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Sara Danius

Who can still believe in the opacity of bodies, since our sharpened and multiplied sensitiveness has already penetrated the obscure manifestations of the medium? Why should we forget in our creations the doubled power of our sight capable of giving results analogous to those of the X-rays?

—Umberto Boccioni et al., “Futurist Painting: Technical Manifesto”

In the mid-nineteenth century, the artist’s eye begins to claim sovereignty with unprecedented energy. According to John Ruskin, J. M. W. Turner once said, “My business is to draw what I see, and not what I know is there.”¹ Indeed, in the historical period that sees the emergence of me-

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1. John Ruskin, *The Eagle’s Nest: Ten Lectures on the Relation of Natural Science to Art*, vol. 22 of *The Works of John Ruskin*, ed. E. T. Cook and Alexander Wedderburn (London: George Allen, 1906), 210.

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chanical devices for reproducing visual phenomena—from the camera to the X-ray machine—the artist's eye increasingly claims autonomy from the habits of artistic perception inherited from the tradition, and above all from scenarios of rational, instrumental, or generalizing knowledge.² To move from Claude Monet's sunstruck haystacks to Man Ray's somber rayographs, from Eugène Atget's deserted Parisian streets to Umberto Boccioni's speed-infused sculptures, is to bear witness to the stunning diversity of the modernist conquest of the visual. No longer located in the ideality of the sense of sight, visual perception is now grounded in the bodily being of the individual in all its ostensible immediacy. Vision is celebrated for vision's sake. *Aisthesis* is invented anew.³

In *Techniques of the Observer*, Jonathan Crary argues that the model of vision that modernism deploys, whether implicitly or explicitly, takes as its point of departure the immanence of the individual body, not the Cartesian, noncorporeal, and transcendental model of vision.⁴ Loosely following Crary, one might say that *theoria* is increasingly associated with vision machines such as Etienne-Jules Marey's chronophotographic camera, Wilhelm Conrad Röntgen's X-ray machine, and other optical technologies that similarly explore and articulate physiological domains otherwise inaccessible to the human eye. In ancient Greek, it will be recalled, *theoria* means a looking at, viewing, contemplation, speculation, theory, but also a sight, a spectacle.⁵

If, then, the artist's eye claims self-sufficiency, independence, and irreducibility, it is a utopian gesture that must be understood as marked by,

2. On the connections between modernist visual arts, particularly surrealism, and technology in a more general sense, see Rosalind E. Krauss, *The Originality of the Avant-Garde and Other Modernist Myths* (Cambridge: MIT Press, 1985), as well as her *Optical Unconscious* (Cambridge: MIT Press, 1993). See also Hal Foster, *Compulsive Beauty* (Cambridge: MIT Press, 1993).

3. *Aisthesis*: Greek, from *aisthetikos*, from *aisthanomai*, to perceive, apprehend by the senses; [of mental perception] perceive, understand; hear, learn; take notice of, have perception of. For a full etymological explanation, see H. G. Liddell and R. Scott, *Greek-English Lexicon* (Oxford: Clarendon, 1996).

4. Jonathan Crary, *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century* (Cambridge: MIT Press, 1990). On twentieth-century critiques of vision as a philosophical paradigm, particularly in a French context, see Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Berkeley and Los Angeles: University of California Press, 1993).

5. *Theoreo*: look at, behold; inspect, review; gaze, gape; [of the mind] contemplate, consider; observe; perceive, speculate, theorize. For a full etymological explanation, see Liddell and Scott, *Greek-English Lexicon*.

among other things, the technoscientific discourses that helped produce the new matrices of perception. "My imagination," says Marcel Proust's narrator in *Remembrance of Things Past*, "depicted for me not what I knew but what it saw."⁶ Seeing vis-à-vis knowing: This particular division of labor between the aesthetic and the epistemic, the sensuous and the systemic, *aisthesis* and *theoria*, is intrinsic to nineteenth-century modernity in general and to the emergence of various photographic technologies in particular, and it should be seen as coextensive with a radical epistemological crisis.

Few modernist narratives dramatize this crisis as effectively and obsessively as Thomas Mann's encyclopedic novel *Der Zauberberg* (1924), translated as *The Magic Mountain*.⁷ Thematizing the workings of the eye and the limits of what it may see and know, all the way from social scanning and the medical gaze to the mechanical eye, *The Magic Mountain* emerges as an inquiry into the relativization of the epistemic mandates of human vision. Equally important, the narrative connects this epistemological crisis to the theme of *Bildung* and, by implication, subjectivity. As we shall see, Mann's novel details the hero's first encounter with an array of new technologies, including an X-ray machine, a cinema show, and a gramophone; each can be seen as a signpost along the protagonist's long and cumbersome process of education. Yet although the thematics of technology is richly orchestrated in *The Magic Mountain*, critics and commentators have failed to recognize its importance, save for a passing mention in a few studies.⁸ Nor has the central issue of vision and visuality received critical

6. Marcel Proust, *Remembrance of Things Past*, trans. C. K. Scott Moncrieff and Terence Kilmartin (New York: Vintage, 1982), 2:590.

7. Thomas Mann, *The Magic Mountain*, trans. John E. Woods (New York: A. Knopf, 1995); *Der Zauberberg* (Frankfurt am Main: Fischer, 1991). Page references, cited parenthetically in the text, indicate first the Woods translation and then the German edition.

8. But see now Geoffrey Winthrop-Young's essay, "Magic Media Mountain: Technology and the *Umbildungsroman*," in *Reading Matters: Narrative in the New Media Ecology*, ed. Joseph Tabbi and Michael Wutz (Ithaca, N.Y.: Cornell University Press, 1997), 29–52. Winthrop-Young's article was published when my essay was complete, and some of his perspectives may be usefully aligned with my own, particularly the focus on how "medical technology and storage technology" affect the "cultural construction of the human body," including the human sensorium (32). Heavily influenced by Friedrich Kittler's *Aufschreibesysteme*, Winthrop-Young suggests that Mann's novel is "the first epic of modern information." Bespeaking the crisis of the novel and of culture in general, *The Magic Mountain* teaches that "books are demoted, information is circulated by more effective technologies, and those technologies now dominate, invade, and will eventually replace bodies" (50). The idea that Mann's novel thematizes the emergence of new media such as cinema has been suggested by Jochen Hörisch, "'Die deutsche Seele up to date': Sakramente der

treatment. In this essay, therefore, I want to propose a new interpretive framework with which to approach Mann's best-selling novel.⁹ By tracing how the experience of the machine is represented, both on the level of enunciation and on the level of form, I want to argue, first, that there are constitutive links between technological change and Mann's aesthetics, and, second, that *The Magic Mountain* is inscribed in the debates concerning the relations of *Kultur* and technology that were so prevalent in Weimar Germany. I also want to propose that the novel stages the problem of *Bildung* and subjectivity in terms of visually signifying systems.

An Exemplary Modernist Novel

The story is well known. Hans Castorp, a young engineer, goes to visit his cousin Joachim at a sanatorium in the Swiss Alps. The year is 1907. A perfectly healthy young man, he intends to stay for a mere three weeks. He stays at the sanatorium for seven years, however, not because he has to but because he wants to, even after his cousin's premature death. Harassed by a slight fever, the engineer becomes an intellectual, a learned man, voraciously studying anatomy, physiology, biology, botany, astronomy, and other subjects in order to explore what he calls the nature of man, including the meaning and purpose of life. He also falls in love, desperately and hopelessly, with a Russian woman, Clavdia Chauchat. After seven years, Castorp, now thirty years old, decides to enroll in the army and finally descends from his chosen Olympus. The narrative comes to a cinematic end as our hero, bayonet in hand, vanishes out of sight, staggering along in the steady rain while he sings a little song. It is as though the camera is slowly pulled back, as the protagonist walks into the unknown, and the credits roll before the spectator's baffled eyes.

With *The Magic Mountain*, Mann inscribes himself, deliberately and emphatically, in a number of mighty cultural traditions. First, he joins the German literary tradition of the bildungsroman fathered by Goethe, and already this step frames the multiple layers of meaning in the novel.¹⁰ Second,

Medientechnik auf dem Zauberberg," in *Arsenale der Seele: Literatur- und Medienanalyse seit 1870*, ed. Friedrich Kittler and Georg Christoph Tholen (Munich: Fink, 1989), 13–23.

9. As Hans Levander has pointed out, *The Magic Mountain* unexpectedly became a best-seller. In 1925, fifty thousand copies of the novel had already been printed, and three years later, the figure exceeded one hundred thousand. See Levander, *Thomas Mann: Silhouetten och verket* (Stockholm: Bonniers, 1964), 166.

10. For an analysis of *Der Zauberberg* as a renewal and parody of the classical bildungs-

Mann alludes to a philosophical tradition that includes, most prominently, Schopenhauer and Nietzsche.¹¹ Third, by foregrounding the linkages between disease, the imminence of death, and spiritual expansion, Mann also inserts his narrative in a specifically romanticist tradition.¹² According to this legacy, health is associated with stupidity, mindless endeavors, and vulgar aspirations.¹³ The slogan "Syphilisation is civilisation" is not an altogether unfitting rubric for this long-standing philosophical interest in the connections between genius and disease.¹⁴ Fourth, because he installs mythologi-

roman, see Jürgen Scharfschwerdt, *Thomas Mann und der deutsche Bildungsroman: Eine Untersuchung zu den Problemen einer literarischen Tradition* (Stuttgart: W. Kohlhammer, 1967), esp. 114–74. See also Martin Swales, *The German Bildungsroman from Wieland to Hesse* (Princeton, N.J.: Princeton University Press, 1978); Jochen Hörisch, *Gott, Geld und Gluck: Zur Logik der Liebe in den Bildungsromanen Goethes, Kellers und Thomas Manns* (Frankfurt am Main: Suhrkamp, 1983); Ulrich Thomet, *Das Problem der Bildung im Werke Thomas Manns* (Bern: Herbert Lang, 1975), 66–93. Helmut Koopmann, by contrast, argues that *Der Zauberberg* is not so much a bildungsroman as a novel of initiation or, alternatively, an intellectual novel. See *Die Entwicklung des "intellektuellen Romans" bei Thomas Mann: Untersuchungen zur Struktur von "Buddenbrooks," "Königliche Hoheit" und "Der Zauberberg,"* 2d ed. (Bonn: H. Bouvier, 1971); and *Der klassisch-moderne Roman in Deutschland: Thomas Mann, Alfred Döblin, Hermann Broch* (Stuttgart: W. Kohlhammer, 1983).

11. See, for example, Børge Kristiansen's study of how Schopenhauer's influence is reflected in the narrative form of the novel, especially with respect to the use of the leitmotiv, *Thomas Manns Zauberberg und Schopenhauers Metaphysik*, 2d ed. (Bonn: Bouvier, 1986). On the Nietzschean influence, see Roger Archibald Nicholls, *Nietzsche in the Early Work of Thomas Mann* (Berkeley and Los Angeles: University of California Press, 1955). See also T. J. Reed's comprehensive study of Mann's authorship as a whole, *Thomas Mann: The Uses of Tradition* (Oxford: Clarendon, 1974), in which the notion of irony is foregrounded, as is the Nietzschean influence.

12. In an influential study that would pave the way for the reception of *The Magic Mountain*, Hermann J. Weigand argues that Mann's novel is inscribed in the German romanticist tradition, both from a literary and philosophical point of view. One of the earliest comprehensive studies of Mann's authorship thus is written by an American scholar and also focuses on *The Magic Mountain*. The fact that Mann himself endorsed Weigand's study has no doubt contributed to its status. See Hermann J. Weigand, *The Magic Mountain: A Study of Thomas Mann's Novel "Der Zauberberg"* (Chapel Hill: University of North Carolina Press, 1964); first published as *Thomas Mann's Novel "Der Zauberberg"* (New York: Appleton, 1933).

13. On the thematics of illness and spiritual growth, see Eberhard Falcke, *Die Krankheit zum Leben: Krankheit als Deutungsmuster individueller und sozialer Krisenerfahrung bei Nietzsche und Thomas Mann* (Frankfurt am Main: Lang, 1992).

14. Ernest Newman, *The Unconscious Beethoven: An Essay in Musical Psychology*, rev. ed. (New York: A. A. Knopf, 1930), 46. Quoted in Gunilla Bergsten, *Thomas Manns Doktor*

cal and religious substructures in the text, it resonates with references to Greek and Roman mythology as well as Christian symbolism.¹⁵ In this way, Mann's narrative method appears akin to that of other modernist writers who devised techniques for creating multiple layers of meaning in the text and endowing the individual existence with universal significance; it should be enough to mention Eliot's *Waste Land* and Joyce's *Ulysses*. Finally, Mann's narrative joins the ranks of what is sometimes referred to as the experimental modernist novel because of its pronounced desire to delve into the enigma of temporality and unfold into a "time romance," on the level of reading as well as on the level of plot.¹⁶

These literary and philosophical traditions have also couched the vast majority of interpretations of *The Magic Mountain*.¹⁷ In this essay, I want to claim another family likeness for the novel, not a vertical one, as it were, but a horizontal kinship: first, a thematic kinship with contemporaneous issues, such as the modernist preoccupation with regimes of sight and visual machinery, resonating, not least, in futurist manifestos and Bauhaus programs; and second, with the charged discourse concerning the relations of *Kultur* and technology that was so prominent at the time.

Faustus: Untersuchungen zu den Quellen und zur Struktur des Romans (Stockholm and Uppsala: Scandinavian University Books, 1963), 84.

15. See, for example, Lotti Sandt, *Mythos und Symbolik im Zauberberg von Thomas Mann* (Bern: P. Haupt, 1979). See also Hans Wysling, "Der Zauberberg," in *Thomas-Mann-Handbuch*, ed. Helmut Koopmann (Stuttgart: A. Kröner, 1990), esp. 401–8.

16. For a discussion of *Der Zauberberg* as a "time-novel" influenced by Bergson, see, for example, Joseph Gerard Brennan, *Three Philosophical Novelists: James Joyce, André Gide, Thomas Mann* (New York: Macmillan, 1964), 143–51. On the implicit theories of time in the novel, see Francis Bulhof, *Transpersonalismus und Synchronizität: Wiederholung als Strukturelement in Thomas Manns Zauberberg* (Groningen: Drukkerij van Denderen, 1966), 112–47.

17. The following bibliographies and works of reference have been consulted: Klaus W. Jonas, *Die Thomas-Mann-Literatur: Bibliographie der Kritik*, 2 vols. (Berlin: Erich Schmidt, 1972–1979); Harry Matter, *Die Literatur über Thomas Mann: Eine Bibliographie, 1898–1969*, 2 vols. (Berlin: Aufbau-Verlag, 1972); Herbert Lehnert, *Thomas-Mann-Forschung: Ein Bericht* (Stuttgart: Metzler, 1969); Hermann Kurzke, *Thomas-Mann-Forschung, 1969–1976: Ein kritischer Bericht* (Frankfurt am Main: S. Fischer, 1977); *Stationen der Thomas-Mann-Forschung: Aufsätze seit 1970*, ed. Hermann Kurzke (Würzburg: Königshausen und Neumann, 1985); *Bibliographie der deutschen Sprach- und Literaturwissenschaft* (Frankfurt am Main: V. Klostermann, 1970–); Hans Rudolf Vaget, *Thomas Mann: Studien zu Fragen der Rezeption* (Bern: Herbert Lang, 1975); Koopman, ed., *Thomas-Mann-Handbuch*; Hugh Ridley, *The Problematic Bourgeois: Twentieth-Century Criticism on Thomas Mann's "Buddenbrooks" and "The Magic Mountain"* (Columbia, S.C.: Camden House, 1994).

The classic bildungsroman, it has sometimes been claimed, is the story of how the male bourgeois subject is constituted. Goethe's narrative of Wilhelm Meister's adventures is generally seen as the generic paradigm. After numerous obstacles and struggles, the hero returns home, finds himself a suitable profession, gets married, and starts a family. In this way, the story reaches the ideal end point: harmony between the individual and the social. Castorp's trajectory, of course, deviates from the classical pattern. His *Bildung*, for one, is made possible not by means of traveling but by a closed, disciplinary space—the sanatorium. Like Frédéric Moreau in Gustave Flaubert's *Sentimental Education*, Castorp thus secures for himself a space of social weightlessness. As Pierre Bourdieu remarks in his analysis of Moreau's social context: "The tendency of the patrimony (and hence of the entire social structure) to persevere in itself can only be realized if the inheritance inherits the heir, if the patrimony manages to appropriate for itself possessors both disposed and apt to enter into a relation of reciprocal appropriation."¹⁸ Symbolically enough, in Castorp's case, just as in Moreau's, the implicit claims of the patrimony are cut short. Because Castorp becomes an orphan at an early age, the patriarchal descent of the family is broken, a family of prosperous merchants and senators whose proud lineage goes back at least to 1650. And since his future cannot be appropriated by his family's traditions, Castorp is free to constitute himself. He lacks not only a past that may appropriate his destiny; as the narrator carefully underscores, he also lacks ambition. A proto-existential hero, Castorp hesitates before the bewildering variety of social personas. Spleen, ennui, sluggishness—what better material for an intellectual?

In the classic bildungsroman, time is a mere medium in which to move from one experience to the next. Time marks out the distance traveled and propels the hero forward until, eventually, it is time to return home, at which point, temporality freezes into an eternal now. Franco Moretti, arguing along these lines, observes that in the classical version of the genre, the ending and the aim of narration are brought together: "The happy ending, in its highest form, is not a dubious 'success,' but this triumph of meaning over time."¹⁹ In *The Magic Mountain*, the tables are turned. Time is no longer a mere function of space. Meaning can no longer triumph over time. Rather, time now triumphs over meaning and offers itself as the ultimate existen-

18. Pierre Bourdieu, "The Invention of the Artist's Life," trans. Erec R. Koch, *Yale French Studies* 73 (1987): 80.

19. Franco Moretti, *The Way of the World: The Bildungsroman in European Culture* (London: Verso, 1987), 55.

tial question: What is its meaning? Its nature? Its essence? Symptomatically, space is no longer a question of origins and hence also not of *telos*; at length, therefore, the reader comes to contemplate the peculiar relation between, on the one hand, spatial stasis, that is, the sanatorium, and, on the other, a narrative designated by Mann as a "time romance," which sets out to *perform* the temporal enigma itself. Stripped of its spatial correlation, temporality becomes an abstraction and is represented as such. Indeed, time becomes a philosophical and existential issue to be contemplated.

In the era of Goethe, according to Moretti, the bildungsroman enacts a symbolic resolution of a new, specifically bourgeois dilemma: How to manage the incompatibility of individual freedom and social integration? The primary means for achieving an organic unity between these two clashing desires is the symbol. The world of the bildungsroman, Moretti suggests, is thus symbolically constituted: The singular, the particular, and the individual are, in the end, mediated by the whole and are therefore laced together by it. The symbolic reigns, and must reign, supreme. This is why the bildungsroman does not accommodate the idea of interpretation per se: "To do so would be to recognize that an alterity continues to exist between the subject and his world, and that it has established its own *culture*: and this must not be. That clash, that social strife which, on the cognitive plane, the act of interpretation keeps open and alive, is sealed by the beautiful harmony of the symbol. Or in other words: meaning, in the classical *Bildungsroman*, has its price. And this price is freedom."²⁰

Castorp, by contrast, has all the freedom in the world. He is free to choose, free to leave, free to fall in love, free to spend seven years in a sanatorium, free to constitute himself. More important, however, is this. Just as temporality disengages itself from space, just as time acquires depth and turns into an abstract problem in *The Magic Mountain*, so the reader witnesses yet another dialectical leap: The problem of interpretation, along with that of allegory, alterity, and difference, reintroduces itself. It comes to the very fore of the narrative, as though we were witnessing the return of the repressed; and more often than not the problem of interpretation is linked to the image of technology.

Visual Regimes and the Formation of the Hero

The International Sanatorium Berghof is a place where sufferers of all nationalities, mostly European, take their cure. A commonly held view

20. Moretti, *Way of the World*, 63.

is that the image of the sanatorium represents the decline of humanity in general and of Western civilization in particular.²¹ But what if one conceives of the image of the sanatorium as a historically specific institution and not merely as a symbol? Indeed, the sanatorium, a restricted space of medicine and high technology, is part of the logic of the plot, and for a number of reasons.

The sanatorium is rendered as a place where one engages in visual activities. One looks at other people, into optical toys, at paintings, at photographs, at X-ray plates, at the landscape, and so on. One is also looked at: by other people, by the physicians, by the X-ray machine. In fact, *The Magic Mountain* is marked by an obsession with eyes, vision, and visibility. On virtually every page, the reader finds references to sight. Eyes are variously “bloodshot,” “Kirgiz-shaped,” “watering,” and so forth. Visual metaphors abound. For instance, Dr. Behrens asks Castorp: “Well, my innocent bystander [*Zuschauer*], . . . what are you up to, have we found favor in your searching eyes [*Blikken*]?” (104; 147). Furthermore, it is striking how, in Mann’s text, eyes are endowed with agency and impetus: “[His eyes] simply would not remain closed now, but kept fluttering open restlessly the moment he shut them” (87; 124–25). This tendency holds not only for eyes but for body parts as well. The reader thus begins to glimpse the contours of a body that has begun to disassemble and dismember itself, a body whose various limbs, functions, and sensory organs take on a life of their own.

Generally speaking, the sanatorium harbors two major regimes of sight, both of which can be divided into several subregimes. Each of these visual economies brings into play a particular division of visual labor, as ambivalent as it is stratified. On the one hand, vision emerges as *aisthesis*, that is, as a form of corporealized and individualized perception, often libidinally inflected. Vision, then, is a means of leisurely activity, pleasure, and pain. First, and perhaps most obvious, there are the optical toys with which the patients amuse themselves in the evenings—just as in the opening pages of Proust’s *Remembrance of Things Past*, where a kaleidoscope, a kinoscope, and a magic lantern suggest an alternative world of visibility. In addition to the optical toys and the nearby movie theater, there is also the erotically charged gaze: the art of flirting.

21. Erich Heller, among others, subscribes to this view: “The sanatorium is Europe. It is also the world. Man is the patient” (*The Ironic German: A Study of Thomas Mann* [Boston: Little, Brown, 1958], 15). Similarly, Brennan writes apropos of Castorp: “Thrown out of his native surroundings, he descends to the kingdom of the dead, a fall followed by a rise from the grave, resurrection and ascent, *Steigerung*, hermetic metamorphosis” (*Three Philosophical Novelists*, 161).

On the other hand, vision emerges as a matter of *theoria*, that is, as a means of gathering systematic knowledge (definition, classification, typology). Or rather, theoretical vision reveals itself as a vehicle of a signifying system that maps a certain knowledge onto an object seen. This second visual regime encompasses at least three modalities: social scanning, the medical gaze, and the mechanical eye. As we shall see, these visually determined signifying systems all bear on the formation of the protagonist, mediating his experiences at the sanatorium. At the same time, however, these visual regimes are all riddled with contradictions, ambivalences, and blurred boundaries. Not only do they contest and compete with one another; they also reveal themselves as subject to the vicissitudes of interpretation.

Apart from this visual division of labor, there is another division of labor at work that has to do with perception at large. Vision is privileged, functionalized, and in some ways reified in the world rendered by *The Magic Mountain*, whereas the other senses are relegated to the margins of a universe of increasing visuality and abstraction. They wait in the wings, however, offering new opportunities for aesthetic intensities. Consider, for example, the sublime world of listening, mediated by the technologized reproduction of music, that Castorp's ears will enter at the end of his spiritual journey.

The optical toys Mann describes—a stereoscope, a kaleidoscope, and a cinematographic drum, most likely a zoetrope—are all invented in the first half of the nineteenth century. These so-called philosophical toys call attention to the discrepancy between vision and the object seen. Their presence bestows a certain old-fashioned aura on the patients' evening pastimes, especially since they have access to a movie theater. Yet it is peculiarly fitting that these contrivances are present in this space of medicine and optical technology, for they share crucial features with scientific devices developed in the first half of the nineteenth century for studying empirically the laws of physiological vision.

During this period, the study of optics undergoes significant changes. According to Crary, whereas vision had previously been understood as a privileged means of objective and disembodied knowing, it now turns into an object of empirical, experimental, and physiological knowledge. Goethe's *Farbenlehre* (1810) and Schopenhauer's *Über das Sehen und die Farben* (1815), Crary suggests, are crucial instances in the transition from a Newtonian, transcendentalist conception of vision to a physiologically based one. Optical phenomena such as retinal afterimages, peripheral vision, bin-

ocular seeing, and thresholds of attention are subjected to empirical study, and a wide range of apparatuses and gadgets were developed to this end.

Significantly, these optical devices also become part of the popular culture. They are explored commercially in the form of widely popular toys, among them the thaumatrope, the phenakistoscope, the zoetrope, and the stereoscope. This is a double-faced process, Crary argues. On the one hand, the observer is emancipated, and the autonomization of vision is affirmed in cultural practices such as optical diversions, photography, and painting. On the other hand, the scientific articulations of the observer's physiology are made compatible with new arrangements of power that emerged in the period, in particular, the science of labor and the related rationalization of the human body.²² Thus the scientific interest in the empirical observer functions as a system of power/knowledge, to use Michel Foucault's terminology. Crary's study can be understood as an exploration of the idea that the emergence of photography and impressionistic painting required that a certain "technology" of the observer was already in place, without which these new art forms could not be experienced as aesthetically gratifying.

The modernist period signifies the reinvention of the observer, now empirical, embodied, and particular, which helps explain why, as Martin Jay among others has maintained, vision loses its legitimacy as a philosophical metaphor and epistemological category. God has long since closed his infallible, transcendental eye; and the human eye, embedded as it is in the physical and anatomical functioning of the empirical body, turns out to be a poor substitute. In short, seeing is no longer necessarily knowing. In the realm of late-nineteenth- and early-twentieth-century philosophy, according to Jay, the critical turn manifests itself in three ways: as a de-transcendentalization of perspective, a recorporealization of the cognitive subject, and a revalorization of time over space.²³

Mann's optical toys thus situate the world of the novel in a space of physiologically based vision, emancipated and instrumentalized all at the same time, a space, in short, haunted by the asymmetrical relationship between the object of perception and the perceiving subject. As a theme, this unbalanced dichotomy will resound in later sections of the narrative, prefig-

22. This argument, however, is not fully elaborated by Crary. For a wide-ranging study of the emergence of the European so-called science of labor and the notion of the human body as a machine, see Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (New York: Basic Books, 1990).

23. Jay, *Downcast Eyes*, 187.

uring, in particular, Castorp's experience of how his body's opaque interior is articulated by the X-ray.

Visual Hermeneutics of Class

Mann's novel, as I have suggested, stages the problem of *Bildung* and modes of subjectivity in terms of visually signifying systems. On closer consideration, it becomes apparent that the recurring, and seemingly metaphysical, question of the nature of the human being revolves largely around the new ways in which medicine and optical technology discover, map out, and so rearticulate the nature of the human body. Mann's narrative, therefore, may be thought of as an experimental space, where at least three distinct signifying systems or modes of knowledge intersect, confront, and compete with another. These signifying systems are visually determined and depend on what may be seen. The first system is social scanning, or social hermeneutics; the second is the medical gaze, or medical hermeneutics; the third, finally, is the mechanical eye: the little red eye of the X-ray machine in the chapter entitled "My God, I see!"

In its classic, historically strong form, the identity of bourgeois man is contingent on the stability of a socially signifying system. Such a system is largely (but, of course, not only) visual, and all the more so in societies with strict class divisions; turn-of-the-century Germany is a case in point. The visual hermeneutics of class carries a set of institutionalized, yet semi-conscious, social categories and maps it onto the exterior of the individual to be decoded. The parameters of social scanning are established in a typical scene early in the novel. Castorp is still new to the establishment when he first encounters Settembrini, the Italian scholar and man of letters who will become a key figure in his intellectual adventures at the sanatorium. Typically, Castorp takes the authority of his German social hermeneutics for granted, moving securely within its horizons of decoding. No episode is more telling than when he studies Settembrini's physiognomy.²⁴ Focusing on what are, for him, immediately intelligible signs of the stranger's identity, the

24. On this encounter, see also Kristiansen, *Thomas Manns Zauberberg und Schopenhauers Metaphysik*, esp. 98–103. In Kristiansen's view, however, Castorp's ambivalence testifies to his metaphysical *Steigerung*, a process marked by a Schopenhauerian dialectics of *Form* and *Unform*. The encounter with Settembrini accordingly represents an "Auflösung der 'flachländischen' Formwelt" on Castorp's part, *Formwelt* here understood as a predominantly metaphysical category rather than a social one.

episode renders Castorp's social gaze and how it wavers between so many interpretive hypotheses:

It would have been difficult to guess his age, but it surely had to be somewhere between thirty and forty, because, although the general impression was youthful, he was already silvering at the temples and his hair was thinning noticeably, receding toward the part in two wide arcs, making the brow even higher. His outfit—loose trousers in a pastel yellow check and a wide-lapelled, double-breasted coat that was made of something like petersham and hung much too long—was far from laying any claim to elegance. The edges of his rounded high collar were rough from frequent laundering, his black tie was threadbare, and he apparently didn't even bother with cuffs—Hans Castorp could tell from the limp way the coat sleeves draped around his wrists. (54; 79–80)

The description gives the reader an idea of the sophistication of Castorp's hermeneutics of class as he applies it to Settembrini's exterior: a sloppy coat, a worn-out collar, a shabby cravat, and no cuffs. In spite of these indexes of a certain poverty, however, Castorp detects signs that, in his view, imply that a gentleman stands before him after all: "The refined expression on the stranger's face, his easy, even handsome pose left no doubt of that" (54; 80). Still, he is not entirely certain what to conclude from the sum total of these signifiers. His interpretive hypotheses refuse to enter the hermeneutic circle. The question of nationality then comes to his aid. A new cartography spreads out before him, and it becomes clear to the reader that Castorp's hermeneutics of class easily translates itself onto a kind of ethnography: "This mixture of shabbiness and charm, plus the black eyes and a handlebar moustache, immediately reminded Hans Castorp of certain foreign musicians who would appear in his hometown at Christmas-time and strike up a tune, then gaze up with velvet eyes and hold out their slouch hats to catch the coins you threw them from the window. 'An organ-grinder!' he thought. And so he was not surprised by the name he now heard as Joachim got up from the bench somewhat flustered and introduced him, 'Castorp, my cousin—Herr Settembrini'" (54–55; 80).

Thus it suddenly dawns on the German engineer what kind of social position the velvet-eyed Italian must occupy: He is a handorgan man! Nothing could be further from the truth, however: Settembrini is a distinguished private scholar, who celebrates reason, enlightenment, and Western progress. No doubt it is Settembrini's "Italianness" that, combined with

his loud, worn-out attire, makes the young man jump to conclusions.²⁵ Castorp's hasty deduction follows the mental schemata of the opposition between *Kultur* and *Zivilisation*, a geospiritual map of Europe with Germany at the center, to which Mann, among many others in this period, makes constant allusions, both in his fiction and in his nonfiction.²⁶ *Reflections of a Non-Political Man* (1918), which Mann wrote while working on *The Magic Mountain*, is a striking example. Briefly, this geospiritual map has two faces. Germany is seen either as the structural antidote to France—sometimes England also serves as the opposite—or as the perfect balance between East and West, North and South. As *das Volk der Mitte*, or the people of the middle, the German people is believed to mediate between barbarism (Slavic countries) and overrefinement (France/England), or between stout rationalism (the North) and soulful irrationality (the South, in particular, Italy).²⁷

Traditionally, *civilization* has referred to the self-consciousness of the Western world in general, particularly with regard to its technological achievements. In German usage, by contrast, *Zivilisation* is seen as secondary to that of *Kultur* and is perceived as such well into the twentieth century.²⁸ As Norbert Elias has argued, the antithesis between *Kultur* and *Zivilisation* is linked to the German middle class and its rise to historical hegemony. Beginning with Kant, *Kultur* is understood in contradistinction to *Zivilisation*.²⁹ Associated with nature, inwardness, depth, sincere emotions, immersion in books, and the cultivation of the individual, *Kultur* is

25. Although Castorp quickly corrects his reading of Settembrini's social status, the image of the man as an organ grinder persists. Every time the protagonist is overcome by a need to belittle his powerful mentor, the image emerges again, as in Castorp's dream (157; 220); or, after an intense discussion, when Castorp attempts to write a letter to his relatives: "By now, he no longer felt like taking up the task of writing. The organ-grinder and his insinuations had definitely spoiled the mood for it" (220; 308); or when he dwells on Clavdia's X-ray plate and the image of organic life: "And in considering that inner aspect, he also thought of Settembrini, the pedagogic organ-grinder" (383; 533).

26. On the ideological repercussions of the German modernization process in the early twentieth century, particularly as they pertain to conservative attempts to reconcile technology with *Kultur*, see Jeffrey Herf, *Reactionary Modernism: Technology, Culture, and Politics in Weimar and the Third Reich* (Cambridge: Cambridge University Press, 1984).

27. For a discussion of the "Geography of Wilhelmine Culture" and the discourse of *Kultur* versus *Zivilisation*, see Russell A. Berman, *The Rise of the Modern German Novel: Crisis and Charisma* (Cambridge: Harvard University Press, 1986), 1–54.

28. Norbert Elias, *The History of Manners*, vol. 1 of *The Civilizing Process*, trans. Edmund Jephcott (New York: Pantheon, 1982), 3–50.

29. Elias, *History of Manners*, 8.

accordingly placed in sharp contrast to *Zivilisation* and the courtly values of *politesse*, formal conversation, and ceremony. When, however, the German middle class becomes a vehicle of national consciousness, the opposition between *Kultur* and *Zivilisation* is translated into a cultural geography with expressly political overtones. The cluster of meanings surrounding the notion of *Zivilisation* then attaches itself to the image of France or, in other contexts, England. Moreover, the notion of *Zivilisation* increasingly denotes technological progress.

The second point that needs to be stressed is the close connection between *Kultur* and *Bildung*. Insofar as the notion of *Kultur* is an expression of a specifically German self-image, it is clear that the idea of *Bildung* is co-extensive with the entire conceptual and ideological matrix underlying the opposition between *Kultur* and *Zivilisation*. The process of *Bildung*, accordingly, is a path to the acquisition of *Kultur*. Goethe, the inaugurator of the bildungsroman, is typically regarded as one of the most significant champions of *Kultur*, active in an era that saw the ascendancy of the bourgeois class. Mann, on the other hand, is often seen as Goethe's intellectual heir in that period when the golden years of the German bourgeoisie were drawing to a close. Georg Lukács was right, in other words, when he claims that the fundamental question haunting Mann's works, especially *The Magic Mountain*, is not so much "What is man?" as "What is bourgeois man?"³⁰

If, then, we conceive of the bildungsroman as a formation of the specifically bourgeois subject, as a way of being that is "functional" in relation to a particular worldview, then a new reading becomes possible: *The Magic Mountain* is a story about how one mode of subjectivity, or constitution, replaces another. What is at stake in Mann's novel is the male middle-class body; the constitution of Castorp's identity, as we shall see, becomes a matter of the somatization of the self.³¹ And the staging of this drama is, to use a Foucauldian phrase, predicated on the sanatorium as an essentially disciplinary space.³²

30. Georg Lukács, "In Search of Bourgeois Man," in *Essays on Thomas Mann*, trans. Stanley Mitchell (New York: Grosset and Dunlap, 1965), 13–46.

31. In his brief discussion of *The Magic Mountain*, Peter Brooks usefully approaches Mann's narrative as a "Modernist discussion of the body," foregrounding the discovery of the interior. See Peter Brooks, *Body Work: Objects of Desire in Modern Narrative* (Cambridge: Harvard University Press, 1993), 263–66.

32. As a clinical and therapeutic space, the sanatorium is remotely affiliated with those institutions whose disciplinary practices Michel Foucault subjects to theorization—the prison, the asylum, and other restricted spaces with thoroughly regulated regimens di-

Let us return now to Castorp's reading of the physiognomy of the Italian intellectual. His hypothesis—that Settembrini is a handorgan man—reflects the social codes of the well-bred turn-of-the-century German bourgeois, for whom "Italianness" signifies lightweight soulfulness and smiling music sold for a trifle. At the beginning of the novel, Castorp's point of view typically operates not as one perspective among others but as a transparent norm—at least as he sees it. This impression is overturned, however, as soon as Settembrini addresses him. Indeed, *The Magic Mountain* may be read as a narrative about how the hero's worldview is relativized by other kinds of visually determined signifying systems that impinge on the conception of "man" as played out in the novel. Two pivotal moments may be distinguished, both bearing on Castorp's self-image and worldview: his encounter with the medical authorities at the sanatorium and the medical gaze in general, and his encounter with the X-ray machine and its mechanical eye.

The Medical Gaze

When Castorp first meets with the two doctors who run the sanatorium, he attempts to decode the ulterior signs of their status. The sovereignty of his perspective, however, will soon be upset. For when the chief physician, Dr. Behrens, looks at him in return, the doctor makes sure to assert the power of his gaze. This is still social scanning in the sense that the doctor engages in a reading of Castorp as a social being: "I spotted it at once. . . . There's something so civilian, so comfortable about you—no rattling sabers like our corporal here [*Ich habe doch gleich gesehen . . . , daß Sie so was Ziviles haben, so was Komfortables . . .*]. You would be a better patient than he, I'd lay odds on that. I can tell right off whether someone will

rected at the body by way of the soul. In *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan (New York: Pantheon, 1977), Foucault proposes that identity formation builds on the transforming internalization of the other's gaze or norms. In this sense, one might say that Castorp's process of *Bildung* is a disciplinary practice, that is, a "technology of the self." The difference is that it is not enforced. The notion of the technology of the self would therefore have to be supplemented with the notion of the "care of the self," Foucault's designation for how, in ancient Greece, the free male fashioned his selfhood by means of subjecting himself to carefully regulated bodily practices—diet, exercise, sex, and so on. See Foucault, *The Use of Pleasure*, vol. 2 of *The History of Sexuality*, trans. Robert Hurley (New York: Pantheon, 1985); and *The Care of the Self*, vol. 3 of *The History of Sexuality*, trans. Robert Hurley (New York: Pantheon, 1986).

make a competent patient or not [*Das sehe ich jedem gleich an, ob er einen brauchbaren Patienten abgeben kann*]” (44; 66).

Castorp, however, refuses to submit to the objectifying nature of the doctor’s eyes, clinging stubbornly to his identity as a visitor and engineer—but in vain. Seconds later, the equilibrium between doctor and visitor is broken. Without further ado, the doctor touches the engineer’s body. Behrens more than violates Castorp’s physical autonomy; he challenges Castorp’s right to be the center and author of his perception. The doctor does not touch a particular extremity, nor does he settle for the pulse; instead, he pulls down Castorp’s eyelid and scrutinizes what he sees (45; 67). Thus, in casting his glance on the young man’s eye region, the physician turns the most crucial instrument of perception into an object of knowledge. Vision, the noblest of the senses, makes possible classification and typologization, and so the doctor pronounces Castorp sick: “No doubt of it, totally anemic, just as I said. Do you know what? It was not all that stupid of you to leave your Hamburg to fend for itself for a while” (45; 67).

This seemingly undramatic incident anticipates the later course of the novel. As Castorp’s means of vision is suddenly turned back on itself, he is no longer just an engineer, someone who knows, but rather a phenomenon to be studied empirically, clinically, and theoretically. And as Mann’s hero enters into an asymmetrical relationship to himself, where he, as a subject of knowledge, thinks about himself as an object of knowledge, as an organic being before the scrutinizing medical eye, he comes to inhabit an unbalanced dichotomy between object and subject.

After Behrens inspects Castorp’s eye, the protagonist gradually begins to occupy a world of alterity, allegory, and difference. In short, he enters a world of interpretosis. The next crucial step in his self-formation is when he discovers that he has a fever. The narratological function of this discovery is, of course, to set the plot in motion, but it also leads to a series of events, all of which give rise to interpretive confusion on the protagonist’s part. Castorp has to take his temperature in order to “verify” his bodily state. It is his first experience using a thermometer. Here, he attempts to read the visual translation of his interior condition:

He was not immediately the wiser. The sheen of the mercury blended with the refraction of the light in the elliptical glass tube; the column seemed now to reach clear to the top, now not to be present at all. He held the instrument close to his eyes, turned it back and forth—and could make out nothing. Finally, after a lucky turn, the image be-

came clear; he held it tightly and hastily applied his intellect to the task. And indeed Mercury had stretched himself, very robustly. The column had risen rather high, it stood several tenths above the limit of normal body temperature. Hans Castorp had a temperature of 99.7 degrees. (166; 234)

Once the fever has become an established “fact,” that is, once it has been translated into a visual and numeric record, he informs Behrens about it.³³ The doctor responds, “And I suppose you think that’s news to me, do you? Do you think I don’t have eyes in my head?” (171; 240). Castorp must now subject himself to a physical examination, revealing himself half naked before the medical gaze. Thus stripped of his bourgeois appearance, he offers himself to another visual horizon of interpretation, the medical one: “‘Ah yes, it’s *your* turn now! [*Ach so, das wären nun Sie!*]’ he said; grabbing Hans Castorp’s upper arm with one massive hand, he shoved him into place and gave him a sharp look. But he did not look directly at his face, the way you look at another human being, but at his body. He spun him around, the way you spin an object around, and examined his back as well. ‘Hmm,’ he said. ‘Well, let’s have a look at what you’re up to.’ And he took up his thumping again” (176; 247). During the examination, the doctor proceeds by way of percussion (tapping) and auscultation (listening), in an attempt to detect signs of pulmonary disease: dullness, rough breathing, scars on the lungs, pathological lesions, “moist spots,” and so on.³⁴ Behrens thus applies the medical gaze to Castorp’s body, which spreads out as a vast legible surface before the physician’s eyes.

The medical gaze, Foucault argues in *The Birth of the Clinic* (1963), represents a historical threshold, in the history of medicine as well as in the sciences of man.³⁵ Before the emergence of modern theories of pathology,

33. On the history of thermometry, see Stanley Joel Reiser, *Medicine and the Reign of Technology* (Cambridge: Cambridge University Press, 1978), 110–21.

34. No doubt Mann renders Dr. Behrens as a quack doctor, in particular since his detection of a “moist spot” on Castorp’s lungs will prove to be a false diagnosis. Interestingly enough, *Der Zauberberg* sparked a heated debate in the medical community in Germany. See Heinz Sauereßig, “Die medizinische Region des ‘Zauberberg;’” in *Die Entstehung des Romans “Der Zauberberg,”* ed. Heinz Sauereßig (Biberach an der Riss: Wege und Gestalten, 1965), 25–34. The forums were newspapers as well as journals and magazines, including *Münchener Medizinische Wochenschrift*, *Deutsche Medizinische Wochenschrift*, *Zeitschrift für Tuberkulose* (Leipzig), *Medizinische Klinik* (Berlin), and *Klinische Wochenschrift* (Berlin).

35. Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. A. M. Sheridan Smith (New York: Pantheon, 1973). See also Reiser, *Medicine*, 1–22.

the physician rarely touches the patient, much less does the patient appear naked before the doctor—only after the patient’s death would the physician have attempted to localize the site of disease. With the advent of pathological anatomy, however, the structured medical perception of the corpse is mapped onto the living body. Death becomes the ultimate interpretive horizon, a matrix henceforth inscribed on the individual patient’s body. Meanwhile, the opaque depths of the human interior turn into an extensive surface of legibility, deciphered by the medical gaze, which contains within itself a multisensory structure: sight, hearing, touch.³⁶ For Foucault, this perceptual and conceptual move signifies that the *forms* of visibility have changed. In effect, the new paradigm represents “an epistemological reorganization of disease in which the limits of the visible and the invisible follow a new pattern; the abyss beneath illness, which was the illness itself, has emerged into the light of language.”³⁷ Crucially, Foucault also maintains that clinical pathology has a tremendous impact on the constitution of the sciences of man, not just methodologically but also ontologically. Medical knowledge now has to balance the asymmetrical dichotomy of modern epistemology, which Foucault would later articulate in *The Order of Things* (1966): On the one hand, man is the object of knowledge; on the other hand, his consciousness is the transcendental condition for all knowledge.

The historical period Foucault covers in *The Birth of the Clinic* ends circa 1820. It is around this time that medicine becomes increasingly dependent on technological devices that transcribe invisible bodily facts into either auditory representations (the stethoscope) or visual representations, including graphic and numeric ones (photography, thermometry, sphygmography, radiography, and so on). To be sure, these devices may be theorized as extensions of the physician’s already instrumentalized sensory organs, as prosthetic supplements. Loosely following Foucault’s theory of the medical gaze, however, it seems more appropriate to conceive of these technological devices and their accompanying networks as parts of yet another

36. Foucault, *Birth of the Clinic*, 164. This argument is confirmed by Reiser’s etymological observation with regard to the stethoscope, the first medical instrument used to detect and study sounds produced in the body, developed in the early nineteenth century. The designation derives from the Greek words for “chest” and “I view.” Reiser adds that one “metaphor that recurred regularly in the medical literature between 1820 and 1850 was ‘seeing’ disease by listening through the stethoscope: ‘We anatomize by auscultation (if I may say so), while the patient is yet alive,’ proclaimed a doctor, for whom the ear became an eye through auscultation. It is a ‘window in the breast through which we can see the precise state of things within,’ insisted another” (*Medicine*, 30).

37. Foucault, *Birth of the Clinic*, 195; translation amended.

shift in the realm of medical perception. For once a device such as the X-ray machine transforms itself into a black box in Bruno Latour's sense, it relegates the physician's gaze to the realm of the merely subjective, nonobjective, or not-yet-objective knowledge.³⁸ The machine thus helps to produce a new discursive realm of the subjective, in which the once functional medical gaze is now localized. And as it splits open a new distinction between the subjective and the objective, the X-ray introduces new matrices of legibility and criteria of positivity, ultimately upsetting previous parameters of truth.

In tapping on Castorp's chest, Behrens applies the medical gaze to the body before him, a body whose depths, now legible, are projected onto its surface. As a consequence of the doctor's not-yet-objective detection of a "moist spot," Castorp undergoes an X-ray examination, an event that again modifies his notion of self, now far more radically. Moreover, it introduces him to the enigmas of physiological perception. The opaque interior of the human body is suddenly brought to light by a language that names what is seen.

The International Sanatorium Berghof is a high-tech establishment, in particular because of its X-ray machine. The diagnostic device is rendered both as an extension of the physician's senses and as an independent form of vision, uncannily endowed with its own agency. On the most obvious level, the X-ray examination confirms that Castorp is sick, and the illness gives him a new identity, in the most profound and wide-ranging sense of the word.

The Mechanical Eye

On another level, however, the X-ray machine is more than a single, if significant, narrative event. It enters the novel as a network in Latour's sense.³⁹ The X-ray machine is an extended technogram—tubes, screens, lenses, switchboards, measuring instruments, cameras, plates. These artifacts have real consequences beyond the immediate laboratory, indirectly producing trajectories that link persons to persons, persons to things, or things to things. The X-ray plate, for instance, mediates between Castorp and Dr. Behrens, since it signifies the former's alleged disease and entitles him to stay at the Berghof. It mediates also between Castorp and Set-

38. On Bruno Latour's notion of the black box, see *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge: Harvard University Press, 1987), 138–40.

39. Latour, *Science in Action*, 138–40.

tembrini, since it provides a pretext for the latter's discourse on his skepticism with regard to the natural sciences, his disgust at Eastern inertia, and his involvement in the League for the Organization of Progress. The X-ray also connects Castorp to Clavdia, since she, significantly enough, gives him a plate of her chest as a token to behold in her absence. Furthermore, the X-ray machine is a sociogram: It comes complete with doctors, nurses, technicians, and laboratory assistants. These extended, multidimensional networks are essential for both plot and narrative.

When Mann conceives *The Magic Mountain*, X-ray technology is still relatively new. Röntgen, a German physicist, discovers the X-ray in 1895. Within days, the news of rays that are "entirely invisible to the eye" is cabled all over the world.⁴⁰ While experimenting with a cathode-ray tube and electrical discharges through rarefied gases, Röntgen observes a mysterious fluorescence. He notices that the rays penetrate solid matter. By placing books and various metals between the tube and a screen of barium platino-cyanide, he concludes that the denser the metal, the more radiation is absorbed. Encyclopedias of the history of science often relate what henceforth would seem to be the moment of discovery: When Röntgen puts his hand between the tube and the screen, the bones in his hand appear on the screen.⁴¹

Shortly after his discovery of this unknown type of electromagnetic radiation of short wavelength, Röntgen presents a paper on the subject. He sends copies of the paper to influential physicists, along with X-ray prints, including the most famous one of his wife's hand. Soon the photograph of Frau Röntgen's bones, complete with an opaque wedding band, makes its way into scholarly journals, newspapers, and the popular press, in Europe and in the United States. Its caption reads *Hand mit Ringen*. Interestingly, the x-rayed hand becomes a photographic genre unto itself, appearing in both scientific journals and popular publications.⁴²

The X-ray, together with the fluoroscope, helps reconfigure the con-

40. See Otto Glasser's classic account, *Wilhelm Conrad Röntgen and the Early History of the Roentgen Rays* (Springfield, Ill.: C. C. Thomas, 1934), 1–28.

41. See, for example, Röntgen entries in *Asimov's Biographical Encyclopedia of Science and Technology*, 2d ed. (Garden City, N.Y.: Doubleday, 1982); *The History of Science and Technology: A Narrative Chronology*, 2 vols. (New York: Facts on File, 1988); and Frank N. Magill, ed., *Great Events from History II: Science and Technology* (Pasadena, Calif.: Salem, 1991).

42. Glasser notes that of all the first Röntgen pictures, "that of the human hand made the greatest impression upon the public" (*Wilhelm Conrad Röntgen*, 32). See also Glasser's inventory of such photographs (33–35).

ception of the human body.⁴³ As Stanley Reiser suggests in *Medicine and the Reign of Technology*, the X-ray obliterates one “distinction between the outer and inner spaces of the body—both were now susceptible to visual examination.” Meanwhile, the general interest revolves around the recognition that X-rays could lay bare the skeleton, making the surrounding flesh look like a halo. The public, Reiser underscores, readily believes that the X-ray is a “materialized eye.”⁴⁴ Just how widespread the interest is may be gleaned from the fact that X-ray machines and prints are displayed in shop windows. Equally astonishing, X-ray prints become tokens of sentimental value. Couples went to the studio for sentimental X-ray portraits, and a radiographic print of mother’s hand was not an uncommon family souvenir.⁴⁵

Clearly, then, Castorp is not alone in fetishizing X-ray plates. Cherishing the print of Clavdia’s X-ray plate, he keeps it in his breast pocket next to his heart and often kisses it. In all likelihood, Mann’s contemporary readers must have recognized Castorp’s charged relationship to the “funereal photograph [*funebre Lichtbild*],” and Mann evidently alludes to a readily available popular discourse surrounding the emergent X-ray technology (238; 332). Mann’s term—*funebre*—also confirms that this discourse is suffused with a rhetoric of death: Radiographic images, we recall, are often referred to as “ghost pictures” or “shadowgraphs.”

From the point of view of medicine as a discipline, the emergence and use of the X-ray machine has not only methodological bearings but also theoretical ones. Understood as an amalgamation of technical forces and specialized human skills, the X-ray machine may be seen as part of a technogrammatic network that helps restructure the matrices of medical perception, that is, the implicit rules that govern the diagnostic gaze. The X-ray helps reorganize the epistemological assumptions on which the medical gaze previously rested. The opaque interior of the human body be-

43. Lisa Cartwright conceives of the effects of X-ray technology on the notion of the human body in terms of decomposition, usefully connecting this perceptual matrix to the new optical spaces and different modes of representing the human body that cinematography makes available. See Cartwright, *Screening the Body: Tracing Medicine’s Visual Culture* (Minneapolis: University of Minnesota Press, 1995), 107–42. Commenting on *The Magic Mountain*, she suggests that the novel indicates that it is impossible to consider “medical techniques apart from their cultural meanings vis-à-vis life, sexuality, health, and death” (123).

44. Reiser, *Medicine*, 62, 60.

45. Reiser, *Medicine*, 61. See Glasser’s account of reactions in the popular press, *Wilhelm Conrad Röntgen*, 199–209.

comes subject to new forms of legibility, turning into a surface that offered itself to diagnostic scrutiny.

What is more, because the X-ray translates the bodily interior into a visual record, it provides a seemingly true-to-life representation that is permanent and that can be stored. If the symptoms and other signs of disease previously belonged to the individual body of the patient—that is, if they were inseparable from the body itself—it is now possible to mobilize them as autonomous items in their own right, in the form of objectified visual inscriptions of the patient's signs of disease. This also allows the patient to carry around the exteriorized visual sign of his or her own interior.

The Legibility of the Interior

If, then, X-ray technology is still relatively new when Mann conceives *The Magic Mountain*, it is equally important to stress that the novel renders an individual's first encounter with X-ray technology. In this respect, too, Castorp is ever the neophyte—no one has ever “taken a look [*Einblick*] into his organic interior [*organisches Innenleben*]” (207; 290). In the X-ray laboratory, Castorp looks on while his cousin is subjected to examination, and the metaphorical eye is evoked once again. The event is rendered as a literal spectacle, whose terms are framed by the notion of the technological sublime:⁴⁶

For two seconds the dreadful forces necessary to penetrate matter were let loose—a current of thousands of volts, one hundred thousand, Hans Castorp thought he had heard somewhere. Barely tamed for their purpose, these forces sought other outlets for their energy. Discharges exploded like gunshots. The gauges sizzled with blue light. Long sparks crackled along the wall. Somewhere a red light blinked, like a silent, threatening eye, and a vial behind Joachim's back was filled with a green glow. (212; 297–98)

46. Leo Marx, who first used the term, has observed that during the nineteenth century, the American rhetoric of progress often indulged in the rhetoric of the technological sublime. See *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford University Press, 1964), esp. 195–207. See also Rosalind H. Williams's discussion of European underground explorations as a source of images of the technological sublime in *Notes on the Underground: An Essay on Technology, Society, and the Imagination* (Cambridge: MIT Press, 1990), 82–120.

When Castorp is examined, the sublime is folded back into its traditional realm—nature and landscape—for the X-ray enlightenment is likened to a storm and is thus apprehended in terms of nature. The noninvasive penetration of the interior, by contrast, is rendered as a scandal of the mind, a contradiction of the first rank: “Hans Castorp waited, his eyes blinking, his lungs full of air. The thunderstorm burst behind him, hissing, crackling, popping—and fell quiet again. The lens had peered inside him [*Das Objektiv hatte in sein Inneres geblickt*]. He dismounted, confused and dazed by what had happened to him, although he had not felt anything at all during the penetration” (213; 298).

After Behrens has taken X-rays of the two young men, he moves to a different apparatus, which, although not specified in the text, is probably a fluoroscope, since the interior organs can be seen on a screen. Alluding once again to the enigmas of visual perception, Behrens intimates that the object of visual perception is contingent on the physiological functioning of the eye itself. Implicitly, the question emerges as to whether the object seen exists independently of the perceiving subject: “We have to wait for our pupils to get nice and big, like a cat’s, in order for us to see what we want to see. I’m sure you can understand that we can’t see properly, just like that, with our normal daylight eyes. For our purposes here, we first have to ban any rousing daylight scenes from our minds” (213; 299). A motor starts, the floor vibrates. The red light penetrates Joachim’s body. Worried that he might commit an indiscretion, Castorp asks his cousin’s permission to look at his insides. Subsequently, Castorp, flabbergasted, gazes into the opaque interior illuminated with the aid of “physical optics [*physikalisch-optischen Wissenschaft*]” (215; 301). Behrens points at the screen: “Sharp picture,” he exclaims. “Do you see the diaphragm? . . . Do you see the hilum there? Do you see those adhesions? Do you see these cavities here?” (214; 300).

But Castorp is incapable of reading what he sees. What is more, his attention is drawn to a baglike phenomenon, whose regular contractions make him think of a jellyfish. He is unable to distinguish any features, much less identify them. When, however, the doctor directs his means of vision and gives a name to the pulsating shadow, Castorp is made to understand that he beholds the symbol of life itself, the core of the human being: the heart. All of a sudden, his cousin’s “dry bones, his bare scaffolding, his gaunt *memento mori*” is revealed before his baffled eyes: “Yes, yes! I see it [*Jawohl, jawohl, ich sehe*],” Castorp exclaims. “My God, I see it! [*Mein Gott, ich sehe!*]” (215; 301). This event in the X-ray laboratory epitomizes the ways in which the limits of the visible and the invisible, depth and surface, are re-

arranged. By the same token, the radiographic examination demonstrates how the limits of what one can know and not know are redefined. Proposing that seeing is reading, the episode indicates that vision depends on a language that names what is seen. A new epistemic space is opened up, a space produced by an epistemological reorganization of the interior of the human body.

But the X-ray session has a significant coda. Castorp asks to see his own hand pierced by radiography. This gesture produces an intertextual relationship between Castorp's ensuing revelation and the widely circulated story about Professor Röntgen's moment of discovery in 1895. We recall that Röntgen inserted his hand between the cathode-ray tube and the screen. We recall also that the print of Frau Röntgen's hand functioned as "evidence," as a repetition of this moment. The rendering of Castorp's visual experience is thus a symbolic reenactment of Professor Röntgen's discovery, except that it is played out in an existential register:

And Hans Castorp saw exactly what he should have expected to see, but which no man was ever intended to see and which he himself had never presumed he would be able to see: he saw his own grave. Under that light, he saw the process of corruption anticipated, saw the flesh in which he moved decomposed, expunged, dissolved into airy nothingness—and inside was the delicately turned skeleton of his right hand and around the last joint of the ring finger, dangling black and loose, the signet ring his grandfather had bequeathed him. . . . With the eyes of his Tienappel forebear—penetrating, clairvoyant eyes—he beheld a familiar part of his body, and for the first time in his life he understood that he would die. (215–16; 302)

The repercussions of this insight are more than existential, however, for the shock Castorp suffers is also ontological. The experience relates to his own being, specifically his being as an object of knowledge. Significantly enough, it is only after this traumatic insight that Castorp becomes what may be identified as an intellectual. Enabled by the mechanical eye of the X-ray machine, his altered relationship to his own being, now temporalized in the face of death, produces a radical will to know—which at the same time discredits all that he used to know in the world down below the sanatorium.⁴⁷

47. The centrality of the X-ray episode for Castorp's quest for knowledge has also been underscored by Weigand, although he fails to consider the question of technology as such: "This incident [in the X-ray laboratory] marks the conscious awakening of his latent sympathy with death, and all his emotionally impregnated scientific studies owe their initial im-

Castorp's will to know is produced by two events, and both are responsible for his ever longer stay at the sanatorium: first, his love for Clavdia, an unfulfilled desire that, in psychoanalytic terms, is a displacement of a previous, homoerotic, and equally unfulfilled relationship; and, second, the X-ray examination, which proves both that he is sick and that he will die. So it is that Castorp becomes an intellectual under the sign of lack.

Epistemophilia

According to Dr. Behrens's reading, the X-ray plate indicates a "few nodular lesions" on Castorp's lungs. Behrens concludes that the young engineer is ill. This, in turn, enables Castorp to establish his freedom. In the subsequent chapter—entitled "Freedom"—Castorp writes a letter to his relatives, explaining that he must remain at the Berghof. As he signs his name, he underwrites his existential freedom. Now a new life begins, betokened, among other things, by a new possession—the X-ray plate. As Settembrini confirms in his characteristically ironic manner, the X-ray plate has provided the young man with something like an identity: "Ah, you carry it in your wallet. As a kind of identification, like a passport or membership card. Very good. Let me see" (238; 332).

In addition to the prescribed corporeal discipline at the sanatorium, Castorp's new life is one of bookish learning, intellectual discussion, and frustrated love—in short, the cultivation of the interior. Most of all, he finds himself overtaken by a tremendous urge to accumulate knowledge. Haunted by the question "What is life?" he begins an inquiry into the natural sciences, in particular, those dealing with the human body. His inquiry assumes the form of a search for foundations, whether in physiological and chemical theories of the cell, physical theories of the atom and the molecule, embryological theories of the ova and spermatozoa, or astronomical theories of the universe. As he lies on the balcony taking his rest cure, "the image of life" presents itself to him like a celestial vision, and a mysterious creature appears before his eyes: "The image hovered out there in space, remote and yet as near as his senses—it was a body: dull, whitish flesh, steaming, redolent, sticky; its skin blemished with natural defects, blotches, pimples, discolorations, cracks, and hard, scaly spots, and covered with the delicate currents and whorls of rudimentary, downy lanugo. The body was

pulse to that moment of intense awareness of death, involving the translation of a familiar fact into a vital experience" (*The Magic Mountain*, 23).

leaning back, wrapped in the aura of its own vapors, detached from the coldness of the inanimate world, its head crowned with a cool, keratinous, pigmented substance that was a product of its own skin" (272; 380).

The obscure creature is the result of Castorp's delirious fantasy, projected onto the eroticized image of Clavdia. In subjecting her hair and other bodily features to physiological, anatomical, and neurological theorization, he produces a series of ecstatic reflections leading to the next topic on the intellectual agenda: procreation itself. In this context, it is interesting to note that for Freud, the *Wisstrieb*, or the epistemophilic drive, is intertwined with the *Schaulust*, or scopophilia, the eroticized desire to see.⁴⁸ According to Freud, the will to knowledge is elicited by the question, "Where do babies come from?" A significant part of Castorp's will to know may arise out of a similarly primeval question. In this way, the thematics of vision, visibility, and specular relationships that is so pronounced in Mann's novel takes on new and unexpected significance. *The Magic Mountain* lends itself to a psychoanalytic reading, where the centrality of vision in epistemological scenarios might be explored in some detail—for, as we have seen, it is only after his confrontation with the issue of how vision relates to knowledge that Castorp acquires a new sense of self, including his bodily self.

Having completed his initial research into the enigmas of life, Castorp is pleased to conclude that he has traversed three discursive fields. Now he stands in a threefold relation to organic nature—"lyric, medical, and technical. It came as a great inspiration. And these three relationships, he believed, were a unity within the human mind, were schools of humanist thought, variations of one and the same pressing concern" (276; 386). At the same time, Castorp has begun his project of self-formation, of *Bildung*, transforming his bodily being in the process of discovering it. The result is a transfiguration of the former conception of the middle-class body.

Rising to the Aesthetic

Yet Castorp's long process of *Bildung* is not complete until he has been introduced to a new technological device, the gramophone. The sanatorium has just acquired the latest model, endowed with an electric motor,

48. See Sigmund Freud, *Notes Upon a Case of Obsessional Neurosis*, in vol. 10 of *The Standard Edition of the Complete Psychological Writings of Sigmund Freud* (London: Hogarth Press, 1955), 158–249. For a discussion of Freud's notion of epistemophilia, see Toril Moi, "Patriarchal Thought and the Drive for Knowledge," in *Between Feminism and Psychoanalysis*, ed. Teresa Brennan (London: Routledge, 1989), esp. 199–203.

and this “magic box” provides a new form of evening diversion. The narrator stresses that it replaces those old-fashioned optical toys discussed earlier: “There was no comparison to those little mechanisms in value, status, and rank” (627; 872). But there is another form of outclassed visual pleasure, another downgraded regime of visual consumption, that emerges as a counterpoint to the gramophone and that, furthermore, reveals the contradictions inherent in Mann’s rendering of Castorp’s sublime musical experience: film. From a structural point of view, the gramophone scene is both a supersession and an inversion of another aesthetic experience—the previous visit to the movie theater in the village. Cinematography and gramophone music: Both are technologically mediated and reproduced. Both cater to an ever expanding audience. Both reify the here and now of the “original” performance behind the “copy.” Both are subject to endless repeatability. In *The Magic Mountain*, however, the one is rendered as a downgraded art form—in fact, the question is whether it deserves the designation *art* in the first place—whereas the other is subject to celebration and high esteem, albeit somewhat ironically.⁴⁹

One day, Castorp and his cousin decide to take a mortally ill young woman to the Bioscope Theater. In the company of an anonymous mass of spectators, the trio watches an Orientalist film. On the screen, “life flickered before their smarting eyes [*schmerzenden Augen*—all sorts of life, chopped up in hurried, diverting scraps that leapt into fidgety action, lingered, and twitched out of sight in alarm, to the accompaniment of trivial music, which offered present rhythms to match vanishing phantoms from the past and which despite limited means ran the gamut of solemnity, pomposity, passion, savagery, and cooing sensuality” (310–11; 434). The terms

49. In 1928, Thomas Mann wrote an essay on film, in which he explains that while he often goes to the cinema and derives pleasure from watching film, he does not consider cinema an art form: “I was speaking of a ‘phenomenon of life,’ because I believe that film—you will excuse me—has little to do with *art*; and it would be a mistake to approach film using criteria taken from the world of art. . . . Film is not art, it is life and reality; and its effects, in all its mobile silence, are crudely sensational in comparison to the spiritual effects of art” (Mann, “Über den Film” [1928], in *Kino-Debatte: Texte zum Verhältnis von Literatur und Film, 1909–1929*, ed. Anton Kaes [Tübingen: Niemeyer, 1978], 164). In a 1928 interview, he affirmed his views on cinema: “Film is an art surrogate, not art. It has very little to do with art, because art is cold, in the supreme sense of the word: mediated, not crude, not sensational—film, on the other hand, is an immediate reproduction of life” (Victor Wittner, “Bei Thomas Mann,” *Neue Freie Presse* [Wien], 28 October 1928; reprinted in *Frage und Antwort: Interviews mit Thomas Mann, 1909–1955*, ed. Volkmar Hansen and Gert Heine [Hamburg: Knaus, 1983], 136).

of this narrative event recall the charged rhetoric in which numerous historical accounts of first visits to the movie theater are couched: the flickering images, the ghostlike silence, the uncanny nature of the shadowy figures projected onto the screen. This makes the episode all the more interesting: It carries a paradigmatic weight, which is then affirmed when the narrator lets the event unfold into a miniature essay. Described in some detail, the Orientalist film is rendered as cheap, vulgar, and crude, as it revels in a Moroccan woman's swelling cleavage and an executioner's muscular arms.⁵⁰ And because it seeks to gratify an international audience, the narrator emphasizes, the film suffers from a lack of artistic ambition and intention, a tendency intrinsic, it seems, to the medium itself. As if this were not enough, cinema is also characterized by its depersonalized mode of production and distribution: "There was no one there to clap for, to thank, no artistic achievement to reward with a curtain call" (311; 435). This absence, the narrator intimates, is typically matched by the "repulsive" behavior of the mass of spectators, a mass that is as passive as it is lacking in distinction and aesthetic judgment.

This episode suggests that film is not only a pure diversion but also a cultural practice whose production and reception are fundamentally mediated by the masses. Interestingly enough, Castorp's consumption of pre-recorded music does not elicit the same reaction, although in that context, too, there is no one to applaud, no one to thank for the beautiful rendition. While demonstrating the gramophone to his baffled patients, Dr. Behrens introduces a distinction between a musical instrument and a mere apparatus, as if to even up the machinelike edges of the new device. In the same breath, he alludes to the charged cultural discourse of *Kultur* versus *Zivilisation*, asserting a close link between the essentially German and the technological: "This is no apparatus, no machine, . . . this is an instrument, this is a Stradivarius, a Guarneri—you'll hear resonances and vibrations of vin-

50. Jürgen Kolbe and Christoph Schmidt, respectively, have argued that the episode alludes to a specific film, *Sumurun*, by Ernst Lubitsch. Mann first saw Lubitsch's Orientalist film in 1920, at the Lichtspieltheater am Sendlingerthor in Munich, and then recorded the visit in his diary. See Jürgen Kolbe, *Heller Zauber: Thomas Mann in München, 1894–1933*, 2d ed. (Berlin: Siedler, 1987), 379–81. Christoph Schmidt has detected Spenglerian overtones in the cinema episode, arguing that the spirit of the passage overlaps with a recognizably conservative stance toward the new mass medium. See Schmidt, "'Gejagte Vorgänge voll Pracht und Nacktheit': Eine unbekannte kinematographische Quelle zu Thomas Manns Roman 'Der Zauberberg,'" *Wirkendes Wort* 38, no. 1 (March–April 1988): 1–5. See also Thomas Sprecher, *Davos im Zauberberg: Thomas Manns Roman und sein Schauplatz* (Munich: Fink, 1996), 222.

tage *raffinemang*. It's a Polyhymnia, as we are informed here inside the lid. German-made, you see—we make far and away the best. Music most faithful, in its modern, mechanical form. The German soul, up-to-date" (627–28; 873).

Perplexed, the patients listen to an Offenbach overture that, disembodied from its original performance, its particular presence in space and time, now offers itself abstractly, as it were, to their auditory organs. The narrator reports how the listeners perceive a change with regard to the sound volume, the *Klangkörper*, and how it suffers a diminution of perspective: "It was, if one may use a visual comparison for an audible phenomenon, as if one were gazing at a painting through the wrong end of opera glasses, so that it looked distant and small, but without forfeiting any definition of line or brilliance of color" (628; 874). Such an analogy testifies to the persistence of vision as metaphor or, one could say, to its reification as metaphor. But, and more important, the analogy also bears witness to the perceived freshness of technologically stored and transmitted musical sounds, an aesthetic experience that, at this point, evidently awaits its particular sensory modes of management and processing.⁵¹

Castorp immediately acquaints himself with the gramophone, eventually becoming its prime operator. With all of the distinction bestowed on cultivated men, he listens to recorded music late at night all by himself. Unlike his visit to the movie theater in the village, Castorp's encounter with gramophone music, now stored and reproduced for the benefit of the ear, is not a collective, mass-mediated experience: His solitude impregnates these late-night aesthetic experiences and lends them a certain sublimity. Ultimately, then, it is the mode of distribution that sets film apart from recorded music and so degrades it.

It seems proper that the sluggish engineer-cum-intellectual should evolve into a distinguished listener, even if he has yet to advance to genuine Wagnerianism.⁵² For Mann, as indeed for Adorno, Nietzsche, and Schopen-

51. For an account of the technologization of the production and reception of music, see Michael Chanan, *Repeated Takes: A Short History of Recording and Its Effects on Music* (London: Verso, 1995). Chanan dwells briefly on the gramophone episode in Mann's novel (41–43).

52. Brennan, among others, has discussed the remarkable fact that Wagner's music is not among the records Castorp listens to; and yet Wagner's formal presence in the novel itself is striking: "If no explicit reference to the music of Wagner is made in *The Magic Mountain*, a methodological device characteristic of the composer is definitely employed there. It is the *Leitmotiv*" (*Thomas Mann's World* [New York: Columbia University Press, 1942], 99).

hauer, music represents the highest and most refined art form. Nietzsche, for one, maintains that a life without music would be equivalent to a life in exile. In his view, music is a basis for philosophy; the more one immerses oneself in the spiritual realm of music, the more one learns to think authentically.⁵³ In this and other respects, then, Castorp's *Bildung* is more or less complete. He has successfully acquired the sensibilities associated with *Kultur*: bookish learning, emotional depth, aesthetic judgment, and inner enrichment; in short, he has acquired individuality. His ability to immerse himself in a Schubert *Lied* and its worlds of "feeling" confirms his spiritual graduation. E. R. Curtius, in a 1925 review article of *The Magic Mountain*, even goes so far as to read Castorp's musical experience as a feature of what is typically German. In fact, Curtius contends that Mann's work is deeply rooted in a mysterious realm—a Germanness whose essence is musical and metaphysical all at once (*musikalisch-metaphysischen Deutsch-tum*).⁵⁴ This notion, obviously, is what Behrens alludes to when he suggests that the gramophone offers an updated version of the German soul. The irony inherent in the physician's remark should not mislead us: In this way, Mann attempts to keep intact the notion of the German soul.

Apart from such messages, it would seem that the most important lesson that the new technological device, variously referred to as "chest," "cabinet," "little truncated coffin of fiddlewood," "small dull-black temple," has in store for Castorp is memento mori. "What was this world that stood behind [the Schubert *Lied*], which his intuitive scruples told him was a world of forbidden love? It was death" (642; 893). To the notion of *Kultur* is now added "sympathy with death," the ultimate form of "triumph over self." The

53. On Nietzsche and music, see Curt Paul Janz, "The Form-Content Problem in Nietzsche's Conception of Music," as well as Michael Allen Gillespie, "Nietzsche's Musical Politics," in *Nietzsche's New Seas: Explorations in Philosophy, Aesthetics, and Politics*, ed. Michael Allen Gillespie and Tracy B. Strong (Chicago: University of Chicago Press, 1988), 97–116, and 117–49, respectively.

54. E. R. Curtius, "Thomas Manns 'Zauberberg,'" *Luxemburger Zeitung*, 9 January 1925; reprinted in Heinz Sauerebige, ed., *Die Entstehung des Romans "Der Zauberberg,"* 55. In the same vein, Curtius's general conclusion is fraught with allusions to a German geopolitics of culture: "A peculiar transformation has taken place: what in the French or English or Russian novel would be psychological here appears as dialectical and metaphysical. This is one of the eminently German traits of Thomas Mann's work. French literature is psychological; German literature, in its innermost nature, is metaphysical. *All great German works are Faustian. Reflective in a Faustian fashion, experimental in a magical manner, crafted in a musical way—such is also Thomas Mann's work*" (53; emphasis in the original).

chapter revolves around musical harmony, but it scarcely resembles the conclusive harmony of the classic bildungsroman: Castorp's destiny is far from sealed. Once again, then, the image of technology attaches itself to the image of death, as though the emergent technologies for reproducing art, including such ephemeral art forms as music, can only shatter the bourgeois world of *Bildung*, its inherent values and intrinsic modes of aesthetic perception.

The Total Work of Art

If, as I have shown, the experience of the machine is vital to the formation of the hero and to Mann's novel as a whole, why is it that these thematic complexes and conceptual matrices have gone largely unnoticed? Surely, its role has gone unnoticed not because the machinery in the novel enjoys a peripheral status. On the contrary, and this may seem paradoxical, the significance of technology has been disregarded precisely because it is so central to the narrative. Against this background, it is instructive to compare the status of the machine in Mann's novel with the surrealist preoccupation with technological artifacts. The surrealist machine is more often than not a nonworking, nonfunctional machine, stripped of its living environment and naturalizing context. Concerning the surrealist predilection for fetishizing the machine, Hal Foster suggests that nearly all "machinist modernisms fix fetishistically on the machine as object or image; rarely do they position it in the social process."⁵⁵ In *The Magic Mountain*, by contrast, the machine is placed in its natural habitat, and this is part of the reason why it has been overlooked. The X-ray machine enters the narrative as a vast network, weaving its way through the entire plot, up until the point when Castorp receives his last X-ray print toward the end of the novel. The X-ray machine emerges as both a technogram and a sociogram; hence it is a working machine, that is, a *naturalized* technology. The X-ray machine is effective precisely because it has been incorporated into other practices, social, intellectual, economic, even emotional; and it mediates these practices while it is, at the same time, mediated by them. In the final analysis, the space of the sanatorium naturalizes not only the machine but also the intellectual inquiries engaging Mann's protagonist. This, then, is the sense in which the sanatorium is not just a background, much less a mere symbol of an ostensibly moribund European culture. Indeed, the sanatorium, like

55. Foster, *Compulsive Beauty*, 148.

the machine, is an integral part of the inner logic of the plot: its condition of possibility, its pretext, its edifice.

We have seen the extent to which *The Magic Mountain* is preoccupied with various forms of specular pleasure, vision machines, and mechanical extensions of the human eye. We have also seen how these technologies are represented as reducing the habits of human vision to secondary, merely “subjective” experiential modalities. In yet another respect, then, it is fitting that the novel end with Castorp’s elevation to the aesthetic. As he manages to ascend to the highest art form—music—he rises above the reified forms of vision mapped out in the novel.

Yet a certain historical irony casts its shadow over this final instance of Castorp’s spiritual expansion, since the abstraction of vision also participates in the separation of the senses, ultimately encouraging their aestheticization and reification. Nietzsche, writing in 1878, argues that the production and reception of music are at that moment undergoing something like a rationalization process. In *Human, All Too Human* (1878), he notes apropos of what he called the de-sensualization of higher art, “By virtue of the extraordinary exercise the intellect has undergone through the artistic evolution of modern music, our ears have grown more and more intellectual. We can now endure a much greater volume, much more ‘noise,’ than our forefathers could because we are much more practiced in listening for the *reason in it* than they are.”⁵⁶

Following in Nietzsche’s footsteps, Adorno subjects Wagner’s musical dramas, his *Gesamtkunstwerke*, or total works of art, to critique. Wagner’s explicit intention is to emancipate the ear. He also wants to transcend the genre system: the *Gesamtkunstwerk* is, Wagner hopes, the drama of the future, a total art form in which poetry, music, and theater would be united and transcended in a historically unprecedented way. In promoting the idea of the *Gesamtkunstwerk* as a synesthetic art form, Wagner also expresses a will to reconcile the senses and dissolve their institutionalized aesthetic division of labor. For Adorno, however, hearing is the last not-yet-reified sense, it is not yet appropriated by the means-end rationality of bourgeois society. To pursue the emancipation of the ear, as Wagner does, is to effect its rationalization, for in Wagner’s musical dramas, hearing is singled

56. Friedrich Nietzsche, *Human, All Too Human: A Book for Free Spirits*, trans. R. J. Hollingdale (Cambridge: Cambridge University Press, 1986), paragraph 217. Nietzsche develops this line of thought in his later works on Wagner, notably *The Case of Wagner* (1888), where he argues that the composer had succumbed to an instrumental logic of means and ends.

out as that sense whose task it is to codify and process the linear development of the diegesis of the drama. In this way, Wagner's grand protest partakes in the process of reification precisely by trying to overcome it. Adorno warns that it is questionable whether there ever existed a unity of sense experience, the myth on which Wagner's musical dramas feed. The composer is therefore forced to dream transcendence at the price of inevitable failure. In Wagner, the ultimate synesthesia is thus precluded.

A similar logic is at work in *The Magic Mountain*. Mann elevates the musical leitmotiv into a structuring principle in the novel and, furthermore, does so in an explicitly Wagnerian spirit. On the most obvious level, the leitmotiv technique is a mode of organizing the narrative materials. In fact, Mann once noted that the "conception of epic prose-composition as a weaving of themes, as a musical complex of associations, . . . largely employed in *The Magic Mountain*. Only that there the verbal leitmotiv is no longer, as in *Buddenbrooks*, employed in the representation of form alone, but has taken on a less mechanical, more musical character, and endeavours to mirror the emotion and the idea."⁵⁷ In this passage, Mann produces a distinction between the mechanical and the musical that echoes widely in modernist art and criticism. More important, since the leitmotiv is a mode of organizing narrative materials, it can also be seen as a mode of structuring readerly perception and reception. In other words, the leitmotiv turns into a modality for molding and constructing knowledge; and so *The Magic Mountain*, as befits an encyclopedic novel, transforms itself into a vast apparatus for producing knowledge.

Moreover, *The Magic Mountain* attempts to enclose within itself, even exhaust, other media of cultural production with which it competes, in particular, mass-cultural ones, such as optical diversions, cinema, color photography, and gramophone music.⁵⁸ Each of these media of cultural production is subjected to detailed reflection, sometimes even to miniature essays, particularly cinematography and gramophone music. Symptomatically, then, Mann's literary encyclopedia contains entries on almost all art forms, and, as we have seen, these entries come complete with an implicit axiology. In an effort to synthesize the various cultural modes of production

57. Thomas Mann, preface to *Stories of Three Decades*, trans. H. T. Lowe-Porter (New York: A. A. Knopf, 1936), vi.

58. Hörisch has suggested that Mann's novel is the "swan song" of the educated reader [*gebildeten Leser*] and the privileges of the printed book. See Hörisch, "Die deutsche Seele up to date," 23.

and so outdo them all, *The Magic Mountain* thus turns itself into a giant aesthetic edifice: the total work of art, the virtual *Gesamtkunstwerk*.

Mann's novel also encloses within itself competing modes of knowing. In the narrative, X-ray technology emerges as a mode of knowledge, or, more precisely, as a mode of inscription and translation that makes other modes of knowledge seem antiquated and in some ways arbitrary, especially the bourgeois socially signifying system and the medical gaze. At the same time, the novel attempts to present a solution to the contradictions that arise out of these conflicting visual economies and signifying systems, and, crucially, projects it in the narrative form itself. *The Magic Mountain* effectively overarches the new and alien languages of medicine and technology, granting these idiolects but local validity within the larger universe of *Bildung* and the total work of art. (In fact, as Heinz Sauereßig has observed, Mann was proud of the fact that even though the novel contained vast portions of medical discourse, specialists had found nothing to object to.)⁵⁹ As a virtual *Gesamtkunstwerk*, Mann's novel dreams of an ultimate sensibility: a humanism capable of subsuming "the lyric, medical, and technical," that is, a sensibility that knows no boundary between art, technoscience, and experience. *The Magic Mountain* may then be seen as an attempt at overcoming precisely the contest of the faculties it so forcefully represents. Yet at the very moment the novel aims at transcending the ever widening gap between humanism and technoscience, it can only reinscribe their respective boundaries.

On another, more deep-seated level—that of the imaginary⁶⁰—the narrative already knows that the grand moment of *Kultur* has passed. The recurrent images of death and human finitude that so strikingly coagulate around the cluster of technological machines suggest a language set in another key, a language of fear, alarm, and nostalgia that ultimately runs counter to the desire for a synthetic, all-embracing humanism in a world of social, scientific, and technological interpretosis.

59. See Sauereßig, "Die medizinische Region des 'Zauberberg,'" 25.

60. I draw here on Michèle Le Doeuff's notion of the philosophical imaginary. As Le Doeuff argues in *The Philosophical Imaginary*, trans. Colin Gordon (Stanford, Calif.: Stanford University Press, 1989), when philosophers such as Descartes, Galileo, Rousseau, and Kant have recourse to images, even when the image in question belongs in the philosophical tradition, the effect is frequently an ambiguous and contradictory discourse, often revealing a nostalgia for the power that philosophy once had.