Realism: A Tautological Tale

by Amy Kulper

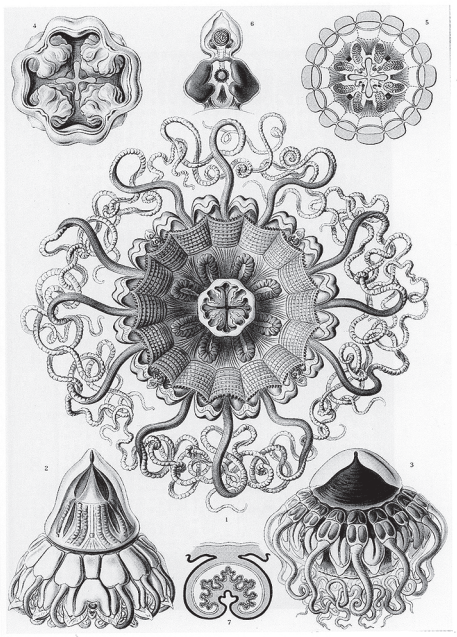

fig.1 The Science of Medusae. *Periphylla Mirabilis*, Ernst Haeckel, *Report on the Deep-Sea Medusae Dredged by H.M.S. Challenger During the Years 1873-1876*, pl. 21, drawn by Haeckel and Adolf Giltsch, lithographed by Edward Giltsch.

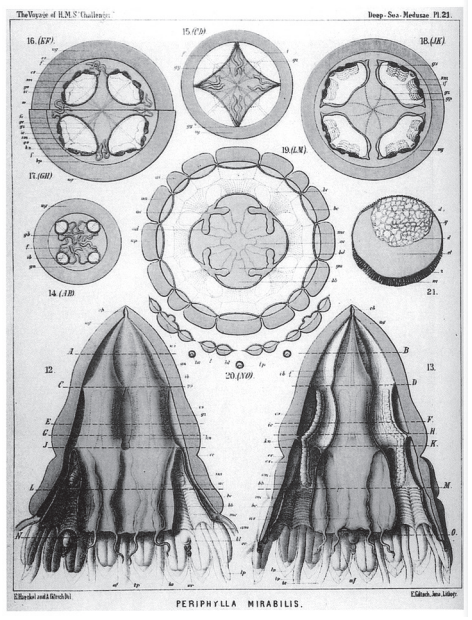

fig.2 The Art of Medusae. *Peromedusae*, Ernst Haeckel, *Kunstformen der Natur* (Leipzig: Bibliographisches Institut, 1904), table 38.

A copy of the universe is not what is required of art; one of the damned things is ample.

—Rebecca West[1]

Within the discipline of architecture, realism is often invoked as a virtue. The conceit of this worldview resides in the belief that the more realistically architects are able to represent their spatial imaginings, the more precisely design intentions can be projected into the built environment. This essay will argue, however, that the representational agency of realism is tautological, eliding the ambitions of the drawing or model with the execution of the built work, while eschewing the creative dimensions of the translational phase of architectural design.

This is a tautological tale, but also a cautionary tale in equal measure. The operations of digital fabrication have conflated architectural design and production. Within the digital convention of the cut sheet resides both the disciplinary desire for realism and the tautological undermining of architectural design's representational agency. What follows are some ruminations about extra-disciplinary instruments, fictions, and representations that collectively augur against realism as an architectural aspiration.

Real Instruments

According to some of those who espoused the mechanical-objective view, realism, accuracy, and reliability all were identified with the photographic. Nature reproduces itself in the procedurally produced image; objectivity is the automatic, the sequenced production of form-preserving (homomorphic) images from the object of inquiry to the atlas plate to the printed book. Photography counted among these technologies of homomorphy, underwriting the identity of depiction and depicted.

—Lorraine Daston and Peter Galison[2]

Daston and Galison's account of the heated debate between Ernst Haeckel and embryologist Wilhelm His in their 2007 text, *Objectivity*, offers a compelling starting point for a contemplation of 'real instruments.' At stake in this debate over the scientific representation of embryos was the question of whether drawings or photographs were more mechanically objective. His, who deployed a painstaking representational process involving a drawing prism and a stereoscope that projected an image which would then be traced upon the drawing surface and methodically checked against finely lined graph paper, characterized Haeckel's drawings as "inventions," accusing Haeckel of ushering his 'subjective' biases into the illustrations.

An examination of two drawings of the *medusae* by Haeckel—one *Periphylla mirabilis* (pl. 21) from *Report on the Deep-Sea Medusae Dredged by H.M.S. Challenger During the Years 1873–76*, the other, *Peromedusae* from *Kunstformen der Natur*—demonstrates his implicit understanding that natural specimens can be perceptually skewed towards the aesthetic or the scientific, and that, indeed, these are two sides of the same epistemological coin (Figs.1&2). Perhaps in this context, Wilhelm His' advocacy for technologies of homomorphy—technologies that maintain the integrity of the object of inquiry through the manufacture of "procedurally produced" and "form-preserving" images—and their claims on realism, can be better understood. If scientific discourse is polarized through the competing lenses of "realist" and "constructionist" accounts, then surely His' homomorphic aspirations fall squarely within the camp of realism. However, the brilliance of Daston and Gallison's argument is in their revelation of mechanical objectivity as a social construction. If mechanical objectivity is a social construction, then the technologies of homomorphy deployed by His produce results that are no more "real" (or realistic) than the aesthetic and scientific illustrations by Haeckel. If the debate between His and Haeckel is predicated upon such a false dichotomy, then several questions remain: what are "real instruments," what claims do they make for realism, and how do we identify their operations?

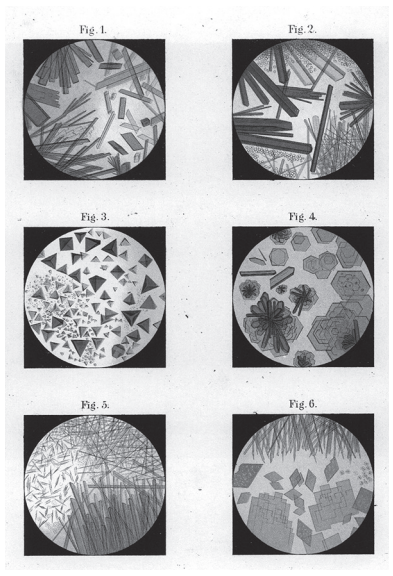

Fig.3 *Blood Crystals*, Otto Funke, *Atlas of Physiological Chemistry* (London: Cavendish Society, 1853), pl.10.

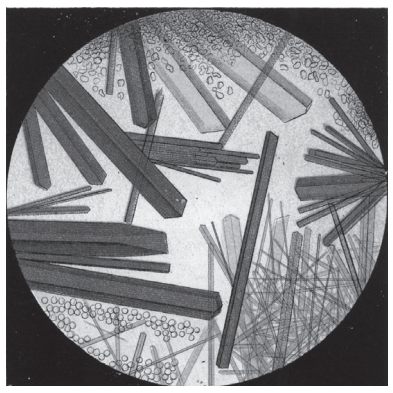

Fig.4 *Blood Crystals*, detail, Otto Funke, *Atlas of Physiological Chemistry* (London: Cavendish Society, 1853), pl.10.

Real instruments are tools that preserve representational traces of their instrumentality, calling attention to the work of the tool and the instrumental worldview it produces and propagates. The *Blood Crystals* featured in Otto Funke's *Atlas of Physiological Chemistry* of 1853 serve as a salient example of a real instrument (Figs.3&4). Here, the circular frame within which Funke represents his blood crystals preserves a trace of the microscopic lens through which he viewed the specimens, indicating to his readers that the blood was viewed through the microscope and is subject to magnification. This convention is pervasive in the atlases of the nineteenth century, becoming a trope of scientific visualization in this period, and it is interesting to consider, by way of comparison, examples of specimens produced through microscopic magnification, in which all traces of the instrument have been eradicated.

Between 1890 and 1896, Karl Blossfeldt received a stipend from the Prussian government, to travel to Italy, Greece, and Northern Africa to obtain photographs of living plants. Two years later, when Blossfeldt received an appointment at the *Kunstwerbliche Lehrenstalt* in Berlin, these plates became an archive for instructional use. In 1928, 120 of these plates were published in a volume entitled *Urformen der Kunst*. Blossfeldt's reproductions were enlarged anywhere from three to fifteen times their original size (and up to 45 times in his later work), replicating the experience of viewing the botanical specimen through a microscope, without any trace of the instrument present in the photograph (Fig.5). In Walter Benjamin's 1928

Fig.5 Karl Blossfeldt, *Monkshood: Plate #96 Aconitum*, 1928. Photograph, Print: 26cm × 19.1cm, Sheet: 31.1cm × 24.1cm.

review of Blossfeldt's work, entitled "New Things About Plants," he writes, "When we remember that Klee and, even more, Kandinsky worked for so long on the elaboration of forms which only the intervention of the microscope could—brusquely and violently—reveal to us, we notice that these enlargements of the plants also contain original stylistic forms (*Stilformen*)."[3] In the absence of any instrumental traces in Blossfeldt's photographs, Benjamin speculates upon a generative immanent nature as a stylistic source. It is as if to see these specimens microscopically enlarged is to witness nature coming into being, and to be privy to the stylistic secrets of its formation. Here, Benjamin compensates for the absent presence of a "real" instrument with the fabrication of a fictitious ontology—a morphology emanating from a stylistic source that can only be seen with the intervention of a "real" microscope or human visuality fictitiously endowed with these instrumental capacities. The conceptual withdraw of "real instruments," in this sense, invites the imaginative and instrumental production of "real fictions."

Real Fictions

The return to nature, the naturalistic evolution, which is the main current of our age, is gradually drawing all manifestations of human intelligence into a single scientific course. However, the idea of literature determined by science is likely to be surprising unless clearly defined and understood. It therefore seems useful to be explicit about what the experimental novel means, as I see it.

—Émile Zola[4]

Perhaps one of the most compelling examples of a real fiction appears in Zola's appropriation of Claude Bernard's experimental method, demonstrating the ease with which scientific procedures and representations were absorbed into literary production and, indeed, culture at large. The general atmosphere of comparative analogy in this period allowed Zola to appropriate Bernard's procedures for physiological experiment into a kind of manual for the naturalist novel (Fig.6).[5]

Fig.6 Léon Augustin L'hermitte, *The Lesson of Claude Bernard*, 1899.

Bernard published his *Introduction to the Study of Experimental Medicine* in 1865, and postulated that physiology could become an exact experimental science. In 1880, Zola modeled his *Experimental Novel* on Bernard's text, and attempted to imbue literature with this same sort of scientific precision and determinism.

The introduction of experimentation to medicine, with its human subject, is much more problematic than the use of the experimental method in the other physical sciences. However, Bernard raises these comparisons effortlessly, as if the human subject would simply be compelled to comply with experimental demands, in the same ways that inert matter does. He writes, "Comparative experimentation[…] bears solely on notation of fact and on the art of disengaging it from circumstance or from other phenomena with which it may be entangled."[6] Decontextualizing the human subject (or a particular condition within the human subject), is not only difficult, but it may prove to be at cross-purposes with the ethos of medical practice. However, this reification of the patient, or of his condition, facilitates a curt dismissal of his ontological status in favor of a network of lateral comparative relations: "As the essence of things must always remain unknown, we can learn only relations, and phenomena are merely the results of relations. The properties of living bodies are revealed only through reciprocal organic relations."[7] Here, the human subject's status of being in the world is relinquished in favour of the features he has in common with other living beings. Bernard makes lateral coherence a virtue, paving the way for Zola to co-opt his comparative methodology.

When applying Bernard's experimental method to the writing of a novel, perhaps the fictional conceit makes it easier for Zola to extract a character from its situation than it was for Bernard to disentangle the patient from his context. The experimental novel formalizes human experience to such an extent, that the outcome of the plot is not only predictable, it is inevitable: "In short, we must operate with characters, passions, human and social data as the chemist and physicist work on inert bodies, as the physiologist works on living bodies. Determinism governs everything. It is scientific investigation; it is experimental reasoning that combats one by one the hypotheses of the idealists and will replace novels of pure imagination by novels of observation and experiment."[8] In Zola's hands, the plot, once the territory of authorial negotiation between the actual and the possible, is now the prescribed outcome of the manipulation of certain "human and social data." The fictive world of the novel so closely approximates the actual, that the possible is rendered probable, or even inevitable, by virtue of this proximity. In both experimental medicine and the experimental novel, the distinction between the realms of the actual and the possible has lost all meaning.

Both experimental medicine and the experimental novel are predicated upon the acquisition of critical distance—a physical or intellectual retreat from the actual world. For the experimental physiologist, the laboratory is the locus of disengagement: "Every experimental science requires a laboratory. There the man of science withdraws, and by means of experimental analysis tries to understand phenomena he has observed in nature."[9] It is precisely this act of withdrawal from the immediate situation that fosters the aspiration of universal applicability. For the experimental novelist, acquiring a critical distance facilitates scientific knowledge, knowledge that by its very definition is universal: "In short, the whole operation consists of taking facts from nature, then studying the mechanism of the data by acting on them through a modification of circumstances and environment without ever departing from the laws of nature. At the end there is knowledge, scientific knowledge, of man in his individual and social action."[10] The desire of the naturalist novelist to achieve empirical knowledge of man and his social interactions was the subject and source of derision for many contemporary critics. Hippolyte Taine opined:

We have seen that he [the naturalist novelist] has nothing of the quick and lively imagination by which Shakespeare touches and handles the loosened threads that link beings together; he is heavy-handed, painfully and obstinately sunk into his dungheap

> *of science, busy counting the fibers he is dissecting, with such a litter of tools and a variety of repulsive preparations that when he emerges from his cellar and comes back to the light, he retains the smell of the laboratory in which he has been buried.*[11]

In Taine's hands, the retreat of the naturalist novelist becomes suspect—the very act of disengagement calling into question the author's capacity to write meaningfully about experience.

In light of Taine's observation, Zola's experimental novel functions effectively as a scientific fiction, even if its capacity to produce literary fiction is called into question. Zola concedes that there are moments in which literary practice diverges from scientific practice: "The artist has the same starting point as the scientist; he stands before nature, has an *a priori* idea, and works in line with that idea. There only does he diverge from the scientist if he carries his idea out to the end without verifying its exactness by observation and experiment."[12] The criterion of verification is one of the characteristics that Hans Vaihinger establishes to differentiate between a scientific hypothesis and a scientific fiction. In Vaihinger's terms, the experimental novel is an optimal example of scientific fiction, in that Zola never asserts the actual existence of an experimental novel, he merely states that all novels should be written *as if* they were governed by the laws and procedures of experimental medicine.[13] Whereas the scientific hypothesis is "directed towards reality" and "submits its reality to the test and demands of verification," the scientific fiction seeks alternate measures of justification.[14] "To the verification of the hypothesis corresponds the justification of the fiction. If the former must be confirmed by experience, the latter must be justified by the services it renders to the science of experience. If a fictional construct is formed, its excuse and justification must be that *it is of service to* discursive thought."[15] The legitimacy of the scientific fiction resides in its *service to* discursive thought, its capacity to act as an instrument to the science of experience.

Zola's experimental novel, with its deterministic plot and its manipulation of social data, is an explicit representation of the science of experience. By limiting the scope of the novel to the science of experience, the authorial negotiation between the actual and the possible is instrumentalized. Determinism dictates the plot. The entire realm of possibilities is narrowed to one probable outcome. The distinction between the actual and the possible loses its meaning, as the scientific fiction and the literary fiction more closely approximate one another. The atmosphere of comparative analysis seizes upon affinities at the expense of delineating differences. Once again, Taine provides a valuable insight when he articulates the truism that a natural history museum *is not* an art gallery.[15] By extension, one might also assert that a scientific fiction *is not* a literary fiction. Restricting the possible territory of fiction to the science of experience contributes to what Erich Heller describes as the "realistic fallacy:"

> But in fact, the realistic writer is only, like any other writer, fascinated by certain aspects of reality, and uses the selective schemes of his fascination for the aesthetic ordering of his chosen material. For, alas, we seem to get to know one thing at the price of losing sight of another; and however wide our interests, the sharp edge of perception in one sphere is but in contrast to the bluntness of our sensibility in another.[16]

Heller's observation points to the affinities between scientific and aesthetic points of view. Their shared reductive sensibility facilitates the efficient transmission of instrumental representations from the realm of science to the realm of art. So, in what way or ways are the naturalist novels natural? They are not natural. They propagate instrumental representations of nature. However, the fact that this operation falls under the rubric of "natural" in the context of nineteenth-century European culture is a telling detail. Zola lays claim to cultural coherence by establishing a rigorous comparison of the experimental novel and experimental medicine. As a construction, the experimental novel makes sense; it does not make reference to the ontological conditions of its existence. The nature and human nature that the experimental novel would depict are positivistic representations of reality. Experience is formalized into a science in which characters and social data are pressed into the service of deterministic plots. Comparative methodology paves the way for the dissemination of these instrumental representations of nature. With the conceptual withdrawl of the instruments of medical and literary experimentation comes the surreptitious instrumentalization of the experiences, behaviours, and processes they analyze. In this sense, fiction becomes empirical and experimental. Realism aspires to be an end in itself, but ultimately the naturalization of experience that Zola desires reveals itself to be highly constructed. Attendant to the withdraw of real instruments, and the construction of 'real fictions,' is the agency of real representations, and their capacity to either differentiate or obfuscate the distinction between the real and the constructed.

Real Representations

> *To speak of things that one wants to connote as real, these things must seem real. The 'completely real' becomes identified with the 'completely fake.' Absolute unreality is offered as real presence.*
>
> —Umberto Eco[18]

Fig.7 Lyndon B. Johnson Library and Museum, *LBJ Oval Office Replica*, Interior Photographs, Austin, TX, 1971.

Umberto Eco's *Travels in Hyperreality* (1995), first published in English as *Faith in Fakes* (1986) and Italian as *Il costume di casa* (1973), examines the American obsession with copies, replicas, and simulations through the aphoristic lenses of "the real thing" and "more."[19] These phrases, for Eco, epitomize a culture predicated upon the values of authenticity and surplus, and nowhere are these tenets more palpable than in the Lyndon B. Johnson Library, with its full-scale replica of the Oval Office (Fig.7). Eco describes the inhabitable facsimile as a "Fortress of Solitude" and argues, "it suggests that there is a constant in the average American imagination and taste, for which the past must be preserved and celebrated in full-scale authentic copy; a philosophy of immortality as duplication. It dominates the relation with the self, with the past, not infrequently with the present, always with History and, even, with the European tradition."[20] However, Eco's assessment of the "full-scale authentic copy," of the "duplication" of Johnson's Oval Office, is not completely accurate. In fact, the Oval Office replica in Johnson's presidential library is actually a 7/8th scale model of the original. Within Eco's benign miscalculation resides realism's fatal flaw. Implicit in this inaccuracy are the tautological assumptions of realism—the misplaced belief in historical reincarnation, the erroneous ethos of "immortality as duplication."

Perhaps nowhere is this tautology more palpable than in the animatronic figure of LBJ residing in his presidential library (Fig.8). More unsettling than Madame Tussauds' wax effigies, this figure of Johnson dons a gingham shirt and a ten-gallon hat, recounting folksy stories in the former President's infamous Texas twang. The obvious desire for "more" of "the real thing" embodied in this animatronic simulation prompts allusions to Homi Bhabha's description of mimicry as that which "repeats" rather than "represents."[21] And herein lies the cautionary tale about realism. One could argue that, given the technology of Johnson's time, it simply was not possible to produce a more real, life-like figure of LBJ. But it is precisely that realism that condemns the animatronic figure to the status of historical reincarnation. Hillel Schwarz would argue that it is not Walter Benjamin's evocation of the aura that this figure is lacking, but rather, this disconcerting duplicate of LBJ is deficient in its "assurance of our own liveliness," in its capacity to proffer alternatives to contemporary culture's barrage of heavily mediated experiences.[21] Here, the animatronic verisimilitude and the verbatim repetition of Johnson's best-known anecdotes serve to distinguish between this simulated experience and the 7/8th model of LBJ's Oval Office—the inexact replica.

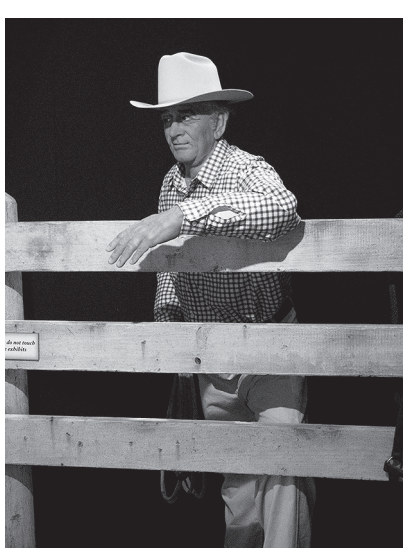

Fig.8 Lyndon B. Johnson Library and Museum, *Animatronic LBJ*, Exhibition Photographs, Austin, TX, 1971.

If the animatronic LBJ operates on the principles of mimicry, then in the disparity between Johnson's actual Oval Office and its replica, resides the territory of representation, and its inherent capacity to imaginatively translate and transform the original into a copy that is something more than mere repetition. However, when it is nearly impossible to distinguish between photographs of Johnson's original Oval Office and its replica, where do we locate this representational agency, and how does it operate?

In November of 2008, *The New York Times Magazine* published an article by Jonathan Mahler, entitled "After the Imperial Presidency," detailing the expansion of presidential powers under the Bush administration. The cover of the magazine bore an image of the Oval Office, benignly attributing the photo credit to Thomas Demand (Fig.9). Those familiar with the oeuvre of the German photographer and sculptor know that there is nothing benign about this attribution. Demand's work begins with found archival photographs that the artist curates, analyzes, and then painstakingly reconstructs in paper and cardboard, at full scale and in three dimensions. Once the reconstruction is complete, Demand photographs it, typically in large format, and then destroys the model, leaving the photograph as the only evidence of its existence (Fig.10). In light of Demand's meticulous process, it is clear that the *New York Times*' choice of simply citing the artist in the photo credit is a ruse, given that the newspaper actually commissioned Demand to produce this piece. Like the subterfuge deployed by the George W. Bush administration in expanding presidential powers, the *Times* engaged in a similar deception, surreptitiously increasing the influence of the fourth estate. Here, the pairing of a realistic journalistic exposé with a fictitious reconstruction of the Oval Office proffers the opportunity for the reader to finally consider what is real and what is constructed. The Times' juxtaposition of a political scenario that is stranger than fiction with an aesthetic framework that posits itself as real, but later reveals itself to be completely constructed, is salient. Both the expansion of presidential powers depicted in the text, and the agility of aesthetic agency embodied in Demand's photographs speak to the capacity of representation to surpass realism's tautological assumptions.

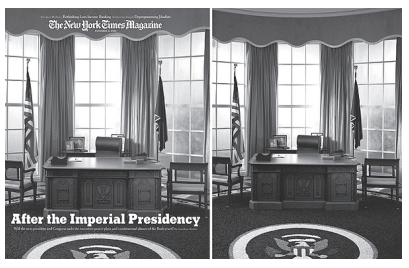

Fig.9 Thomas Demand, *NYTimes Magazine Cover: After the Imperial Presidency*, 2008.

Fig.10 Thomas Demand, *Presidency II*, 2008. Chromogenic Print, 210cm × 300cm.

A Tautological Tale

If this essay is overtly arguing against the tautological operations of realism, it is also covertly attempting to undermine the false dichotomy of realism and constructionism. Historically, the valorization of the real as an end in itself has produced nothing more than tautologies. Through a consideration of "real instruments," "real fictions," and "real representations," the tautology can be eschewed by preserving traces of the instrument, recognizing the heuristic potential of the fiction, and exploiting the translational and transformational capacities of the representation. ×

Notes

1. Rebecca West quoted in August K. Wiedmann, *Romantic Roots in Modern Art: Romanticism and Expressionism: A Study in Comparative Aesthetics*, (Old Woking: Gresham Books, 1979), 54.
2. Lorraine Daston and Peter Galison, *Objectivity* (Cambridge: The MIT Press, 2007), 320.
3. Walter Benjamin, "New Things About Plants—a Review of Karl Blossfeldt, Urformen Der Kunst," in *Germany: The New Photography 1927-33*, ed. David Mellor (London: Lund Humphries, 1978), 21.
4. Émile Zola, "The Experimental Novel," in *Documents of Modern Literary Realism*, ed. George J. Becker (Princeton, New Jersey: Princeton University Press, 1963), 162.
5. Zola preferred to call his theory 'Naturalism' rather than 'Realism.' The difference between the two was, for Zola, like Bernard's distinction between observation and experimentation. The former requires a kind of passive objectivity, while the latter involves a subjective framing of the question, or hypothesis, on the part of the experimenter.
6. "L'éxperimentation comparative…ne porte que sur la constatation du fait et sur l'art dégager des circonstances ou des autres phénomènes avec lesquels il peut être mêlé." Claude Bernard, *Introduction à l'etude de la médecine expérimentale* (Paris: J.B. Baillière et Fils, 1865), 222.
7. Ibid.
8. Zola, "The Experimental Novel," 172.
9. "Toute science expérimentale exige un laboratoire. C'est la que le savant se retire pour chercher à comprendre, au moyen de l'analyse expérimentale, les phénomènes qu'il a observes dans la nature." Bernard, *Introduction*, 247.
10. Zola, "The Experimental Novel," 167.
11. Hippolyte Taine, "The World of Balzac," in *Documents of Modern Literary Realism*, ed. George J. Becker (Princeton: Princeton University Press, 1963), 107.
12. Zola, "The Experimental Novel," 193.
13. Hans Vaihinger, *The Philosophy of 'As If': A System of the Theoretical, Practical and Religious Fictions of Mankind* (CIT), 86.
14. Ibid., 85.
15. Ibid., 88-89. Emphasis added.
16. Taine, "The World of Balzac," 110.
17. Erich Heller, "The Realistic Fallacy," in Documents of Modern Literary Realism, ed. George J. Becker (Princeton: Princeton University Press, 1963), 595.
18. Umberto Eco, *Travels in Hyperreality: Essays*, trans. William Weaver (London: Harcourt, Brace & Company, 1986): 7-8.
19. Ibid., 8.
20. Ibid., 6.
21. Homi K. Bhabha, *The Location of Culture* (London: Routledge, 1994), 88.
22. Hillel Schwarz, *The Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles* (New York: Zone Books, 1996), 141.

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