INTRODUCTION

*Abe Kōbō’s Dictionary*

Shortly after the death of the Japanese novelist Abe Kōbō in 1993, his writing studio in Hakone was opened to a television film crew making a documentary about the author. As the camera travels through the room in the resulting film, it pauses momentarily at the bookshelf above Abe’s desk and focuses on a large volume: a scientific dictionary. It is fitting that this should become an icon of Abe’s work, because his texts often include elements drawn from the world of science. His fiction incorporates material from disciplines such as biochemistry, geology, mathematics, and computer programming, to name just a few, and science becomes a source for his language, his characters, his metaphors, and his plots. It is this scientific influence in Abe’s novels that is the subject of this book.

Abe was one of postwar Japan’s most important writers, a leading light in the avant-garde from the 1950s through the 1970s and beyond. He was best known for his novels, which won him acclaim in Japan and abroad. His brand of imaginative fiction laid the groundwork for a generation of Japanese literature, ranging from the high literary fantasies of Ōe Kenzaburō to the science fiction of writers such as Komatsu Sakyō. Outside Japan, translations of Abe’s work into languages from Czech to Chinese have made him one of Japan’s best-known authors internationally. He was a perennial candidate for the Nobel Prize in Literature up until his death, and when Ōe won the prize the following year, he immediately commented that he was standing on Abe’s literary shoulders (“Nōberu” i).
Abe was also an intrepid explorer of different media and genres, and his legacy extends far beyond prose fiction. He was a playwright and director of the Abe Kōbō Studio, a company that helped define experimental theater in Japan in the 1970s. Besides theatrical plays, he also authored film and television screenplays, radio dramas, and even a stage musical. One of these films, a celebrated adaptation of his novel *The Woman in the Dunes* (*Suna no onna*, 1962), won the Special Jury Prize at the Cannes Film Festival in 1964, was nominated for two Academy Awards (Best Foreign Language Film in 1964 and Best Director in 1965), and garnered Abe a lasting place in the history of Japanese cinema.²

But Abe was originally trained as a doctor. He graduated from the medical college at Tokyo Imperial University, and he had a love of science that never left him. Alongside his artistic accomplishments runs a series of anecdotes about his continuing scientific interests: he remained an inveterate technophile all his life, fascinated with machines of all sorts—particularly cameras and automobiles; he once received an international inventor’s award for a car part he designed; he composed electronic music during the infancy of the genre, and an antique patch-cord synthesizer was still sitting in his study when he died; and he was also one of the first Japanese authors of his generation to write on a computer. *The Ark Sakura* (*Hakobune Sakura Maru*), a novel published during the bronze age of personal computing in 1984, was completed on an early NEC word processor.

Yet the real mark of Abe’s scientific interests is found in his fiction. Abe’s characters include doctors (sane and mad), computer programmers, a polymer chemist, some part-time inventors, and an amateur entomologist. One of his signature characters is the private detective, a man who has one foot in his own world of rational logical deduction and the other in the uncertain grey underworld of crime.

The plots of many Abe novels also turn on scientific devices or situations. *Inter Ice Age 4* (*Daiyon kanpyōki*, 1959) paints a detailed future history in which climate change and genetic engineering have altered society and humanity to something utterly alien. These hard-science elements were so unusual in Japanese fiction of the time that the origins of science fiction in Japan are frequently traced to this novel. Abe’s writing eventually moved away from science fiction and from these fantastically technical plots, but even though his later works are more fully grounded in
the present reality, they often alter that reality suppositionally or experimentally by recourse to some technical device. In *The Face of Another* (*Tanin no kao*, 1964), for example, the narrator invents a process for constructing a mask that will be indistinguishable from a real human face. In the course of this highly psychological and philosophical work, Abe uses the device of the mask to interrogate our ideas about appearance and identity. In *The Ark Sakura* the protagonist lives in an elaborate bomb shelter that becomes an artificial world inside which Abe can ask and address questions about destruction and isolation.

The scientific impulse touches even apparently low-tech works such as *The Box Man* (*Hako otoko*, 1973), a novel about a homeless man living in a cardboard box. The technical quality of the novel is apparent on the opening pages, which provide careful instructions for constructing the box and its special viewfinder, so that the occupant can observe the world while remaining hidden himself. The parallels between the box and a camera are made clear by the novel's many references to photography, which becomes a metaphor for the city's invisible class, almost disembodied by their homelessness, seeing but unseen. Further, photography scholar William Parker points out that the design of the box is actually based on a camera obscura, a lensed viewing chamber whose long, rich history as a scientific instrument makes the novel an interrogation of scientific and artistic observation itself.

Even in works where the content is not overtly scientific, Abe’s style is still riddled with scientific vocabulary (and here we return to Abe’s dictionary), as well as with intricate technical descriptions of scientific principles or processes. *The Woman in the Dunes* is a novel about a man who is kidnapped by the residents of a strange village and forced to live in the bottom of a sand pit, where he spends every day shoring up the endlessly collapsing walls of the hole. The novel turns on the poetry of this spare image and on the irreducible, crystalline metaphor of the sand; but even this text is interspersed with technical discussions of the morphology of sand grains, the biology of insect life in the dune ecosystem, or the hygroscopic properties of sand. Abe’s essays are also salted with these technical metaphors and vocabulary: for example, identity, he tells us, is like the square root of a negative number, and writing a novel is about coming up with a hypothesis, or seeing with one side of the retina, or adding an unexpected line to a diagram to complete a geometric proof.
But Abe the occasional scientist was first and foremost a leader of the avant-garde, an artist who constantly tested the boundaries of representation with texts that became progressively more adventurous and even bizarre over the course of his career. We might expect these two strains to be uneasy partners in Abe’s work. Indeed, they do bear strange fruit in his writing. Several of the descriptions above hint at the tendency in Abe’s fiction for the technical to be wedded to the absurd, the surreal, or the simply unreal. The detective, the box man, and the sand pit are just the most extreme examples.

In fact, Abe is probably best known for this grotesque or absurd strain in his fiction. His characters sometimes metamorphose into animals, plants, or inanimate objects. He is often compared with Kafka for this, and for the way that many of his protagonists awake one morning to find themselves in a world that is suddenly irrational, or that obeys a new rationality they cannot comprehend. In *The Crime of S. Karma* (*S. Karuma-shi no hanzai*), the novella that first earned Abe wide attention when it won the Akutagawa Prize in 1951, the hero has his name stolen, and finds that articles of his clothing have taken on a will of their own and are hatching a plot against him. He also discovers that if he stares at anything long enough he can make it disappear, and for the inadvertent acts of theft that result from this new power, he is placed on trial by a strange tribunal that meets in an underground chamber deep beneath the city zoo. But just as Abe’s most scientific passages have an undercurrent of the absurd, even in his most fantastic stories Abe’s trademark logic and technical vocabulary make an appearance. As we will see below, despite the carnival atmosphere of *The Crime of S. Karma*, one critic suggested that the work’s defining features were in fact its “syllogistic reasoning” and the logical rigor of its prose!

This juxtaposition of the scientific and the grotesque remains one of the puzzles of Abe’s work—a knot at the heart of his texts that is difficult to untangle. It is an aspect of the novels that is addressed only glancingly by most critics writing on Abe; yet it is this juxtaposition of the scientific with the grotesque and the irrational that defines Abe’s unique idiom, and more than anything else it is the violent reaction between these two worlds that generates the energy driving Abe’s texts. What kind of meaning does this juxtaposition produce? And what do Abe’s texts have to say about science on the one hand or fiction on the
other, and about the distinctions or elisions we make between the two?
The goal of this book is to consider these questions by examining this
combination of the scientific and the fantastic in Abe’s novels. We will
address this issue particularly from the standpoint of Abe’s style and
his language—the ground suggested by the opening image of Abe’s
dictionary. This book approaches Abe’s texts by examining the kind of
language they employ, and how they use this language to accomplish
the mixing of these two worlds.

Each of Abe’s novels displays within itself a range of different voices
or dialects, some associated with science or a particular science, others
associated with different languages and different ideas. The other lan-
guages may be drawn from different branches of science, from philoso-
phy, psychology, literary prose, or even poetry. Although these dialects
begin as distinct voices (belonging to different characters, for example),
in the course of the novel they come in contact with one another, and
as the ideas behind each language interact and change, Abe’s different
dialects collide, combine, split, and recombine. They activate or neu-
tralize one another, and in particular they join to form new hybrids. The
place where this mixing takes place is the laboratory—or the witches’
cauldron—of Abe’s prose.

Through this mixing of dialects, Abe forces the reader to question the
distinctions often drawn between the scientific and the non-scientific,
blurring the boundary between science and literature. One effect of
Abe’s novels at the time they were written was to broaden and prob-
lematize the idea of literary language—to make his readers question what
literary language is, by stretching the definition of narrative prose to
include technical language. Mikhail Bakhtin argues that the novel is a
genre uniquely able to combine within itself voices and styles from a
range of other disciplines, and Abe’s novels expanded the envelope of
high literature in just this way, clearing a place in the fictional space of
the novel for a new kind of discourse.

Once Abe’s work had opened this door, other authors followed suit,
so that today this combination has become more common in Japan—
not only in the genre of science fiction that Abe helped get off the
ground, but in the mainstream literary establishment as well. A year
after Abe died, Ishiguro Tatsuaki won the Akutagawa Prize for a novel
written in the format of a scientific paper. Better known examples in-
include Ōe Kenzaburō, Murakami Haruki, Shōno Yoriko, and Murakami Ryū, whose literary fantasies have sometimes borrowed scientific tropes or premises.

Tatsumi Takayuki has grouped Abe with the authors above under the label “slipstream” writers, suggesting a position between genre science fiction and more conservative streams of literary fiction. Tatsumi and others have argued that this permeability of genres constitutes a dominant characteristic of Japanese literature today, but when Abe began writing, this mixed quality was much less common. This book looks carefully at contemporary Japanese critical reactions to Abe in order to recover some sense of the revolutionary quality—often puzzling, sometimes incomprehensible—that his prose had for Japanese readers at the time it was written. In fact, while Abe clearly helped clear a space for the genre-crossing fiction that succeeded him, even today the way he combines scientific and literary elements still sets him apart from most of the Japanese slipstream. Later chapters investigate this crossover style, with some more extended comparisons to authors such as Murakami Haruki and Murakami Ryū.

Even more interesting than the changes Abe wrought in literary language, however, is the way his work tried to alter received ideas about science. This aspect of Abe’s writing remains most powerful today: at the same time that Abe’s mixed style undermines narrow definitions of literature, it also overturns some of our stereotypes about science and its role in society. By pulling scientific language into his own domain (into the fantasy world of his novels), Abe is able to play with it in a way that shows science itself in a different light. We are led to view science in the same way that we see literature—not as an unassailable fortress of rationality but as a “magic kingdom” with its own (sometimes arbitrary) laws. Abe wrote at a time of rapid scientific and technological progress in Japan, and his novels avoid the prevailing blind faith in science, but without falling into a facile critique, either. Instead, the complex interplay of voices in his texts supports a more nuanced conclusion: that potential of science to bring about drastic, previously unthinkable changes is simultaneously its greatest promise and its greatest threat. To Abe, science and scientific language offered hope for a revolution that would point to radical new possibilities beyond everyday experience and everyday values. But Abe also recognized
and warned about the disruption and disjunction that such a revolution would entail.

In this respect, Abe’s fiction connects with work in the history and philosophy of science that sees links (forged from language) between science and literature. This includes not only recent efforts to understand scientific practice as a social discourse, but also centuries of work by literary critics who have attempted to distinguish or conflate the languages of literature and of science. This book examines Abe’s novels and some of his essays on fiction and science within this global historical context, comparing his ideas with a range of critical traditions, from the Italian Renaissance and British empiricism down to New Criticism and Japanese poststructuralism. One of the threads that runs through this criticism is the construct called the sublime, a feeling of dangerous power or fearful excitement that has been invoked repeatedly to explain the mutual resonances and creative conflicts between science and fiction. We will sketch the early history of the sublime near the outset, and then return to this idea and its contemporary incarnations in subsequent chapters in order to develop an ear for the sublime voices that compose Abe’s texts.

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Japanese scholarship on Abe has placed considerable emphasis on his unusual personal history, particularly a childhood in Manchuria where he witnessed firsthand Japan’s colonial ambitions and their subsequent collapse at the end of World War II. With some encouragement from the author himself, many critics have connected this experience with Abe’s suspicion of narrow rationalities and ideologies, and have sought the key to his fiction in the dilemmas of home, belonging, and individual or collective identity. This book approaches Abe in a different way, by constructing an image of the author through his texts rather than the reverse. It also comes at these texts from a new direction, but the study of the science in Abe’s work does connect at many points with existing criticism that centers on issues of identity. Chapter 1 addresses the question of biography by surveying Abe’s early life and tracing the path he followed from a doctor-in-the-making to an established author. That chapter will conclude that although there is some connection between Abe’s own transformation from doctor to writer
and the fantastic metamorphoses portrayed in his texts, these shifts are far from straightforward and are as complex and sometimes as ambiguous as Abe’s prose.

Shifting critical emphasis to look at the science in Abe’s literature reopens his work in a number of ways. It revives some interest in earlier more overtly science fictional texts that have suffered the neglect of critics. But it also casts new light on mature works that have been examined mainly from other perspectives. Finally, it provides a critical purchase on Abe’s difficult later novels, where the complete breakdown of rationality can leave the reader and critic at a loss. Chapter 2 orients us as described above, with a survey of Abe’s essays on science and literature and some critical background on historical distinctions between these two fields, including an introduction to the notion of the sublime. After this, Chapters 3 through 7 focus on one or two novels from each of these categories or periods in Abe’s career, offering new readings of the individual texts but also providing a sense of how Abe’s treatment of science continued and changed throughout his life as a writer.

Each of these readings attempts to identify the different dialects or voices that make up the novel's style. Often they are associated with particular characters, or with the same character at different stages of the story. The readings then show how these voices change and interact as the characters and ideas come in contact with one another, or as new ideas are introduced. Finally, each chapter asks what the interaction of all these styles has to say about the world views, epistemologies, and social configurations that the styles represent.

For example, Chapter 3 examines one of Abe’s early science fiction works, Inter Ice Age 4. The protagonist is a computer scientist who programs a machine to predict the future, but when he intervenes to prevent a frightening prediction from coming true, he finds that the machine itself has hatched a plot to oppose him. As the talking prediction machine develops a will of its own, its output/language changes from the cool, cut-and-dried computer code instilled in it by its creator to a rawer, more complex idiom. Each of these two extremes of style attracts its own adherents in the novel, and these two sets of characters and languages wage war against each other through the course of the work, until what emerges is a hybrid of the two dialects. In the machine’s final prediction, both humans and computers are slated for
extinction, to be replaced by new hybrid beings who can speak in and respond to these hybrid tongues.

This chapter updates the notions of the sublime introduced in Chapter 2 by examining more recent formulations of the “postmodern sublime” by Jean-François Lyotard, Jean Baudrillard, Fredric Jameson, Azuma Hiroki, and Katherine Hayles. All of these thinkers connect changes in language to technological evolution, suggesting that the growth of mass media and long distance communication has changed the ways we communicate and altered what it means to be human. If they are correct, it may be that we have already arrived at the situation depicted in *Inter Ice Age* 4, where stylistic hybrids correspond to human ones.

Chapter 4 treats a novel from the peak of Abe’s creative prose activity in the 1960s, *The Face of Another*. The narrator is a chemist whose face is burned away in a laboratory accident. A plastics expert, he begins to construct a mask that will take the place of his missing face. The narrator’s meticulous technical descriptions of the mask’s construction reflect his hope that if he can just reduce the problem of his identity crisis to technical terms, he can solve it with technical means. The finished mask is indeed indistinguishable from a real face, but the narrator finds that when he dons the mask it begins to take on a will or a personality of its own. And the style in which the alter ego of the mask speaks is very different from the narrator’s earlier technical idiom: it is a language of make-believe or fiction centered on the mask’s deliriously violent fantasies, and eventually this less rational voice threatens to gain control of the narrative. The object of the chemist’s desire and the mask’s fantasies is the chemist’s own wife, who finds herself caught between these two dialects. Finally she is left to try and balance them to yield a productive hybrid of science and fiction.

This chapter takes a closer look at Mikhail Bakhtin’s theory of novelistic heteroglossia and dialogue. Superficial invocations of Bakhtin have become commonplace in literary studies, often simply drawing our attention to the multivoicedness that we would intuitively expect to find in almost any novel. This chapter draws on some of Bakhtin’s earlier, more difficult, and less familiar philosophical work, which goes well beyond the now familiar ideas that the novel comprises different voices, and that these voices represent forces in society; Bakhtin also argues
with some sophistication that identity formation is a process of assembling and reconciling the different voices that exist within and around a single being. As we read *The Face of Another*, Bakhtin shows us how identifying the different voices inside the narrator is a critical step in understanding the issues of identity and community that the novel treats.

Chapter 5 changes gears by examining the effects of technology on Abe’s own literary production, as reflected in his experiments with other media. The best known example is the 1964 film adaptation of his novel *The Woman in the Dunes*, directed by Teshigahara Hiroshi from a script Abe wrote himself. Although theories of the postmodern sublime and some of Abe’s own novels assign an alienating effect to technology and the way it multiplies and accelerates language, this chapter finds that the technology of Teshigahara’s film actually rehumanizes the characters. The film does multiply the number of voices in the story, but instead of resulting in confusion and fragmentation, this actually produces conversations and communication that are absent in the novel. Abe’s notion of analog and digital texts, as well as Vivian Sobchack’s theory of analog and digital subjectivity, both suggest that the film itself may constitute a kind of human/machine hybrid that is paradoxically more optimistic and humanistic than the aquans, the prediction machine, the mask, or any of the technologized humans in Abe’s written texts.

Finally, Chapter 6 treats one of Abe’s later works, a written text that simulates the action of electronic technology on language more literally than any of Abe’s novels up to that point. *Secret Rendezvous (Mikkai, 1977)* is also marked by the sheer fantasy common to Abe’s later works, where the line between science and fancy is blurred almost beyond recovery. The story is set in a bizarre hospital where doctors perform absurd medical experiments. As the hospital’s new chief of security, the narrator keeps everyone under constant surveillance with an intricate network of hidden microphones and tape recorders, whereby hundreds of voices throughout the hospital are combined and overlapped onto a single tape—the most literal expression yet of Bakhtin’s heteroglossia. The narrator hopes that the surveillance tapes will help him make sense of the hospital’s strange goings on. But the electronic multiplication of voices only confuses things further, until we hardly know who is speaking or what is being said.
It becomes hard to know how seriously we are to take the science in this work. Is it still part of a balance with non-science or fiction, or have the grotesque elements finally triumphed completely? In this way, the disorder of the novel’s language confuses sense and nonsense until it finally produces a kind of moral disorientation as well. The fantasies become progressively more disturbing in Abe’s later works, and in *Secret Rendezvous* the reader is unsure whether to laugh, stare, or cringe at the novel’s parade of perverse technology. The way that the multiplication of styles erodes a stable linguistic or ethical perspective is a problem taken up by Bakhtin and Fredric Jameson in their characterizations of parody and pastiche. Chapter 6 compares these and other theories of parody, to ask just how far language can be mixed, layered, and destabilized before all perspective is lost.

All of these readings are intended to shed new light on Abe’s novels by viewing them in the context of questions about science and literature or science in society. But what of the reverse: does reading Abe’s novels shed any new light on these social and theoretical questions? To answer this, Chapter 6 takes the lessons about heteroglossia, parody, and sublimity learned from Abe’s texts and applies them to a set of recent critical controversies in the world of science studies, the Sokal hoax and the Bogdanov affair. In the former, a scientist published a critical article on literature and science in a prominent journal of cultural studies and then announced that it was a hoax. In the latter, a prominent physicist turned the Sokal affair on its head by suggesting that the published scientific papers of two colleagues might in fact be intentional or unintentional parodies of scientific research.

Published in 1977, *Secret Rendezvous* arguably marked the end of Abe’s last great productive period as a writer. He published only two more novels before his death in 1993. For many critics and readers these proved even more baffling than *Secret Rendezvous*, and Abe’s long silences between these novels were matched by puzzled silences from critics, who had (and still have) little to say about these later works. Chapter 7 considers the possibility that these silences were also the result of technology’s effect on literature. Abe’s 1984 novel *The Ark Sakura* revolves around the nuclear stalemate of the 1980s, and the ways that nuclear technology produced a paralysis of the dialogue that had driven Abe’s work up to this point.
Although issues of biography, identity, and origins have dominated interpretations of Abe’s works, many critics have at least noticed the works’ scientific content, and a few have treated it systematically, though none have analyzed it at real length. The critics who have addressed it can be divided very roughly into two camps: those who read Abe’s scientific language and content in perfect seriousness, as a model of clarity and logic, and those who regard it as a gross caricature of science that demonstrates nothing less than the bankruptcy of the narrow rationality of science. The argument of this book is that both of these interpretations are simplifications (or exaggerations) that fail to capture the special quality of Abe’s texts, which contain both elements of caricature and a great deal of extremely accurate and committed scientific logic. Abe’s texts actually thread a course between the extremes of simply mocking science on the one hand or on the other hand swallowing it whole. Through this balance, Abe conveys the idea that science has a creative and sometimes disruptive quality as well as a clarifying power.

It may be helpful here to consider an example of each of these other readings in order to show the two positions between which this book attempts to steer. In the first category are many critics who take Abe’s scientific language more or less at face value: for example, repeating the scientific metaphors he uses to describe his own work without any trace of irony, as if accepting them on faith. Alternatively, they may note the scientific content only in passing, and treat it merely as a kind of stylistic window dressing that imparts “realism” to the text. In this view, the detailed descriptions of the mask’s construction in *The Face of Another*, for instance, simply justify the premise upon which the novel is based. In these interpretations, only the relationship between face and identity is really important—the mask is just a prop. The reader can even skip the more doggedly scientific paragraphs once he or she gets the general tone. But the difficulty with reading Abe this way is that it does not address or explain how scientific language and rationality are deliberately deformed and transformed in the course of the text.

As a case study in this sort of criticism, consider an early article by Ishikawa Takashi on Abe’s prose style that appeared in the journal *Gengo seikatsu* in 1955. The article analyzed the word choice, sentence construction, and even the typography and line breaks of *The Crime of*...
Setting aside the chaotic, carnival quality of the plot to focus on the style, Ishikawa concludes that the prose is “voluble and explanatory, but also simple and fast-paced.” He suggests that Abe’s “explanations,” “syllogistic reasoning,” and similar techniques are particularly appropriate for depicting the world of the novel—a world that is fantastic but also highly conceptual—and he contrasts Abe’s language with the “sensual clarity and deep symbolism” of a style like Shiga Naoya’s (38–40). Ishikawa apparently means to suggest that in the maze of ideas and fantastic events in Abe’s story, clear and rapid exposition of everything is paramount. One of the sentences he cites is from the first page of the work: “I went to the cafeteria, I guess because I was hungry (although even if I hadn’t been hungry, I still would have gone), and there I had two bowls of soup and two pounds of bread” (AZ 2:378).

Ishikawa identifies the parenthetical comment, for example, as just another example of the kind of exposition that keeps us abreast of the ideas and their progress. Ishikawa had the unenviable privilege of being answered by Abe in the same issue of the journal, in a piece now known as “S. Karuma-shi no sujō” (The character of S. Karma), though when originally published it was titled simply “Watashi no buntai” (My writing style). Abe points out rather easily that the apparent reasoning of S. Karma makes little sense, claiming that “at that time I was trying my best to write nonsense” (AZ 5:343). Abe even maps the logical propositions of the sentence above to show that Karma is not really reasoning through anything; he is in fact trying to attach a reason to something that does not have one, or does not need one. Abe explains in the essay that one of his goals was to show in S. Karma the futility of certain kinds of reason. The moral of this story is that the reader should be on guard against taking the realism of Abe’s science at face value. One must give attention to the cracks and shortcomings in these sections, and the ways that language threatens to break down or transform itself into something unexpected.

There is another kind of reading that takes an approach diametric to Ishikawa’s and dismisses Abe’s scientific material at the outset as part of a straw man rationality that the novel will inevitably topple. This approach reads all of the scientific language in an ironic tone and sees an element of parody everywhere. It is a particularly tempting reading for some of Abe’s later novels, where nothing seems to be taken seriously,
and we will revisit the notion of parody in the book’s final chapter. But even in these later novels, failing to give the scientific language its due at least some of the time deprives the novels of an important dynamic.

David Pollack tends toward this kind of reading in his chapters on Abe in *Reading Against Culture*. Pollack’s book questions cultural essentialism by exposing culture as something deployed and constructed for economic or political ends. He posits science as one form of ideology, a constructed system that is historically linked with the dangerous rationality of urban society and capital: “The connective strand running through all of Abe’s work is the idea that rationality, pursued logically to its logical endpoint, turns out to be insanely irrational. . . . In Abe’s hands, properly licensed and accredited scientific knowledge of the world proves not only as false as any other but even more so, and certainly more destructive in its consequences” (124).

One interesting chapter of Pollack’s book analyzes *The Woman in the Dunes* and its insect collector protagonist Niki Junpei. Pollack’s reading links the decay of the protagonist’s narrow scientific rationality with his retreat or freedom from the city and its rationality of modern capital. And Niki’s decision to remain in the village at the end of the book becomes the triumph of a rural utopian ideal (or ideology) over the urban scientific one. In many places this reading is clearly on target. Most of Abe’s characters do have this tendency to follow reason relentlessly until it finally leads them to contradiction or nonsense. This is a process traced in the following chapters, as one side of the interplay between science and non-science, or science and nonsense. But I think Pollack is a little too anxious to condemn all of science for the shortcomings of the protagonist’s logic, and he does not give science itself all the attention it deserves in this novel. In particular, his readings miss a creative or positive effect even “properly licensed and accredited scientific knowledge” can have.

*The Woman in the Dunes* is considered in more detail in Chapter 6, but as an example of where this book’s approaches and conclusions differ from Pollack’s, consider the following detail from his reading. It returns us one final time to Abe’s dictionary. To show the narrator’s distorted logic and his “step-by-step deduction somehow gone a few degrees awry,” Pollack cites a definition of sand that the narrator gives at the beginning of the novel. Pollack characterizes it as a “dry but somehow
slightly implausible encyclopedia entry that reads like a passage from one of Borges’s imaginary books” (127).

SAND: an aggregate of rock fragments. Sometimes including loadstone, tinstone, and more rarely gold dust. Diameter: 2 to 1/16 mm. (13)

But is this encyclopedia really as fantastic as Borges’s? Below is the actual definition of sand (suna) from the standard Japanese dictionary Kōdansha (fourth edition, my translation).

SAND. An aggregate of fine rock grains. Composed mainly of various mineral particles. Usually indicates grains having a diameter between 1/16 mm and 2 mm.

In Japanese or in English, the two definitions are almost identical. Instead of the fantasy or lampoon of scientific language that Pollack implies, Abe’s language is in one sense very realistic. Much of the scientific language in Abe’s texts shows this same commitment to logic and accuracy, and it is a mistake, I think, to dismiss it all as part of a hollow rationality. The readings in the following chapters all assume that a careful reading of Abe’s style must accord science a certain integrity to allow it to function within the text. We must be sensitive to the complex relationship between fact and fantasy—in this case, the sense of amused discovery many first-year geology students have had on discovering that what we all know intuitively as sand must in fact be defined by the diameter of its grains. (Anything larger is technically pebbles; anything smaller is silt or clay.) Even though Abe’s definition of sand is accurate, Pollack’s instincts are certainly correct when he says that there is something quirky about this passage and the way it is presented. In this case the truth of science turns out to be just as quirky or fantastic as fiction, and it may be science itself that jolts us out of our narrow rationalism.

I believe this is an experience physicists, biologists, engineers, and the like have frequently; at least I did in the course of my own scientific education. And here, before turning to Abe’s biography in Chapter 1, it may not be out of order to say a word or two about my own background. I was an undergraduate engineering major and then a software developer working between America and Japan before I turned to Japanese literature, and even when I was earning my doctorate in Japanese (in the heart of Silicon Valley), I found myself falling in with engi-
neers as often as humanists. I am sure this has influenced my reading of Abe; perhaps more importantly, it has influenced my perception of the frequently touted divide between literature and science, and my desire to work on or in that gap. So while the pages that follow focus as much as possible on Abe’s texts, perhaps I should disclose some of my personal opinions here at the outset, rather than making the reader wait for my preoccupations and idiosyncrasies to emerge from between the lines of the text, as they do in the case of Abe’s own narrators.

My feeling is that there is a creative, open-minded, even perpetually surprised side of science and scientists that scholars in the humanities do not always appreciate—that humanities often wrongly sees science as “a desert of numbers with no room for mysteries, no shadow of a doubt,” to borrow a phrase from Abe (AZ 15:237). On the other hand, I also believe that the scientific method used in laboratory research (and in many other disciplines that aspire to scientific objectivity) tends to bracket a number of important philosophical questions about knowledge, knowability, and representation. At the outset, these questions are set aside deliberately and consciously—by declaring science’s object to be the measurable rather than the actual, for example. These bracketed questions are often forgotten until the habits of scientific thought (and the fruits of technology) are allowed to escape the lab and enter the larger arena of controversies about society and identity, and then these questions return with a vengeance. In debates among scientists, literary critics, and cultural historians who study science (notably, the so-called culture wars and the “science wars” taken up in Chapter 6), some claimants have persistently tried to apply the specialized rationality of what are essentially laboratory protocols to broader questions that these methods are not equipped to address—questions that center on the interplay of the real, the represented, and the perceived, for example. The shortcomings of a narrowly rigorous scientific method often seem to go unacknowledged in these arenas, because the scope the method originally set for itself—the limit that is the very source of its power—has been forgotten.

Throughout this book, I have tried to focus my discussion on specific perspectives on science and literature, specific images (some) people have of science or literature, and specific languages associated with science and literature. It is difficult and often dicey to translate these
conclusions into generalizations about how scientists (or literary critics) think as a group; both are a notoriously and wonderfully varied lot. So the generalizations about some scientists and critics above are soft ones, and they are neither the premise nor the conclusion of this book. They do constitute a personal perspective (or observation, or ideology) that explains my motive for writing this text, and gestures toward what I think is at stake in reading it. Abe’s work resonates for me in the way it bridges science and literature, juxtaposing these two epistemes to expose the unexpected powers and limitations of both—limitations that all too often become invisible to those within a given discourse, and powers that often go unnoticed by those outside it.

To return, then, to the point above, I would argue for a more sympathetic (I would also say more faithful and more rigorous) reading of Abe’s science than Pollack suggests with his analogy to “Borges’s imaginary books.” But Pollack’s invocation of Borges is appropriate to his own argument. For those unfamiliar with the fantastic dictionaries and imaginary reference works described in the essays and short stories of the Argentine writer, a typical example is “a certain Chinese encyclopedia” cited by one of Borges’s narrators, wherein

it is written that animals are divided into (a) those that belong to the Emperor, (b) embalmed ones, (c) those that are trained, (d) suckling pigs, (e) mermaids, (f) fabulous ones, (g) stray dogs, (h) those that are included in this classification, (i) those that tremble as if they were mad, (j) innumerable ones, (k) those drawn with a very fine camel’s hair brush, (l) others, (m) those that have just broken a flower vase, (n) those that resemble flies from a distance. (103)

Borges offers this apparently apocryphal example in “The Analytical Language of John Wilkins,” to suggest the arbitrary nature of classification, and by extension the futility of transparent language. This is a point close to Pollack’s claim about the arbitrary and ideological nature of any framework for knowledge and perception. Despite my considerable sympathy for this claim, I do not believe that science (at least not for Abe) is as arbitrary as Pollack suggests. But I would endorse the comparison between Abe’s encyclopedia and Borges’s if we consider Borges’s book the way Michel Foucault does. Foucault cites the Chinese encyclopedia in his preface to The Order of Things as a fable that jolts us into realizing the limits imposed on us by the “orders” that organize our thoughts (xv). In this respect, it resembles the creative
ways Abe uses science, not just to tear down the systems of science, but to awaken us to new possibilities within science and without.

In his suggestive work on the “encyclopedic imagination,” Michael Foster compares early Japanese reference works on monsters and other oddities with another Borges book, from the short story “Tlön, Uqbar, Orbis Tertius.” In that story the narrator discovers a forged encyclopedia purporting to describe the planet of Tlön. The work is fiction, but it is so complete and convincing (particularly in its description of Tlön’s science and philosophy) that it is widely believed, to the point where it eventually becomes normative for our world, and the real world starts to change to become more and more like the imaginary planet. So in Borges’s story, a fiction about science first changes people’s attitudes toward scientific reality, and then transforms reality itself. Foster compares this with the creative science at work in eighteenth-century Japanese catalogs of monstrous creatures, “reference” works that set out to depict the world and ended up creating new science out of whole cloth. Monsters and monstrous science both turn up frequently in Abe’s texts, and we will return to them in the chapters that follow. But the broader idea that Foster and Borges highlight is the leakage between scientific truth and fiction. This book is in large part about this process of leakage or exchange. Chapter 1 begins with one aspect of that process, by reviewing Abe’s early biography and tracing the complicated exchanges and interactions between the world in which Abe grew up and the worlds of his fiction.