

Introduction

COMPLEXITY, GEOPOLITICS, AND THE SOCIAL ORDER

*Introducing Multimedia Analysis into Global Histories
of Evolution and Religion*

ALEXANDER HALL AND WILL MASON-WILKES

In 1959, as Franco's regime sought to exert tighter control over communications about science, a group of leading Spanish scientists and elite theologians met for the first of a series of annual meetings on evolution and Catholicism. The meetings, held at Poblet Abbey outside Barcelona, were an attempt to come up with a version of evolutionary science that was compatible with the regime's Catholic nationalist ideology and would provide the Spanish public the boundaries and language for acceptable discussion of a topic viewed by the regime as too materialistic. Evolutionary science was a topic of increasing potential consternation for the regime because of its perceived threat to Catholic doctrinal teaching around the origins of life and associated existential and moral questions. Thus, controlling media coverage of the subject increasingly fell within the Francoist government's purview. Complicating matters, notable international successes by Spanish evolutionary scientists, in particular the 1959 Nobel Prize-winning biochemist Severo Ochoa (1905–1993), were viewed by the regime as an opportunity not to be missed in its quest to present an increasingly modern and liberal face to Spain's international neighbors. The solution was a state-sponsored rapprochement that theologically assessed and adapted evolutionary ideas for mass Catholic consumption. The meetings at Poblet came up with a new, nonmaterialistic, finalistic, and theistic evolutionary framework, which, in a carefully tailored form, was communicated to the public via the state-controlled media.

The Poblet meetings, discussed by Clara Florensa in chapter 6, aligned well with the work of leading Spanish paleontologists who at the time were already trying to define a "southern school of evolution" in opposition to the overly materialistic neo-Darwinian hegemony prevalent in the Anglosphere.

In doing so, they continued a tradition of critiquing materialistic concepts associated with evolutionary theory, which extended back to the beginning of the twentieth century and to writers such as G. K. Chesterton and Hilaire Belloc. In chapter 1, Peter J. Bowler introduces debates, which took place in popular and affordable books, between these conservative writers and more progressivist and materialist thinkers, chief among them H. G. Wells. These debates centered on the appropriate role evolutionary thinking should play in understanding nature and humanity, as well as the place of the latter in relation to the former. The issues that Bowler's chapter introduces signal the wider central thread that ties this wide-ranging collection together. By exploring a range of popular media forms across a multitude of different geopolitical contexts from the 1920s to today, this book analyzes the ways in which evolutionary theory has been understood as, or indeed has been mobilized explicitly for the purposes of, addressing wider sociopolitical questions. In doing so, it is the first collection of its kind to explicitly explore the role of popular media formats themselves as mediators in institutional debates on the relationship between evolution and religion.

A century after the in-print debates between Wells, Chesterton, and Belloc and more than fifty years after the gatherings at Poblet, many of the issues they grappled with remain relevant today. For example, as discussed by Rachel S. A. Pear, Nigmeh Abu Toameh Kadan, and Israel Belfer in chapter 11, natural history museum curators in Israel, in attempting to communicate scientific knowledge about evolution to as wide an audience as possible, sometimes consider accommodations due to the various beliefs of audiences of different faiths, including Haredi, Orthodox, and secular Jews, as well as Muslims and Christians. To do so successfully means acknowledging their different beliefs and tailoring content accordingly—a process of accommodation that has occasionally drawn criticism. In addition, for some, especially those committed to a conflict framing of the relationship between science and religion, such accommodation may seem like a concession. However, this approach is in fact enshrined within the Israeli legal system, which provides unique protections from religious offense. Here again, we come across another way in which the framing of the relationship between evolution and religion in public is shaped by the wider sociopolitical and, in this case, legal landscape.

Whether via legislation or media messaging, it is not just governments that have sought to influence popular discussion of evolution and belief in society. Across various times and locales, major institutions, religious groups, media producers, and other sociopolitical actors have sought to co-opt or re-frame the narrative regarding evolutionary science and traditional religious ideas. Perhaps counter to prevailing expectations, relevant actors such as conservative religious groups have even deployed evolutionary theory to

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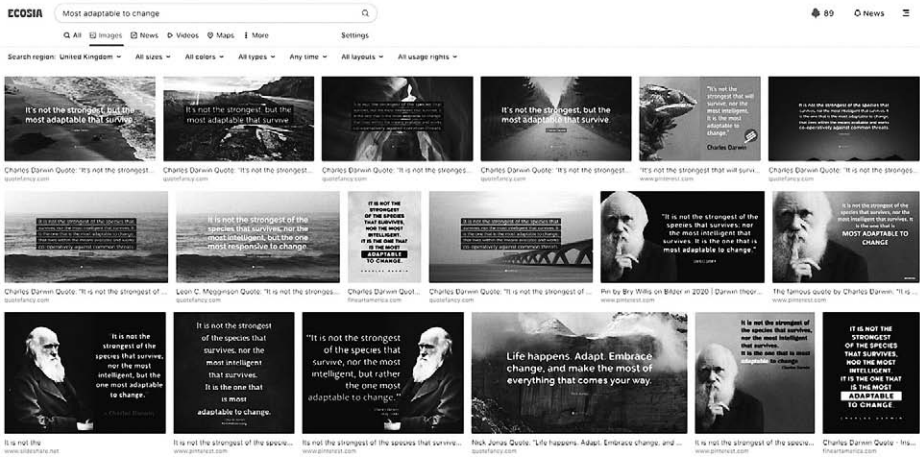


FIGURE I.1. The results of an image search on ecosia.org for “Most adaptable to change.” Note that among the attributions to Darwin there is one result that correctly attributes the quote to Leon C. Megginson, showing that myth-busting online to correct misinformation can have some (very limited) results.

bolster their arguments against feminist movements for gender equality and women’s emancipation. As Nayanika Ghosh details in chapter 8, this was the case in the United States, where during the 1970s and 1980s in popular and widely circulated magazines such as *Time* and *Playboy* the ideas of the prominent sociobiologist E. O. Wilson were used to support conservative Christian calls for “traditional” family structures and to argue against an expanded role for women in the workplace.

All of these examples demonstrate the varied and divergent ways that evolutionary ideas continued to be interpreted and reframed during the twentieth and early twenty-first centuries. In this volume, our aim is to explore the ways that different mass media have been utilized in wide-ranging local encounters at the interface of evolutionary ideas and nonscientific traditions and ways of understanding life on earth. In doing so, we see how different evolutionary traditions and figures have been championed or discredited by different religious traditions, their spiritual leaders, and politicians using the cultural authority of religion as leverage. Further, we see that where episodes have spilled into popular consciousness, they are usually not driven solely by epistemological clashes between science and religion; rather, this framing is used to serve and further the aims of political, social, and cultural actors and institutions (including both religious and scientific organizations).

The title of the volume, *Most Adaptable to Change*, is taken from a mis-

quotation widely attributed to Charles Darwin and first popularized in the 1960s by Leon C. Megginson, a professor of management and marketing at Louisiana State University. Today the phrase, still beloved in business management literature, has also proliferated as an inspirational meme via the internet (fig. I.1). This proliferation has occurred despite the careful research of the biologist Nicholas J. Matzke and a series of articles highlighting the erroneous attribution to Darwin, most notably by historians of science working on the Darwin Correspondence Project.¹ We have opted to use the phrase as the title of our volume, not to draw the ire of historians attempting to stymie its association with Darwin but rather as an opening apologue that encapsulates some of the issues central to the case studies in this collection.

As Matzke, science historian John van Wyhe, and others have detailed, there is no evidence to suggest that Megginson ever set out to misquote Darwin or attribute something erroneous to the already eminently quotable nineteenth-century naturalist. Rather, “most adaptable to change” was a paraphrasing of Darwin that Megginson regularly used in his business lectures, and he then included it as a paraphrased reflection of Darwin’s work in several journal articles he published in the early 1960s. However, by the 1980s a version of the phrase attributed directly to Darwin appeared on a page of quotes in a business textbook.² The unchecked proliferation of this humble quote, in combination with its own cultural evolution as its wording became more condensed when it was reproduced online, neatly highlights the messy and intractable role multimedia systems play in the (mis) transmission of scientific ideas and knowledge. The misquote’s origin as an oft-wheeled-out paraphrase by a business professor highlights the influence that those outside of the natural sciences have often had in shaping popular understandings of evolution. Furthermore, that Megginson’s misquote is a fairly good summary of Darwin’s position as included in later editions of *On the Origin of Species* alerts us to the fact that many of the nonscientists popularizing evolutionary ideas in the media, whether in relation to religion or just in communicating scientific knowledge, have done so in good faith and, of course, often with more lasting impact than some of the more austere and didactic efforts by some natural scientists!

Whether detailing a genuine misunderstanding of evolutionary biology, an earnest philosophical conjecture with regard to evolutionary ethics, or a more premeditated political misappropriation of an evolutionary concept, the following chapters are full of case studies exploring how mass media have been used to negotiate the relationship between evolutionary biology and its associated social dimensions, as well as a wide range of traditional religions. From the more familiar deliberations between scientific and religious elites who used print media to popularize their positions, to more democratic contemporary sites of mediation, such as the popular Turkish

science communication website and YouTube channel *Evrım Ağacı* (Tree of Evolution), the following chapters demonstrate that across the twentieth and into the twenty-first century, evolutionary science has prompted and spawned a great number of contestations, allied social ideas, and philosophical reflections on humanity's place in the world.

In dealing with such a wide scope—temporally, geographically, and in media format—we have encouraged our contributors to explore beyond evolutionary biology's scientific boundaries. This broader focus on evolutionary themes helps us to incorporate the messy fringes, where biological evolution has been co-opted by politicians, religious fundamentalists, and others keen to use its application to shape the social order.³ The cast required to undertake such an expansive global exploration is equally diverse. The development of the collection has been inherently multidisciplinary from its inception, being the collaboration of a historian of science (Alexander Hall) and a science and technology studies scholar (Will Mason-Wilkes). The chapters that follow feature contributions from social historians, historians of science, science and technology studies scholars, sociologists, media studies scholars, a theologian, and a linguist. The book is just one publication among many that have grown out of the large multidisciplinary project *Science and Religion: Exploring the Spectrum of Global Perspectives*, funded by the Templeton Religion Trust, which has employed researchers in nine universities around the world.⁴

In designing the collection, we wanted to ensure that the case studies represented as wide a range of locales as possible, and while our ambitions in this regard were stymied somewhat by the COVID-19 pandemic, we still have chapters from all corners of the world. From evolution and religious cosmologies in African literature to evolutionary themes in blockbuster Japanese anime films, the global scope of the geographical contexts and the wide range of media forms the chapters analyze render the volume as a whole a unique and timely contribution to scholarly literature on science and religion.

This collection has been developed alongside another volume from the same research project, also published by the University of Pittsburgh Press: *Evolutionary Theories and Religious Traditions: National, Transnational, and Global Perspectives, 1800–1920*. Edited by historians of science Bernard Lightman and Sarah Qidwai, this parallel collection is similarly global in scope and features regional case studies analyzed with both a transnational and a postcolonial lens. Lightman and Qidwai's volume is part of emergent literature and wider trends under which historians of science and religion have begun the task of expanding their scope and incorporating transnational perspectives.⁵ Pursuing a transnational history illuminates the ways in which ideas, both scientific and religious, and practices of communication

have moved between and across specific national and regional contexts. In raising its gaze above the level of the national to the transnational, Lightman and Qidwai's collection reveals how processes of intellectual and practical translation, transplantation, and hybridization impact the popular communication and reception of scientific and religious ideas around the world.

In a similar vein, this volume seeks to attend to the ways that, in the globalized and networked world of the twentieth and twenty-first centuries, where media forms and formats have proliferated alongside media audiences, popular communications have increasingly come to disrespect national borders. Indeed, in the contributions to this volume we can trace a culmination of processes that are identifiable in Lightman and Qidwai's collection. For instance, in our Latin American chapters, by Miguel de Asúa (chapter 2) and by Elisa Sevilla and Ana Sevilla (chapter 3), we see how European scientific and religious ideas are first imported but then refracted through a local lens to serve local sociopolitical needs. Ultimately, this refraction has led to popular representations that offer a version of the relationship between evolution and religion that is familiar to an extranational audience but with an indelibly local flavor. In more recent cases, we see how these transnational processes accelerated. Mason-Wilkes and Hall's contribution (chapter 4) highlights how increasingly popular television representations rely on a type of institutionalized transnationalism in the form of coproduction deals between broadcasters (for instance, the BBC and China Central Television) to produce content expected to be viewed by audiences around the world. In a similar vein, in chapter 10 Alper Bilgili highlights the role online platforms with a global reach play in facilitating the spread of content to audiences beyond the immediate national context in which they are created. Likewise, in chapter 9 Hiroko Miyashita and Alexander Hall highlight how the representations of evolutionary and religious themes in Japanese manga and anime have helped to shape the contemporary global popularity of these genres. In partnership with Lightman and Qidwai's collection, this volume further enhances claims for the necessity of understanding that popular representations of evolutionary and religious ideas and the relationship between them, both historically and contemporaneously, are shaped through transnational processes.

Although this collection is unique in both its global reach and multimedia focus, it builds on a wealth of extant literature exploring the relationship between the history of science and religion and the representation of science and religion in the media. In this way, this collection is situated within and builds upon literature on the history of science and religion, which has to date shown that, since the first iterations of evolution as a concept in the nineteenth century, the interactions between evolution and religion have been varied and complex.⁶ In keeping with such works, the chapters in this

collection, whether dealing with state, religious, or scientific authorities, show that no single pattern, whether accommodation, separation, or conflict, can comprehensively account for the variation and nuance found across cultural engagements with evolution and religion as evidenced across a diverse range of popular mass media. While the first two parts of the volume—with the opposing framings of the relationship between evolution and religion their chapters identify—speak to this theme, the third part of the volume is an explicit nod to this well-established tradition of historical research. The chapters in this final section emphasize the ways in which local geographical and historical contexts can override or complicate “grand narratives” about the relationship between evolution and religion. Furthermore, with their more contemporary focus, these chapters highlight how the diversification and democratization of media communication platforms and channels may have helped to further accelerate this growing complexity.

As ably demonstrated by historians of science, the emergence and popularization of evolutionary ideas within a scientific framework in the second half of the nineteenth century caused widespread discussion, debate, and disruption.⁷ Such impacts occurred not only in the Western Hemisphere, where many of the most famous scientists involved were working, but also, as an increasing body of literature shows, in other parts of the world.⁸ In the first half of the twentieth century, evolutionary sciences continued to develop at pace, undergoing mathematical and genetic turns, which were eventually bound together under the aegis of the modern evolutionary synthesis.⁹ Fueled by these developments, neo-Darwinian evolutionary theory continued to have an impact on areas as wide ranging as ethics, politics, and religion and to reverberate across societies around the world.¹⁰

Whether employed to justify racist scientific ideas, such as early twentieth-century work on eugenics (discussed in chapter 1), or to prop up authoritarian ideology (see chapter 6), significant controversies around the science of evolution continued to flare up across the globe during the twentieth century. While multiple accounts have been written about such flashpoints, to date the majority of histories are siloed by the geographical location and the scientific milieu within which they occurred.¹¹ In keeping with wider trends in scholarship on the history of science and religion that urge us to go beyond controversy to explore complexity, historians have begun the significant work of globalizing the history of evolutionary science and interrogating more roundly its influence upon diverse societies.¹² In extending beyond a focus on controversy, or “myth-busting,” recent scholarship has also begun to analyze the impact of evolutionary ideas on popular culture and more everyday, seemingly mundane aspects of society.¹³ In this volume we further address recent transnational approaches to the history of science and religion by situating the case studies within their larger social, political, eco-

nomic, and cultural circumstances. In focusing on popular representations across diverse contexts, we provide new explanations for the persistence of conflict and harmony narratives and propose new ways the field can grow and evolve, building on the foundations of the complexity thesis.¹⁴

During the interwar period, the means by which ideas—including Darwinism and neo-Darwinism—could be communicated over distances to new mass audiences began to expand beyond print, as radio broadcasting technology emanated outward from Europe and North America.¹⁵ With this proliferation of media channels came a concomitant diversification in the ways in which evolution and religion were related, within an increasing diversity of media genres and formats. Throughout the volume, but most insistently in the final part, building on recent work on evolution as it appears in popular culture and media (particularly the work of Hall and Mason-Wilkes), we attempt to come to grips with the multimedia expansion of the second half of the twentieth century and the first decades of the twenty-first century. Drawing on sociological, ethnographic, linguistic, and media studies methodologies, the chapters in this final section of the book explore how diverse formats—from museum displays to popular websites—have affected, shaped, and interacted with the communication and understanding of evolutionary science in diverse geopolitical contexts. The contributors demonstrate that, as media formats diversified across the twentieth and into the twenty-first century, so too did the narratives and representations of the relationship between evolution and religion. Nevertheless, as the volume as a whole attests, despite this diversifying landscape, key narratives, particularly those relating evolutionary ideas with ideas of societal and human progress, perpetually resurfaced and continued to be redeployed throughout the time period covered.

Given their disciplinary diversity, the chapters in the volume build on a wide range of literature on the relationships between science, religion, and mass media in historical and contemporary societies. Whether focusing on religion or science, several studies have empirically demonstrated the important role that mass media systems play in creating and popularizing ideas, as well as the dominant or hegemonic lens through which society understands them.¹⁶ In contrast to the history of science and religion, however, work exploring evolution and religion in more contemporary media is fragmentary and limited to a few case studies, which are once again often focused on specific flashpoints. For example, studies in both the United States and United Kingdom have shown the importance of science popularizers and celebrities in shaping attitudes toward science and religion.¹⁷ Meanwhile, the most comprehensive analysis and reflections on how science media producers utilize religious framings, language, and modes of affect in their output come from Mason-Wilkes's work.¹⁸

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The chapters are arranged into three main thematic sections. Each part contains an internal chronology, with the contributions in the first two parts, “Evolution, Religion, and Progress” and “Evolution, Religion, and Reaction,” covering the period from the interwar years of the 1920s through the end of the Cold War in the early 1990s. The third part, “Evolution, Religion, and Complexity,” examines late twentieth- and twenty-first-century case studies, albeit with added relevant historical context.

The chapters were developed via an online workshop and then iterative draft revisions, with the distinct themes of each part emerging organically as individual contributors developed their case studies in light of the other scholars’ work. Reinforcing the main argument of the collection as introduced above, the three thematic parts of the book highlight that although the ways in which evolutionary ideas have been communicated and co-opted are diverse and locally contingent, these case studies in their broadest conception do map on to wider global histories of science and geopolitics in the (long) twentieth century.¹⁹

Beginning part I, “Evolution, Religion, and Progress,” historian of biology and popular science Peter Bowler introduces in chapter 1 some of the debates around Darwinism and religion that took place at the beginning of the twentieth century in Britain. These debates involved prominent anti-Darwinian Catholics, including Hilaire Belloc and G. K. Chesterton; pro-Darwinian evangelical Christians such as Canon (later Bishop) E. W. Barnes; scientists, most prominently paleoanthropologist Arthur Keith; and later humanists as well, most vitally H. G. Wells and Julian Huxley. Bowler shows how these debates, though carried out in popular and widely read books, involved both “scientific” and “social” elements, with critics arguing that Darwin’s ideas were both scientifically untenable and socially disastrous. Defenders of Darwin, in contrast, argued that his ideas aligned with humanist visions of progress and could therefore offer humanity hope for the future.

Chapter 2 sees historian of science Miguel de Asúa explore the discussion of evolution in Catholic cultural magazines, which flourished in Argentina from the 1920s to the 1940s. Asúa analyzes articles on Darwin and evolution in the intellectually sophisticated magazine *Criterio*. Those articles were the work of the Catholic biologist Emiliano Mac Donagh, who held a finalistic and theistic version of evolutionary theory. Asúa also looks at the antievolutionist campaign by the Jesuit amateur anthropologist José María Blanco deployed in *Estudios*, a Jesuit cultural journal published monthly in Buenos Aires. These two cases, which are representative of the wide spectrum of Catholic opinion on this issue in Argentina, are discussed against the background of the larger “evolution wars” occurring in the secular and Catholic press. The interwar years saw the emergence of prestigious,

high-profile Catholic scientists who, though politically conservative, were not averse to defending versions of evolution theory compatible with Catholic doctrine.

In chapter 3, historians of science Elisa Sevilla and Ana Sevilla explore how Charles Darwin and evolution were discussed in Ecuadorian popular media during the 1930s centenary celebrations of the *Beagle's* voyage to South America. Sevilla and Sevilla use the centennial celebrations to analyze the role Darwinism played in contestations between scientific and religious authorities in the region. The chapter explores the public discussions of the teaching of evolution within a framework of the dispute over the relationship between church and state in a period after radical liberal reforms in Ecuador. The authors show how debates around evolution and conservation in the Galápagos Islands migrated from academic to popular media in an era of media technology modernization, where new mass media forums became spaces where the role of science in society was frequently debated.

In chapter 4, the final contribution to part I, Will Mason-Wilkes and Alexander Hall trace developments in the representation of science and nonreligion in BBC “blue-chip” television science documentaries, focusing on Jacob Bronowski’s *The Ascent of Man* (1973) and Brian Cox’s *Wonders* series (2010–2013), which continue the “progressive” tradition identified in Bowler’s chapter. Mason-Wilkes and Hall identify a shift from *The Ascent of Man’s* explicit positioning of science as underpinning philosophical humanism to the *Wonders* series’ implicit representation of science as grounds for a totalizing worldview, without direct reference to humanism. In *The Ascent of Man*, evolutionary narratives were enrolled as aligning with and justifying a humanist perspective, while in the *Wonders* series evolutionary narratives provided the material from which a grand narrative of creation built purely from “scientific” knowledge can be fashioned. The authors discuss this representational shift in the context of a changing media and cultural landscape—specifically, developments in viewing technologies, institutional and production process changes at the BBC, and a perceived divergence in the prominence and cultural authority of science and religion in British society in the period from 1970 to 2015.

In part II, “Evolution, Religion and Reaction,” social historian Saurabh Mishra explores in chapter 5 the surprisingly frequent discoveries of “feral children” in colonial India. In doing so, Mishra shows that while the idea of feral children had existed in European and Indian mythologies for a long time, there was a distinct shift in the tone and tenor of discussions in the late nineteenth century, such that these storied children began being linked almost exclusively with the so-called untamed tropics. Focusing on 1920–1940, the chapter explores the deep interest that Christian missionaries and

people from other religious groups had in these children, an interest that coincided with their greater use in scientific tracts on evolution and child psychology. Mishra explores these varied dimensions of the subject, while underlining the ways in which the idea of feral children transformed itself in its travels from the tropics to the scientific metropolises.

In chapter 6, historian of science Clara Florensa discusses the series of meetings that brought together scientists, philosophers, and theologians from 1959 to 1967 at Poblet Abbey, a Cistercian monastery in Spain. The participants sought to devise a version of evolution appropriate for communicating to the public under the Francoist dictatorship (1939–1975). In seeking to legitimize its anticommunist Catholic ideology, Franco’s regime favored the popularization of a nonmaterialistic, finalistic, and theistic view of evolution, constructed in opposition to neo-Darwinism. However, the neo-Darwinian view of evolution was becoming hegemonic worldwide, while the Second Vatican Council (1962–1965) updated and modernized several aspects of the Catholic Church, and both circumstances threatened the fundamental tenets of Franco’s regime. By analyzing the press coverage, leaflets, and programs of the Poblet meetings, as well as the articles written about them in scholarly publications and the internal minutes preserved at the monastery, Florensa’s chapter addresses the scientific communication model of Franco’s dictatorship, as well as the importance of public discourse on evolution for the construction, legitimation, and perpetuation of Franco’s regime.

In chapter 7, the theologian Harvey Kwiyani and sociologist of religion Sheila Akomiah-Conteh explore African evolution and traditional religious cosmogonies in popular African media representations, focusing on the best-selling novels *Things Fall Apart*, by Chinua Achebe (1958), and *The River Between*, by Ngũgĩ wa Thiong’o (1965). Focusing on human origins, the chapter explores how the colonial imposition of both Judeo-Christian religions and modern science has affected the cultural framing, public understanding, and acceptance of evolutionary science in many African contexts. The chapter draws the comparative media review into conversation with contextual histories of West and East Africa and the authors’ extensive knowledge of the complex religious identities found in the region. Kwiyani and Akomiah-Conteh conclude that one can only understand how traditional African cosmological ideas about the origins of humanity have been incorporated into modern African identities—whether in service of Judeo-Christian faith or the rejection of evolutionary science—through a critical postcolonial lens.

In chapter 8, anthropologist and historian of biology Nayanika Ghosh scrutinizes the claim that in the 1970s sociobiology upended convention rather than simply providing a “legitimate” basis for gendered views.

Ghosh argues that sociobiology acquired its “rebellious” identity through obfuscation of its links with political conservatism. This was achieved in print media by suggesting that sociobiology, despite favoring a natural basis for traditional gender roles, was consistent with gender equality; by never platforming critics (particularly feminist ones), while representing them as misguided Marxists whose ideology was antithetical to science; and by using powerful religious imagery that disguised the reality that sociobiology faced scarcely any religious opposition. Ghosh concludes by suggesting that through such obfuscation, the media created the conditions under which twentieth-century US sociobiologists could credibly proclaim themselves heroic victims of persecution, the Galileos of their time.

In chapter 9, the opening contribution to part III, the final section, “Evolution, Religion, and Complexity,” linguist Hiroko Miyashita and historian of science Alexander Hall analyze the religious and scientific influences on Japanese manga (graphic novels) and anime (animated films), exploring the manifestation of evolutionary themes within some of the most popular content of the genres: the 2001 anime film *Spirited Away* and the science fiction story *Ghost in the Shell* (manga series 1989–1990, animated film 1995). The chapter begins with a brief history of Darwinism in Japan and of manga and anime’s development, highlighting how the Shinto and Buddhist themes in the illustrated historical handscroll *Chōjū-giga* greatly influenced the medium. Both case studies demonstrate that these Shinto and Buddhist themes remain central in contemporary popular output, while *Ghost in the Shell* draws ideas and themes more explicitly from evolutionary science. With a story line thematically centered on the intersection of religion, posthumanism, and transhumanism, Miyashita and Hall highlight a key disjuncture between Japanese and Western sci-fi. The authors conclude by reflecting on how the centrality of religious influences in manga and anime has itself shaped the genres’ incorporation of evolutionary themes. They posit that this ability to interrogate questions pertaining to evolutionary ethics and the future of humanity within a religious moral framework is a central component of Japanese manga and anime’s global appeal.

In chapter 10, sociologist of science and religion Alper Bilgili examines the role the popular Turkish website *EvrİM Ağacı* has played in the popular discussion of evolution and religion in the region. The analysis is situated within the longer history of science and religion in Turkey, a controversial issue for Turkish intellectuals and the Turkish state since the mid-nineteenth century. Although dissenting voices have always been raised, the Turkish state dramatically lost its monopoly on religious discussions with the advent of widespread internet use in Turkey, which provides a platform for unorthodox actors, both religious and nonreligious, to reach publics they were not able to influence before. The influential popular science

website *Evrım Ağacı* (meaning Tree of Evolution) is one such unorthodox actor; it has more than three million subscribers on YouTube and one million followers on X (formerly known as Twitter). In analyzing *Evrım Ağacı*'s presentation of the relationship between science and religion, Bilgili argues that the website presents a complicated and sometimes contradictory picture of the relationship between science and religion. This is attributed to a lack of formalized and institutional processes in the creation of internet media content, which is thus more fluid and contingent upon individual content creators' input.

The closing contribution to the volume, by science and technology studies scholars Rachel S. A. Pear, Nigmeh Abu Toameh Kadan, and Israel Belfer, focuses on the representation of evolution in natural history museum exhibitions in Israel, which cater to the country's diverse religious population in a variety of ways. Their analysis includes the Museum of Natural History in Jerusalem, which concealed an exhibit on human evolution to accommodate the sensitivities of Haredi (ultra-Orthodox) educators visiting with local schoolchildren; the Steinhart Museum of Natural History at Tel Aviv University, where the evolution exhibit is housed on the top floor; and the Biblical Museum of Natural History in Beit Shemesh, where evolution is not included in exhibits, to serve the aim of attracting Haredi visitors. This chapter explores the stories behind such curatorial decisions and probes stakeholders' thoughts regarding if and how to present evolution, as well as the manner in which these decisions have been received by publics. This case highlights socio-legal aspects that are specific to the Israeli context and in doing so reinforces the importance of a transnational approach, which necessitates attendance to both the local and global in making sense of evolution and religion in popular media.

Whether focusing on the press in 1920s Latin America or contemporary multimedia streamed online, we hope that the case studies presented, and the case for their inclusion in this somewhat eclectic volume, inspire you as much as they have us in our roles as editors. As a first attempt at bringing together a multidisciplinary cast of scholars working on evolution, religion, and popular media, this volume does not aim nor claim to be comprehensive or exhaustive. While the most notable absences, such as the lack of inclusion of a Muslim-majority context from the Arabian Peninsula or the Indian subcontinent are due to participants withdrawing during the pandemic, other omissions come simply from a lack of scholars working on these subjects in certain regions. We hope, then, that this volume can inspire further study of evolution and religion in society in locales and contexts where these issues have not yet been considered pertinent. Nevertheless, in pushing the fields of the global and transnational history and sociology of science and religion into the twentieth century and beyond, this volume makes important in-

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roads into the vast wealth of untold (hi)stories on the subject. By incorporating diverse popular media formats into our analysis, we have demonstrated that the academic study of science and religion must look beyond solely textual and elite discussions to fully understand the complex interrelations of evolution and religion in society.