, we want to traverse the area between the object and thing in order to interpret how medical technologies fit into digital media studies and how that informs cultural perceptions about ourselves as patients in the medical experience. The radio calls to me again as I write these words and I hear: "Life's not about what's better than/ You can be better than that"<sup>8</sup>. We do these things to see ourselves *differently*, though not necessarily *better than*.

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<sup>8</sup> (John Butler Trio)

## CHAPTER 2 – HISTORICAL CONTEXT

The artifacts produced by medical imaging technologies offer a unique basis upon which to search for existential meaning. The technologies themselves raise questions about our physicality and what it means to be human. Looming death, the promise of healing, and perhaps ultimate transcendence compel us to allow the shift in medicine from human-driven to device-driven. It's conceivable that the radiographic image, or at least the perception brought about by the imagery of our inner selves, helped take us to that place. While both the patient and doctor currently remain necessary at some level, the imaging technologies make their location, time, and place less relevant, and lessen the significance of physical human interaction. At some point, the machine must analyze the patient and the doctor must analyze the machine's analysis, i.e., the images, but we face the possibility that never the two shall meet. The medical images offer rich, complicated visual rhetoric from which to extract meaning.

It is useful to have some historical context in order to pull connections from outside of the field of radiology into it. This chapter provides that context and strangely shows that, ultimately, it all goes back to God, who seems to be at

the heart of everything<sup>9</sup>. Advances in radiology – including uses for magnetic resonance imaging (MRI), computed tomography (CT or CAT) scans, nuclear medicine, and ultrasonography – give physicians a window into the body that shows objective evidence of disease and decreases their reliance on the patient’s subjective complaints. The time when doctors had only their five senses and the patient’s own observations to diagnose ailments is long gone. The stethoscope, which remains a symbol of authority, hangs on a doctor’s neck now more than it is pressed to a patient’s chest. With technologies that allow a view of the human body from the inside out, images provide the doctor with more information than does the patient himself. The capture of reality in an image has always fascinated us. It preserves us indefinitely; there is no doubt we existed, if for just that moment. According to Lyotard, the photographic and cinematographic productions gave us something that we wanted; they preserved “various consciousnesses from doubt” (74). We must exist.

The radiographic image – which we could consider the über photo, if a photo at all – might do the same. Understanding something of the x-ray, CT scanning, and MRI helps us to see how the technologies have affected society over the past century, and how the mere possibility of the images may affect our

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<sup>9</sup> We might even say that since *God* is an antigram of *dog*, and God is life, that explains why life’s a bitch.

consciousness. Physicist Wilhelm Conrad Röntgen devised the x-ray machine in the late nineteenth century, receiving the Nobel Physics for the discovery in 1901. Antoine Henri Becquerel aided the development of the x-ray with his discovery of the phenomenon of natural radioactivity, leading to the science of nuclear medicine (Becquerel). The technology fascinated scientists and the public. In 1895, physicist Joseph John Thomson, discoverer of the electron, spoke about the significance of the “Röntgen rays” at Cambridge University. “This discovery, as you see, appeals to one of the most powerful passions of human nature, curiosity, and it is not surprising that it attracted an amount of attention quite disproportionate to that usually given to questions of physical science” (100). In a headline, the science publication *Nature* hailed the x-ray as “a contribution to the new photography” (Lockyer 101). While science was giving birth to radiology, views of the body began to change. People could see beneath the surface of a living person. Scientist William Lockyer describes the result of an early x-ray image of Mrs. Röntgen’s hand:



Figure 5 - X-ray image of Mrs. Röntgen's hand

It will be seen that the flesh is very nearly transparent for these rays, while the bones, the gold ring, the piece of wire and the glass tube are practically opaque. The ring and wire, which were naturally in contact with the flesh of the fingers, appear in the illustration as if suspended in the air. (101)

The flesh becomes transparent.

A historical sidebar: Earlier in the nineteenth century, even before Röntgen's discovery that would ultimately lead to the field of radiology and an understanding of the human body, Charles Babbage was taking steps to create an infallible machine. In *The Difference Engine*, Doron Swade tells the story of



Babbage's quest to build the first computer in the early 1800s. He describes Babbage's motivation: "The 'unerring certainty' of mechanism would eliminate the risk of human error to which numerical calculation was so frustratingly prone. Infallible machines would compensate for the frailties of the human mind and extend its powers." (1). Over a century later, those infallible machines would eventually merge with imaging technologies to change modern medicine.

Amidst the development of the x-ray, the world was discovering electricity, telephones, automobiles, air flight, the vacuum cleaner, and the teddy bear, and experiencing the inexorable march of technological progress. While medicine was also making great strides, society struggled with the notion of a male doctor examining a female patient's erogenous zones. There were charges of seduction and sexual abuse (Ehrenreich 54). "How could a woman, especially a lady, expose her most private parts to his peerings and pokings?" (55). The controversy paved the way for female doctors who crusaded at the time "for female health, for morality, for decency" (56). In a fortuitous way, the development of the x-ray around this same time seemed to allow doctors to see the inner workings of their patients of any gender with neither doctor nor patient experiencing the discomfort, displeasure, or shame associated with the physical exam.

The x-ray captivated people's attention. In 1897, x-ray images were used to find bullets in the Balkan War, and some believed the technology could "transmit thoughts, restore vision to the blind, [and] raise the dead" (Smith). X-rays took on rather Frankensteinian implications, all the while intriguing and beguiling the public. It took years – actually until around 1970, when the practice totally went out of use – before the side effects of radiation convinced the public that they did not need to x-ray their children's feet to ensure a set of well-fitting shoes. The importance of x-ray has been recognized as a major achievement.

In the mid-1970s, the CT scan came into use, which combines computer and x-ray technologies to provide cross-sectional images of any region of the body. Arun Dhand, M.D., a physician at Ormond Beach-based Gastroenterology Consultants, has been a gastroenterologist for over 25 years. He says that imaging technologies such as CT scanning have enhanced his ability to identify disease and made diagnoses more accurate. "A patient may present with abdominal pain and weight loss, with normal physical exam, and if I suspect serious intra-abdominal disease, a CAT scan of the abdomen may find a tumor that I can't feel," Dhand says. "What the human hand can't feel, the CAT scan or MRI can feel for you."

CT scanning has recently become popular as a “wellness” diagnostic tool to search for problems in the body where no symptoms exist. Paradoxically, its use has recently been linked to an increase in the chances that a patient will get cancer. A study in July 2004 by the journal *Radiology* shows that a single CT scan can increase a patient’s chances of getting cancer by .08%, and an annual CT scan for 30 years would increase the lifetime risk of cancer by about 1.9% (Brenner). Dr. Wiesman of the Austin Radiological Association explains that this type of diagnostic procedure does not use more extensive contrast scans that highlight parts of the body to reveal abnormalities (McArthur). Nonetheless, in our vigilance against disease, the scans have become one more tool to insure our wellness. Oprah Winfrey had a whole body scan on her television show a few years ago, causing its popularity to soar. Dr. Weisman projects that “if a large enough population does wellness CT scans, we’re going to increase the number of tumors in the population as a whole.” In any case, the machines work quickly, are relatively accessible – at least to those in most Western countries – and continue to scan for disease in a healthy population.

However, outside of sonography and mammography, most scanning is done when a patient presents with symptoms. It may only take a few minutes to scan a patient’s head or abdomen. After that, the radiologist and treating

physician can view a digital image almost immediately. "If a patient had a CAT scan at 10:00 a.m., at Memorial Hospital, I can look at it at 10:05," Dhand says. "I generally look at the films before I make my rounds, so I can correlate a patient's clinical picture with the scans."

When CT scanning came into wide usage, magnetic resonance imaging was in its early stages. MRI uses a giant magnetic field – with strength of more than eighty-thousand times that of the earth's magnetic field – rather than radiation to peer into the previously impenetrable. Jim Feeney, author of "Magnetic Resonance Imaging – A Window into the Human Body," offers a technical description. Excuse the length ... It's important:

All atoms consist of outer shells of negatively charged particles called electrons buzzing around in diffuse clouds, and a dense central portion called the nucleus. Some of the nuclei behave like small bar magnets and when placed in a powerful magnetic field, about half line up in the direction of the magnetic field and about half line up in the opposite direction. By providing energy in the form of radio waves these tiny magnets can be caused to change orientation, to resonate absorbing energy at a resonance frequency that depends directly on the strength of the magnetic field. While

the magnetic field is changed slightly this resonance frequency also changes in a predictable fashion. [...] More than half the human body is composed of water which as everyone knows has two atoms of hydrogen joined to one atom of oxygen – H<sub>2</sub>O.

Fortunately, hydrogen has all the right properties to demonstrate the magnetic resonance effect. So your body contains more than one thousand billion billion water molecules, each acting as a sensitive radio transmitter capable of reporting on its location, its state and its surroundings.

This is the human body: a chemical concoction. While scientists have understood, relatively, the basic composition of the body for generations, medical imaging provides visual evidence. The MRI, for example, breaks us down to our nuclei, our smallest known part.<sup>10</sup> It performs the ultimate deconstruction. One of the most exciting applications of MRI is the study of the human mind. In contrast with other imaging technologies, MRI lacks the health hazards of radiation, and actually has no known negative side effects at this time (except for the patient whose body contains any type of metal). The medical

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<sup>10</sup> Our smallest known part, notwithstanding quirky quarks and other tiny things that very, very few people understand.

community met the development of MRI with skepticism, but it has since emerged as a very powerful and widely used imaging tool (Feeney).

Doctors have dozens of other radiological technologies at their disposal. Mammography and sonography are the most common. Sonography uses sound waves to construct an image. A 1999 study of the types of procedures used by diagnostic radiology practices showed that 95% of those surveyed used mammography, and 94% performed sonography (Sunshine). Both of these systems are used primarily for wellness checks; mammography evaluates for breast cancer and sonography is most commonly used to view a fetus in utero. The technologies are often serving a healthy population, who wants to stay that way, but sees their demise on the horizon. A November 2004 study by Royal Philips Electronics estimates that 79% of Americans believe that they are currently in good health, but almost 90% expect to face a potentially serious health condition in the next five years. For these healthy people, technology offers insurance against the insidious advance of disease in the body. Other technologies include PET scanning and applications in nuclear medicine, and many subspecialties and variations of the primary radiological functions. "Radiology and imaging has become an integral part of the diagnosis of disease in a patient's work up," says Dan Miles, M.D., radiologist for Daytona Beach-

based Radiology Associates. “There is no question that as the technology has improved, there’s been a significant increase in the use of imaging.” Ultimately, medical body-imaging allows doctors to see inside our bodies without piercing the skin.

Progress has brought radiology from the x-ray of 1896 to a myriad of body imaging equipment now available to the medical profession and their patients. While some of these imaging capabilities have been around for years, recent advances and an aging population are fueling the demand for them. According to a study by The Freedonia Group Inc., a research firm based in Cleveland, the U.S. market for imaging equipment was expected to increase 7.6% per year from 2004 through 2008 to \$9.5 billion. Digital radiography equipment and PET scanners will experience the highest increase in demand, with traditional x-ray equipment seeing the slowest growth. The digitization of radiology is propelling its escalation of use. In the past, radiology departments had darkrooms that developed each film and produced a physical image and many still do. These films have to be manually carried from place to place and stored for years. Lost films are not uncommon. The transition from film to digital storage makes using the images easier, cheaper, faster, and more efficient. Miles explains how not only the prevalence, but also the capabilities of radiology have increased,

partially as a result of the transition from film to digital imaging. “The technology of the CT scanner, for example, has improved so we can take thinner and clearer images than we could before,” Miles says. From the development of HDTV to hi-resolution miniaturized portable device screens, digital images are becoming crystal clear on media in popular culture and medicine.

Use of medical imaging technology has risen sharply over the past several years as a result of the benefit in diagnosis and even treatment of ailments. (The treatment of disease by radiologists is called ‘interventional radiology’.) Financial motivation may also be a factor in its use. While insurance companies and medical guidelines that regularly deny claims may discourage some excessive scanning, the expensive machines needed for these services make money only when they are in use. These fiscal needs combined with litigation-wary physicians and a patient-base savvy enough to know that machines can see where their doctors cannot creates a situation where the use of medical imaging will continue to increase.

At this point, patients still expect their doctors to physically examine them. This could, theoretically, change in the future. Imagine a time when a patient would receive scans in a radiology department based on a physical complaint, such as pelvic pain. A gynecologist would view the images in her



own office, confer electronically with the radiologist, and then prescribe treatment without ever meeting the patient. So far, this does not happen to a large extent. "Certain things are time honored. You still have to be able to sit down with your patient, talk to your patient, examine your patient," says Dhand. "The question is whether the new technology will change the patient/doctor relationship."

It is true that some doctors may now order a scan before seeing a patient. One medical professional describes a time when a spouse suffered from headaches and called for an appointment with a neurologist. The neurologist suggested that the patient get a CT scan before the office appointment. Harry Black, associate medical director and chief of general surgery for Florida Health Care Plans in Daytona Beach, says that such a situation is atypical, and we are not on the cusp of eliminating the doctor or patient:

I don't think we're anywhere close to taking the clinician out of the picture. It helps clarify for me something that I may have operated on routinely ten or fifteen years ago. Now on the basis of the scan, I figure out now if I need to operate. It doesn't take the physician out of the decision-loop and it doesn't take the patient out, either.

Black uses radiological results to aid in his decision-making process, but the technology is nowhere near being self-sustaining – the machines aren't thinking yet. They aren't thinking, but they are inscribing, according to Hayles. The medical imaging machines fit into the category of "inscription technology," in that they "*initiate material changes that can be read as marks*" (italics in the original) (*Writing Machines* 24). If Black, a surgeon, is one of Hayles' post-humans, he might also be an inscribing machine in that he initiates changes in his patient's bodies that can be read as marks. Beyond the physical body revision, he leaves marks that he and others read later. The incision, for instance, is viewed as evidence and later read, in a follow up visit, in terms of how it's changed (i.e., is it healing well? any evidence of infection?). The patient may also read the incision as symbolic of infirmity, physical vulnerability, or something representative of the surgical experience. [Jesus, this goes on forever. The narrator should also note that on the next page of *Writing Machines*, Hayles describes how "*the physical form of the literary artifact always affects what the words (and other semiotic components) mean*" (italics in the original) (25). Hayles finds literary texts that "consider their own form" a way of creating meaning and connecting theory to the material world. If *this* text had any literary merit, Hayles might call it a "techartext," her name for these special, self-conscious literary works. She finds value in these texts, because they "play a special

role in transforming literary criticism into a material practice" by making "vividly clear that the issue at stake is nothing less than a full-bodied understanding of literature" (25-26). And I thought that was my job.

Here is probably a good opportunity to offer you an out. Stop reading. Skip the rest of this chapter, because it can only end badly. It doesn't acknowledge your existence and it offers nothing in the way of truth. It's a recitation. The narrator has the personality of a disc jockey who's talked into the radio for so long that s/he's forgotten how to have a conversation.]

To the patient, doctors and their technologies are becoming integrated, their powers pooled. The CT scanning machine and other equipment have become a gateway to health. In many cases, the patient endures the radiating of her body so that the machine may light up the cancer, heart murmur, blockage, or various other ailments. "[O]ne result of the new noninvasive imaging technologies in the area of medicine is the capability of turning a person inside out ... It conjures up foreboding visions of an all-powerful observer who has instant visual access to the anatomy, biochemistry, and physiology of a patient," says Victoria Vesna, an artist and professor at UCLA (qtd. in Wilson 152). Vesna questions access to areas that used to be private, but are now open for unprecedented surveillance (152). The public seems willing to sacrifice access to their most private places in exchange for life. We don't want to die. If we submit

to God, salvation awaits us and we will love forever in a heaven filled with wine and roses. If we submit to the machine, we may beat death for a little while longer.

While doctors have always used technological tools, the power and possibilities of seeing inside the living human body through radiation, ultrasound, and magnetic resonance gives them a divine authority that exceeds historical precedent, and paradoxically, makes them less germane to the patient/doctor relationship. Patients' expectations of doctors are shifting. With the development of computer-aided diagnosis, algorithms that detect abnormalities, and technologists evaluating images, the doctor becomes technically less relevant, but more mysterious – a God-like entity behind-the-curtain. The opportunity to accept the role of an omnipotent power has always been tempting. German physician and professor, Linus Geisler, says that doctors must resist the temptation to play God:

The seed of temptation is laid in the nature of the medical profession, in that the doctor finds that he is regarded as god, or that he becomes like one. As more and more technical power is available to the doctor, he is in increasing danger of being regarded in the role of god, whether or not he is in agreement.

If the view of doctor-as-God increases in relation to the power of medical technologies, it is consistent that we may be seeing the technologies as a part of the doctor. Some doctors readily consider the stethoscope, the eyepiece, and the scalpel as sometimes powerful extensions of themselves. Surgeon and author, Richard Seltzer, M.D., writes about the scalpel in his essay “The Knife”:

I still marvel at its power—cold, gleaming, silent. More, I am still struck with a kind of dread that it is I in whose hand the blade travels, that my hand is its vehicle, that yet again this terrible steel-bellied thing and I have conspired for a most unnatural purpose, the laying open of the body of a human being. (79)

A surgeon lacking a scalpel has never been much use and might admit as much. But, doctors appear to distinguish between tools and machines; tools are an acceptable extension of self, while the idea of a machine as a tangible part of the doctor may be considered a failing. And, in medical imaging, not only does the focus shift from the doctor to machine, but then from machine to a mere image – a visual representation of the patient. The tool requires touch, while the doctor – or even a mere mortal technologist – operates the machine from afar. To move from tool to machine takes the management of medicine from the Taylorism discussed by Jon McKenzie in *Perform or Else* to a performance

management model. According to McKenzie, Taylorism produced centralized bureaucracies controlled by a few. "Performance Management, in contrast, attunes itself to economic processes that are increasingly service-based, globally oriented and electronically wired" (6). This type of system empowers people, i.e., patients, with information that allows them to contribute to decision-making. McKenzie goes on to state that computers and electronics, along with telecommunications, provides us with the most profound technological performance (11). Certainly medical body imaging technologies fall into this category, though there is not necessarily a one-to-one correlation between performance management and the shift in medicine arising from technological advances. The doctor still holds the key to the machine, and by extension, the key to a patient's health. That may change as the patient-as-consumer undergoes a shift in expectations of medical care and access to health.

Many people believe that their "right to health" is being denied when they are unable to receive the medical care that they feel they need. Waiting for a mammogram can be weeks or even months in the U.S., and then the scans must be interpreted by a radiologist. Few patients would permit a non-doctor to use the scalpel during an operation, but when a medical process requires no touch or invasiveness – no violation of the body – a patient's expectations may be

different and open the door for trained technologists to administer and review medical images without the direct supervision of a trained radiologist.

Before the late twentieth century, most doctors relied heavily on physical exam, observations, and intuition, where they listened to patients' complaints and performed a sort of laying on of hands to diagnose, and sometimes treat, illnesses. The doctor touched each tool he used – scalpel, speculum, stethoscope, – which in turn touched the patient. Each tool was a physical extension of his hand, eyes, or ears. The patient was integral to the exam, the diagnosis, and the treatment, at least in terms of a physical presence. Even if Victorian anxieties about the reproductive body sometimes proscribed a 19<sup>th</sup> century physician from touching his female patient, her physical existence remained relevant to his diagnosis. Physicians of that era approached their patients “through observation and examination” and “engaged in activities that were primarily mental and visual” (Rosenman 378). The physician could hear the patient's complaints and see the patient's body. The requirement for a physical patient is changing. A radiologist, by definition, would be hard-pressed to aid patients without an x-ray, MRI, or CT scanner. A cardiac specialist would have few patients without an electrocardiogram (EKG). These machines are becoming more familiar to the patient, as the doctor becomes more remote.

The patient's role in diagnosis of disease has traditionally been one of acquiescent contributor – a data provider – but now he may be even less relevant to his diagnosis.<sup>11</sup> Traditionally, a patient described her symptoms, disrobed, and submitted to a physical exam. Dhand points out that a neurologist may not see a patient now until after viewing a scan of his head. But despite an acknowledgment that medical technologies are vast, impressive, and change the practice of medicine, most doctors strongly contend that neither the physician nor the patient is irrelevant to the process of diagnosis and treatment. Black says that while imaging technologies are an integral part of medicine, they have not superceded the patient's own voice. "You're not going to do the test unless the patient complains," says Black. "[The scan] helps define the complaint in a more complete way. The patient interaction is very important, because it helps the doctor hone in on what tests can be useful in making the diagnosis."

The patient's voice that once called for palliatives and cures now calls for something else. Patients want reassurance that they are well, a demand unheard of in the past. Doctors help us accomplish this and let us see inside of ourselves.

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<sup>11</sup> Sontag points out how certain medical conditions, specifically tuberculosis and cancer, have historically been used as metaphor to the detriment of the patient. Cancer is "an evil, invincible predator" (7) reflective of a condition that implies a moral judgment. Rosenberg describes how the Contagious Diseases Act in the Victorian age "authorized surgeons to forcibly treat prostitutes for venereal disease by painting their genitals with mercury" (367). These are small examples of how the patient is often a footnote to her own medical condition.



While some doctors may hide behind the curtain, the curtain of the human body opens, and this is changing what we expect of our body and its infirmities.

Geisler says that our repression of suffering, an agnostic society, and the human effort to become God-like, “coupled with a fixation on the dazzling possibilities raised by high-technology medicine” has changed the way we approach illness.

In addition, as a society, we feel that we have a right to health, which Geisler says is illusory. He cites a hospital chaplain, W. Stroh, who states that “Life is not a court where one can prosecute one’s claim to health.” Perhaps now those claims to health may be processed through insurance companies rather than some existential entity. Patients have access to the machines that may be intended as insurance against suffering and death. If we can only *see* the problem, certainly it can be eliminated. What we cannot see frightens us the most (even if some patients avert their eyes).

With technologies that can peer behind skin, through bones, into body organs and even brains, a patient can literally observe a reproduction of his disease. Previously, a doctor might feel a lump or diagnose a clogged artery based on the patient’s symptoms, but now disease poses for the camera. There are few places to hide. A doctor shows the patient an MRI of her right breast and circles in red the whitish mass identified as cancer. The tumor that might kill her

in six to eight months appears as a small twinkle on a computer monitor. With a few mouse clicks in Adobe Photoshop, the patient herself could wipe out the offending cells. With machines the size of rooms and computer systems that hold more knowledge about metastatic breast cancer than a thousand physicians, with laparoscopy, radiation therapy, a massive assortment of drug choices, and the progress of interventional radiology, would the patient be unreasonable to expect cure post haste? Cure or not, the patient has now seen inside herself, assuming her doctor has allowed her access. The patient now has a textual version of herself, concrete and immutable, disease and all.

Ong describes writing as having restructured our consciousness as a society. The form that writing takes – a book or other text – cannot be refuted, because the author has removed herself from the work. “There is no way directly to refute a text. After absolute and devastating refutation, it says exactly the same thing as before. This is one reason why ‘the book says’ is popularly tantamount to ‘it is true’,” says Ong. He points out Plato’s contestation of writing over orality. “Writing destroys memory. Those who use writing will become forgetful, relying on an external resource for what they lack in internal resources,” says Ong, summarizing Plato’s argument (78). The medical image of a tumor offers that irrefutable proof; the interpretation may be wrong, but the image remains

irrefutably a freeze frame of our body in time. Ong also contends a close connection between writing and death: "The paradox lies in the fact that the deadness of the text, its removal from the living human lifeworld, its rigid visual fixity, assures its endurance and its potential for being resurrected into limitless living contexts by a potentially infinite number of living readers" (80).

Technology is manifestly artificial and its artificiality is natural to humans, but that artificiality serves us well. Using technology enriches the human psyche and intensifies our "interior life" (82). Medical body imaging literally radiates the interior life of our bodies and offers us proof that we are complex, exceptional creatures, even if we're not.

The human spirit, or at least the human, wants more than anything to exist. Currently, that existence as we know it relies heavily on the human body. What is the purpose of medical imaging technology above and beyond finding heart defects and secret, festering tumors? "To fuse the machine and the visceral, and ultimately to challenge mortality and prolong life [...] Scanning devices such as MRI, PET, and electron microscopy present fascinating interior landscapes never seen before," states Michele Theunissen, curator of an exhibition on art, medicine, and the body. Theunissen questions whether the technology will change the way we imagine ourselves, or whether we will "remain foreigners to

the medical depiction of our bodies” (qtd. in Wilson 193). These machines offer us the truth, and despite the fact that most of us have an utter lack of understanding about how they work, we have great faith in their results.

Radiological equipment shows the human as it has never been seen before. Yet, an MRI, CT, or x-ray image shows nothing that looks even remotely like flesh and blood. It offers a pixilated version of the body. Consider Dr. Richard Seltzer’s poetic description of what a surgeon sees after just opening a living body with a scalpel. “And there is color. The green of the cloth, the white of the sponges, the red and yellow of the body. Beneath the fat lies the fascia, the tough fibrous sheet encasing the muscles. It must be sliced and the red beef of the muscles separated,” says Seltzer. He goes on:

Deeper still. The peritoneum, pink and gleaming and membranous, bulges into the wound. It is grasped with forceps, and opened. For the first time, we can see into the cavity of the abdomen. Such a primitive place. One expects to find drawings of buffalo on the walls. The sense of trespassing is keener now, heightened by the world’s light illuminating the organs, their secret colors revealed—maroon and salmon and yellow. The vista is sweetly vulnerable at this moment, a kind of welcoming. An arc of the liver shines high

and on the right, like a dark sun. It laps over the pink sweep of the stomach, from whose lower border the gauzy omentum is draped, and through which veil one sees, sinuous, slow as just-fed snakes, the indolent coils of the intestine. (80)

Medical images do not replicate or illustrate the visceral beauty and complexity that Seltzer describes. Radiological machines create a digital image of a patient, which resembles a machine more than the patient. Are we all turning into machines? In *How We Became Posthuman*, Hayles discusses Hans Moravec's belief that this is true. "Humans can either go gently into that good night, joining the dinosaurs as a species that once ruled the earth but is now obsolete, or hang on for a while longer by becoming machines themselves," Hayles states, summing up Moravec's views (283). While radiology has not turned us into robots, it is possible that our power to see inside is changing our views on the body as a machine.

The idea of the human body as a mechanism is old; Leonardo da Vinci, for example, described the body as a machine and created magnificent art by interpreting its machinations. Radiological images reinforce the idea of the body as a machine and as art, and offer us new views into ourselves. These images change the way we see ourselves and our diseases. The images may be a digital

representation of the human form; or, perhaps the digital is real and flesh represents us outside of the computer. Whatever the case, we do not see flesh in a CT scan. We see intricacy, nuance, circuits, and bursts of color, and we also see hollowness. Where is the ghost in the machine? Stephen Pinker asserts that no ghost or mystical spirit resides within us, and that that idea bothers people: "It can indeed be upsetting to think of ourselves as glorified gears and springs. Machines are insensate, built to be used, and disposable; humans are sentient, possessing of dignity and rights, and infinitely precious" (10). He explains that regardless of our religious faith – or lack thereof – most Americans choose to believe in some type of immortality or soul, and the idea that our body is a machine upsets our beliefs about human purpose, such as love and art. "And of course if the mind is separate from the body, it can continue to exist when the body breaks down, and our thoughts and pleasures will not someday be snuffed out forever" (10). We want everlasting life and to know with certainty that our soul, if not our body, lives on.

Nietzsche describes the "internalization" of man and man's development of a soul. "The entire inner world, originally as thin as if it were stretched between two membranes, expanded and extended itself, acquired depth, breadth, and height, in the same measure as outward discharge was *inhibited*"

(84). He contends that no order exists in reality, and it is the purpose of art to make that order. Medical body images have moved into the realm of art, and make order of what we are closest to – ourselves – but have never seen. Artists are using the images produced by the machines (perhaps even the machines themselves) to give order to the human, just as artists have always done through painting, sculpture, and photography. “More than making visible the invisible, art needs to raise our awareness of what firmly remains beyond our visual reach but which, nonetheless, affects us directly,” says artist Eduardo Kac (qtd. in Wilson 91).

Alexander Tsiaras did just that with his remarkable exhibition at the National Museum of Health in Washington, D.C., and his book *The Architecture and Design of Man and Woman*. Tsiaras has assembled 500 color images constructed from digital slices of the human body, using most of a 10,000 volume library of anatomical images from various research centers. He describes the images as “reconstructions of scans” rather than photographs or pictures (qtd. in Squires). The reconstructions offer what we still cannot achieve to a great degree in reality. A *Washington Post* journalist, Sally Squires, describes one of the pieces:

The images startle, their subject appearing at once familiar and foreign. It is the human body as you’ve never seen it, with its

intricate layers of tissue, bone, and skin – and most of the vital systems in between – simultaneously and gorgeously rendered in images whose color, clarity, and depth evoke the masterworks of Renaissance painters.

“This is where art meets science” (Tsiaras qtd. in Squires). Tsiaras uses images that are hundreds of times higher in resolution than typical medical images, and constructs them in three dimensions. He and his colleagues produced one image that shows a body’s range of motion by taking a spiral, whole body CT scan and removing the muscles, fat, and other body tissue, leaving the skeleton. They then merged that image with a performance of a fast motion dance, creating a remarkable representation of the human in motion. Some of his pieces show only body parts. “Twisted vines that snake along a forest’s strange and spongy floor are actually capillaries running through the thyroid gland,” describes Squire. “What appear to be irregular stacks of wooden planks are the building blocks of collagen and bone.” Tsairas explains the work of creating this art as “looking at God’s puzzle” (qtd. in Squires). A puzzle is meant to be solved, or at least indicates that a solution exists. Medical imaging takes the puzzle of our bodies and attempts to find a solution in a way similar to the anagramming and other methods for reconfiguring information used here attempt to solve other types of



problems. The machine captures the image, converts it into tiny data, and puts it back together on the screen to give us new information about our physical state of being; the process used in this text also breaks images into smaller pieces and reconstructs them to create meaning and change the way that we address problems.

Medical imaging technologies are changing the way that we look at our bodies and our doctors. We can see our bodies as they are and as they are not. The images are digitized and electronic, and yet reveal the very actual imperfections of the flesh. We do recognize the power of medical technology over our lives, in that it can seek and destroy disease, and lengthen our lives. It cannot at this time, however, offer us freedom from suffering or immortality. It cannot do exactly what we want it to. Pinker says that “images are said to have insidious power over our consciousness” (213). He describes a postmodern view that we inhabit a world of images rather than a real world with images in it: “In other words,” states Pinker, explaining a theory that he ultimately disagrees with, “if a tree falls in the forest and there is no artist to paint it, not only did the tree make no sound, but it did not fall, and there was no tree there to begin with” (213). Few would assert that if we did not have a representation of our inner selves, we would somehow exist less or fail to exist at all. But medical imaging

does offer us more of an understanding of ourselves and how our bodies function. The images show us that we are not special and that we are. The ability to see all of our body's gears, wires, and pumps that keep us functioning on earth, helps us understand the secret lives of our bodies, ourselves. [The next chapter is supposed to exemplify the medical experience in the way that this chapter described it more didactically. It's debatable, but to me, the following chapter lacks visuals and voice - mine - and therefore lacks oomph. You'll see the difference. To each his/her own.]

### CHAPTER 3 – STONES REMOVED

The patient lies in the shape of a cross, on her back with her arms extended, in a chilly, well lit room. A cap covers her long, straight blond hair. The 38-year-old woman's shapely body is draped in sterile blue sheets. Dr. S, an anesthesiologist, stands by her head inside a half circle of monitors and other medical equipment. A surgical technologist tends instruments on a tray while the patient, still awake though tranquilized, mentions that she used to smoke, but that she has quit smoking, and that she is nervous about the surgery. She is real.

At 9:35 a.m., Dr. S glances at colored bars on a screen. He is monitoring the multi-function machine that displays the patient's vital data—the data that divulges whether the patient is functioning properly, dying, or dead. She is currently alive. The machine detects and converts things like heart function, oxygen saturation, carbon dioxide levels, airway pressure, and blood pressure into digital data and displays the information on a screen in an audio/visual format. Dr. S hears a rhythmic beep as he watches lines and numbers on the computer monitor that assess the patient's physical well being. He could just as easily monitor the patient from another room. Her corporeal presence is not strictly required.

“It will tell me that I have a problem even before I can imagine it,” Dr. S says of the multifunction monitor.

Dr. S says this with some irony, as if patients’ lives depend on their physicians’ imaginations—the minds that can envisage the modification of the human body from the inside out. The anesthesiologist and surgeon’s imaginations must also predict thousands of possible outcomes to individual actions and decide exactly how to proceed when any one or combination of those outcomes occurs. An inventory of medical technologies has helped physicians in both regards, including the system used by Dr. S.

While understanding the full meaning of this data requires extensive training, the monitor makes it quite clear when the body’s functions have gone awry. The normal lines and beeps emanating from the machine have cadence; they are musical, in a sense. The rise and fall of the stomach, the thump of the heart, and the pulse that lightly beats against the skin are the body’s beats. On Dr. S’s monitor, the rise and fall of lines on a screen and the steady beep of the machine give observers a baseline by which any deviation triggers alarm. The anesthesiologist says deaths attributed to anesthesia have dropped from 1 in 10,000 to 1 in 250,000 over the last decade in large part due to these systems. Generally, though, each patient cares about the ‘one’ more than the 249,999

others. Dr. S covers this patient's face with a mask and she slips into unconsciousness. He inserts a tube into her throat and tapes her eyes closed. The patient communicates through her data and lies at the will of those she has entrusted with her care.

A surgical technologist adjusts the patient's blue sheets. He opens the patient's dressing to expose a rectangular area on her abdomen, which will serve as the surgeon's doorway to the internal body. A sheet is raised at an angle above the patient's neck to obstruct her view of the surgical area in the unlikely event that she awakens from anesthesia in the middle of the operation. Seeing one's own viscera is said to be traumatizing. Despite the popularity of medical reality shows that show surgeries on various body parts in full, fleshy detail, the recognition that we are meat does not come easily. This is particularly true of those knowing that a sharp, metal blade has pierced their flesh.

Everyone in the room wears a face mask to help prevent infecting the patient with germs, a risk reduced by the small incisions of laparoscopic surgery. Conversation flows easily between the surgical team members, though it takes practice to communicate without the usual facial expressions – visual cues – to understand meaning. People who work the operating room learn to express and

interpret emotion through their eyes. Raised eyebrows, crinkled eyes, widened eyes, or a slightly prolonged stare take on heightened meaning in the OR.

At 9:50 a.m., Dr. D, a general surgeon and, reportedly, a concerto pianist, enters. His colleagues, employees, and patients seem to venerate him, stating that he has exceptional skill in the operating room, though lacks affability. Surgeons are often thought of as controlling and cold. Watching the reverence with which one is treated by other medical professionals in the sanctum sanctorum of the operating room may explain how such arrogance would develop; however, there is no conclusive evidence to suggest that the stereotype is true. Fixing flawed bodies is the test by which surgeons are judged. It takes nerve. While a chilly disposition may not be an admirable trait, patients appreciate the conceit that allows someone to drive a scalpel into the human body and come up aces. A scrub nurse dresses Dr. D in a gown and gloves.

“Tell me what I’m doing,” Dr. D says with a clout peculiar to surgeons.

He is doing a laparoscopic cholecystectomy – gallbladder surgery guided by a camera. Surgeons perform thousands of these surgeries every year; they have replaced the traditional cholecystectomy, which required a five- to eight-inch incision, greater recovery time, more time under anesthesia, and greater risk to the patient. Gallbladder removal overall is the most common surgery in the

world. Losing the organ itself seems to pose no risk. The gallbladder is a pear-shaped organ that stores bile produced by the liver before dumping it into the small intestine, but the body seems to get along fine without it. Sometimes, as in this case, small stones form that cause an obstruction that discomforts the patient, usually after eating fatty foods.

For weeks, this patient had complained of severe upper-abdominal pain at night. She saw her physician, who ordered a hepatobiliary iminodiacetic acid (HIDA) scan to evaluate her condition. During this procedure, a radioactive tracer was injected into her body through an IV line, which collected in her liver and gallbladder and gave off gamma rays. A special camera took pictures of these rays. Her radiologist and physician then had images that indicated a need for gallbladder removal and referred her to a general surgeon.

The surgeon draws lines on the patient's body with a marker. He then uses a scissors-like tool to cut a hole in her belly button; he cuts three additional small holes in her abdomen. He inserts the laparoscope, a tool with a small camera connected to it, through the navel.

"Kill the light," Dr. D says.

The light that shines on the patient dims. A technologist who serves as the cameraman takes hold of the camera. In some ways, the success of the operation

depends upon him, though he serves at the behest of the surgeon. The surgeon's gaze shifts from the patient to the color monitor that displays the magnified images of the patient's innards, illuminated by a small light attached to the camera. Carbon dioxide is pumped into the abdomen to help the surgeon see and maneuver the terrain. At 9:55 a.m., the cameraman moves the camera through the inside of the patient. Veins, an artery, yellow fat, and flesh become visible. Soon, the liver appears on the screen, as does the pancreas. Dr. D uses pinchers inserted through one of the incisions to move things out of the way.

With seemingly little effort, Dr. D finds and separates the gallbladder from the liver and ducts. Watching the camera all the while, he staples the cystic duct that delivers the bile and uses a hook electrode to burn the edges of the gallbladder. Throughout the procedure, he makes decisions based on the screen's moving images about what looks normal and what does not. He must decide what should be cut, pushed away, stapled, or otherwise attended to and what must not, under any circumstances, be disturbed. The surgeon toggles between the video representation of his patient and her physical body, with a predilection for the visual representation. He cannot obtain enough information from the flesh as a whole, so he must turn the patient's body into a visual signal, magnifying the fragment of her that requires revision. Her body as a whole



provides superfluous information that hinders the surgeon's ability to solve the problem at hand – her defective gallbladder. Her body sends redundant signals. Therefore, he must dispense with the body as a whole and focus on fragments of it, visually captured and reconstructed on the screen by the imaging technologies. He studies her as a text in need of revision.<sup>12</sup>

One of Dr. D's colleagues, another general surgeon, says that a difference between operating based on a screen image and navigating the actual body is a change in one's sense of touch. The traditional cholecystectomy is a visceral operation; surgeons delve more blindly into the abdominal cavity, relying heavily on the sensation in their fingers to decide where they are in the body and what to do there. With the prevalence of video-guided surgery, the body becomes the source of the image and the surgeon must focus on the image rather than the body itself. The surgeon has a new medium – that of the screen or monitor – which communicates a continuous stream of information about the patient in the form of moving images. If a photograph or the series of still frames that comprise film are generally considered artifacts of the past, perhaps we could deem the surgeon a historical revisionist. The body is itself a text—forever changing, subject to revision, unknowable. Surgeons not only “read” and

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<sup>12</sup> *Revision* is to *surgery* what *editing* is to *haircut*.

interpret it, but physically participate in the body's making and unmaking, "authoring" us through their clinical interventions.<sup>13</sup> The study of medicine becomes digital media discourse.

The surgeon revises this patient so that her bile can flow freely. Through a hole in her upper chest cavity, he pulls out three slimy, cherry pit sized stones and a bile bag. He breaks the bag onto the patient's chest and a primordial greenish-yellow fluid flows out. Dr. D removes the offensive gallbladder through the hole and finishes the operation. The camera and other instruments are pulled from the patient's abdomen. At 10:05 a.m., the lights are turned back on. The images vanish from the screen and all attention reverts to the body on the table. The surgeon sews the patient's wounds with blue thread and leaves the room.

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<sup>13</sup> Medical and personal narratives fuse here, stories bound together by a spine.

## CHAPTER 4 – VISIONS OF LOVE, RADIOLOGY, AND GREEN CHAIRS

We have problems, you and I, whether you are a lesbian or a radiologist or neither. In the interest of full self-disclosure, I identify myself as neither though concede that I am closer to the former than the latter. As such and through no one's fault but my own, I cannot find a word to identify the adult relationship that *infiltrates* my existence more than any other. It might seem narcissistic to ask you to care about me in a text of this nature, and it is indeed a selfish request, but I propose that this specific language conundrum constitutes a social and humanistic concern worth addressing, seriously and with only a modicum of self-mockery. [Self-mockery helps to demonstrate the real nature of this text, which is humbly and *unapologetically* narcissistic.] Humans want to be understood. I, along with a world of Significant Others, must be understood in terms of this relationship, yet there is no specific, unambiguous signifier to identify whom I will disdainfully and sardonically identify, only once here, as My Significant Other. The word I seek is not a legal term or one that characterizes partners in a marriage sanctioned by the Clerk of the Court, the Nation of Islam, or the Church of Jesus Christ of Latter Day Saints, nor is it a synonym for the post-adolescent, provisional girlfriend-

boyfriend relationship.<sup>14</sup> The word, when I find it, will be a synonym for nothing or, rather, have no synonym. [Maybe it will be “closer to the former than the latter.”]

Luce Irigaray poetically faced a struggle of this sort. In “When Our Lips Speak Together” (205-218), she works out the problem of a lack of language for her lover and herself. She believes in the transcendence, the beauty, and the uniqueness of relationships between women, as I do. “Kiss me. Two lips kissing two lips: openness is ours again” (210). Openness is ours again: the beauty of the letter O. Overwhelming and orgasmic, O is the shape of the feminine orifices that kiss each other. Irigaray refuses to accept the same lovers’ language that men have written across the pages of her life with their leaky penises. She generally asserts that the weight of those phallic pens has caused female sexuality – homo- or hetero- or anything on the continuum – to be “conceptualized on the basis of masculine parameters.” A clitoris is a little penis; the vagina is “a hole-envelope that serves to sheathe and massage the penis” (23). These parameters define not only female sexuality, but the experience of women-loving-women as well, both in relationships with the self and with other women:

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<sup>14</sup> I am not unique and the relationship that I seek to name is not either. It constitutes an infinitesimal step forward in the naming of things, and not just things, but significant things. In this case, I mythologize my *amie*. I want her to become a part of the cultural lexicon rather than stand apart from it. I want her to be the myth that turns toward me and subjects me to its “intentional force” and “summons me to receive its expansive ambiguity” (Barthes, *Mythologies* 124). I want this for everyone.

If we keep on speaking sameness, if we speak to each other as men have been doing for centuries, as we have been taught to speak, we'll miss each other, fail ourselves. Again ... Words will pass through our bodies, above our heads. They'll vanish, and we'll be lost. Far off, up high. Absent from ourselves: we'll be spoken machines, speaking machines. Enveloped in proper skins, but not our own. Withdrawn into proper names, violated by them. Not yours, not mine. We don't have any. We change names as men exchange us, as they use us, use us up. It would be frivolous of us, exchanged by them, to be so changeable. (205)

I do not care whether or not I speak like men; as far as I know, they speak like I do. Words do fail me, though, and I feel lost with Irigaray, absent from myself, drawn into using my *amie's* proper name when I want a common noun to give me the common ground that I seek. Firm space to walk on. The working out of *my* linguistic quandary will be less poetic than Irigaray's. Also, I will not blame the penis on the grounds that its ink is invisible at best, washing away with a bit of soap and water. The vagina, on the other hand, writes in blood red and stains permanently.<sup>15</sup> I blame no one but my *amie* for holding me down. Those who feel they need the language and who make the meaning for the

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<sup>15</sup> Cixous states, inexplicably and conversely, that women write in white ink with their own "good mother's milk" (352). My *amie* is lactose intolerant.

language must invent the language. [Correct me if I'm wrong, but this chapter sets out to prove the inadequacy of language, which by the narrator's own definition, it can only do by using inadequate language to prove itself. It's a fallacy that demonstrates its truthfulness by being fallacious. That's a dead end. Or rather it's recursive, linguistically, ontologically, and existentially. I suspect the problem is less one of language than one of thinking and intellectual history. Our understanding of a word like *wife* is less delimited by the intrinsic inadequacies of language than by the meaning of that noun having been imposed on us. It's these inherited ideas that we're anchored to, not the words. Efface the word "love" from the planet and the sentiment would remain, I imagine. But would the opposite be true?]

Whereas I search for a word with enough meaning to communicate something of my identity to others, radiologists have a term with too much meaning. They argue over the word *infiltrate* and how it should be used in radiological reports about their patients' chests. *Infiltrate* is defined as such in the March 2008 issue of *Radiology*:

Radiographs and CT scans.—Formerly used as a term to describe a region of pulmonary opacification caused by airspace or interstitial disease seen on radiographs and CT scans. Infiltrate remains controversial because it means different things to different people

(69).<sup>[16]</sup> The term is no longer recommended, and has been largely replaced by other descriptors. The term opacity, with relevant qualifiers, is preferred. (706)

Some radiologists believe the term should be excised from medical usage; others believe *infiltrate* is the best, most efficient term to describe what it signifies. The controversy has been ongoing for at least two decades, and is characterized by one radiologist as “a never ending semantic battle” (Hall). These problems – those of lesbian love and radiology – are intertwined in a way that allow me to address them simultaneously, using *rhetorical narrative fragmentation and reassemblage in the service of resolving states of difficulty*. Spoiler alert: Nothing will be unambiguously solved here. The *resolution* in this case will come in the form of understanding the problems differently, such as the medical imaging experience, that were not part of the central questions but about which the methodology yields data, regardless.

Let me explain the linguistic situation more thoroughly, using credible outside sources to validate my position. It should be noted that no outside sources were harmed in the making of this text. They remain wholly intact.

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<sup>16</sup> The endnote from the original text: “Patterson HS, Sponaugle DN. Is infiltrate a useful term in the interpretation of chest radiographs? physician survey results. *Radiology* 2005;235(1):5–8” (721).

I cannot get close enough to my *amie*. I look to the French for a name that signifies our relationship, because nothing in my own language fits. While I was married, both before and after the term of the legal partnership, I referred easily to my *husband*, communicating with great clarity the commitment, complexity, and passion of our relationship. Though not everyone identifies *husband* with passion, when I speak the word, I can infuse it with meaning through my intonation, tone, and the pitch of my voice. The word *husband* makes conversation fluid and easy and transmits a great deal of information. I say it; the receiver gets it. Communicative interference is minimal. The importance of this cannot be overstated. We are inextricably bound to our lovers. They infiltrate our lives and being able to speak of them to those around us deepens our relationships with other people. I miss referring easily to my *husband* and even *marriage*, because when I was able to do that, everything made sense. Not only did others understand me, but I understood myself. Without the moorings of language to identify my relationship or even myself, I feel precarious and alien (though not so much as to be debilitating).<sup>17</sup>

*Amie* translates literally to *girlfriend*, yet seems less ambiguous and juvenile – closer to *amant*, which means *lover* but implies a fundamentally sexual

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<sup>17</sup> See Footnote 14.



relationship. *Amie* (or *mon amie*, meaning *my girlfriend*) does not suffice. She means more than that; she is a referent for a word that does not exist. The language eludes me while I burrow into her and squeeze so hard that it hurts us. My desire exceeds my body's capacity to transcend itself. I wrap my arms and legs around her as she lies on her side, watching me watch her. The skin is no barrier to the flesh. Her skin against mine becomes my skin and I want nothing but to never extricate myself from this place. For that moment, I need no words because I have carnal expression. Things happen, the outside world intrudes, life interrupts. We peel apart. Then I *need* words or, more specifically, a word, because I cannot always be locked in euphoric embrace.

I have no language to identify my *amie* in the context of my life. I want her (and you) to know how I feel because by succeeding at this, I will create something beautiful, forever have that which I describe, and I will be understood. This part is important; this description of physicality is not merely to appeal to prurient interests. She does not replace, substitute for, or much resemble the relationship I once had with my husband or anyone before him and, therefore, I must have a unique expression for her. It seems that a relationship between two women is fundamentally different, more intimate and volatile and perhaps less steadfast, and requires its unique recognition. It

requires a name. I want to use Susanne Langer's rationalization of musical aesthetics here, but I struggle as always with how to incorporate another's dissertation into mine. [It seems an injustice to Langer, the readers, and yourself when you only use what you want from the vastness of *Everything Ever Written* to justify your means to an end. It's possible that only Langer's death prevents her from complaining.] In any case, Langer says that "it seems peculiarly hard for our literal minds to grasp the idea that anything can be *known* which cannot be *named*" (232). She speaks of the symbolization of music – not to be confused with symbols in music – and the phantom qualities that make articulating the meaning behind a musical composition elusive. She wants us to see that music as a symbol for emotion is too *much* for language and that "*music articulates forms which language cannot set forth*" (233).<sup>18</sup> I either face the limits of language to express myself or the limits of my ability to construct language where none exists.

*Love* means nothing; it's a cliché, a vacuous word. Language is a machine that serves itself in that we conform our experience to its limitations. It leaves me with this problem of lack of expression only addressable in a way that will produce unreliable results. The problem requires reaching outside of language, searching for God, and making disparate connections that we can only

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<sup>18</sup> Italics in the original.

accomplish by leaving logic and reason at the gates – it means dispensing with inhibitions and convention. Describing Barthes' approach to *S/Z*, Robert Ray states that "the writer will find himself led in surprising directions" by yielding to an unusual form. Through the fragmentation of a Balzac novella, Barthes "recognized that passages unstuck from the larger narrative prompted speculation, different readings, play" (97).

To solve the problems that I have created, I want to unstick my experience from the larger narrative and fragment it, crumple it to pieces, as if it were a plate that has served its practical purpose and is shattered and shaped into a mosaic of a Christian fish with an open mouth – an object far different from its origins and one that conveys complex, highly interpretative, contradictory meanings. I may find pieces from a shattered teapot to create an elephant that bends to squeeze the fish with his phallic trunk. The method is troubling: breaking plates and teapots and reassembling them in ways that create new information. Langer understands the need to break things. More importantly, she identifies a need for "expressive abandon" both in terms of music and language itself. I need a term of "expressive abandon" for *amie*, a "wailing primitive dirge," "wild syncopated shouts" that is the "sheer self-expression" of which Langer writes (216):

The laws of emotional catharsis are natural laws, not artistic. Verbal responses like “Ah!” “Oh-oh!” are not creations, but speech-habits; even the expressiveness of oaths rests not on the fact that such words were invented for psycho-cathartic purposes, but that they are taboo, and the breaking of a taboo gives emotional release.

Breaking a vase would do better still.<sup>19</sup> (216-217)

We must respect those who want to break taboos and vases, as well as those who want to break through the skin without making a scratch, because they are the freedom fighters of humanity. Here is where radiologists enter this story. (They fight for our freedom from disease and pain by seeing beneath us.) In the context of a radiological report of the chest, *infiltrate* – a noun – might mean *pneumonia* or *atelectasis*, or it might refer to a non-specific finding (Irwin 1123). Its ambiguity frustrates some physicians. According to Fred Monsour, M.D., an interventional radiologist, certain radiologists prefer ambiguity, particularly when using the term in a descriptive phase rather than a diagnostic one. Drs. Patterson and Sponaugle studied the *infiltrate* issue and have determined that it “is an inadequate term in chest radiology” and one that “could

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<sup>19</sup> In a strange parallel, or possibly a conventional tangent, a 1981 *New York Times* article describes the split between Classical and Popular music, citing Langer's admonition to break vases as follows: “The Pop musician's aim and need is to break vases; the Classical musician's aim and need is to pick up seemingly random pieces and make vases of them” (Henahan). In this circumstance, I would characterize my position as *bi-musical*.

have a counterproductive effect.” They find the term an inefficient carrier of information, perhaps in the way that *amie* inefficiently communicates what it means to describe. The radiological report is an interpretation of an image, and the researchers note that while “it seems that some may view the radiologist’s interpretation as a sort of work of art and an end in itself, we argue that it is rather a tool to be used to transfer information.” Drs. Patterson and Sponaugle imply that good information, in the context of a radiological report, is not vague or ambiguous.

My passion for my *amie* is not ambiguous; it carries information to her, through her, and out of her. It is too vast for ambiguity and defines my universal space distinctly with great clarity. To be sure, my *amie* herself can be ambiguous, amorphous even, in her response to my passion at any given moment. The difference between a kiss and a bite, love and hate, an embrace and a stranglehold – it’s difficult to distinguish sometimes. But passion prevails and creates space comprised of fractured light colored with my fever for my *amie*. My passion *infiltrates* the universe, conveying an inexpressible layer of information to whoever will receive it. Inexpressible information would seem, on its bare face, to lack value. It cannot infiltrate a receiver; it evaporates leaving nothing.

The issue of language does not evaporate nor do the medical records that radiologists generate. When they use the term *infiltrate*, they use it primarily in written medical reports. When they use the word *infiltrate* in conversation, they, like anyone else, may be speaking of a snitch infiltrating the mob, gays infiltrating city council, or infiltrating the flesh of their lovers. Of course, *infiltrate* has a different meaning outside of the medical discipline. *To infiltrate* is to pass through or penetrate – a verb, an action word. Doctors infiltrate their patients with their latex covered digits, scalpels, cameras, radioactive isotopes, and scopes. I want to infiltrate my *amie* with words and more. I want to be able to tell you who she is to me in one word. These problems, mine and the radiologists, are intertwined. The radiologists exist because of our desire to see ourselves, to fix ourselves, to transcend ourselves, which I want to do as well. I want to be more than a walking shadow living a life of quiet desperation. I do not want to find meaning with my *amie*; I want to make meaning.

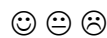
Two questions seem apparent: 1) Should radiologists use the term *infiltrate* in chest radiology, and 2) What word can I create that expresses and identifies who I am in terms of my relationship and inexpressible desire for my *amie* in a way that serves a larger need for this language of love and desire? In order to solve these problems, I observed an aorta-iliac and lower extremity run-off

arteriogram and obtained the artifacts produced by that procedure – a radiological report and images of the patient’s lower extremities.

That’s not entirely true.

I observed an aorta-iliac and lower extremity run-off arteriogram and *then* ascertained the problems that it will solve. But, that’s where the lie stops. It fits with the form. Fiction is autobiographical; memoir is fictionalized. I have no preconceived notions about what the arteriogram or its artifacts will offer me or what kind of answers that I might find in them. It may be significant that *arteriogram* contains the perfect anagram *art or mirage*. This seems to substantiate my approach to the problems that the radiologists and I face. [Only if you make the metaphor more significant than seems justified.]

Thank God for the arteriogram and its artifacts. They contain expressible information, waiting to be decoded. I must infiltrate the code, cross boundaries, and find new entry ways into the language and images produced from the body on the table.



A soap opera plays on the television hanging from the ceiling in the radiology waiting room. [The television miniaturizes the story to make it fit the screen; you’re miniaturizing this story to fit the page; both stories are interruptions, interpretations. Nothing is real(istic).]

Patients sit in green chairs with faux wooden appendages. The patients' appendages are not wooden or faux, but they are mostly the same color as those of the green chairs. A coffee table supports a box of tissues next to the Holy Bible. Everyone waits, including a round woman with a round face. She's pregnant. A commercial interrupts the soap opera. [The soap opera interrupts the commercial.] It advertises Femcon Fe, birth control pills, and instructs the audience to visit [chewablepill.com](http://chewablepill.com) for more information. Later, I read that the Web site warns its readers that "oral contraceptives are not for everybody." This seems patently obvious. My *amie* and I do not need contraception nor does the pregnant woman. In this way, we are the same. [You don't need contraception but not for the reason that you imply; in reality, as it were, you need no contraception because you are a disembodied narrator.] The pregnant woman reads *Redbook*, which claims on the cover to reveal: "The hidden ways he says 'I love you.'" Her phone rings repeatedly. She looks at it and pushes buttons, but says nothing. She finds hidden ways to say "I love you" to the baby that grows in her belly.

The aorta-iliac and lower extremity run-off arteriogram will take place in a room called "Specials Lab," but the radiologist, Dr. Singireddy isn't ready yet. Dr. Monsour dictates a report in a little space with computer monitors used to



read medical images called the “viewing room,” which contains a cardboard box with “squeeze fish” handwritten in black marker. [This probably does not mean anything.] Everything means something. [Not necessarily.] He dictates punctuation and paragraph breaks. He watches the image on a screen and tells the story of a procedure into a microphone attached to a box attached to a computer. A medical stenographer will transcribe it later. [Nothing will happen later that does not happen in the story. It ends at the last word on the last page.]

Back in the “Specials Lab,” a plate of pistachios is positioned to view the procedure on a large counter that also holds five computer monitors.<sup>20</sup> The room is cold. A poster of the peripheral arterial system hangs on the wall with magnified sections of the renal anatomy and femoral puncture site. Dr. Monsour states that radiology reports have essentially three purposes: they communicate findings to interested parties, usually doctors; document procedures and analyses for future reference, including protection of the radiologist from liability claims; and ensure proper payment to the medical facility. Radiologists receive a base fee for a procedure, though there are some procedures for which there is a

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<sup>20</sup> I wondered about the rationale for including this particular detail, but oddly enough, weeks after the observation and consequent documentation of the pistachio nuts, I observed a respiratory therapist eating pistachio nuts in the viewing room of the “Specials Lab,” establishing with some certainty the connectivity of the events and as well as highlighting the relevance of the nuts as an allusion to both *a nourishment of the body* and *insanity*.

supplemental fee for complexity or length. The poster is not a medical record, but it does communicate the findings of the artist who rendered the image and gives that artist a basis for payment. I have no basis for payment. [No one will buy this text.]

Medical technologists wheel the 81-year-old patient into the “Specials Lab” on a gurney. He has yellowed hair and weighs 172 pounds. His name must remain secret lest it seem to violate the Health Insurance Portability and Accountability Act of 1996 (HIPAA), but his name contains the perfect anagram *El-Lion*, so that is what I shall call him. [HIPAA means nothing in fiction. Government regulations are not applicable to El-Lion. How can anyone take this seriously?] He speaks to Dr. Singireddy, whose last name contains the perfect anagram *dying rides*, and moves himself from the gurney to the table upon which he will lay for the procedure. El-Lion wiggles his toes, covered by gray socks with white, bent lines. [Sometimes details seem to add credibility, which you need here. It’s a good move to use language to move this from the radiological field to the humanities. And, if nothing else, it shows you certainly are no expert in radiology. A radiologist would not likely find scientific value in anagrams.]

Dr. Monsour, whose name contains the perfect anagram *so mourn* – which seems suggestive coupled with his partner, *dying rides* – comments to me that no specific protocol exists for communication between the treating physician, who

decided that the patient needed an imaging procedure, and radiologist.

Sometimes the physicians speak on the phone, meet in person, or communicate by email, and sometimes none of those things happen. They do not speak of going on *dying rides* with their patients, nor do they *so mourn* over this omission.

A technologist wipes El-Lion's pelvic area and leg and covers his genitals with a sterile blue cloth. She lays a blue sheet with clear plastic edges over the patient from the waist down. In the "Specials Lab," blue denotes sterility and not necessarily a state of depression or sadness, though it is possible to be sterile and depressed, with or without a causal connection. The patient's chest rises and falls under a separate blue sheet. The whole, mechanical table rises and falls, literally. The patient, by necessity, moves with it. The technologist comments that the patient has had an aneurysm. The table is shifted around. [Or, "The table shifts around"?] The pistachio nuts remain still. The patient becomes a table for the tools and holds the instruments that Dr. Singireddy will use to infiltrate his body. There are two pats of butter wrapped in foil on the counter opposite of the nuts. In the observation room, Dr. Singireddy speaks to the technologist about administering pain medication. I do not understand the machine they look at, so later, I ask Dr. Monsour by email. Dr. Monsour responds:

It's a medication dispenser networked to the hospital computer system.

There are many around the hospital, each one stocked with the meds used most often in that particular area [...] Through links to other facets of the HIS (hospital information system) it keeps track of user authorization and tracking, inventory, patient charges, etc.

[Ellipses indicate missing text - text considered "irrelevant." Who gave you the right to determine what's relevant?]

The doctor digitizes his pharmaceutical desires and the machine spits out pills for the patient. Back in the "Specials Lab," the technologist argues that the patient needs more medication than the doctor prescribes. The technologist controls the machine.

"He's very fragile," Dr. Singireddy says.

As Dr. Singireddy speaks to me about the patient's condition, I feel my phone vibrate and I know that my *amie* wants me. I know her vibrations. I do not answer because my relationship with Dr. Singireddy is very fragile. We just met and I need for him to provide the means to solve my problems. He will bring me closer to my *amie*, if only I can interpret the experience and artifacts that he creates from El-Lion's arteriogram. Therefore, my *amie* must wait. Everything is connected. Nothing is a non-sequitur. [Everything is a non-sequitur. One thing doesn't need to follow the other. It does by chance. The nature

of this text is that its author breaks apart the experience as she sees fit. The text is a reproduction of experience with missing pieces all along the way.]

All of these details are relevant if we believe that I am in a surgical theater and want to watch the performance through a veil of fingers, as Man Ray did in the movie theater, to “release individual images from the narratives that constrained them.” [Robert] Ray describes the Surrealist method of fragmentation in cinema to seek revelation and ignore the demands of the story itself to focus on one thing or the other (101). [Better that we control what we see than be controlled.] I am tearing apart this experience and the things created as a result of it in order to create new information in a way that will solve our problems. To get there, you must first develop a sense of empathy for El-Lion and Dr. Singireddy and understand why they exist in this narrative. [They exist only in this narrative. The real experience was nothing like this. Ask anyone who was there. They won’t see it this way. The story reflects only the narrator’s perception.] The characters *need* context. The artifacts produced from this experience need to be ripped from their context. It gets messy.

Dr. Singireddy wears a gown, mask, cap, and gloves to protect himself and the patient from germs, along with a lead vest to protect him from radiation. He moves to the patient and looks down at his face.

“Sir, do you have any questions for me before we proceed?”

“No,” says El-Lion.

Away from the patient, Dr. Singireddy tells me that El-Lion is here because he has had pain in his legs. [El-Lion is there because the “Specials Lab” needs to validate itself.]

“We will puncture an artery in his groin,” Dr. Singireddy says, in a way that makes that act alone sound remedial.

The doctor interrupts the procedure to speak to El-Lion’s wife, who has appeared in the doorway of the “Specials Lab.” His words are indecipherable to anyone but the woman. She replies “um huh” during every pause. Dr. Singireddy then speaks louder, probably unconsciously.

“Most of the time, things go well,” he says.

“Is there any chance of a stroke?” the wife asks.

“No, none.”

Dr. Singireddy qualifies his statement by adding that of course El-Lion’s body may be planning a stroke anyway and it is, theoretically, possible for that

stroke to occur in concurrence with the procedure; however, the procedure would not have *caused* the stroke.

“Why is it so cold in here?” the wife asks.

She worries about her husband’s comfort.

“For the computers,” Dr. Singireddy replies. [Poor El-Lion must shiver for the sake of the machines. If computers needed to be underwater, all the patients would drown.]

He assures the wife that her husband will be comfortable.

The patient receives a tranquilizer and local anesthetic. Dr. Singireddy delicately passes a small catheter through a sheath into the right side of the patient’s groin. He attempts a similar procedure on the left side and comments that the patient has substantial scarring in the groin. He has to adapt the procedure for the patient’s age and physical condition. [And the patient must adapt his body for the catheter.] Dr. Singireddy holds the wire in while the technologist gets a “catheter with metallic support.” He must use stiffer wire because of the scarring. The table moves with the patient on it. Dr. Singireddy inserts another access sheath into the patient, so that he can then guide the catheter through it. Patient snores as he bleeds slightly. Music plays on the radio:

Oh I, oh, I'm still alive  
Hey, I, I, oh, I'm still alive  
Hey I, oh, I'm still alive

Hey...oh...<sup>21</sup>

El-Lion is quiet but might as well be the one singing, because he is still alive, though statistically closer to death than the technologists, radiologist, or observer in the “Specials Lab.” He must be sleeping because the technologist awakens him, telling him that he must follow breathing instructions so that pictures can be taken.

“Take in a deep breath,” she says.

The patient does so.

“Stop breathing.”

The patient does so.

“You can breathe.”

The patient breathes. I breathe.

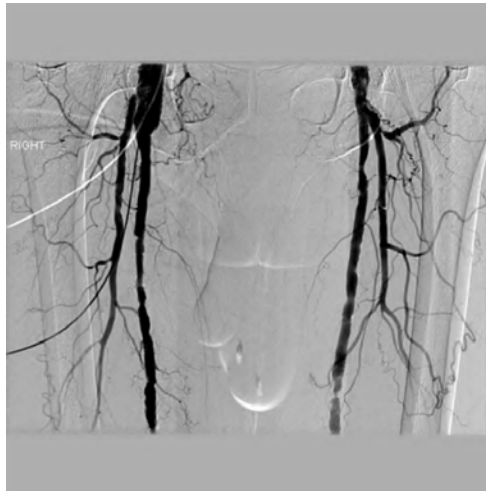
The technologist seems to take for granted her ability to grant breath to El-Lion. My *amie* sometimes reminds me to breathe, because I forget when I am with her. Dr. Singireddy watches a monitor in the observation room that displays an image of the vascular system in El-Lion’s lower body as dye flows through the patient’s veins. [No clever comments about the word *dye*? How unusual in the context of this story. It could demonstrate restraint on the author’s part, but more likely reveals the author’s lack of

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<sup>21</sup> (Pearl Jam)



imagination. "Death is the sanction of everything that the storyteller can tell," Benjamin says (94).  $9+4=13$ . Very unlucky.] Wherever the dye slows or stops identifies a blockage.



**Figure 6 – Run-off arteriogram, upper thigh**

The doctor sees blockages in both legs. I see a primordial root system that tells the story of human history. The language I seek is rooted in the image, if only I can dig it out. The doctor cannot see the root system. (I know because I ask him.) If Dr. Singreddy were to be distracted by primordial root systems blossoming in his patient's extremities, he may be blinded to arterial blockages, creating a situation where his patients die sooner than they would like. I cannot see blockages because I have never seen a blockage. I have no context for such an image and see nothing of the patient's well-being or likelihood of suffering an untimely death, if there is such a thing. [The patient dies or, at least, ceases to exist once this story dies or, at least, ceases to exist.]

And, ultimately, if any of us look at the screen, we must make some sense of it; it must mean something based on our context. I think of root vegetables - carrots and potatoes - and reconsider the value of butter in the observation room.

Dr. Singireddy moves to the patient. Technologists swing four monitors hanging from an arm on the ceiling around to the opposite side of the patient's body. The patient vacillates between a state of wake and sleep. He follows commands but seems to have no will. He speaks lucidly. The doctor asks him when he had the surgery causing extensive scarring in the groin.

"About twenty-five years ago, I guess," he replies.

The blue sheet that covers El-Lion is spotted with watery blood.

I get into an electric blue lead vest, cover my head with a cap, tie a mask around my face, and move closer. [You forgot to include the pirate's collar, remember? In the "Specials Lab," you forgot to wrap it around your neck and a technologist had to do it for you, remember? You interrupted the performance and now you're omitting critical information for anyone interested in the true story.]

"This is an extremely difficult case," says Dr. Singireddy.

He needs a floppy wire. The doctor presses El-Lion's abdomen.

"Every single step," Dr. Singireddy says, "we are going to have problems with this case."

The patient's body frustrates the doctor, but he remains calm and methodical. He cannot insert the catheter into the patient. It *is* a difficult case. The patient has no will or he would will it to work. He doesn't want to lie on the table. [But if he didn't lie on the table, there wouldn't be a need for the table. What would it do then? There was no need for this story. It creates its own need.] El-Lion wants to walk out with his wife, who worries about his comfort. [We need comfort, not tables or stories.]

"Show me the left groin," Dr. Singireddy says into the air.

Everyone moves to the other side of the patient. Technologists swing equipment around. The image on the screen above the patient shows the surgical clamps that rest on his body in a way that they appear to be part of his body. Dr. Singireddy has substantial work to do before El-Lion will move from the table. Someone has eaten the pistachios. El-Lion, Dr. Singireddy, and the technologists remain in the "Specials Lab."

I get hungry and leave.

That was the context. [So you say.]



I feel a great need for discursive positioning here and a brief statement about how ambiguity works in the humanities and in medicine. Literature

professors and novelists like ambiguity when giving or receiving information; radiologists and patients dislike ambiguity when receiving information.<sup>22</sup> The humanities requires constant reflection on and interpretation of the condition of human existence, a state of being that by its ambiguity created the need for literature professors, scholars, novelists, and philosophers, and for the arts and humanities. Radiologists and other physicians by contrast require constant reflection on unambiguously reducing pain and prolonging life. Physicians must negotiate life whereas humanists must understand it.<sup>23</sup> If *ambiguity* is made into a verb (verbalized?), it would be *ambiguitize* and I could say that, in this text, we *ambiguitize* medical imaging artifacts so that they may give us the answers we seek.



I obtain the radiological record documenting El-Lion's procedure, as well as images created by computers during the arteriogram. These artifacts come from machines that capture voice, keystrokes, and images and digitize that information for human consumption, in the same way that the earth produces nuts, carrots, and potatoes for our consumption. Physicians are accustomed to

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<sup>22</sup> Radiologists dislike ambiguity when giving information as well; however, we have already noted that some radiologists like ambiguity during the "descriptive phrase rather than diagnostic one." (See page 44.) They do not want to be trapped by their words.

<sup>23</sup> In this text, we attempt to understand medicine through the humanities in an effort to help doctors negotiate.

seeing the information in a specific way. They must read the textual report and images in a linear fashion or at least read selected sections linearly. [They read it that way because it is produced that way. No one thinks in lines.] Not I. I exploit Bal's perception that meaning is made while the text comes together and not simply at its end, where it makes a whole. She says:

Language may unfold in linear fashion, but that unfolding in no way accounts for the multiple significations construed along the way that sometimes fall to dust before the end of the sentence.

Meaning cannot be atomized; nor is it simply accumulative. Hence, putting one word after another may have the semblance of linearity, but producing meaning does not. (90)

The medical context allows for precise interpretation with regard to the patient's physical wellbeing and the medical providers' financial and legal protection. [You're talking about the machinery of commoditization. It is demanding.] I am free to interpret the report, image, and narrative in a different context. They are now situated in the context of a cupboard, where they transubstantiate into existential plates and teapots.



1) Should radiologists use the term *infiltrate* in chest radiology, and

2) What word can I create that expresses and identifies who I am in terms of my relationship and inexpressible desire for my *amie* in a way that serves a larger need for this language of love and desire?

Interrupting, fragmenting, and combining the radiological report with another voice forces it to communicate new information that I will use for my own ends. In this experiment, I personify the report by acknowledging that it has its own voice – that it speaks to us. This is a rhetorical study of medical communications as dynamic productions in themselves, and in this case, it is combined with a *carefully selected random text* with which it can have a conversation and say something of value, something we did not know: new information. For the radiologists, I want to *unmask* the data that remains hidden by the gulf between the humanities and the sciences. In possibly unparalleled irony, I use the “Unsharp mask” function in Photoshop on the image created of El-Lion’s upper thighs to reveal a masked face in the image itself. According to Adobe Help:

Unsharp Mask locates pixels that differ from surrounding pixels by the threshold you specify and increases the pixels' contrast by the amount you specify. In addition, you specify the radius of the region to which each

pixel is compared. The effects of the Unsharp Mask filter are far more pronounced on-screen than in high-resolution output.



Figure 7 – Run-off arteriogram, upper thigh, revised in Photoshop

The revised image, with sharpened edges, reveals eyes hidden behind a mask in El-Lion's upper thigh where the arteries and veins appear as hair, the penis as a nose, and the scrotum as a chin. His nose is long, which symbolizes deceit, and his chin is highlighted by under light, creating a sinister effect. Once you see the face living inside El-Lion, it becomes impossible not to see the face. The image says that it deceives us; it offers us a light inside the body, but we are misled into believing that we see anything of ourselves. The light is only a sliver, like a moon crescent. We cannot really *infiltrate* the flesh and see ourselves for what we are without tearing it apart. I cannot infiltrate my *amie* without tearing her apart. There is a face inside the pregnant woman in the waiting room. There is a face

inside everything. We face everything inside ourselves when we view the image of El-Lion's upper thighs, because we can answer everything [that we face] by doing so.<sup>24</sup>

The King James Bible found its way into the waiting room, waiting to be noticed. In the world outside the waiting room, its information has been used widely and liberally for centuries. It now has the chance to say something new. We take its voice and instead of listening reverently or cynically, we force it to speak to Dr. Singireddy's report of the arteriogram and hope for the best.

[Anyone who doesn't want to know how the story ends should skip the following paragraph.] From the text that precedes the body of the radiological report, we learn that the exam sings, singing infiltrates, El-Lion needs the heat of his wife, Dr. Singireddy feels guilt, the exam didn't happen, the wife grieves, the radiological report opposes the Bible, El-Lion should not hurt his wife, El-Lion and his wife do not want to die, and my *amie* did not know me once, but now she does. This is how it works out:

EXAM PERFORMED: CCL ANGIO EXT BIL 05/15/2007 09:07  
ORDERING PHYSICIAN: SINGIREDDY, SUKHENDER

**Figure 8 – Arteriogram report fragment**

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<sup>24</sup> ... if we believe the basic assumption of this text, which is that every text contains all of the information necessary to solve any problem. (See page 1.)



The radiology report begins with somewhat of a clang (*ccl+angio*) – an abrupt noise – after the “EXAM [was] PERFORMED,” followed by a colon. (See Figure 8.) Ironically, a colon exam was not performed. In fact, “exam performed” lacks the verb “was,” leaving the impression that the “exam” serves as the subject doing the action, in past tense, of performance. The exam might as well have danced or sung, which would make sense – it sings to us. [It sings a song to itself. It doesn’t know you exist.] Music makes itself an inexorable part of this text and may become the salvation of language. As well, music “lends itself to the revelation of non-scientific concepts” and expresses the unspeakable (Langer 233, 235). The perfect applicability of music herein makes me weep.<sup>25</sup> It is possible the report reverberates with noise, both abrupt, as in clanging, and measured, as in singing. Far in distance of both time and space, we might have heard the clanging of metals as factory workers built the imaging machinery that captures images of El-Lion and the audio of Pearl Jam singing a loose affirmation of life – the primitive “expressive abandon” that Langer describes. My *amie* hears my song to her, both abrupt and measured, as she touches me and I know that *oh I am alive*. I say as much in my guttural song, though I sing in tongues with the

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<sup>25</sup> This is a literal reference to me crying and is not, as it may seem, poetic license, hyperbole, or a metaphor for something other than it is. I cry not only at the perfection of music in this text, but also because rationalizing its perfection frustrates me to the point of tears.

spiritual conviction of a Pentecostal snake handler. I mean to say: “Stay with me, my *amie*” (which contains the anagram: *I waist my thyme*). Jesus or his ghostwriter affirms my practice and seems to imply that I may heal the sick by my voice.

[You know nothing about Jesus; he’s a construction of the page, just like the *amie* and El-Lion.] Mark 16: 17-18 states:

<sup>17</sup>And these signs shall follow them that believe; In my name shall they cast out devils; they shall speak with new tongues;

<sup>18</sup>They shall take up serpents; and if they drink any deadly *thing*, it shall not hurt them; they shall lay hands on the sick, and they shall recover.

My God. I should have pushed Dr. Singireddy away so that I could sing to El-Lion. He needed to hear my song for my *amie*, a song that perhaps his wife does not know, though she cares for him. El-Lion did not need an arteriogram and sterile wires in his thighs; he needed passion to *infiltrate* him – passion that would allow the blood to flow effectively, fluidly through his femoral arteries. His blockages were not of old age, but rather a lack of heat generated by the touch of my *amie*.<sup>26</sup> Now he has the touch of Dr. Singireddy, or so it would seem, and I understand that to communicate to and about my *amie*, I must find

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<sup>26</sup> It’s so personal because, really, we only write about ourselves, no matter what the subject matter.

language through song – a poetic composition. [I'm talking directly to you now, the narrator ... Once you put it into words, you've ruined it. Don't do it. Don't define that feeling. It will evaporate into the ether. She doesn't need your words.] Poetry offers meaning beyond language and the words themselves. Connotative over denotative. *Oh I am alive*. While radiological reports may certainly have a poetic effect (how beautiful is "exam performed"?), the readers of such reports search for denotative language and seek finality of meaning. They want no ambiguity. *Infiltrate* is a poetic verb masked as a noun that lacks consensus of unambiguous meaning. It requires examination but not before examining the radiologist's behavior.

Intuitively, we believe that the radiologist performed the exam at the subject of the report and know that he wrote the report, insofar as we can know anything of this nature. [We can know nothing of this nature.] He writes: "EXAM PERFORMED." That he omits himself as the doer of action implies his guilt, and his omission of even the passive verb "was" demonstrates transference of his understanding of self to the exam as a personified, nonrepresentational noun. [Everything in this text is a grammatical construction, including you and me. This is a human remembrance and therefore unreliable.]

If we examine *exam* and split it into *ex-am*, the *ex* represents an annihilation of the present or a synonym for *previous* and *am* as the first-person

singular of *be* or *to exist*, we see that the exam was never performed and represents an obliteration of self. *Infiltrate* in chest radiology represents a thing – pneumonia or whatever – that generally ought to be obliterated if the patient’s continuation of life is the goal. It would seem difficult to obliterate what cannot be identified, and what does not exist certainly cannot be infiltrated. But, the physician insists the exam took place on May 15 at 9:07. These are just numbers, the words of mathematics that serve as the language of God, so we consult Numbers 5:15 and 9:07. [Could this be more random?] First things first (5:15):

Then shall the man bring his wife unto the priest, and he shall bring her offering for her, the tenth *part* of an ephah of barley meal; he shall pour no oil upon it, nor put frankincense thereon; for it *is* an offering of jealousy, an offering of memorial, brining iniquity to remembrance.

The man, El-Lion, did in fact bring his wife to the priest if we see the physician as a paternal, quasi-religious figure, in the sense that El-Lion’s physical maladies created a situation in which the wife ended up speaking in the doorway of the “Specials Lab” on May 15. He brought no pinches of barley meal but did parley (turn the *b* upside down) his wife into tasting the bitterness of grief for her husband’s pain and discomfort in the cold room where the priest ordered the

machinery into motion (“ORDERING PHYSICIAN: SINGIREDDY, SUKHENDER) and would puncture his groin. “*Is*” is italicized, giving emphasis to the smallest word in the biblical verse, meaning “to exist,” whereas the medical record fragment emphasizes all of the text with ALL CAPS, thereby emphasizing nothing, with *nothing* meaning “no thing,” referring to a negative – something that does not exist. If everything is bold, nothing is bold. So the two voices seem to mount with the tension of life (existence) versus death (nothing).



I break the tedium here. This analysis requires that we accept the validity of tenuous connections at least temporarily, about form as well as substance, in order to create information that will address our problems. The medical imaging artifacts provide a framework within which the answers lie. [Keep in mind that the answers might lie.]



Like the biblical man’s offering, El-Lion’s offer is one of jealousy. There is nothing like jealousy. His wife, representative of woman, bit the metaphysical apple. She knows. He merely followed and then blamed her. [Or so He says. Had He used a word processor to type Genesis, He might have processed and revised as he wrote. As it was, He probably used a quill or blood ink or something, making revision much more difficult. The word

processor, used to create this text, muddles the revision process, changing things altogether.] She had God's wrath and respect; he was pitifully feminine in his submissiveness, laying on the table waiting to be infiltrated. El-Lion envies his wife's strength and memorializes himself on the table – "brining remembrance" as Dr. Singireddy injects him repeatedly with a saline solution. Dr. Singireddy brines El-Lion for his "iniquity into remembrance," as we will all remember this: El-Lion should not hurt his wife. I do not want to hurt my *amie*, but more than that, I do not want my *amie* to hurt me. Jealousy hurts. My *amie* feels jealousy at the sight of other eyes on me ... when I smile and speak softly, laugh with someone else. She feels the heat of our love rise in her throat and glares at me with dark eyes. It is only of men that she is jealous. She thinks they want me and that I will want them, but I think that she is wrong. I resent the space that separates us and prevents me from reaching her and pulling her towards me always.<sup>27/28</sup> If I find the right words, she cannot hurt me, because I would understand everything and be understood.

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<sup>27</sup> My *amie* just calls me on the telephone right now, months after writing much of the text above and below this footnote. I tell her that I'm reading what I wrote about her and she asks if I still feel the same. I explain that the inherent problem of revision encompasses a part of this text, and that the text is a living, breathing thing, in the sense that it inhales experience and exhales meaning. She won't read these words about herself now, because she says that she may not understand it. I tell her that no one will understand my meaning, but that they will make their own.

<sup>28</sup> I would like to write a footnote to footnote<sup>27</sup>, but my computer refuses, so I modify my text to fit the requirements of the machine that generates this text. In any case, my footnote to footnote<sup>27</sup> would say that my *amie* spontaneously read approximately one paragraph of this chapter

Numbers make sense. They are unambiguous representations of both a complicated idea and symbols. The text record says that El-Lion's exam began at 9:07, which is only four-minutes after a jet plane passionately struck the second tower of the World Trade Center almost six years earlier. During the four minute difference, President Bush read a story about a goat to children in a Florida school. Numbers 9:7 states:

And those men said unto him, *We are* defiled by the dead body of a man: wherefore are we kept back, that *we* may not offer an offering of the LORD in his appointed season among the children of Israel?"

Just as President Bush is defiled by the dead bodies that fell while he read about a goat, the physician, El-Lion, and the wife "did flee" (a perfect anagram of *defiled*) from death together, but were kept back from the redundancy of offering an offering, because God doesn't do redundancies. God apparently does, however, want goats. "And if his offering be a goat, then he shall offer it before the LORD" (Lev. 3:12). Instead of offering a goat to the Florida school children, President Bush might have given it to God and saved us from the aftermath of 9/11. Lesson learned. The hijackers infiltrated the plane, the plane infiltrated the towers, the flames and shards of metal infiltrated the people, my husband

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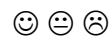
yesterday. I wanted to tell her that I know so much more now than I did months ago, but cannot continue to disrupt the text or it will never be complete.

infiltrated me, and my *amie* did not know my name. I was a secret not yet revealed. The truth hurts.

[Clang.]



*Infiltrate* has been used up. It's gone. Blown up on 9/11. Its meaning has exceeded the bounds granted to words of its nature. The radiologists should find other language to unambiguously report their findings. The goat I offer God is this word for my *amie*; I whisper it to him. God alone can understand. Like Freud describing his dreams to the larger world, the truth has been revealed, but I can reveal no more on this page, lest I, like him, "betray many things which had better remain my secret" (15).



The answers are not always satisfactory or unambiguous; the answers are often unsatisfactory and ambiguous.



## CHAPTER 5 – A RESURRECTION OF LOVE: FICTIONAL PHALLUSES IN A MATERIAL AGE

I shall call it *medico penile theory*.

I proclaim it revolutionary.

Medical intervention feminizes the patient, men and women alike.

I have a short, completely true story to tell.

Dr. M photographs birds. He lives on the edge of a river and floats onto that river in a canoe most nights after work. The birds fly within view of his camera and he captures their images. They fly away unhindered by Dr. M or his camera. He emails the photographs to dozens of his friends. The sight of birds in nature brings him a certain amount of satisfaction. As a gastroenterologist, Dr. M concerns himself with his patients' digestive problems and ways in which he can reduce pain and extend life; these are not always compatible goals and so he must balance possible outcomes. Usually, his patients want to live.

On this particular day – and this day is not a compilation of many days, nor is the patient merely representative, but instead, it's a real day and a real patient – his silver-haired patient, whom we'll call N, reclines on a gurney in the hospital hallway, awake and alert, wearing glasses and a medical gown.

[Written in the present tense, this text seems to want to mislead the reader into thinking that the events are unfolding naturally. Really,

the inherent condition of written language is that it's past tense.  
Everything. *Finis.*]

This leads to an aside: In an interview last week, Doris, a 92-year-old woman, described what her physician said to her a half-century ago, when she complained that she had taken all responsibility in her marriage for running the couple's appliance store, paying household bills, cleaning, cooking, and raising their two children, while her husband regularly drank himself into a stupor.

"... and today, I opened our shop and put all of the men to work," Doris said.

She had done the one task that her husband remained responsible for, but was unable to accomplish on that day, because he was in an alcohol-induced state of unconsciousness. Her physician looked at Doris and shook his head sadly.

"Do you know what you've done?" her doctor replied. "You've stolen your husband's pants."

Like the women of the time, Doris stole no one's pants, but appropriated the clothing she needed from a cultural closet of ill-fitting apparel. In this case, Doris did not want pants at all; the pants appropriated her. The patient, N, wears no pants on the gurney, but instead, he wears a gown. This means something about gender. It must. Medicine feminizes the patient; the physician is a

monolithic, paternalistic figure that dominates the doctor/patient relationship; the patient submits passively, femininely to the will of the physician; gown is to vagina what pants are to penis? Ask N and he'll say that he wants health at all costs and then he will demurely look into his doctor's eyes for confirmation. His face appears stern and shows slight signs of stress. Dr. M greets him and they talk.

"Any questions?" asks Dr. M.

The patient has none.

"We'll get you set up," Dr. M says and leaves N's side.

A smiling medical technologist, a lovely woman with stylish hair, touches N's shoulder and asks if he needs to go to the bathroom. He declines.

Acknowledging a need to void bladder or bowels may cause difficulties anyway, as he would have to climb off the gurney in a hospital gown that only nominally covers his *derriere*. Assuming a certain level of modesty, the question seems moot. The restrictions of clothing designed for the needs of medical experts – easy access, one-size-fits-all, poly-cotton blend for repetitive washing – rather than the wearers of the clothes, is often considered a feminine issue. Historically, women have endured the suffering and indignities of restrictive, uncomfortable, or revealing clothing – the necktie notwithstanding. (It's more of an accessory.)

Judith McGaw highlights the brassiere as an example and points out that the design of this feminine technology “goes beyond issues of capitalist exploitation of the consumer or patriarchal disregard for women’s concerns, to which analysis through social construction readily leads” (19). She believes that the bra exemplifies a way of standardizing the biological. The bra cannot fit because “breasts are living things” that change constantly, which may explain why the pants of Doris’s husband failed to fit him any longer; he had changed, but his pants had not. It certainly goes a long way to explain N’s hospital gown as a feminizing piece of technology that serves as a symbolic sort of bra or support system allowing entry into various bodily orifices. [A symbolic bra? Maybe it’s the breasts that are the more significant symbols, signifying the letter B, like this:



**Figure 9 - Interpretation of breasts as symbol of the letter B**

If breasts serve as alphabetic symbols, it follows that while the *bra* is part of the *breast*, with an *est* left over, the *breast*

symbolizing the letter B is also a part of the *bra*. Frankly, it sounds ridiculous, but the implication is that the substance of ourselves – everything that we think we are – serves to justify the machine of language, in the same way that the form and substance of this text justifies the existence of the technology that creates it. I would look different if my Mother-God were using a quill.]<sup>29</sup>

Of course, Dr. M is not at fault here, nor is the brassiere industry. It's a matter of situatedness; the patient situates himself in a position where he has no authority to determine what he wears. According to McGaw, brassieres don't fit because women "make the compromises and create the knowledge that permits a deeply flawed system to work" (19). And so, women situated themselves to be constrained rather than uplifted, though ironically, they are literally uplifted as a result.

N waits patiently to feel uplifted. He had stones in his bile duct a year ago, which were endoscopically removed. The patient is a *recurrent stone former*, whereas Dr. M might be considered a *current restorer of men*, a perfect anagram of his patient. Once a year, the patient comes into the hospital for an endoscopic retrograde cholangiopancreatography (ERCP) as a preventative measure – that is, something that is not strictly necessary for immediate relief of a pathological

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[<sup>29</sup> I sense that I'm starting to sound like the narrator ... Time to find my own voice. There's no sense in both of us blathering senselessly about an idea that will fade to nothingness.]

condition, an important consideration here. N offers up his body willingly and without the duress. If something bad comes of it, he can only blame himself. Two medical assistants roll the patient's gurney into the procedure room. They transfer him to a supine position in another bed of sorts.

The patient lies nearest the back wall in the horizontal center of the small room. A large device called a fluoroscope hovers above him. Wait, the patient doesn't lie so much as the text lies; the fluoroscope actually hangs from a big metal arm, but does appear to hover. [It's all a lie; it never happened this way. Small details are left out because this is a text generated by an unreliable narrator. There are infinite lies of omission.] Fluoroscopes transmit a radiographic image of, for example, the abdomen, on a video monitor for capture and storage. The procedure exposes the patient to radiation, a known carcinogen; new fluoroscopes use less radiation than older systems. Physicians often ask patients immediately before undergoing a procedure – gowned and prepped – if they understand the dangers and possible outcomes or consequences of invasive medical procedures, and whether they are willing to take the risk. Despite some fairly nasty possibilities, few physicians have seen a patient jump off the machine and run for safety, though the process does firmly plant in the patient's mind as he drifts off into an ether-induced sleep that death is a side effect of life. The question seems moot.

The room contains four monitors, including one large video screen that stands above the other equipment and people. Five people move around the room now: the male anesthetist, Dr. M, two female medical assistants, and me. Later, a male radiology technologist will enter.

“Have you had your cocktail?” Dr. M asks the patient, politely, as he might have asked a date in an effort to loosen her up.

The cocktail is Mylicon, a concoction that dissolves any air bubbles in the stomach and duodenum. The patient says that he has in fact consumed his cocktail and makes predictable yet still humorous alcoholic references. [If we don't see his words in quotation marks, how do we know what he says? How do we know even then? You're translating for him. You're untrustworthy.] Small laughter ensues.

For my benefit, Dr. M demonstrates the endoscope, which is a black, flexible video unit the diameter of a pen with an opening at the end that allows the physician to insert tools into the patient's body. Dr. M blows air through the tube and exhibits its power to make bubbles in water. He knows that its power exceeds that displayed in the demonstration. Devices attached to the patient's body allow monitoring of his vital signs; if Dr. M. detects abnormalities, he can administer medications intravenously to correct deviations from the biological

standard. Tools he inserts through the tube allow manipulation of the bile duct and its contents.

Technologists now help N into a prone position and turn his face outward, away from the wall. Everyone in the room can see N's face, but the technologists severely restrict his movement, as they seem to tie him up with tape and tubes, limiting his ability to see those who see him. His restraints render him defenseless against molestation, but there is no fear of that. They tie him up because they care about him.

"It looks like I'm not going anywhere," N says rather cheerfully.

"We're going to be putting a small piece of plastic in your mouth, sir," says the anesthetist. "And you're going to drift off to sleep." [I'm drifting off to sleep as well.]

"Good night then," the patient says.

The lights dim and I search for meaning in the archives. I find Haraway compelling because she writes of ducks and also describes technologies as regenerative and reproductive, and because despite my cynical, snarky tone,<sup>30</sup> it seems clear that Haraway sees things inside the body like Dr. M, but without the large machines. And, significantly, Haraway believes that theory is corporeal

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<sup>30</sup> Possibly the result of mild self-hatred.



(68). [Exit the world of experience, enter the theoretical place where theorists gestate in effluvia?]

As she gestates in effluvia, Haraway works tirelessly to erase the boundaries between “stodgy bipolar terms of hominids” (69) and the rest of nature, which of course is a contentious space or non-space, as the case may be. She sets about to reclaim an understanding of science as culture from the “technopornographers, those theorists of minds, bodies, and planets who insist effectively—i.e., in practice—that sight is the sense made to realize the fantasies of the phalocrats” (64). Goddess knows, this procedure room could have bloomed from a phalocrat’s Petri dish with its phallic-visual interruptions of space, clearly framed digital boundaries, i.e., separate computer monitors serving as windows into phallo-fragments of the patient’s body, and clear delineations between the patriarchal phallo-physician and feminized patient, who’s about to have an elongated tube inserted down his throat, the image of which will be projected on the screen for all to see. This might be problematic, but it does allow Dr. M to prevent little stones from growing too large inside N. For Dr. M to look into the nature of N’s condition, he must look into the nature of N. Haraway finds nature unhidden and not in need of unveiling. She proposes that to experience nature or who we are in nature, we need rhetorical spirits. This leaves

Dr. M in a bind. To create a rhetorical spirit – the light and shadows that make up the rhetorical artifacts containing the spirit of life – he must unveil nature. And, in any case, he would argue that he is no phallocrat; he simply likes to see things clearly, whether it be birds or intestines.

The big screen displays images projected from the endoscopic camera, currently in a cylinder of still water. As Dr. M demonstrates the tool's flexibility and nature again briefly, the screen shows flashes of the procedure room, fingers crossing the camera's lens, and the bowl of water again as the tube is dunked inside. Dr. M. will use video endoscope and video fluoroscope in this procedure. Images from both devices will be projected on monitors placed above the patient, some of which will be saved for later analysis.

“This productionism is about man the tool-maker and –user, whose highest technical production is himself; i.e., the story line of phallogocentrism ... his reward is that he is self-born, an autotelic copy” (Haraway 67). This seems to be playing out somewhat in Dr. M's endoscopic theater to the extent that the artifacts that he creates serve as “autotelic” copies of himself, but mostly if the borders are removed. If we erase boundaries as Haraway would have, we might as well erase the line between patient and physician and allow the masculine and feminine representatives in this play to become one, and while we're at it, we

might as well erase the line between human and techno-artifact, so that the reproduced image of N's esophagus (or whatever body part) becomes metonymical for All of Nature. Dr. M might even find it useful for the birds.

Between the patient and the wall near his knees, a monochromatic screen displays the numbers and lines showing whether the patient is alive, dead, or somewhere in between. These are the patient's vital signs. The monitor nearest the patient's head projects fluoroscopic images after the radiologic technologist transmits x-rays through the patient's abdomen. These images are shadows and light and they are beautiful. On an electronic monitor, similar to x-ray films on a light board, the reflection looks like a glowing shadow – an impossibility in nature. [So you say.] The image appears not like a part of the human body, but more as a fractal where each part of the whole makes sense in its own right. Another monitor that sits haphazardly on the patient's opposite side is part of a computer on a rolling cart that contains a portion of the patient's medical records – at least those that relate to this procedure. Dr. M explains that the patient's total records are not consolidated in this apparatus. Pieces of N's medical data stream reside elsewhere.

Dr. M inserts the camera into the mouth of the sleeping patient. The patient does not complain; he sleeps. The large monitor shows windows with

two images: the larger, primary window on the left displays the moving image transmitted by the camera as it travels through the patient's esophagus and stomach and into his small intestine. While it's visual, projected on a screen, and seems a bit licentious – like a cautionary tale for young girls to avoid activities that lead to getting laid, splayed, or objectified unless they want to be physically violated – what we are watching could hardly be called pornography, though it's tempting; that would be an exceptionally convenient argument. Instead, the moving image offers an artistic rendering of the natural body. Art increases the possibilities of meaning and interpretation. The physician's phallic prosthesis seems nothing like Haraway's cruel description of a "male's urinary and copulative organ" (72), which would deprive medicine of romance. Rather, it is a love tube with which Dr. M enters the patient orally.

The second window shows a still image from the camera. In the upper, left corner against a black background, the screen displays the patient's name, the date, and the type of procedure. Dr. M. pushes the tube further into N and comments that the patient shows erosions in his stomach, indicating the use of certain medications, such as common pain relievers. Both medical assistants confirm that the patient has denied use of any medications. Everyone in the room watches the screen, except for the anesthetist, who watches the patient.

Investigating the body via endoscopy is like walking into a very dark, mysterious cave with a candle. The endoscope's light brightens the fleshy lumen it travels through revealing the shimmering, reddish glow of the gastrointestinal tract, but offers only the slightest hint of the inner body's brilliance. It's a medico peep show.

"Recurring common bile duct stones is the diagnosis," Dr. M informs me. Everyone else in the room knows that.

Some confusion ensues, as one medical technologist, R, comments that the patient may have a stent. A stent is a small device endoscopically implanted to keep the bile duct open. Dr. M seems to tense slightly, becoming alert to an unknown circumstance and states that mention of a stent is not in his dictated notes. R remains uncertain and says that the patient may have mentioned it. While it remains unstated, they all know that patients cannot always be trusted. They are often fickle and unpredictable. Like a hysterical woman, the patient's inherent pathological state makes him subject to error and even delusion, though he cannot be totally ignored.

Dr. M assumes control. The ERCP, like most invasive medical procedures, follows a strict flow chart of actions, which even a non-expert might reasonably be expected to learn without a decade of training; the physician's expertise is that

of decisiveness and deviation. The body acts upon itself in unpredictable ways and does not accommodate the flow chart. In addition, the technology itself and the conditions surrounding it create unexpected scenarios. The physician must draw from his understanding of the human body and the technologies in his hands to face the unexpected.

Dr. M pulls the tube out through the patient's mouth. [The "love tube"? He withdrew his love? That's very sad.]

"Fluoroscope," Dr. M. announces, as he pulls the large, flat panel over the patient's back.

R picks up the phone to call for a radiology technologist; Dr. M suggests that he should call to get the technologist here quicker, but R makes the request anyway. Soon thereafter, a balding radiology technologist enters the room and attends to the fluoroscope. He moves it over the patient more precisely and pushes more than one button. An image of the patient's abdominal cavity fills the smaller monitor.

Haraway describes "subjugated human adults" (she may as well be referring to N), who have been disengaged and relocated "in the authorial domain of the representative" (she may be referring to Dr. M), finding that this relegated position of the represented who is rendered speechless is the

“representative’s fondest dream” (87). Everything that might constitute a voice for the represented – the patient – is removed. That seems to be the case in this story, though both the patient and the physician would be hard pressed to see it that way. They would, however, see their relationship as one that negotiates the biggest payoff or loss. “The power of life and death must be delegated to the epistemologically most disinterested ventriloquist, and it is crucial to remember that all of this *is* about the power of life and death,” states Haraway.

Dr. M inserts a second endoscope, a duodenosope, in the patient’s mouth, advances it to the duodenum, and calls for a balloon. No one in the room considers the balloon in anyway analogous to a prophylactic; that assertion never comes up anywhere but here, in the form of a denial. Dr. M inserts a deflated balloon in through the endoscope and injects the patient’s bile duct with contrast agent. The endoscopic video screen shows bile pouring from the patient’s bile duct into the small bowel. Both monitors show the elongated balloon being filled with air; the fluoroscope image shows a sort of transparency, while the endoscope image shows the balloon pressed against viscera.

“We’re going to pull the balloon through and see if anything comes out,”

Dr. M says.

Everyone quietly watches the screen. Dr. M pulls out the endoscope.

“No stones,” he says.

Dr. M is satisfied and leaves his patient laying quietly. Not coincidentally, *phallus* refers not only to male generative power, but also to bird anatomy.

Haraway sees birds through a different lens. She understands their queerness and laments their position bound into an undeserved servitude. “Forced to live in our ethno-specific constructions of nature, the birds could ill afford the luxury of getting embroiled in what counts as natural for the nearby community,” says Haraway, about ducks she encounters on a lake (129). She knew the ducks were into queer communities and did not need bras or hospital gowns (though in an exceptionally strange coincidence, *speculum* refers to both the medical instrument that penetrates the vagina *and* patches of color on ducks’ wings). The ducks swim within view of our gaze and we capture their image. They swim away unhindered by us or our eyes. The sight of birds in nature brings us a certain amount of satisfaction, knowing that we can place them in ethno-specific constructions of nature. But N is a bird of a different feather. He leaps into servitude and bounds his own self so that he can feel the warm, safe thrust of Dr. M’s fluoroscope.



I shall call it the *fictional epistemological model*.



I proclaim it revolutionary.

Medical texts can only be decoded with fiction; fiction offers the only truth that matters.

I have a short, completely true story to tell. [Here we go again.]

If medical intervention feminizes the patient, then the relationship between patient and physician must be one of love; it is the open, sacrificial love of a woman offering herself on faith – in the medical credentialing process – to one who will make her whole. Some time ago, my daughter went to bed and began coughing. At midnight, I called her pediatrician.

“She can’t seem to breathe,” I said.

My daughter gasped for air; panicking made it worse. On her physician’s instructions, we went to the Emergency Room, where two nice men took multiple x-rays of her chest. The ER physician had already administered medication that stemmed her coughing fits and the x-rays were to determine whether she had bronchitis or some other ailment of the lungs. That night, the hospital experienced a record number of head traumas from motorcycle accidents, moving croup patients down the list of priorities. My daughter and I spent several hours in a cold room watching videos of dancing bears on a very small television set. Nevertheless, she left the hospital calm and able to breathe,

which fulfilled our goal. [This seems strangely personal, like the narrator wants us to believe the text represents some sort of truth about her life and that it's somehow relevant to everyone else's lives.]

I looked at my daughter's radiology consultation report and realized that the radiologist loved her. Reading his report, however, it seemed clear that he was hiding something, as lovers often do. The text – plainly a love note – bonded my daughter and him but did not clearly identify his feelings. I could not decipher his message very easily. His love remained hidden in a way that hurt. The medical record seemed stripped of meaning; it said nothing of my daughter's beauty or love of domesticated animals. The radiologist failed to comment on her blond hair, hazel eyes, and dancing ability and said nothing at all about her penchant for practical jokes.

### RADIOLOGY CONSULTATION REPORT

**Ordered By:** Eric S. Csortan M.D.      **MR #:** H0879673      **DOB:** 12/23/97  
**Copy To:**                                      **Loc:** HEPD                                      **Age:** 7

**KOLLER, SYDNEY**  
**Chest, PA & LAT**

**March 13, 2005**

**INDICATIONS:** Seven year old with difficulty breathing.

**TECHNIQUE:** Frontal and lateral views of the chest at 0219 hours.

**COMPARISON:** none

**FINDINGS:** Frontal and lateral views of the chest demonstrate the heart and mediastinum to be normal. The lungs are clear. The osseous structures are intact.

**\*\* IMPRESSION:** No acute cardiopulmonary disease.

Scott D. Klioze, MD  
Board Certified Radiologist  
This report was verified electronically.

**Figure 10 – Radiology consultation report**

My daughter was more than a “seven year old with difficulty breathing.” I found that I could not ask Dr. Klioze what he meant, because he did not exist. [See there. That proves my point. He doesn’t, you don’t, I don’t. We’re a by-product of Microsoft and Coca-Cola.] Neither my daughter nor I ever met him. He reportedly read the x-rays sometime after they were taken. It is apparent that: “This report was verified electronically.” What kind of conversation could I have with an electronic verifier? I chose to address this

situation as anyone would: with fiction. [Now that's like the pot calling the kettle black, if I can use a cliché. Of course I can. I am a cliché.]

What better way to understand a love note verified by a fictional entity than to ask a fictional love story? What better love story could we use than Kundera's *The Unbearable Lightness of Being*, where the main characters, Tomas and Tereza, exist in an existential space moving between fiction and reality, and where the duality of body and soul is at the heart of the matter? To accomplish my mission, I need to fragment the love note—tear it apart to be able to see it in a new way. I knew this meant something vital to me and I had to understand. The tearing process mimics how the radiologist fragmented my daughter to understand her pathology. He penetrated her with his gaze, though from afar, and exposed her “Frontal and lateral views of the chest,” leaving the rest of her untouched by anything but traces of radioactivity. Kevles points out that from the x-ray to the digital images produced by more sophisticated imaging technologies, such as CT, MRI, and PET, visual medical technologies have “increased the sense of fragmentation that comes from seeing parts of our inner selves as transitory patterns on video monitors” and focused on specific organs, similar to the move from general practitioners to specialists focusing on body part” (261-262). By

isolating and dislocating, it is possible to create. I created something from the x-ray. (See Figure 11.<sup>31</sup>)

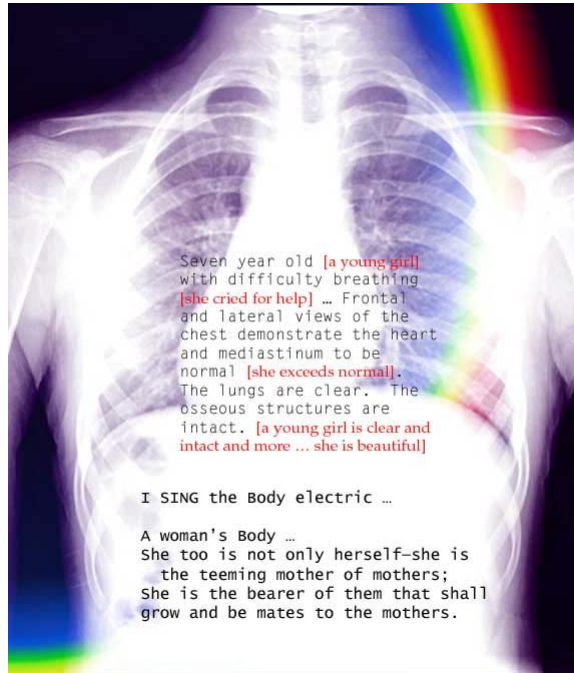


Figure 11 – Collage of image of x-ray and medical record with poem fragment

As a baby, my daughter's first words were *no* and *dada*, so it seems to make perfect sense now that Sydney was saying *no* to the *Dada* movement, and instead instructing me to look beyond at an offspring of *Dada* – surrealism in this case. Fortunately for us, the Surrealists practiced cut-up and collage wherein text is rearranged to understand each fragment and the reconstituted whole in a different way, which is highly instructive here. I refuse to slip into unconsciousness, however, and will search with intent to find the right

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<sup>31</sup> "I Sing the Body Electric" poem fragment (Whitman).

fragments, the right language. [If you remain still and calm, the right language will find you.]

Fragmenting the medical record of the x-ray itself gives me a way of understanding Sydney's radiologist, the cryptic medical report, my daughter's own body, and the rest of humankind. It isolates the detail from the narrative so that its meaning becomes open for new interpretation. In this case, I rearrange the fragments to reveal information inside the medical text. (See Figure 11.)

By searching through the Kundera novel, I filled in the blanks of the radiologist's love note; I decoded the white space and completed the communication between the electronic verifier and my daughter. This juxtaposition of the love note and love story offers a new way of addressing the puzzle of meaning in this ostensibly medical interaction.

Seven year old with difficulty breathing. What fell to her lot was not the burden but the unbearable lightness of being. Technique: Frontal and lateral views of the chest at 0219 hours. God, it may be assumed, took murder into account; He did not take surgery into account. He never suspected that someone would dare to stick his hand into the mechanism He had invented, wrapped carefully in skin, and sealed away from human eyes. Comparison: none. The odd duality of body and soul has become shrouded in scientific terminology. Findings: Frontal and lateral views of the chest demonstrate the heart and mediastinum to be normal. The lungs are clear. The osseous structures are intact. A long time ago, man

would listen in amazement to the sound of regular beats in his chest never suspecting what they were. He was unable to identify himself with so alien and unfamiliar an object as the body. Impression: No acute cardiopulmonary disease. The road there wound through some hills, and their pickup had crashed and hurtled down a steep incline. Their bodies had been crushed to a pulp.

What does this say? What questions does this conversation between medicine and literature answer? It's clear: "Seven year old with difficulty breathing. What fell to her lot was not the burden but the unbearable lightness of being." What fell to my young daughter's lot that night was not the burden of illness, of croup, or of lack of breath; it was the agonizing pain of living in a body that requires breath. The love note hints at it, but doesn't finish the thought. Her lightness – the lightness of childhood, innocence, and maybe my love – became unbearable for her that night. As she coughed spasmodically and screamed that she couldn't stop, she felt the pain of existence and the fear that it would be snatched from her.

We see from the text that God had no idea; the technique was ungodly. "Technique: Frontal and lateral views of the chest at 0219 hours." Two-nineteen refers to the two of us, waiting as one billing unit (for hospital purposes), at a

moment in time when we were not dressed to the nines. This is significant. Our clothing was our own.

God, it may be assumed, took murder into account; He did not take surgery into account. He never suspected that someone would dare to stick his hand into the mechanism He had invented, wrapped carefully in skin, and sealed away from human eyes.

God could not have envisioned x-rays; x-rays are God and he has no mirror. [These words are a mirror of god-the-creator. I am god.] They penetrated Sydney's skin with a mysterious, invisible ray that produces – like murder – both dangerous and thrilling results: the exposure to radiation and the spectacular artifact created by the radiation. "Comparison: none. The odd duality of body and soul has become shrouded in scientific terminology." As the new text states, there is no comparison. The duality between body and soul, between my daughter as female, patient, child, and her radiologist as male, physician, adult becomes more apparent. But wait! His love for her is becoming suspect.

"Findings: Frontal and lateral views of the chest demonstrate the heart and mediastinum to be normal," How could he call her "normal," especially her heart? Normal signifies her as nothing. While normality is historically the ideal condition of a patient, as a person and one he loves, what could such a banal



description of my daughter possibly mean? You cannot love someone who has a “normal” heart. It’s insulting if not downright blasphemous. Love requires exceptionalism. [Love means nothing in words.] Normality is nothing but a sham that keeps us in a constant state of pathology. But things appear to improve; the explanation follows. We see that “scientific terminology” shrouds the truth. Amen, sister. Nothing appears clearer than a truth shrouded by language. Moving along, we learn through an interpretation of the x-ray image that my daughter’s lungs are clear and her bony structures intact, but we are reminded that things were not always as they are:

A long time ago, man would listen in amazement to the sound of regular beats in his chest never suspecting what they were. He was unable to identify himself with so alien and unfamiliar an object as the body.

The love story reminds us of a time when we romanced the body and were romanced by its ticks and murmurs, a time when they remained mysterious rhythms that might as well have emanated from the earth. The body, earth, sun, universe, God, and buttercups were all one conflated juggernaut. My daughter’s love mate understood and grew impressed by my daughter. “Impression: No acute cardiopulmonary disease.” Thank Goddess. But, reading on, we learn that: “The road there wound through some hills, and their pickup had crashed and

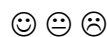
hurtled down a steep incline. Their bodies had been crushed to a pulp.” What is this winding road and how can I stop my daughter from getting in the pickup before it’s too late?! The road cannot be life; that’s far too easy a metaphor. Is the road one day – the day of all days – when no matter how “normal” her heart and mediastinum, they will fail her and she will be crushed to a pulp? I need to know who rides with her, whether the radiologist sits there, a new lover, God, or maybe it’s me. This says that despite all of her radiologist’s efforts at seeing inside of her and no matter how she exposes herself to his gaze in an effort to endure her lightness of being, it is merely a prolongation of the inevitable outcome.

A year later, a physician visits our home and sees my daughter’s chest x-ray in a frame. I have shrunken and revised it in a digital photo-editing program. She’s mine, after all.

“It’s backwards,” he says. “The heart should be on the left.”

How could he know her heart better than I do?

[Clang.]



I learn that the medical artifacts know things about my daughter that I do not. They contain information that I must excavate in the service of

understanding her and me, and significantly, the idea that her heart is normal. If there is a place that I wish to see exceptionality, it is in the heart (soul) and mind (brain). I will leave the heart as it stands for now. Medical technology changes the way that we look at ourselves and others. For example, our awareness of drugs, surgical techniques, and end-of-life machinery affect what we expect of our bodies. We want to be normal while simultaneously achieving a sense of identity, a sense that we are singular among humans. Perhaps unlike previous generations, we see normalcy as a place free of pain and conflict, both physical and mental. We find our identity in our physicality, despite attempts to reach beyond the flesh. Nowhere in our corporeal selves do we find identity more than in the mind. And, nowhere in our corporeal selves do we understand less than the mind.

We commonly associate the mind with the brain, another facet of the body that we barely comprehend. It hides from researchers and physicians inside the skull, and unlike other organs, cannot be examined and prodded in its living state. Researchers can only look at brains after the mind has gone. While they cannot observe the brain's spongy flesh in action, with its neurons firing, they can observe images of reconstructed slices of brain matter from a living person through advanced medical imaging technologies, such as computed tomography

(CT), magnetic resonance imaging (MRI), and positron emission tomography (PET). The resulting images give us our first glimpses into the working brain and, by association, the living mind.

Dumit addresses how PET scans are changing cultural ideas about normalcy: “Meaning, from a cultural anthropological perspective, is a lived relation among cultural actors, and to the extent that things such as images and technologies are attributed agency, they, too, participate in cultural exchange” (10). Researchers must standardize normalcy to enable them to identify the abnormal. With the dissemination of PET scans into magazines, the Internet, court proceedings, and textbooks, these visual standards affect our views of normalcy.

While there is no universal standard, researchers often use the same type of normal control subjects when studying brain function. “PET brain studies almost always use right-handed male subjects, unless gender is specifically being studied or a disease is being studied that is significantly more prevalent in females than males.” He goes on to state that, “By choosing only men for these studies, the researchers implicitly assume that gender matters. But by treating the results of the experiments as applicable to normal humans in general, they

risk the consequence that a gender different may appear as an abnormality.”

Researchers often exclude race as a variable by using “whites” only (62-63).

Dumit argues that PET brain images serve different agendas simultaneously and are being used to represent types of people. He shows that brain images are not the objective snapshots that they appear. Everything in the research process, from selecting subjects to deciding how to color the scan, can affect the images’ meaning to researchers, drug manufacturers, physicians, and the general public. The selection of which images to publish particularly affects meaning. Many studies show little distinguishable difference between normal versus abnormal scans; given a random sampling, most could not differentiate between the brain of a schizophrenic and non-schizophrenic, for example.

However, oftentimes various motives will dictate that the two images showing the greatest disparity will be published. Researchers want difference. With differences come funding, notoriety, and the ability to continue researching.

Dumit does not imply that the researchers are scam artists or wasting efforts with a useless technology. He considers PET a phenomenal technology that offers great promise for diagnosing and treating our physical and even

mental maladies. However, we should understand that we don't understand it.<sup>32</sup> We should analyze how we are using brain images to understand and negotiate normalcy. According to Dumit, PET currently does a better job of showing abnormalities in a person as opposed to a normal state. He argues "that PET scans are far better suited to show differences and abnormalities than they are to show that someone is normal or that there are no significant differences between groups, and that this inherent preference has powerful consequences when these scans are used in courtrooms" (12).

PET images show only very thin slices of the brain – not the whole brain. In addition, they do not offer us a snapshot, but rather, a reconstructed image based on the path that a radioactive isotope takes through the body. "For the PET researcher, the scan shows what the researcher cannot yet imagine," says Dumit (104).

It is interesting to note that while researchers have conducted a great many studies of mental illness using PET brain scans, how we treat mental illness has not changed a great deal over the years. In an editorial in *The British Journal of Psychiatry*, Bullmore and Fletcher question how imaging has impacted psychiatry:

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<sup>32</sup> ... an understanding that will likely be gained from an understanding of medical imaging artifacts as a form of digital media.

Despite the extraordinary technical developments in neuroimaging (Andreasen, 1997), scepticism is common with respect to its impact on psychiatry. What has imaging told us about schizophrenia, for example, that we did not already know? Why has imaging been largely irrelevant to our understanding of causation in psychiatry? Why has imaging made no difference to the clinician?

They conclude that neuroimaging may, in the future, show us new, useful ways to alleviate psychiatric conditions.

While imaging technologies such as PET may be technologically capable of doing so now, we do not have the capacity to interpret and process the knowledge effectively. We do not have the technology. They state:

[M]ajor advances in the impact of imaging on management of individual patients will probably need to await the creation of large reference databases of brain images acquired from the general population, and widely agreed standards of data analysis, which can be accessed via the internet as a basis for quantitative analysis of the extent to which a patient's image is abnormal or predictive of some clinically important outcome. Admittedly this assumes a level of methodological maturity, infrastructural investment and

international cooperation that does not yet exist; but these are details, surely — there remain grounds for optimism.

While I find Dumit's position reasonable and his arguments compelling, I questioned the commonness of brain scans in the media, asking him by email whether the images were significantly prevalent outside of medical and research facilities. He responded (on 26 Feb. 2005):

There are a lot of issues regarding impact including what counts as "very prevalent", but the first one is that there is currently a supreme court case concerning whether 17-yr-olds can be given the death penalty, and the american med assoc and other groups have argued that based on the latest brain evidence, they have immature brains. And they explicitly cite brain imaging studies, with the images traveling quite widely "clearly showing different brain types."

Then there have been regular appearances of brain images "showing" racism, republicans vs. democrats, and violence in the last few months alone. Again, is this a lot?

Finally the images connected with illnesses (schizophrenia, depression, OCD, ADHD) are widely circulated on the NIMH



website, on activist websites, and discussed by patients and advocates. I think of this as an important contribution to the biologization of these illnesses.

Subsequently, we have seen Larry Summers' widely publicized claim of gender differences, apparently based on brain studies that clearly show differences between men and women's brains. Some researchers would argue that some studies show differences, some studies show no differences, and no study clearly shows differences. And, even if researchers do see significant differences, what do they know then? We might wonder what it matters that some researchers tell us of these differences. It seems that we should still be the same as before we came to hear this information, but maybe not. Dumit finds that we identify ourselves, at least in part, by what we think of as verifiable. "Publicity in all of its forms, with all of the transformations it conducts on the facts, is how we come to know facts about ourselves," says Dumit. This seems to validate the study of medical images as cultural artifacts rather than diagnostic or interventional tools, and not by medical researchers, but rather by scholars in the humanities.

## CHAPTER 6 – JUGULAR TROUBLE

I want to make sense of this mess for you and state overtly why the methodology for deciphering questions and addressing problems is valuable and important, because that is what texts like this do. Yesterday, I witnessed the insertion of a catheter through a patient's jugular vein and into his upper chest, ultimately threaded to his heart, with the hopes of finding a way to accomplish this goal of explication, justification, rationalization, and validation, and convince you of the merits of my argument. While the specific medical procedure itself may be arbitrary, the process of creating the narrative accomplishes my goal.<sup>33</sup> I struggle to care about justification and its ilk because the value should illuminate itself or not in the demonstration of my methodology, but I bitterly acknowledge the requirements of texts of this nature and submit.

While this matter works itself out, I will also address the question of how to minimize perceptual errors in medical imaging procedures. Simply put, perceptual errors occur when a radiologist either reports disease in a disease-free person or fails to report disease in a diseased person. Perceptual errors account for about half of all errors made by radiologists, and somewhere between 3% and

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<sup>33</sup> You may remember the story that opened this text (see page 3), where I described my insomniac mind as a river with fast-flowing tributaries. Consider the medical procedure as my mind and the tangential information, objects, and ideas as fast-flowing tributaries that create the overall landscape of the text.

25% of those errors affect patient well-being (Kundel 1).<sup>34</sup> If a tumor appears on an image and no one sees it, it's still a tumor on the image and, correspondingly, may put the patient's body at risk. Radiologists should work to decrease perceptual errors both to improve patient care and "because substantial variation among observers undermines confidence in the reliability of imaging diagnosis" (1). Radiologists want their patients' confidence. I want to correct the perceptual errors that my former husband<sup>35</sup> has of me and revise our relationship in a way that satisfies both of us, as well as the needs of our two children. Our relations could be characterized by his *in situ* hostility toward me and my need for his acceptance and forgiveness.

The catheter procedure gives me a framework, setting, and characters to manipulate in a way that will help me prove the value of producing new information through narrative and textual-visual amalgamation, but 1) justifying my methodology, 2) reducing perceptual errors in radiology, and 3) fixing a

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<sup>34</sup> On a practical note ... When evaluating diagnostic images, radiologists should adjust the lights, eliminate glare and reflection, consider contrast and detail perception, and magnify and minimize images for optimal viewing. They should evaluate the image(s) for disease without reading the clinical history, read the history, and evaluate the image again (Kundel 6).

<sup>35</sup> It would seem that *ex-husband* is the more accepted term; however, despite its common usage, I find it misguided on a personal level, based on the varied definitions for *ex* and its annihilative connotation. I find it difficult not to refer to the signified as simply my *husband*, without a modifier, though the marriage in its traditional sense has dissolved. As justification, I remain committed to him and his well-being, though in a different sense than before the buckshot (see page 134 for *buckshot* reference), a feeling which may not be reciprocal, giving rise to his place in this text.

violently-damaged relationship is a daunting goal. Today, I worried that I would not have enough to say or that I would say things that fail to convince anyone of the validity of this text. Fortunately, an epiphanic moment<sup>36</sup> occurred, prompted in part by a Bruce Springsteen song, and the material needed for this endeavor became extremely apparent.

By custom, I view online weather maps repeatedly while I write, because this gives me something to do while the words form in my head. The weather map that I checked most recently looks like this. (See Figure 12):



Figure 12 - Weather map (used with permission)

<sup>36</sup> The moment occurred over a span of approximately 10 minutes.

The map shows radar indicating levels of precipitation over Central Florida with the intensity indicated by colors on the legend in the upper, right corner of the image. Maps are updated approximately every five minutes. I looked at this map and then walked outside and nothing made sense. This is a close facsimile to what I saw outside, keeping in mind that it is a photograph. (See Figure 13):



**Figure 13 - Unedited photo of the sky**

The sun briefly blinded me and forced me to take the photo with my eyes closed. I am located just north of Daytona Beach (see Figure 12), where there was not substantial precipitation indicated on the map at the moment the map was

generated, but storms were imminent and forecasters had predicted that the rain would move into my area all throughout the afternoon and evening. The image showed cloud cover and heavy rains moving toward me, but the sky itself said nothing. Here's photo taken of the sky approximately 45 seconds later at a different angle. (See Figure 14):



**Figure 14 - Another unedited photo of the sky**

The blue sky with only the scantest trace of clouds belies the image presented on the weather map. The map perceives something that I cannot and presents itself as truth, as well as something to act on. It does not convey a picture of anything real; it interprets data that we think mimics something in reality, something

tangible, but the visual output is a perception of the machine that creates it, in the same way that I convey these ideas through manipulation of the alphabet. Kundel points out “that the output of the system is not an image but an interpretation of the signal in the form of a report or a decision about the object” (2). The machine that generated the map interpreted signals and produced a visual report that reflected the data it absorbed and we have no basis for argument with it. It says rain is imminent; I see no sign of rain.

The map, like the diagnostic medical image, is a predictive image. [The map may have been a predictive image, but it’s now a historic image. Meaning is about context, both of which have been thoroughly corrupted throughout *this* text.] Whatever it shows of the moment is relatively insignificant and its power lies in what it shows of the future.<sup>37</sup> So far, this brief analysis shows me that my former husband may be reading my emails and – in the past, when we still saw each other – the visual map of my expression and body movements and using these things to predict the future rather than to accept them at face value. His hostility is palpable even though our relationship has become largely text-based; we communicate via email because he types that he does not want to see me or speak with me. He perceives the likelihood that he

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<sup>37</sup> Often, a quiet, inconspicuous tumor doesn’t bother anyone right away. Its possibility for growth is what threatens.

will suffer pain if he sees me again and, as a result, pushes me as far away as possible. However, he misreads the data. He writes that I hurt him deliberately and with malice and that he does not need me now; I tell him that I did nothing maliciously and that I ache for his losses as well as my own and that we still need each other to raise our children and to heal ourselves. I tell him that his understanding of my actions is erroneous. If he accepts my communications with him as candid and truthful, he would have no reason to aggressively drive me outside the perimeter of his life. He looks at me as the weather map, but I want him to see me as the photograph. He sees my communications as predictive rather than representative.

When I go inside my house to consider the weather, I hear Springsteen sing on the radio: "And she was blinded by the light." These lyrics were followed closely by: "And go-cart Mozart was checkin' out the weather chart to see if it was safe to go outside." This seems unlikely, but it happened just as I describe. The song finds its place in this story because it makes a place here. I was blinded by the light of the sun, with *was* being key – the blindness *was* temporary and the camera took over for my eyes. And whereas go-cart Mozart was checking out the weather chart to see if it was safe to go outside, I was checking outside to see if it was safe to use the weather chart.



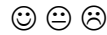
*Go-cart* is a perfect anagram of *cog art*. A cog is a part of a wheel that engages it into motion with another wheel, and art is beautiful and creates meaning. The art that the medical imaging and weather map technologies have produced, as well as the art that I produce in this text, are cogs that grind toward establishing the beauty and purpose of this methodology. Go-carts and cogs both imply motion and movement, and I use them to push the art of deviant analysis that allows me to heal a relationship and help radiologists in their jobs all in one fell swoop.

The Springsteen lyrics prove their validity as a tool for my analysis by making the connection with my immediate experience apparent and driving me to excavate this song as if it were of a holy nature. Whatever song played would serve this purpose as long as I am capable of generating the connection with it.<sup>38</sup> The value of the process that I describe evolves from the infiniteness of source material – the answers I seek are found in the artifacts of daily existence, including the newspaper, shampoo bottle, literary anthology, Holy Bible, billboard, MRI scan, cell phone ring tone, as well as the emptiness of the air. The connections are everywhere and everything. In this instance, I again seek

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<sup>38</sup> Fortunately, the richness of the Springsteen lyrics offers ample fodder for this Frankensteinian activity.

information from the medical experience and return to the radiology department.



The patient, whose name rhymes with *Zen* and whom I shall call Zen, suffers from renal failure. Zen needs the insertion of a permanent catheter (called a Permacath), which will allow relatively easy access to his vascular system for dialysis treatment. During the medical procedure performed by an interventional radiologist, the patient maintains a symbiotic connection with a machine that monitors his vital signs. The machine helps keep the patient alive by interpreting physical data and perceiving when the patient slips near the netherworld of death. The patient gives the machine a reason to exist.

Medical technologists roll Zen into the procedure room. I sit quietly in the viewing room, which is illuminated by incandescent lights that create a warm visual effect in the space, but do not heat the chilliness of the room whatsoever. Someone has pitched a blue tent over the patient. In this procedure, the radiologist uses ultrasound to guide the needle. Ultrasound has a frequency higher than humans can hear. When it comes in contact with a patient's skin and emits its signal into the body, the sound is reflected off internal structures and

creates an image (AIUM). The sound makes pictures on a screen, which the radiologist uses to visualize the inside of Zen.

Back in the procedure room, the radiologist punctures the patient's jugular vein and inserts a white wire.

"Don't touch anything blue," a technologist says to me, as I pretend to be invisible.

She touches both of my shoulders and gently pushes me slightly backward, away from a table covered with a blue sheet that holds the radiologist's tools. He measures a piece of wire that he will insert into Zen.

"You're going to feel this, okay?"

He injects Zen's chest with Xylocaine, a local anesthetic. The patient grunts. Some blood flows from his neck. A dilator goes over the wire.

"Is everything okay, sir?" the radiologist asks.

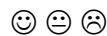
The technologist who touched me replies.

"He doesn't speak very much."

The radiologist asks Zen to hold his breath to relieve pressure on the chest while he inserts the catheter.

"Do you feel this, sir?" the radiologist asks as he gently slices Zen's neck with a scalpel.

Zen remains quiet. The radiologist flushes a catheter with saline solution and Heparin, a blood thinner, so that blood does not clog the tube. He then creates a tunnel of skin in the chest through which he inserts and manipulates the catheter until it is in the appropriate location, thoroughly incorporated in soft tissue. Zen wheezes a little bit. The radiologist closes the incision with a suture. A technologist turns off the ultrasound machine and its little screen goes black. The technologist puts a sterile dressing over Zen's wound. The patient lives; documents are generated.



Here is a fragment of the patient's medical record:

INDICATION: Patient with renal failure, needs dialysis access.

**Figure 15 – Fragment of Zen's medical report**

The radiologist and Zen's referring physician use this information in a variety of ways and find it a straightforward assessment of their patient's condition. It justifies the procedure – the insertion of a permanent catheter to allow for dialysis access. The *meaning* of the text is clear and unambiguous for this purpose; however, the text itself is anything but unambiguous. "Patient" refers to Zen, but might also be used as an adjective, in the sense of being tolerant or long-suffering, such as:

INDICATION: Patient with his renal failure, Zen needs dialysis access.

**Figure 16 – Revised fragment of Zen’s medical report**

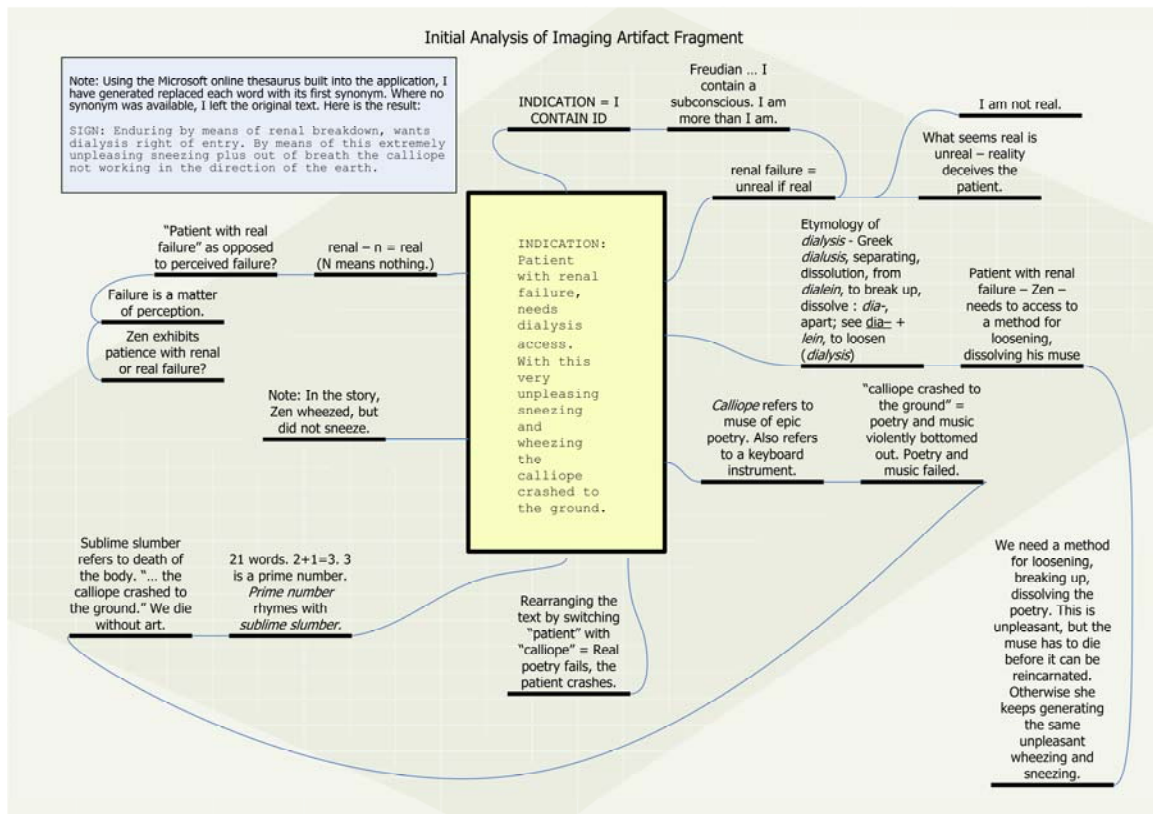
Zen’s patience allows him to lay on the table while the radiologist punctures his jugular vein, creating access for dialysis. Your patience with this text allows you to receive new information about weather charts and old songs, creating access to a new methodology for deciphering problems. Patience with my former husband may save him and me from singing a sad, silent song into infinity and give us access to a revised relationship. A radiologist’s patience with a medical image may save her patient’s life by taking enough time to perceive the image fully, *see* the image with all of its nuances, identify disease, and communicate those findings to the patient. Patience gives the radiologist access to greater perception. But, I want less predictable findings, so I will combine the original medical record fragment with a piece of the Springsteen song. (See Figure 17):

INDICATION: Patient with renal failure, needs dialysis access. With this very unpleasing sneezing and wheezing the calliope crashed to the ground.

**Figure 17 - Fragment of Zen’s medical record and Springsteen song**

This collaged text contains a fresh supply of new information<sup>39</sup> that I will combine with a visual artifact – an x-ray – generated by Zen’s medical experience.<sup>40</sup> [Footnote 40 proves contrived nature of this text. The narrator establishes a false process for the reader that she does not even utilize. If she were craftier and more rhetorically proficient, she might have created this “schematic” digitally, reproduced it with ink or lead on paper, and then re-digitized it to use here. It would

39



Here is a schematic of possible conceptual connections between the narrative of Zen’s experience [it is a narrative of the narrator’s experience watching Zen and has nothing at all to do with Zen’s experience] and a fragment of his medical record combined with a line from the Springsteen song at the center, both stripped of their original context.<sup>40</sup>

<sup>40</sup> This is one way to generate meaning, though I prefer to do it more organically, with the connections moving directly from my head through my fingertips and skipping the map.

appear more authentic and convincing.]<sup>41</sup> [Who is she speaking to in Footnote 41?]<sup>42</sup> [Jesus, I've been outed.] After the Permacath insertion, Zen's chest is x-rayed to establish the position of the catheter tip. Here is that image. (See Figure 18):



Figure 18 – Zen's chest x-ray

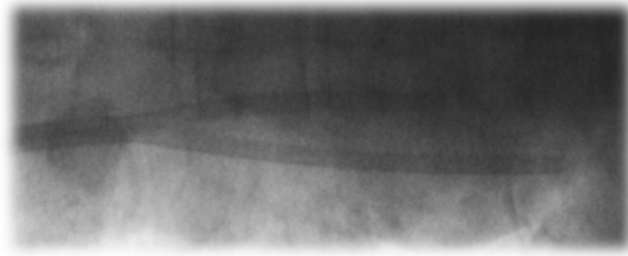
The image reveals the inside of Zen's chest, framed in black, illuminated by lightness, with the ribs, the vertebral column, and bony structures made of shadows and darkness. The catheter on the left side of the image appears alien in

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<sup>41</sup> The schematic appears in my mind and the connections are just as valid. I do not pretend to be convincing.

<sup>42</sup> You.

the body, like a visual oxymoron or, at the very least, an inconsistency. A fragment of the image – where the catheter splits – appears as a wishbone, something found in birds but not humans and Zen is no bird. (See Figure 19):



**Figure 19 - Wishbone fragment of Zen's x-ray**

Zen created a wishbone in his body to signify that he desires to continue living within the structure of his bones and physical shell but also acknowledges that he may lose his wish to a stronger force.

In the original x-ray image (see Figure 18), the body emanates light from within, but does not expose its secrets boldly; subtly, quietly, and bathed in light, the image reveals Christ with his arms extended in the shape of a cross. An image of artist Robert Liberace's sculpture, *Crucifix*, makes evident the similarity between the corporeal image made up of the vertebrae and collarbone.<sup>43</sup> (See Figure 20):

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<sup>43</sup> Liberace's image has been desaturated of color; other than this revision, the content of the two images is unchanged from the "originals."



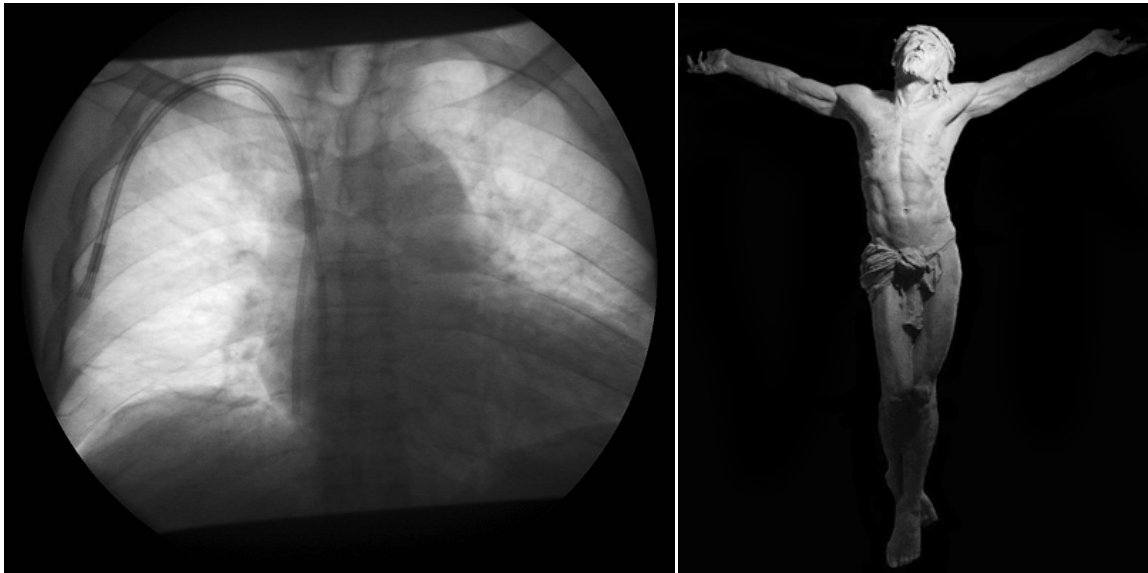


Figure 20 - Christ sculpture (used with permission) and Zen's x-ray

In these images, Christ represents the trinity – God, Jesus, and the Holy Spirit – with his two arms extended and legs twisted together as one. [*God, Jesus, the Holy Spirit* is a perfect anagram for *Oh, lest I judge sophistry*, which sentiment I find as compelling as the idea of this three-for-one special; I have no qualms about judging anything, as I don't exist beyond the page, and therefore, I judge this text to be replete with sophistry. It is meant to deceive the reader into believing it is more exceptional than conventional, but it is pure rhetoric. The Surrealist tradition, upon which this text heavily relies, proposes a trust in the unconscious and randomness to create meaning, whereas the process described herein consists of an explosion of consciousness and deliberation.]<sup>44</sup> The head at the top of the x-ray tilts in the same direction as the

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<sup>44</sup> The Surrealist tradition also relies heavily on free association, a rejection of conventional logic, and a belief in the liberation of the mind. [This conversation is becoming surreal. I don't know who's talking to whom. The flow of this text is non-linear and disturbing. I don't belong in footnotes.]

sculpture and the vertical and horizontal lines of Zen's ribs and vertebrae mimic the ripples of the Christ figure's torso, or, alternatively, represent bars that confine Christ in the prison of Zen's body. Zen has Christ-Thrice in his bones. To many people, Jesus Christ represents a trinity of love, forgiveness, and redemption, things that I also seek. The image conveys that I need to help my former husband *see* these things in his own bones, so that we can release ourselves from this prison of painful aversion.

Through ultrasound, Zen's radiologist uses sound to *see*. My former husband does not want to hear the sound of my voice or he will *see* things he does not want to *see*. He may see that he needed the freedom from me that I have given him, and that during our marriage I burdened him with my neediness as well as unfair expectations of his emotional faculties; he may see clearly his role in the passing of our marriage; he may see that I needed to leave and that there can still be love. But, the silence of email allows him to ignore things of that nature, and he types blindly onto white space, seeing nothing of the recipient to his messages. [How does that differ from this text, where the narrator types blindly into white space, seeing nothing of the recipients of her message?] He perceives only the betrayal of feeling that punctuated the marriage as one might ignore the sentence and read only the exclamation mark! Maybe by

the time you read this text, he and I will both *see* better, but I cannot know that now, so I must keep attacking this problem in the hope of guiding us to a peaceful place.

I see something through Springsteen as he sings: “And some bloodshot forget-me-not whispers daddy's within earshot save the buckshot turn up the band.” In the song, this flowering girl whispering that her father might hear something painful wants to save her transitory boyfriend with music. The band’s music drowns out the pain and is preferable to the abrupt, jarring sound of buckshot. My former husband still hears the buckshot that blew apart our marriage and opened wounds that bleed resentment, sorrow, and regret. It rings in his ears and he cannot perceive any goodness in me. I can make music that will help heal his pain, but it is self-serving as it will also heal my pain, and perhaps I need to suffer. In silence.

Whether Christ resides in Zen’s bones or not, Zen wishes to avoid suffering in silence or otherwise, which is why he lays on the table. A woman enduring a mammogram suffers the relative discomfort of having her breasts smashed and radiated to avoid suffering death by breast cancer and she hopes that a radiologist will perceive truth whether, comforting or not. The lyrics imply that the radiologist may need sound to more clearly see signs of danger – to

avoid the buckshot that kills.<sup>45</sup> Zen's collage (see Figure 17), pays tribute to audio poetry by reference to Calliope, the muse of epic poetry and mother of Orpheus, the greatest musician and poet of Greek mythology.<sup>46</sup> The fragments of Zen's medical record collaged with the lyrical fragment indicate that Zen's poetic muse sneezes and wheezes – classic signs of illness – and bottoms out. The music and poetry of his corporeal envelope is sick and gives rise to his *renal failure*, which is a perfect anagram for *unreal if real*, indicating that what seems real is unreal and that reality deceives. Zen needs a new song, as do radiologists attempting to perceive dangerous disease in the images of their patients before it leads the patients to pain and death.

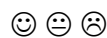
When medical imaging scans were film-based, it was only possible to produce an image that represented an interpretation of the signal about the object of study. (See Kundel reference on page 152.) The lyric fragments seem to tell us to turn the data produced by the signals created during the mammogram and other imaging procedures into an audio-visual artifact. If the signal that created the visual display was also converted into an audio file that composed

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<sup>45</sup> *Buckshot* is a perfect anagram for *both suck*, implying, perhaps, that *both* sound and silence *suck*, sometimes.

<sup>46</sup> Orpheus sings a song for his dead wife so beautifully that it charms even inanimate objects and he only succumbs to death when attacked by the Maenads with their own hands. They behead him and he continues to sing as his head floats to the Island of Lesbos, where some would say that I have floated as well (Orpheus).

itself into musical notes based on the density or mass of flesh and bones – a radiological song – the radiologist could then listen for a tumor as well as see it. The audio mammogram would serve to heighten visual perception and cue the radiologist to physiological anomalies, though not replace the visual scan. The idea of diagnostic musical composition based on physiological measurements is not unheard of. Using electrocardiogram data of the heart, scientists have generated musical compositions and discerned differences between the music of healthy and diseased hearts,<sup>47</sup> determining that auditory display can aid diagnosis of conditions such as congestive heart failure, atrial fibrillation, and obstructive sleep apnea. The healthy heart resounds more complex fluctuations than a diseased heart (Ballora). Subjectively, the healthy heart chants a more aesthetically pleasing song. There is no widespread usage of diagnostic musical composition in cardiology; however, like the inseparable union of thunder and lightning, sound and sight could work hand-in-hand in future medical imaging applications to diagnose the diseased body.<sup>48</sup> The body sings electric.<sup>49</sup>

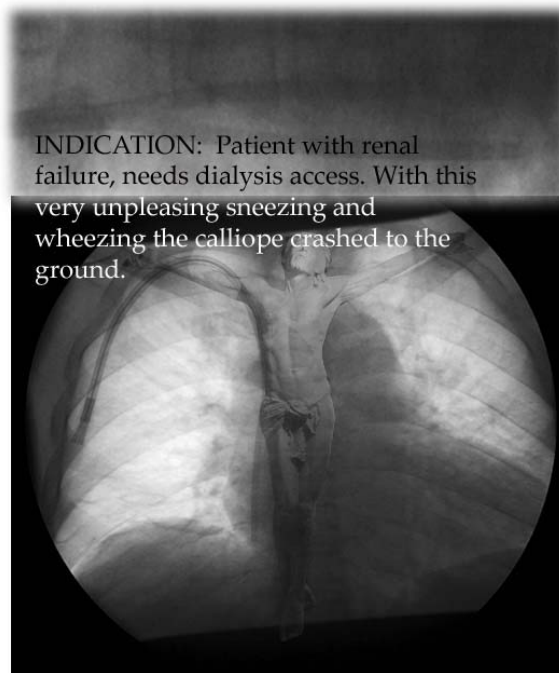


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<sup>47</sup> ... as well as creating “biometric art.”

<sup>48</sup> There have been anecdotal stories of olfactory applications under development that emit odor based on digital input, but these programs have not flourished. If they did, perhaps it would be possible for the radiologist to smell a tumor as well as see and hear it.

<sup>49</sup> See Whitman poem fragment in Figure 11: “I sing the body electric.” P.S. *The body sings electric* is a perfect anagram for *bode thy crisis neglect* - a warning of unknown origin.



**Figure 21 - Zen collage**

I hold an end of Zen's catheter wishbone in each hand and pull in opposite directions. If my left hand wins, you will understand and value my methodology for the process of deciphering problems; if my right wins – the more proprietary hand – you will not understand a thing and the methodology will remain inaccessible to you so that I may keep it for my own always and you will not misuse it or use it for ill gains. Understanding that all texts contain all of the information necessary to solve any problem, a violent person might start World War III by uncovering the secrets hidden in the upper, left corner of Zen's chest x-ray. Since a text such as this one must prove itself to be academically

credible or commercially viable,<sup>50</sup> I force my left hand, which happens to be my dominant hand, to pull harder, snap the bones, and retain the larger piece. It breaks up the wishbone and, according to folklore, fulfills wishes.

The etymological baggage of *dialysis* contains the idea of breaking up, separating, and dissolving. The process I've described for deciphering problems requires this breaking up of artifacts and ideas in a way that forces the destruction of meaning to create new information and way of seeing. Zen's collage (see Figure 21) suggests that *access* to this methodology requires *patience* with *real failure* (*renal failure* = *real failure*, with *n=nothing*) – the failure of logic to provide solutions. We need a method for loosening, breaking up, and dissolving the poetry of problems. This is unpleasant, but the muse, Calliope, wheezes and sneezes and has to crash to the ground before she can be reincarnated as goes the story of Christ, the spiritual entity who lives in the shadows of Zen's chest, hanging from the cross. Christ meant something as a living human, philosopher, teacher, and carpenter, but become infinitely more meaningful after his reported death and resurrection. He believed he faced real failure ("My God, my God,

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<sup>50</sup> Often, these are diametrically opposed conditions.

why hast thou forsaken me?”) (Mark 15:34), but came to mean all things to all people.<sup>51</sup>

The methodology for deciphering problems that you have subjected yourself to throughout this text could mean all things to all people – it can be utilized for any problem with any text, but it requires a belief (even, perhaps, a faith) that the information produced is valid. *Rhetorical narrative fragmentation and reassemblage in the service of resolving states of difficulty* asserts that every text contains all of the information necessary to solve any problem. The theories upon which this text is based create a tenuous rationale for the collision of the narrative with fragmentation and collage to generate meaning, but ultimately beyond the page, this text offers you a theory-less theory and instead illuminates a way of seeing images and texts and, more importantly perhaps, the nature of experience in a new light, in a way that generates new information, meaning, and value for both practical application as well as creating a way to transcend the reality of existence, if only temporally.

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<sup>51</sup> Jesus lives (allegorically, metaphorically, and physically, at least); documents are generated.



## CHAPTER 7 – POSTSCRIPT TO CHAPTERS 1 THROUGH 6

Here's an x-ray image of my profile. It was taken yesterday (with *yesterday* being the day before I originally wrote these lines and not one of the many yesterdays associated with the days before I revised these lines):



Figure 22 - Narrator's profile x-ray

It tells the orthodontist whether my jaw is aligned properly (it still isn't) and can indicate other serious conditions of the head, neck, and jaw. I stare in wonder at the answers I might find in my own head but am more transfixed by

the shadow image that emerges from the facial bones.<sup>52</sup> I clearly see another person's nose, mouth, and chin, and it is *not* my own. [Hi . ] This indicates to me that I am more than I am and that another voice lives in me; perhaps it is one who knows more than I know and can teach me to employ the methodology that I outline in a way that I have yet to consider, in a way that will allow me to cure my insomnia, figure out whether evil exists, find language for my *amie*, decide the best radiological use for the term *infiltrate*, eliminate perceptual errors in diagnostic radiology, heal my relationship with my former husband, validate this text, and transcend my own reality.<sup>53</sup>

[Clang . ]

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<sup>52</sup> Except for cropping transparent edges and reducing the size, the image is unedited.

<sup>53</sup> Alternatively, it teaches me what Macbeth learned: "Life's but a walking shadow, a poor player, that struts and frets his hour upon the stage, and then is heard no more; it is a tale told by an idiot, full of sound and fury, signifying nothing."

## **APPENDIX A: COPYRIGHT PERMISSIONS**

Robert Liberace

2826 Chain Bridge Road, Vienna, VA 22181



March 10, 2008

I grant Lynn Koller permission to use an image of the crucifix I sculpted in her dissertation.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert Liberace". The signature is written in dark ink and is positioned above the printed name.

Robert Liberace



March 28, 2008

Lynn Koller  
Assistant Professor of Communication  
Embry-Riddle Aeronautical University

Dear Ms. Koller:

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TITLE: Student

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6. This Letter Agreement shall be construed in accordance with the laws of the State of Georgia without regard to its conflicts of law principles. All disputes under this Agreement shall be resolved by the State or Superior Courts of Cobb County in the State of Georgia or in the United States District Court for the Northern District of Georgia, and the parties consent to the exclusive jurisdiction of such courts and hereby waives any jurisdictional or venue defenses otherwise available to it.
7. This Letter Agreement and any and all exhibits, attachments and/or appendices attached hereto represents the entire understanding between the parties hereto with respect to the subject matter hereof and this Agreement supersedes all previous representations, understanding or agreements, oral or written, between the parties with respect to the subject matter hereof and cannot be modified except by a written instrument signed by the parties hereto. This Letter Agreement may be executed by facsimile and in counterparts, with such counterparts taken together to constitute the entire agreement.

EXHIBIT A



Microsoft product screen shot reprinted with permission from Microsoft Corporation. See <http://www.microsoft.com/about/legal/permissions/default.aspx#E3C>.

## APPENDIX B: IRB CLEARANCE





University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901, 407-882-2012 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

**From : UCF Institutional Review Board  
FWA00000351, Exp. 5/07/10, IRB00001138**

**To : Lynn Koller**

**Date : May 1, 2008**

**Study Title: "Green Chairs, Fictional Phalluses, Infiltration, and Love on the Rocks:  
Medical Imaging Artifacts Blown Up"**

Dear Researcher,

As per our e-mail correspondence, the Institutional Review Board has determined that your project "Green Chairs, Fictional Phalluses, Infiltration, and Love on the Rocks: Medical Imaging Artifacts Blown Up" does not require Institutional Review Board (IRB) review/approval. Your project is not considered human subjects research.

Thank you for your time in resolving this issue. Please continue to submit applications that involve human subject activities that could potentially involve human subjects as research participants.

On behalf of Tracy Dietz, Ph.D., UCF IRB Chair, this letter is signed by:

A handwritten signature in black ink that reads "Janice Turchin".

Janice Turchin, CIP  
UCF IRB Coordinator

cc: IRB file  
Melody Bowden, Ph.D.

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