SCIENCE FICTION

SHERRYL VINT

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CONTENTS

SERIES FOREWORD

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INTRODUCTION: WHOSE SCIENCE FICTION?

It has become axiomatic to say that the world is becoming like science fiction (sf). From mobile phones that speak to us (reminding *Star Trek* fans of tricorders), to genetically modified foods, to the Internet of Things and the promise of self-driving cars, people in industrialized nations live immersed in technology. Daily life can thus at times seem like visions from the pulp sf of the 1920s and 1930s—either a world perfected by technology, manifested in events such as the 1939 World's Fair, with its theme "The World of Tomorrow"; or a dystopian nightmare, such as Aldous Huxley's *Brave New World* (1932). How might sf help us conceptualize and respond to a world that has begun to resemble sf, in ways both marvelous and malign? This book provides an overview of how sf grapples with the ways that science and technology shape and change human lives. As introduced here, the genre is a tool for

thinking about and intervening in the world. This book is about what science fiction can *do*, not a catalogue of important authors and titles.

There are many competing claims regarding precisely how to define sf and how to determine when the genre began. Some argue for a long tradition of all speculative writing about science, dating back to Johannes Kepler's *Somnium* (1608) or even earlier. Others link it to utopian writing, beginning with Thomas More's *Utopia* (1516); later utopias offered visions of future societies in examples such as Edward Bellamy's *Looking Backward, 2000–1887* (1888) and William Morris's *News from Nowhere* (1890). Still others see H. G. Wells's scientific romances and Jules Verne's *Voyages extraordinaires* as the "fathers" of a genre whose origins are inextricably linked to science becoming culturally dominant in Western cultures during the late nineteenth and early twentieth centuries. In his insider history of the genre, *Billion Year Spree* (1973), Brian Aldiss influentially dubs Mary Shelley's *Frankenstein* (1818) the first sf novel, a work that fuses the latest innovations in science with a humanist tradition of thinking about society and ethics. A popular trend dates sf's origin to the American pulps of the 1920s, chiefly Hugo Gernsback's *Amazing Stories*, which tapped into an emergent, enthusiastic community of experimenters and technicians. Gernsback is responsible for popularizing the term *science fiction*, a less complicated version of his original "scientification."

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In the first issue of *Amazing Stories* (1926), he announced this was to be a "new sort" of fiction for a century that would chart a new path in literature and "in progress as well."[1] For original fan communities, the Gernsback era was foundational, and his technophilic pronouncements are the core of the genre, but his view represents only one facet of a complex tradition.

Rather than elaborate this history or take a position on the origins of science fiction, this book focuses on what they share at their core: a vision of the world made otherwise and the possibilities that might flow from such change. My goal is to provide neither a detailed history of the genre nor a comprehensive listing of its most important works. Rather, following John Rieder, I am interested in focusing on what science fiction can *do*, how it has been described by a variety of constituencies in distinct ways for multiple ends.[2] I plan to chart how sf is evoked and used by a range of authors and audiences and sketch an overview of how the genre has been—and continues to be—useful for grasping daily life in industrialized, technologized societies.

Although there may be no precise demarcation of what the term *science fiction* denotes, certain images or narratives immediately come to mind: enhanced mobility via rocket ships or flying cars; immersion in digitized environments, from virtual entertainments to perhaps digitally transferring one's consciousness to a new body; and

the idea of *the future*, which may include radically different citizens such as self-conscious robots or genetically modified people, perhaps even aliens. A set of images thus conveys the core of science fiction, even if the boundaries at its edges are indistinct, a situation further complicated by the fact that different communities have diverse ideas in mind when they claim the label and try to define the genre it describes. Many fans and scholars of sf, for example, argue that its print form is inevitably more nuanced than media versions, a claim confusing to twenty-first-century audiences for whom "science fiction" is often synonymous with widely known media texts such as *Star Trek*, which has been on television or film screens in myriad iterations since 1966.

Margaret Atwood's widely circulated claim that she writes speculative rather than science fiction, because she extrapolates from known science rather than inventing futuristic versions of it, embodies the confusion: not only would most readers recognize her most widely known works—*The Handmaid's Tale* (1985) and the *MaddAddam* trilogy (2003–2013)—as science fiction, but most practitioners and fans of science fiction would also agree that much (not all!) sf similarly extrapolates from known science.[3] Indeed, many people use the terms *speculative fiction* and *science fiction* interchangeably, recognizing that, despite the label, the relationship between science and science fiction is neither simple nor direct.[4] Idiosyncratic definitions

and squabbles about the minutiae of genre borders will thus not get us very far. Science fiction is better conceptualized as a tendency, a phenomenon Gary Wolfe describes as a style that evaporates into and permeates much cultural production today.[5] Istvan Csiscery-Ronay Jr. argues that we should understand sf as a mode rather than a genre, a way of experiencing the world that has become normalized in recent decades. He uses the term "science fictionality" to describe this way of perceiving and evaluating things as "if they were aspects of a work of science fiction."[6]

My preference is to understand science fiction as a cultural form that offers an "everyday" language for thinking about and responding to daily life in twenty-first century. Its engagement with science and with the motifs of sociotechnical culture—interplanetary travel, digitized experience and communications, genomic modification, artificial intelligence (AI), and more—is metaphorical, whether the worlds it posits might actually happen or not. The genre asks questions about the impact of science and technology on human experience, values, and ways of living, and even when it explores these issues through scenarios that science tells us are impossible, the genre uses such symbols to comment upon otherwise unnoticed aspects of our ordinary world. For example, Atwood suggests that the impossible Martian invaders in Wells's *The War of the Worlds* (1897) make his creative enterprise fundamentally different from Verne's plausible visions of

more powerful versions of existing transportation technologies. From a different angle, however, we can see that Wells engages contemporary sociotechnical culture just as much as Verne does, using the metaphor of a superior Martian civilization conquering London to raise questions about the role science and technology have played in colonial history.[7]

These struggles over terminology illuminate one of the central tensions that has shaped the sf community as long as we have used this label: Is science fiction predominantly a genre that has to do with plausible scientific extrapolation, perhaps even with educating the public in scientific literacy? Or is it predominantly a literature of social change, often using futuristic technologies to establish that its stories take place in different worlds, but remaining more interested in social than scientific change? Within a decade of the first issue of *Amazing Stories*, the science-inflected Science Fiction League fan group launched by Gernsback fragmented. A new organization emerged, originally called the Committee for the Political Advancement of Science Fiction, later the Futurisms, whose members included influential authors and editors such as Frederik Pohl, Judith Merril, Donald A. Wollheim, and a young Isaac Asimov, and called for sf to be less interested in new gadgets and more engaged in social critique. Claiming the opposite, conservative fan Sam Moskowitz founded New Fandom, dedicated to a vision of "hard" or

scientifically engaged sf that had little interest in social transformation. From its very beginnings, sf has included both science-focused extrapolations and politically engaged visions of the future—and arguments among its practitioners over which element was more definitive of the genre.

Under the influential editorship of John W. Campbell, in charge of the central magazine *Astounding Science-Fiction* from 1937–1973, a technocratic version of hard sf dominated the field mid-twentieth century, shaping long-term perceptions of the genre when the early years of Campbell's editorship subsequently became canonized as the Golden Age. Campbell's strong interventions and rigid views were undeniably a key force in shaping the emergence of American sf, but whether his influence established a Golden Age or was the "worst disaster ever to hit" the field remains a matter of debate.[8] In the 1960s and 1970s, a group of artists calling themselves the New Wave, thereby aligning themselves with the contemporary French *Nouvelle Vague* film movement and surrealism more generally, made efforts to push the genre toward similarly new aesthetics and themes, prompting another conservative reaction within the field—and so on. Science fiction is continually invented and reinvented, at times leaning more strongly on its connections to scientific extrapolation, at others emphasizing its literary qualities and formal capacity to challenge how we see the social world.

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Grasping what science fiction *is*, then, requires understanding that this tension between scientific extrapolation and social change lies at its heart. It adopts a range of aesthetic styles and thematic preoccupations as it explores how the world might be otherwise. My use of the acronym sf is not merely shorthand but reflects my sense that texts circulating under either label—science fiction or speculative fiction—are closely related. Indeed, the meaning of the term "speculative" as involving contemplation or conjecture aptly captures the approach to science and technology adopted by science fiction.

In academic study, definitions based in utopian studies have been influential, if also challenged. Most recognizable is Darko Suvin's contention that science fiction is "*the literature of cognitive estrangement*,"[9] developed in dialogue with works of cultural critique by Bertolt Brecht and Ernest Bloch. All are interested in the power of art to jar us out of commonplace associations or perceptions, to see the quotidian world not in all its self-evident naturalness but as one contingent possibility among many, the product of historical choice. Suvin argues that the best sf aligns with a transformative project of social critique and suggests that the cognitive dimension of sf's estrangement, which he correlates with science, ensures that its imaginative visions remain tethered to a practical possibility in the material world. For him, sf is thus politically enabling and oriented toward real-world change, in contrast

to works of fantasy, which he dismisses as mystifications. Although this rigid genre purification has been rejected in recent criticism—and indeed, never empirically described the bulk of sf in any case—the idea that the genre is about change persists. Suvin's ideal that sf would necessarily embody the perspective of those socially excluded from dominant culture, however, has been thoroughly debunked.[10]

Another influential academic conceptualization of sf comes from Fredric Jameson, who is equally interested in the genre's capacity to offer concrete images of different, ideally better worlds. For him sf's critical contribution is that it reframes the temporal experience of our contemporary moment, recasting the "present" as the "past" from the point of view of a text about the world to come. The genre's function is not to predict the future, as people sometimes imagine and as popular journalism often implies, but rather "to defamiliarize and restructure our experience of our own *present*."[11] For Jameson, what sf figurations of the future demonstrate is the atrophied state of our utopian imagination, the difficulty—perhaps impossibility—of envisioning the radically other, which, paradoxically, reignites this capacity by forcing us to confront our failures and thus "becom[e] unexpectedly transformed into a contemplation of our own absolute limits."[12] Like Suvin, Jameson understands the capacity of sf to push us toward utopian insights that seek to correct the problems of the present world.

Seeing what we take for granted—the "alien" perspective that puts things in a new light—is central to sf's rhetorical capacity. Although an empirical survey of the genre belies the hope that it inevitably gives voice to the marginalized, sf of any political persuasion emerges from this idea of change. This penchant is easily apprehended if we consider the proliferation of sf imagery as the lines between sf and other kinds of fiction blur. For example, a film such as *The Matrix* (1999), hugely influential upon its release, is easily categorized as sf, with its dystopian world of machines harvesting humans for their chemical energy while we remain obliviously trapped in a simulated matrix. Fast forward to the release of the BBC's *Black Mirror* (2011–) just over a decade later, which offers similar narratives about mediated worlds, AI, and surveillance technologies, and this blurring of digital and material identities now appears as a reflection of almost-everyday existence, just slightly askew from the real world. Taking this comparison one step further, we might consider the US Air Force's early 2010s advertising campaign under the slogan "It's Not Science Fiction; It's What We Do Every Day," an update of earlier slogans that emphasized action and adventure: "Do Something Amazing" and "We Do the Impossible." This use of "science fiction" suggests that the Air Force is already living in the future due to its cutting-edge technology. The last example sees sf evoked less as futuristic fiction and more as aspirational blueprint.

The contrast between *Black Mirror*'s dystopian warnings about digitally mediated futures and the Air Force's celebration of a similar technology reminds us that sf is equally about frightening nightmares and wondrous dreams. If on the one hand its images inspire us to achieve more, to transcend material limits (a frequent motif), then on the other it warns us of potential consequences that come with social change—that new technologies disrupt as much as they improve. Jameson's notion that sf positions us to think critically about the future we are making is relevant equally to scientific and cultural change. Aligning sf with discourses of economic profit and enhanced consumer products, advertisers embrace sf imagery to make their products seem to usher in the world promised by technophilic stories. This is beautifully captured, for example, by Megan Prelinger's *Another Science Fiction* (2010), a photo anthology of futuristic advertising imagery from the mid-twentieth century.[13] At the same time, activists critical of the status quo draw equally on sf techniques to articulate visions of a new world. Celebrated traditions such as feminist sf, now honored annually by the James Tiptree Jr. Award,[14] and *Afrofuturism*, a term used to describe sf works that envision futures rooted in African aesthetics and experience, are grounded on the belief that sf helps us see the given with new eyes, thereby to challenge systems of patriarchy, racism, and other injustice.[15]

As of this writing, science fiction is widely and diversely embraced by many communities of practice, often to significantly divergent ends and with correspondingly different aesthetic and formal strategies. Following the success of feminist and African American engagement with the genre, other marginalized groups have turned to sf as a vital mode of critique, including Indigenous sf, Latinx sf, and Asian diasporic sf. The past decade has seen a significant increase in sf works by writers of color, among them N. K. Jemisin, Rebecca Roanhorse, Junot Díaz, and Ted Chiang, to name just a few. Activists are also overtly embracing sf as a tool, emblematized by works such as *Octavia's Brood* (2015), edited by adrienne maree brown and Walida Imarisha, a book of activist strategies and new fiction inspired by sf author Octavia E. Butler; and by Shelley Streeby's *Imagining the Future of Climate Change*, a book that highlights how environmental activists draw on sf imaginary.[16] The Civic Imagination Project, founded by fan studies scholar Henry Jenkins, charts how people draw on sf texts in their work to articulate collective visions and practices for a better world.[17] A recent collection of new fiction, *Resist: Tales from a Future Worth Fighting Against* (2018), was published as a fundraising effort, with all proceeds going to the ACLU.

Science fiction is also increasing becoming—in many cases, becoming recognized as—a global genre. Attempting to comprehensively map what sf is or is not, Andrew

Milner draws on world systems theory to argue that sf emerged from a cultural dialectic between Enlightenment and Romanticism, and thus appeared first in European countries as they industrialized.[18] Setting aside Milner's larger arguments about innovation and influence, I want to focus on this relationship between a cultural turn toward sf and the intensification of technological innovation. Into the twenty-first century, as more and more of the world becomes industrialized, urbanized, and especially linked into global networks of information and capital, we see speculative fiction emerge in new locations. The global embrace of sf, which includes the emergence of sf traditions in China, the Middle East, Latin America, Korea, India, and beyond, is among the most exciting ways the field is changing. Numerous websites are devoted to tracking and cultivating these developments, and the Apex Book Company (founded in 2004), a publisher focused on speculative texts, is now on the fifth volume of its World SF series, which translates stories from around the world into English.[19]

Joining Apex, Rosarium Publishing (founded in 2013) is dedicated to promoting a multicultural tradition in sf, while the online sf magazine *The Future Fire*, launched in 2005, focuses on social and political themes. As well as establishing a correlation between the widespread proliferation of technology and the appeal of sf, this burgeoning of world sf tells us something about traditional gatekeeping functions in the history of Anglo sf. Influential editors

such as Campbell imposed restrictions on the genre as it developed, encouraging some voices and perspectives, while attenuating those of others. Often these were voices of women and people of color.[20] Previously the control of editors or other industry gatekeepers was a barrier to participation in the field, but in an era of digital publishing options and on-demand printing, diverse communities can establish their own venues for distribution. Had the genre always embraced such pluralistic voices, we might have a very different set of images that spring to mind when we hear the term *science fiction*. The increased prominence of these new voices suggests that sf into the twenty-first century will be a very different thing from sf of the past.

The transformation of daily life by technology has intensified in the West as well, marked by the increased convergence of sf and other literatures and by the dominance of sf scenarios in other media, especially video games. Moreover, sf techniques are increasingly embraced as a tool in industry, with terms such as "sf prototyping" and "design fiction" being adopted by technology companies to describe the importance of imagination and play in the development of new products. Universities have begun to offer programs in "innovation studies," which, while not strictly sf, clearly draw upon its strategies and aesthetics. I agree with Roger Luckhurst who argues that sf as an identifiable form appeared in the mid- to late nineteenth century, just as the pace of technological change visibly

disrupted social norms within a lifetime.[21] The pace of change has only accelerated since then, and the more we expect the future to differ from the present, the more sf becomes a dominant cultural form. For example, institutions such as Arizona State University's Center for Science and the Imagination position themselves to speak equally to industry and to artistic communities, often commissioning new fiction to further conversations about technological change.[22]

In this book, I will map out the current critical discussion regarding science fiction, especially as the genre intersects with areas of current research in science and technology. My main goal is to demonstrate that sf is an extension of what science studies scholar Sheila Jasanoff calls the sociotechnical imaginary, which she defines as "collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology."[23] She recognizes sf as one site of such visions, but I want to suggest that sf also does something more that is urgently needed—namely, it critically interrogates who is part of the collective creating these "shared understandings." Social as well as technological change is at stake in sf, which helps us think through whether "advances in science and technology" are also always advances in civic and social life.

This book is neither a history nor a survey of sf, but a selective description of the genre as something like a toolkit for thinking through urgent issues in social life today. My examples will come predominantly from recent texts published in English: I want to highlight how and why sf is relevant to conversations at this moment, and I recognize that many other examples could be used. For those interested in a history of the genre and arguments about sf's canon, excellent published histories are already in print as detailed in the further reading section. This short book can offer only illustrative examples of the concepts I outline here, not a full listing of every important text in the sf canon. Indeed, my hope is that readers build on this brief sketch, to fill in and augment my theorization of what sf can do by putting it in dialogue with a wider range of texts drawn from even more communities of practice. The chapters that follow look at sf's dialogue with the utopian tradition, its relationship to colonialism, how sf has become the poster child for speculative design, how it has anticipated and responded to innovations in key contemporary industries of robotics and genomics, and how it illuminates two important social forces shaping our world, climate change and speculative finance. If we are living in a science fiction world, this book aims to help us articulate more precisely what that means and to prompt us to think about actively managing—rather than passively awaiting—this future.