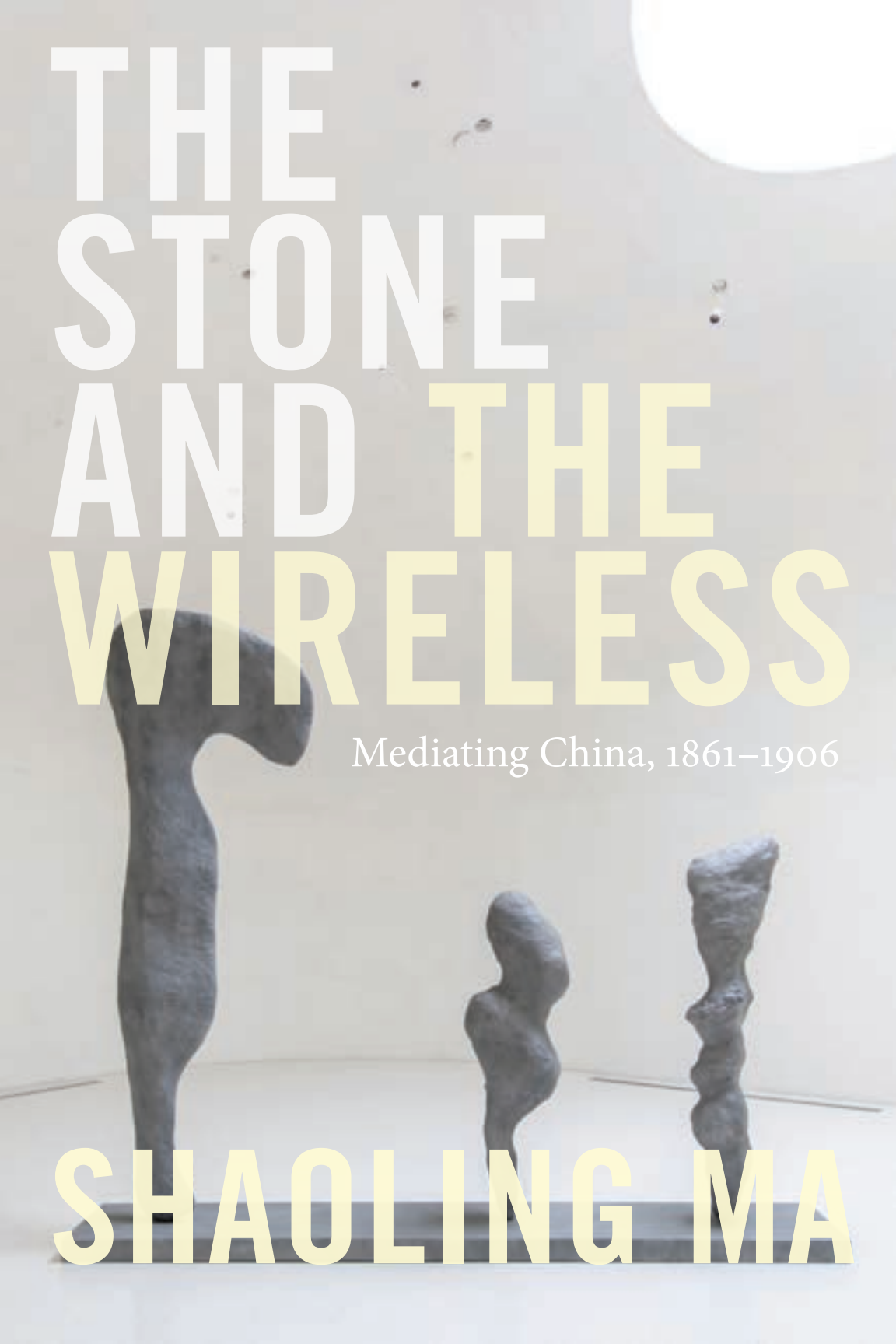
THE STONE AND THE WIRELESS
Mediating China, 1861–1906
SHAOLING MA

The Stone and the Wireless

SIGN, STORAGE,
TRANSMISSION

A series edited by
Jonathan Sterne
& Lisa Gitelman

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Mediating China, 1861–1906

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For S. B.

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INTRODUCTION

The Forms of Media

What do media do? Over the last few decades of the Manchu Qing dynasty (1644–1912), writers, intellectuals, reformers, and revolutionaries grappled with this question without knowing they were doing so. They could not know because, just as in the case of the etymology of English "media," the Chinese term *meiti*, referring to "technical media," did not exist until after the popularization of communicative devices in the early twentieth century. Before that time, individual devices were simply referred to as this or that "machine" (*ji*, *qi*, or *jiqi*).[1]

Indeed, the ubiquitous and undifferentiated machines that characterized the experience of this period were on the minds of many Chinese, among them the customs clerk Li Gui (1842–1903), a member of the court's delegation to the historic 1876 Centennial Exhibition of the World's Fair in Philadelphia, USA. If the entire "cosmos" had turned out to be "one vast machine" (*ji*),[2] as Li, dazzled by the displays in the Machinery Hall, exclaimed, there was no place especially carved out for media. Because the steely progress of the Second Industrial Revolution impressed this visitor with its potential to transform production, all machines were to fulfill the same basic purpose to "benefit the [Chinese] people." Even though observers such as Li knew little about technical media as such, their writings generated discursive and dynamic processes of mediation between emerging conceptions of the old and the new, China and the West, and between culture, tradition, and technology. The late nineteenth century thus witnessed a gradual convergence between more intangible mediations and their perceptibly heftier, machine counterparts, whence the media question was beginning to emerge. The passage below, excerpted from Li's travel diary, *Huanyou diqiu xin lu*, translated and published as *A Journey to the East*, offers such an opening.

> As I wandered about gazing at these machines, I wanted very much to single out and write about those with real utility. In this, however, I was hindered by the complexity of their workings, which proved impossible to completely recount. In addition, the group of visitors was very large and the movements of the machines were deafening, so when meeting with others, I quite often could not hear them speak. The interpreter, too, could not help but distort some things in conveying the finer points of the different devices to me. For all of these reasons, I am able to report only on those things that I could see and inquire about with comparative ease.[3]

No media device, barring anachronism, appears in this excerpt. Even in subsequent paragraphs, when the author mentions the typewriter and glass-etching machine, he barely distinguishes them from manufacturing and production technologies for digging coal, pumping water, or forging and smelting. To Li, they are all wondrous innovations worthy of documentation in terms of their cost, speed of production, the amount of space they occupied, and the number of people needed to operate them. Certainly, his account of the typewriter makes for an impressive historical anecdote of early Chinese contact with the "novel inscription technology."[4] But even the communicative functions of the printing press, typewriter, and glass-etching machine appear garbled. As far as the customs clerk is concerned, both kinds of machine produce noise: while the industrial machines' "deafening" sounds thwart his attempts to find out more about them, the typewriter and the glass-etching machine do not inscribe Chinese characters, and Li does not read English.[5]

No media device, not even one recognized as such, mediates on its own. Mediation happens where communicative processes (the bodily functions of hearing and speech, writing, translation, and print) overlap and interact with historical contexts and social relations. On the most immediate level, Li's diary records the conversations between the interpreter and himself, and those among other international visitors, as well as any miscommunications amplified by the "deafening" movements of the machines. Beneath the diarist's conscious awareness that he is able to "see and inquire about [things] with comparative ease"[6] lies a configuration of cognitive functions, sensory synapses, and muscular relays, which distinguishes between the numerous useful and useless devices, and later recalls and records them. The physical, legible marks of Chinese characters give Li's diary its physical form, but not without the larger forces of history that help shape how and what the diarist writes, including deliberations over the precise form of the technological, of

what counts or does not count as a machine with "real utility." The Centennial Exhibition in Philadelphia took place slightly more than a decade after the conclusion of the Taiping War (1850–64), which was partly quelled with the help of Western weapons. It was the Imperial Maritime Customs Service, founded to recover custom duties from foreigners after the Second Opium War (1856–60), that sent Li to document the world's fair and represent the Qing Empire's industrializing efforts at international events.[7]

There are *media forms*—that is, physical properties of communicative devices and their mechanical processes—and there are linguistic or visual *forms of media*—tone, metaphors, tropes, composition, visual imagery, lines, narrative voice, and so on. The first converges upon the technical or instrumental; the second encompasses aesthetics and the theoretical. These seemingly conflicting varieties of media meet in the politically charged circumstances of late nineteenth-century China on the international stage. Their encounter was by no means accidental, and even less so is this book's restaging of their rendezvous. At a time when observers like Li knew nothing about the specificity of media forms, their writings nonetheless registered curious forms of media. To the question "what do media do?," *A Journey to the East* thus responds with handwriting made reproducible through the technical imprints of mechanical printing, and with the historical and cultural specificities that imbue such inscriptions with form and meaning. Of all the things, peoples, and circumstances that media mediate, mediation attends first and foremost to the relations between a technology's material forms (its physical format, function, reproduction, and circulation, and so on) and elements of such materiality signified in linguistic and visual texts. To grasp just how intertwined and yet at odds these two formal registers are, we need only to return to the above quote from Li, where technological forms—clanking devices producing "deafening" movements—on the one hand prevent the diarist from detailing the exhibition accurately, but inform the style, structure, tone, and imagery of his diary on the other. When the diary, an inscriptive medium meant to document machines with "real utility" records instead the by-products of mechanical friction—that is, their noises, materiality coheres formally as irony.

If the current state of media studies, according to one diagnosis, suffers from a surplus of media devices and a deficit of mediation,[8] the solution is therefore not to do away with devices and instruments but to acknowledge their material specificities while scrutinizing their representability in texts and images. As it turns out, the vacillating relations between technical or material and aesthetic-theoretical forms are exactly what proponents of

mediation need. This proposal is not meant to fold media theory into a subset of literary criticism or visual and cultural studies, but to reveal that the distinction between media as "technology" and media as "cultural forms," to evoke Raymond Williams's terms, to which I will return, remains a media question through and through.

THE "CASE" OF LATE QING CHINA

Yet, how does the road to such an immanently mediating inquiry—whereby "media" announces both the object and method of study—lead to China? The historical, compared with the second, more conceptual rationale, appears justifiable on its own grounds. The years 1896 to 1906 span a period in China when old technologies such as the phonograph, telephone, telegraph, early cinematic devices, and photography were indubitably both new and foreign,[9] and enthusiastically documented by print, frequently with some controversy. Photography can be said to begin either with Jules Alphonse Eugène Itier's (1802–1877) employment with the Imperial Maritime Customs Service between 1843 and 1846, only a few years after the invention of the daguerreotype in France in 1839, or, as the Canton mathematician Zou Boqi (1819–1869) claimed in *Sheying zhi qi ji* (*An Account of the Camera*) in 1844, with his attempt at building his own camera.[10] Scholars point to the August 1896 screening at Xu Gardens as the origin of Chinese cinema, although disagreements over nomenclature could easily have this history begin with newspaper reports of lantern-slide screenings from as early as 1875 instead.[11] Guo Songtao (1818–1891), the first Chinese ambassador to Great Britain, provided the first account of the phonograph in April 1878, if, that is, there is no confusion as to whether he might have been describing the telephone. In 1880, the Chinese Telegraphy Bureau was established in Tianjin as a lucrative "government-supervised and merchant-managed" (*guandu shangban*) enterprise. The bureau took over the Danish Great Northern Telegraph Company and British Eastern Extension A&C Telegraph Company's control of Chinese telegraphic communication. Official court documents (*gongwen*) made good use of this vast, growing network, thanks to an 1898 law conferring court-issued telegrams the same official status as edicts delivered by courier.[12] At the same time, most literate Chinese read republished telegrams in newspapers sooner than they would get to send one themselves.

The history of media, perhaps even more so than other histories, directly concerns who reported what, when, and *through which specific medium*. Yet, the historical objects of this book name media in the plural and not individual

mediums in the singular. I could very well also name China in the plural. This choice speaks not lightly of the admirable reconstruction of any individual communicative innovation, but is one consciously undertaken in order to enact a method or practice of mediation as the dynamic interactions between the material and technical process or device, and its discursive significations in texts and images. Mediation, defined throughout this book as media's cleaving and bridging of technics and signification, applies just as vigorously to the rifts and unions of history and concept. The history/concept problem, as Rebecca Karl observes, is in turn welded to the "cycle of nativist/foreign (Chinese/Western) claims."[13] A work like *The Stone and the Wireless*, which has elected to take mediation as its object as well as method of study, thus moves between the historicizing of then new media and the conceptualization of mediation for rethinking the communicative milieu of the *fin de siècle* that helped shaped China. Mediation, in other words, entails what Xiao Liu identifies as a "'worlding' process" of "temporal and spatial reorganization" that "generates new relations, conflicts, and negotiations."[14]

Hence, this study eschews a typical periodization of the late Qing that begins with the First Opium War (1839–42) or the First Sino-Japanese War (1894–95) and ends with the Xinhai Revolution of 1911–12.[15] Instead, the establishment of the Ministry of Foreign Affairs (*Zongli yamen*) in 1861 and the centralization of transportation and communication under the Ministry of Posts and Communications (*Youchuan bu*) in 1906 bookend my study. The Ministry of Foreign Affairs was responsible for an emerging bureaucratic culture: its new documentation procedures, such as the diplomatic diary (*shixi ji*), the focus of chapter 1, did not just contain invaluable observations of new media technologies, but more importantly recorded and shaped China's changing worldview. The establishment of the Ministry of Posts and Communications signaled an end to the state-private cooperative structure that oversaw the development of telegraphy, which is a central topic of the book's last two chapters. My focus on early media, instead of romanticizing past technological innovations, looks to a longer history of entangled social relations and identities.[16]

Beyond challenging conventional characterizations of Chinese semicolonialism and victimhood, as New Qing History since its rise in the late 1990s has effectively achieved,[17] or simply sharpening such revisionism with a technical edge, this book addresses some of the more elementary and yet intransigent concerns in area studies, critical and media theory, and comparative studies. Mediation itself names neither a Chinese or Western concept but really a comparative method, since it refers to the "specific conditions through and in which concept and history are mediated, that is, the

structured historical conditions demanding mediation" without which we risk promoting the "reifications of imputed native authenticity or of some external conceptual unity."[18]

Little doubt that the space available for a mutually reinforcing media history and theory remains a tight one to maneuver; how a concept of mediation would illuminate media history, not to mention a specifically Chinese media history, warrants further explanation. For if uncovering media cultures outside Europe and North America valiantly expands disciplinary horizons, to avowedly dust off such cultures with a theoretical brush invites allegations of parochialism of a specific kind. Harnessing media theory for China, after all, risks reviving the taboo of encumbering "Chinese reality" with "Western theory," to evoke the title of Zhang Longxi's 1992 essay, worth revisiting for its minor but significant remarks, on telecommunications. In this polemical piece first published in *Critical Inquiry*, Zhang lambasts Rey Chow's reduction of the 1989 Tiananmen Incident—that is, Chinese reality—to its derogatory representation on American television *sans* a critique of the brutality of the Chinese state or a discussion of the protesters' demands. Such elision of historical reality exemplifies, for Zhang, the cost of Western theoretical sophistication.[19] While the means of transmission is not the focus of Zhang's objection, the essay's plea to regard "television texts" not just as "mere fictional representation" but also for their "worldliness and circumstantiality" inadvertently wedges technical media between "Western theory" and its competing "Chinese reality."[20] Television's "worldliness and circumstantiality" ought to amplify "Chinese reality." Yet, in being deployed for a critic's "fictional representation," television ends up buttressing "Western theory" instead. If, in other words, we can accept the mediatedness of Chinese (or any other) reality while simultaneously considering media's concrete historicity and materiality, could the "West" and "China" not then be unhinged from their tortured gridlock with "theory" and "reality" respectively? If such an unmooring is possible, surely even the relatively straightforward task of *historicizing* the development of communicative media in late nineteenth-century China becomes an immanent *theorizing* of what media do.

As long as the West continues to have a monopoly over theory or method, leaving China or other parts of the non-West irrevocably wedded to reality, history, context and so on—assuming that we can even agree on the meaning of these terms—animosities between these conceptual pairs will only persist regardless of the number of times we put them in scare quotes. Many critics have from their specific disciplinary perspectives attempted to loosen the deadlock. Haun Saussy, for one, suggests that since deconstruction's fantasies of

China are so foundational for its historical formation as a theory or method, it was "'Chinese' theory [that] modifies Western 'reality.'"[21] But these were not the first attempts. Nearly two centuries before such contemporary debates in literary and cultural studies, Qing reformers unwittingly performed their own "chiasmus on the predicates" of what would only later be reified in North American academia as text versus context, and Western theory versus Chinese reality.[22]

In the aftermath of the Qing state's devastating defeat during the Second Opium War (1856–60), military and scientific advances preoccupied many members of the court. Li Gui's visit to the 1876 Centennial Exhibition was made possible by the outcomes of the war, and his enthusiastic report of the machines displayed there a mere morsel of a sizable cultural archive documenting similar wonders. One of the ways that reformist officials who formed the Self-Strengthening Movement (*yangwu yundong*) (1861–1895) made sense of this reality was to justify the adoption of Western technology on the basis of their Chinese origins. Verdicts on this thesis, which could be traced to the Jesuits missions of the early sixteenth century, have been quick to pass: the notion that China had originated the scientific and technological know-how that Europe later came to develop could be derided as proof of China's failed modernity on the one hand, or examined seriously as a sign of careful political maneuvering on the other.[23] Less emphasized in existing scholarship on this period of Chinese reform, however, is the logic undergirding one of its most famous slogans, whose cleaving of "Chinese learning as essence" (*zhongxue weiti*) from "Western learning as practical use" (*xixue weiyong*) remarkably previews the discourse of "Western theory" versus "Chinese reality" mentioned above.

It was the scholar-official Feng Guifen who first advocated for Western learning as practical use in his "Jiaobinlu kangyi" ("Protest from the Jiaobin Studio") in 1861, and Zhang Zhidong, in his 1898 "Quanxue pian" ("Exhortation to Study"), who subsequently popularized the distinction of Western from Chinese learning based on Feng's proposal. According to Chen Depeng, proponents of the Self-Strengthening Movement were not opposed to including within the category of Western learning both its politics (*xizheng*) and techniques (*xiyi*), and yet doing so risked making redundant the structural distinction between fundamental principle and practical use.[24] In order to maintain this structural integrity, the category of Western learning came to be limited to the practical domains of Western science and technology,[25] and the result was a definitive epistemology produced out of a realpolitik that was neither strictly foreign nor indigenous but a historical,

semicolonial enmeshment of both. To historicize these distinctions between Western practice and Chinese principle far from renders them "nugatory and useless," or in deconstruction parlance, simply "unstable." Instead, to historicize distinctions is to make their "usage more precise."[26] That imperfect equivalences exist—as if this were an exception rather than the rule of all translations—between the essence (*ti*) of Confucian precepts and the academic high-speak of theory, between and the use or applicability (*yong*) of Western techniques and historical contextuality, rather proves instead of invalidates the point that I am here making. What is considered foundational, abstract knowledge rubs against practical functionality; the two, moreover, are sharpened on the backs of political rivalry, and linguistic and cultural difference. Such was the Chinese reality or historical context, which, to borrow again from Karl, spell the "specific conditions through and in which concept and history are mediated" in the first place.[27]

Latter-day observers of the gap between Western theory and Chinese reality (and I count myself as one) can thus learn a lesson or two from the above episode of Qing intellectual history: the distance separating any theory from any reality is indeed real—that is, it is historical through and through. When the historical context in question orders the very terms in opposition, the question that confronts us becomes: Whose theory? Whose reality?

The road to an immanently mediating inquiry—whereby mediation announces both the object and method of study—does not have to lead to China, but it might well start there. The turn of the twentieth century more than denotes a period in China when old communicative technologies were new and foreign, but also a time when writers and intellectuals were struggling to demarcate machines and technical know-how from what were perceived to be the fundamental and yet more nebulous roots of their very identities. Qing reformers having to distinguish Chinese from Western learning in order to justify their adoption of foreign technologies thus helped shake the very grounds on which twentieth-century Chinese studies scholars struggle to steady themselves. Therein lies the historical reality driving my theory: mediation refers to the tireless contestations between science, technology, and their national and cultural implications staged in an absurd hall of mirrors where the real and the material appear embellished with signification, and discourses on machines confront concrete media as their self-image.

After the Self-Strengthening Movement failed to secure China's victory in the First Sino-Japanese War (1894–95), more progressive reformers sought to renew the Qing state by turning to the West not just for technology but

also for cultural and institutional change.[28] Hence Yan Fu (1854–1921) attributed Western supremacy to educational reforms and commitment to social and political justice rather than industrial and technological strength.[29] Zhou Shuren (1881–1936), better known as Lu Xun, mocked his countrymen of little talent for clamoring over Western material (*wuzhi*) achievements such as modern weaponry, steel, and railways instead of valuing its spiritual (*jingshen*) emphasis on the individual.[30] Both would have scorned Li Gui's overenthusiasm at the Machinery Hall of the 1876 Centennial Exhibition.

It is unclear, however, who might have had the last laugh. Yan Fu and Lu Xun's criticisms of their intellectual predecessors, after all, play on an incipient division between the as-yet-uncodified disciplines of science and the humanities.[31] With much help from actual media devices and communicative processes, mediation therefore also takes issue with both periodization and the nation-state as the *sin qua non* of historical contextualization. Beyond their immediate political and social concerns, late Qing intellectuals prefigure C. P. Snow's 1959 critique of a division between "two cultures,"[32] recently reframed in Bruno Latour's works.[33] Challenging the dichotomy between science and technology and culture, Latour, not insignificantly, calls those who walk the narrow path between the West and other cultures "mediators" (*des médiateurs*), and the uncharted territory beyond the strictly modern and postmodern perspectives "the Middle Kingdom."[34] Such wordplay, to which I will return, demands careful consideration. There were indeed both human and nonhuman "mediators" in the "Middle Kingdom," and they star as this book's protagonists. The diplomats Guo Songtao and Liu Xihong, and the technical contraptions they imperfectly record in their diaries (chapter 1); Jia Baoyu's time-travels inscribed on stone (chapter 2); photographs extoling selfless, patriotic femininity (chapter 3); the Boxers (*Yihe tuan*) in chapter 4 with their incantations and uprooted telegraph poles; and an aspiring entrepreneur of biomedia technology (chapter 5) were all mediators in the strongest sense of the word because their active negotiations of technology and culture, reform and rebellion, China and the world were made possible by developments in transportation networks as well as inscriptive, print, and early audiovisual, electronic-wireless media. Insofar as these mediators also evoke yet-to-be-invented communicative processes and networks, this book thinks the ancient stele alongside the wireless so as to enact "temporal interdependency without telos, movement without suppression."[35]

Should resistance against associating Western theory *a là* Latour with Chinese reality present itself, it does so once again by ignoring that Western

technological transfers coupled with indigenous adaptations were part and parcel of that very reality. The field of Chinese histories of science and technology has debunked the "Needham paradigm" postulating the supposed absence of modern science in China, and repositioned late Qing and Republican Chinese technoscience as active rather than receptive.[36] Such works also join scholars elsewhere in questioning the "easy separation of scientific practice from social and political agendas."[37] And yet, it is both puzzling and remiss to exclude media technologies from a rethinking of the convergence between science, society, and politics. Mediatory processes did not just "happen" frequently during the late Qing; its men and women also avidly grafted mediation onto their encounters with innovations in recording and communication. As John Guillory demonstrates, theories of mediation as variously expounded by German idealism, linguistics, semiotics, cultural materialism, social theory—and, to add, Latour's contribution to science and technology studies—have always been insufficiently assimilated into the study of actually existing media.[38] If this estrangement is attributable to the "disciplinary division between media and communication studies, on the one hand, and the cultural disciplines, on the other,"[39] no doubt the rift is even more pronounced when, beyond disciplinary divides, national, racial, cultural, and linguistic differences enter into play.

The Stone and the Wireless is a study of late nineteenth- and early twentieth-century Chinese media culture as well as a theoretical inquiry into mediation. Instead of proposing indigenous, philosophical notions of social and cultural mediation that have little to do with communicative media and then extraneously applying them to the latter,[40] I begin from their middle ground. I explore scenes of recording, transmitting, and interconnectivity set up around existing and imagined media—books, phonographs, human-stele hybrids, telephones, photography, brain electricity, letters, shamanistic rituals, early cinema, feminine sentimentality, telegraphs, and newspapers—and ask what it is exactly that they *do*. Surely, all communicative techniques from primitive scribblings on stones to wireless technologies perform mediation, at least in some minimal, loose sense. But they do not mediate between this and that thing, entity, or process—nature and artifice, the mythical and the social, the human and the technical, and the individual and the collective, to just give a few examples—without first mediating mediation itself. That is to say, a medium always mediates between some version of its already mediated form—following Carolyn Marvin, technology's larger social and cultural "drama"—and the unmediated "instrument" or device.[41] Any tension between discursive representations of the technological real and the intensities of an embodied,

technical experience lies *within* and *not* outside the primary realm of mediation. Rather than distinguish a "philosophy of mediation" centering on the proliferation of "multiplicity" from a "philosophy of media" that reifies "objects,"[42] this book integrates mediation into what media do. That there are no two separate philosophies or theories tending to media in one instance and mediation on the other is not to suggest the eradication of difference *as* philosophy, but that we do not need to create another field of study altogether when what needs to be challenged are the disciplinary histories legitimizing the distinct methods of our study and its objects.

Arvind Rajagopal argues that Cold War politics effectively contained communicative studies within Western academia since media technologies were deemed to be unfree in party-controlled communist countries. The emergence of the discipline of communications, which influenced "successor terms such as media" occurred simultaneously with the exclusion of the study of technology from area studies, as the latter focused more on the linguistic and cultural aspects of undeveloped countries.[43] This book is an attempt to redress such prejudiced separation of technical media from languages and cultures, together with their respective "areas" of development. To "mediate China," as my subtitle suggests, means enacting its argument through its topic, area, and historical period.[44] More than simply acknowledge the history of communicative technology in late nineteenth-century China as inextricable from the realities of global technological transfers and semicolonialism, I examine recordings, transmissions, and connections in terms of such inextricability, as the complex web of relations at once tying and differentiating machines and the sciences to *and* from their cultural significations.

The development of audiovisual technologies, as any overview of their history is quick to demonstrate, has always been global in nature. Yet to underscore cultural differences in media's transnational origins is not to allow "machines [to] slip unremarked into the domain of an implicitly racialized sense of culture," but merely to historicize the ways in which late Qing writers embedded machines in questions of national, racial, and cultural identities.[45] So closely intertwined were technological innovations with the fate of the Chinese state that a writer like Wu Jianren (1866–1910) estimated its progress by the extent to which Chinese inventions could be models for foreign imitation and learning. Hence in Wu's utopian novel *Xin shitouji* (*New Story of the Stone*, 1905–6), which I analyze in chapter 2, no device goes unmentioned without an emphasis on its indigenous Chinese origin and superiority to its Euro-American counterpart. The more fantastical techno-ethnocentrism gets, the more unfeasible it is to separate the technical medium from its mediation

by questions of identity. If media, as one of its most representative thinkers frames it, are extensions of men,[46] they have to navigate the distances between shores of perceived cultural difference. The scholarly consensus advanced in part by media scholars Jay Bolter and Richard Grusin's influential study that all newer media remediate older ones neglects another equally necessary process of remediation: between what are too simplistically perceived as "Western" technical mediums and their "non-Western" appropriations and imitations, between the technologies "themselves," and their scripted dramas and ramifications.

The main impetus for this book, therefore, lies less in expanding the hitherto largely Euro-American focus of the so-called Edison era,[47] however heartily it embraces the call for "an adequately materialist history of the emergence of media cultures in the colonial world."[48] Just as late Qing "reality" or "context" conceived from an early historical vantage point frustrates the distinctions between China and the West, and reality and theory, China at the turn of the twentieth century is more than simply an "example," "episode," or "case study" in non-Western media history. Equally important it is, then, to resist framing the subjects of this book as cultural or aesthetic responses to Western science and technology, since part of what rethinking media and mediation entails is to contest prejudices and habits of opposing culture or aesthetics to science and technology.[49] China at the turn of the twentieth century subsists beyond a case study of non-Western media history because it conceptually renegotiates mediation's role vis-à-vis media studies' posthermeneutic, anti-interpretational turn, while extending mediation beyond the vantage point of the technological to incorporate questions of the social collective, nationalism, gender, and political economy as generated by semicolonialism and the unevenness of capitalist development. Specifically, this book reinserts mediation into media forms while reading media as possessing other forms—that is, as having been mediated through textual and discursive practices. The first is a move toward the material conditions of communication, the second a continuous regard for social practices and cultural forms.

English-language scholarship on the Qing *fin de siècle* has largely employed the term *mediation* in terms of an *intervention* or *intercession* in processes or relationships involving different or at times opposing entities. Mediation has been useful in emphasizing the historically exceptional transitions between linguistic differences,[50] tradition and modernity,[51] failure and success,[52] essence and function, and China and the West.[53] For Lydia Liu, the phrase *linguistic mediation*, more so than translation, more

strongly illustrates overlaps between the linguistic and the sociopolitical, while for Michael Gibbs Hill it is precisely the lines separating translation from "other modes of mediation" that need to be more sharply drawn lest all mediations collapse indistinctly into "cultural translations."[54] Technical media fall outside the focus of these works; yet it is not difficult to see how communicative devices and processes could help reinforce the importance of social and cultural mediations. Studies of pre-Republican Chinese visual and material cultures, on the other hand, congregate at the other end of the analytical spectrum by downplaying nontechnical aspects of mediation in communicative scenarios.[55] Thus when scholars of mid to late twentieth-century China such as Bao Weihong and Xiao Liu more ambitiously develop expansive understandings of mediation that attend more to the socioeconomic, political, and cultural implications of communicative technologies,[56] they inevitably foreground the propensity of technocultural theorizations to follow conventional periodizations of modernity. It does appear that knowledge production around China ought to, following Haun Saussy's proposal, welcome the manifest mediations of conceptual categories such as "Western, religious, metaphysical, Communist, imperial, didactic, modernist" rather than see them as "danger[s] to be guarded against."[57]

Nonetheless, to prevent the proclamation that "mediation is our authenticity—whoever 'we' may be"[58] from sliding into aporia, this book refrains from employing cultural, linguistic, and textual processes of mediation as metaphors for what media do. The historical processes that mediate China do not "figure" as external factors or even effects, intended or otherwise, of inscriptive machines, wires, and other communicative devices when they are an essential component of how these devices function. At stake is thus less what media "are," an ontological claim or an axiological inquiry into what "good" or "bad" technologies do, but more of a modest call for a praxeology, which, in contrast to existing applications of the term in modern social philosophy and the social sciences, points to the study of nonhuman and nonpurposeful media operations in the theoretical humanities.[59]

READING FOR MEDIA

Precisely because the indelibly technical operations of a medium cannot be reduced to their textual and cultural significations, such irreducibility must be read, accounted for, interpreted, and wrangled with. In other words, this challenge to read for media presupposes the truism long entombed by

Marshall McLuhan's legacy. Yet it also recognizes that technological media engender formal dimensions such as tone, metaphors, tropes, composition, visual imagery, lines, narrative voice, and so on, which through interpretation illuminate the social dimensions of communicative practices. Rather than simply declare that physical devices, their networked infrastructures, and the ways in which they have been imagined and written about matter equally, and leave it at that, this book takes the forceful tensions and relations between materiality and its formal signification as its primary inquiry.

The question of form has been a major, though obscured, fault line in new media studies. Lev Manovich's foundational *The Language of New Media*, according to Alex Galloway's assessment ten years after the book first appeared, considers "media as pure formal devices." That is to say, both digital media and its cinematic predecessor employ specific techniques—their own "languages," as it were—that are worthy of study independently of their social and institutional practices. Together with Friedrich Kittler and McLuhan, Manovich's media formalism thus lies opposite to Fredric Jameson's "poetics of social forms" as well as Raymond Williams's cultural materialism.[60] Writing in 1974, before media theory exercised considerable influence across various disciplines, Williams sharply diagnoses McLuhan's work as "a development and elaboration of formalism which can be seen in many fields, from literary criticism and linguistics to psychology and anthropology, but which acquired its most significant popular influence in an isolating theory of 'the media.'"[61] Formalism, then, surpasses McLuhan's media analysis and is instead recast as an interdisciplinary ground even as discipline-specific practitioners do not recognize it as such. We can even go as far as saying that fields in their individual capacities erroneously assume that their subjects of study are the sole cause to which all other causes are then "reduced to effects," when in fact something like "the media" can extend across literature, the psyche, human behavior, and other determinants. In assessing McLuhan's media analysis, Williams thus practices what he preaches—namely, extends a "parallel" or "homological analysis" between McLuhan's "technological determinism and his avant-garde aesthetic formalism."[62] The question of form becomes that on which "technology" and "cultural form," to evoke the book's subtitle, converge.

Interestingly, cultural materialism is ensnared in its own methodological version of the problem of form. In Paul Jones's evaluation, Williams's critique of McLuhan is made possible, paradoxically, by his attention to form. He has to maintain television's distinct roles as "technology" and "cultural form," while also exploring the "*form of relation* between the two."[63] The

same conundrum preoccupies Williams's discussion of determination as a "real social practice." While rejecting technological determinism, the Marxist critic is equally skeptical of its opposite—namely, the notion of a determined technology that views technology as sheer effect instead of as cause.[64] Hence we learn that television determines certain aspects of society without doing so with a "wholly controlling, wholly predicting set of courses." In his later work *Marxism and Literature*, Williams develops the concepts "typification" and "homology" to further emphasize different social practices as a "complex of specific but related activities." To be sure, homologies are distinct from "formal" relations insofar as they are "examples of real social relationships."[65] Yet, to be a useful analytical tool—as an example surely must be—for understanding media, homologies name the forms of relations between media forms and their significations in texts and images.[66] What Williams develops through the homological as a general concept for thinking through the relations between different social practices—"general" insofar as it serves the ambitious project of cultural materialism *writ large*—I more modestly term *mediation*.

Williams's disagreements with McLuhan remain quietly monumental, not just for media studies but also for the larger stakes of humanistic, theoretical inquiries. I draw upon what Williams sees as McLuhan's main weakness, and intentionally redistibute the weight of media formalism onto the turn—or rather, the return—to form in the humanities over the last few decades. After what can be perceived as exhaustion from an exclusive focus on ideological critique and historicist perspectives on aesthetic production, calls for a renewed attention to close reading and to the nuances of individual texts have resounded from the fields of literary, cinema, and affect studies.[67] As so many advocates of this revived formalism drawing from Frederic Jameson and other Marxist scholars of the twentieth century demonstrate, reading for form can intensify rather than dilute "other theoretical, political, and ethical commitments."[68] The focus on media as formal devices by Manovich, Kittler, and McLuhan, then, appears to swim against this intellectual current insofar as it favors the flows of information over the work of interpretation, the scaling of infrastructure over the representation of media. Attempts to wrest media from meaning under the pull of posthermeneutics,[69] the infrastructural turn,[70] or the technolinguistic,[71] however, often backfire. In emphasizing the precedence of devices, technologies, and material networks over their more symbolic counterparts, such scholarship has to presume the processes of mediation between devices and their historical contexts, technology and culture, material networks, and their representations. But the work of

such conceptual mediations, once again, does not happen independently of the media technologies in question. Without physical devices and technical processes of communication, there would be no need to mediate between them and their textual representations. Conversely, *sans* the reading and writing of media, how do we gauge their worth? In this respect, the works of Kittler, the German media theorist and literary scholar, remain exemplary.

"Media determine our situation." So begins the masterful dictum that sent media scholars into a frenzy when it first appeared in English publication in 1999. To this day, loyal and begrudging citations alike stop short before the second half of the opening line in *Gramophone, Film, Typewriter*: "which—in spite or because of it—deserves a description."[72] Kittler deftly accomplishes this description—or dare I say, close reading. Seldom do we find such a tender paean to the written text as in the sentiment, "how that which is written in no book came to pass may still be for books to record."[73] No doubt Kittler shakes the pedestal on which books were placed in traditional literary studies, pushing mediality to the fore instead as "the general condition within which something like 'poetry' or 'literature' can take shape."[74] His "cavalier" preference for the "sudden ruptures" of historical change at the expense of "genetic causalities" overstates new media's supplanting of print.[75] Nonetheless, it is through textual analysis of writings about technology, and not some abstract appeal to the "technological real," that he assesses writing's ability to punctuate the new aural, visual, and inscriptive functions of the titular trio. In Jean-Marie Guyau's 1880 piece "Memory and Phonograph," Kittler finds the retreat of the psychological sciences and the advent of the phonograph as the embodiment of the brain and memory, so much so that the "trace preceding all writing . . . is simply the gramophone needle."[76] And yet, none of this can be read off the needle. With similar perspicuity, Kittler locates in Maurice Renard's "Death and the Shell" of 1907 the first of a "long series of literary phantasms that rewrite eroticism itself under the conditions of gramophony and telephony."[77] The book's examination of Thomas Pynchon's *Gravity's Rainbow* is classic literary analysis at work; the prognosis that the novel reflexively depicts the overtaking of "sound film and video cameras as mass entertainment" only underscores the fact that it is Pynchon's language that engulfs, in Kittler's words, the "total use of media."[78]

Contrary to the statement that "books (since Moses and Mohammed) have been writing writing; films are filming filming,"[79] the constellation of poets, novelists, philosophers, and inventors that dots *Gramophone, Film, and Typewriter* testifies to the contrary—namely, that books do not just

write about themselves but also about other media. Kittler himself acknowledges writing's versatility, its willingness to attempt what he calls "the impossible."[80] Hence, "Schnitzler's novellas simulate processes of association in phonographic real time, Meyrink's novels in filmic real time."[81] In the chapter "Typewriter," Kittler distinguishes between Nietzsche, who typed out the statement "Our writing tools are also working on our thoughts," and Heidegger, who proclaimed in "old German hand" that "Technology is entrenched in our history."[82] It is little surprise then that Kittler declares Nietzsche "the first mechanized philosopher" to launch "the transvaluation of all values."[83] At the same time, credit should be given to the first German professor of literature to teach computer programming for writing a cautionary tale of technological determinism. A review of *Discourse Networks* as "a narrative history surprisingly unreflected with regard to its methodological procedure,"[84] entirely overlooks the care with which Kittler grants literary texts the position of "a methodological center . . . in contexts that explode the two-cultures schema of our academic departments."[85]

I began this introduction with no less of an outburst, but in an entirely different context: Li Gui, writing in 1876 as an educated Chinese male in what was then the United States' second largest city and the site of the nation's founding, and under pressure to represent China's interests in industrial progress, draws attention to the inscriptive form of his diary through the communicative failures that it nonetheless registers. The boisterous clamor of industrial machines transforms into an irony that effuses Li's diary, and mechanical sounds double as narrative tones mediating between the hefty machines and their discursive significations. Nonhuman entities direct some measure of *The Stone and the Wireless*. Yet accompanying devices were late Qing men and women like Li, who, as anachronistic media theorists, anticipated, mobilized, and transformed many of the inquiries in media studies today, often without full knowledge of the machines they encountered, let alone any conception of media as such. To the extent that they nonetheless grasped mediation from beyond a solely technological vantage point, these historical figures—not all of whom, as my study of the Boxers in chapter 4 shows, were intellectuals, or, as chapter 3 elucidates, male—remained committed to questions of the social collective, nationalism, gender, and political economy generated by China's semicolonial status and global modernity. Despite, or rather because of, the dominance of posthermeneutic criticism in media research, the culture of interpretation remains central.

Joining the recent momentum toward the postcritical in literary and cultural studies, this study's oxymoronic mandate to read for media remains

indebted to the established practices of close reading while wary of the fetishizing of textual exegesis and suspicious hermeneutics.[86] Equally respectful to the technology itself and its myriad cultural forms, the project undertaken here approaches texts and images less with the aim to demystify and unearth hidden meanings, but to amplify their communicative roles. I thus embrace Ellen Rooney's definition of reading as a more "inclusive" process than critique, one which is heavily imbricated with the question of form beyond the main purviews of the literary.[87] Indeed, like Louis Althusser's determination to read Marx's *Capital* "to the letter," with an effect of producing in his prose "critical puns, paradoxes, ironies, and oxymorons,"[88] my own interests in textual and visual forms of media, and, following Williams, in the forms of relation between them, must, rather disconcertingly, resemble wordplays. There is something too literal about such repetitive use of "media," "mediation," and varieties of "forms"; something ploddingly obvious about emphasizing the commonality shared by media forms and forms of media, not to mention defining what media do in terms of mediation and not another term. But such play on words arises from a commitment to, and not as an accident of, reading: it "makes a formal demand" on readers to open themselves to a materialist experience of language, whereby "form is produced as an opacity not to be pierced, penetrated, or described but displaced."[89]

Accordingly, readers may find my dogged pursuit of communicative devices and process from the literal—the transportation of books, the phonograph, the stone, and lithographic presses—to the more figurative—light, lines of telegraph poles, feminine sentimentality—reminiscent and yet strangely at odds with surface reading. Against symptomatic reading's penchant for hidden meanings and ideologies, surface reading advocates re-appreciating texts at "face value."[90] Yet, what evinces in "plain sight," as Cannon Schmitt teasingly emphasizes, simultaneously "escapes notice."[91] Otherwise, there would simply be no job for surface readers to do. If "surface is the new depth," then, correspondingly, postcritique cannot but be mired in critique. Eschewing the binary of surface/depth, this book, following Schmitt, favors the slippages between the literal and the figurative for the simple reason that a literal or denotative reading, rather than jettison symptomatic reading, would "force interpretation to account for what is hidden in texts in conjunction with what is plain to see."[92]

Whereas, for Schmitt, the "figurative, repressed, or ideological resonances of texts" find their fruition in "the sheer facticity of fictional worlds,"[93] *The Stone and the Wireless* often mobilizes literal readings of media to ring in the

materiality of media forms. Hence chapter 1 considers Guo Songtao's dizzyingly monotonous detailing of foreign objects and technologies in his diary as a traditional, textual substitute for newer communicative networks made up of the telegraph, postal networks, the telephone, and the phonograph. Chapter 2 suggestively traces an otherwise nondescript, not to mention mundane, contraption such as a book cart in *New Story of the Stone* to the philosophy of *wen yi zai dao*, commonly translated as "writing as a vehicle to convey the *dao*." While the literal association of a physical vehicle with the more complex meanings behind the word *to convey* (*zai*) may frustrate those who seek more consistent philology, such play on words highlights mediation as that which is both obscured and in plain sight. Hence chapter 3 places the notion of a poetic medium in an actual vessel—that is, the steamship—and returns lyricism to early twentieth-century women's writing, interpreted as conduits for older and newer means of self-expression. Chapter 4 examines photographic, lithographic, and textual depictions of damaged telegraph poles and half-burned ships in war-stricken China precisely because they image literal, and not allegorical, states of communicative breakdown during the 1900 Boxer crisis. When such representations evince disruptions plain and simple, they also allow us to delve deeper into the relations between the different mediums to excavate their latent significations.

MEDIATIONS ALL THE WAY DOWN

To say that media mediate risks saying nothing at all. Yet, as a number of recent works devoted to the explanation of key concepts in media studies attests, "media," "medium," and "mediation" are nonsynonymous terms whose heterogeneous, if not obfuscated, meanings can be traced to diverse etymological origins.[94] Throughout this book, I use the noun "mediation" and the verb "to mediate" to refer to the production of tensions between technical media's physical forms on the one hand, and their political, social, and cultural meanings as they are generated and made legible through textual and visual representations on the other. Mediation, as the arrangement of technology and its Other, names what a communicative medium does. Every medium is specific, as inscriptions can be made on paper, stone, or photographic paper, and their contents transmitted variously through light, electrical wires, radio waves, or as concurrently purported by nineteenth-century believers of telepathy, mesmerism, and animal magnetism, through ether or thought itself. Just as the latest technical medium claims its specificity from its continuity or divergence from an earlier model, the term's

linguistic and cultural signification resonates through historical trajectories. Therefore, reading for media aims not to strip a technical medium of its materiality or historical importance, but to revitalize it. This book grounds the indissociable links between historical developments in communications technology and the social processes of mediation in a study of turn-of-the-century Chinese depictions of media forms. From this perspective, debates between positions that are deeply invested in technology's social meanings—such as nationalism or semicolonial modernity—and a posthermeneutic stance aimed at liberating technology's robust materiality are not secondary to the media question. Rather, they are intrinsic to it.

At stake is how we approach media history when our very sources documenting technical innovations in communicative technologies—newspapers, journals, letters, telegrams, edicts, diaries, artistic renderings in poetry, prose, and illustrations, photographs, and other representative systems—are undeniably part of the consideration of media forms. For this reason, any media history, if done right, is at its heart a theorization of the formal exigency in reading for media. Hence even the most prosaic appearances of communicative devices in late Qing texts and images alert us to the fact that media and mediation are irreducible "to the elucidation, essentially of the paraphrase of themes."[95] This is the precaution with which I approach Li Gui's *A Journey to the East*, eschewing the thematically more relevant, not to mention more widely discussed, passages in his diary regarding the printing press, typewriter, and glass-etching machine to highlight instead the writer's hesitant reflections on what he could and could not communicate. If limited to places where communicative devices appear, mediation would simply name a theme. It would miss a complex operation modulating Chinese writers' vacillating obsessions with the new, the scientific, and the technological on the one hand, and what these technologies signify on the other in their historical milieu.

This move to re-center language and representation in media theory in the face of an ever-extending reach of information technologies in the humanities can only appear jarringly outmoded, given new media studies' attempts to amplify the "new" in discourses around new materialism. To the claim that renewed interest in materialism is "already present in the way technical media transmits and processes 'culture,'" such that we can jettison "philosophical traditions" in order to "read modern physics, engineering, and communications technology as mapping the terrain of new materialism," an insistence on the materiality of language screams nothing short of futility.[96] What if, however, the changing of the guard for such disciplinary

gatekeeping even has its historical precedence in the very philology of the word: media?

When the media concept finally emerged in response to the development of new technical media in the later nineteenth century, it also, in Guillory's formulation, "perplexed the relation between the traditional arts [from poetry, to music, rhetoric, logic, and dialectic] and media of any kind."[97] The rather late appearance of the media concept in the Western tradition thus results, paradoxically, from *a lack of mediation* between older and newer fields of study. That is, to return to the "two cultures" debate presciently staged by reformers of the Self-Strengthening Movement, there exists a gap between theoretical knowledge or ethical precepts grounded in language and culture, and ostensibly more technical devices that are no less inscriptive and yet relatively less determined by signification. This rift between literature and media is all the more surprising, given their philological proximity in both the Greek and Chinese origins of the terms.

One of the earliest English translations of Aristotle's original word for mimesis was "media" or "medium," where the latter has no equivalent in classical Greek. The Chinese character *mei* gives us the compound words for "medium" (*meijie*) and, later on, "media" (*meiti*), but it has no similar basis in "mimesis." The Chinese term for "mediation" (*woxuan*), however, carries mimetic implications since the character *wo* refers to the mechanics of turning made a handle (*wo*) as well as a literary device. The Song poet Luo Dajing (1196–1252) uses the interdependence between the axle and the wheel's rotations (*woxuan ru che zhi youzhou*) in order to emphasize the equal importance of finessing substantive (*jianzi*) and function words (*huozi* or *xuci*) in poetic compositions.[98]

Europeans and Americans at the turn of the twentieth century did not describe the telephone or phonograph as "media," and yet this did not stop subsequent media scholars from canonizing this period of media history as the Edison era. Correspondingly, my engagement with terms like *media*, *medium*, and *mediation* hinges upon their being translations for likewise absent original lexicons (*meiti*, *meiji*, *woxun*) in Chinese. An alternative to switching between different forms of the word—media, medium, mediation, media forms, forms of media, and so forth—would be to come up with an entirely different set of vocabulary and define it. This practice, however, would betray the very premise of the book—namely, that mediation as concept and as material processes are irrevocably enmeshed. To employ terms outside of the *medias* root would be to admit that cultural or social mediation—including, of course, language—has nothing to do with technological change.

So far, this philological digression highlights the ambling trajectory of the media concept as it has been, in China, historically wedged between tradition and modernity, indigeneity and foreignness, and culture and technology. All such epistemological figures, Williams reminds us, are misconstrued as stable, opposing poles around which values could then be constructed *post festum*.[99] Mediation trumps the passive term *reflection* as an analytical concept to dismantle these oppositions since reflection presumes a distance between the "real world" and the material processes of artistic activity.[100] Yet mediation remains insufficient, according to Williams, when it is used as a "metaphor" maintaining "separate and preexistent areas or orders of reality, between which the mediating process occurs."[101] Certainly, as long as "technology" and "writings about technologies" are kept distinct, it is easy to exploit the figurative potentials of mediation. Yet, so long as the term specifies what media do, including what a written medium like Li's diary fails to do, limited as it is by what the author "could see and inquire about with comparative ease,"[102] the concept remains committed to, and yet irreducible to the technical facts of, media. Mediation, in this case, more than figuratively or tenuously evokes technologies. The "mediators" I examine in this book, to draw again on Latour's name for those who work between science and culture,[103] integrate the discursive processes of mediations between China and the West, essence and function, culture and machines, and other oppositional terms into what it is that a technical medium *does* quite literally: mediate.

Resistance against the collapsing of the technological real into discourse, which the interdisciplinary cultural critic Mark B. N. Hansen in *Embodying Technesis: Technology Beyond Writing* critiques as *technesis*, ought to translate into more efforts at reinforcing the relationship between media and mediation. Instead, discarding mediation risks also throwing out media altogether. *Embodying Technesis* deems "cultural materiality" to be an interdisciplinary trend responsible for an "impoverished concept of technological materiality"—without, it must be noted, engaging in cultural materialism as a specific disciplinary subfield within cultural studies or in Williams's works.[104] From this perspective, mediation has no place in the book's critique of major thinkers of technological modernity from Freud, Derrida, Lacan, and Foucault, to Deleuze and Guattari. The problem, once again, is that all technologies are referred to broadly as the "robust materiality of technology" or the "technological real." Without letting specifically communicative machines perform their role of making connections and distinctions between technology and its perceived other, mediation cannot even be mustered as metaphor.

The underlying significance of not defining the "technological real" is obvious. In more moderate instances, Hansen acknowledges that technology does not exist outside social systems and cultural meanings, even playing "an essential role as part of what allows for the very existence of the social as such."[105] Technology, in other words, helps construct its opposite. On more forceful occasions, however, the book holds poststructuralist criticism responsible for reducing technology to "mere supplements or material supports for the production of knowledge/thought/desire."[106] To remedy the becoming-instrument of technology, Hansen extracts the latter from its embeddedness in social and cultural realms. It is one thing to attack the "wholesale assimilation of technology's materiality into the domain of thought."[107] It is, however, quite another to refuse technology some kind of role or agency in the still-unknown relation between thought's encounter with the real. To have "robust ontological status as 'agent' of material complexification," Hansen argues, technology must be rid of its "role within thought."[108] In its preference for a functionalist over a representationalist model, *Embodying Technesis* could have articulated what it is a technology *does*. Precisely because it is unfair to expect a single work to provide an answer to what is undeniably a vast philosophical question, it would be more prudent to focus more narrowly on specific kinds of devices and process rather than analyze technology in the general. Hansen, however, would object to such a "simplification" or "reduction," which he accuses the "master-thinkers" of technology of doing when they "thematize" and "treat technology descriptively, through the category or figure of the machine."[109]

It goes without saying that technologies are more than textual figures or metaphors. But textual or inscriptive machines are not all metaphors, and likewise, not all descriptions of inscriptive technologies are reductive. I share some of Hansen's skepticism about Latour's definition of science as translations, which risks including everything as an inscription device for transforming a "material substance into a figure or diagram."[110] I sympathize with his criticism of Paul Valéry and William Carlos Williams for equating a poem with a machine.[111] Nonetheless, I remain unconvinced as to why Hansen overlooks Derrida's account of the movement of *différance* in "electronic card-indexes and reading machines" as concrete, material examples of technology.[112] If the reason is that such instantiations only further subordinate technology to the larger philosophical principle of *différance* and the *gramme* or mark of writing, the question then becomes whether any definition of technology could indeed lie outside means or instrumentality, as an unadulterated principle in and of itself without utility or function. As I

demonstrate in chapter 3 and the conclusion, a technical recasting of femininity's relationship to media technologies can either disrupt or enhance the more figurative, and not coincidentally, instrumental employment of femininity as a medium or conduit for reimagining a new China.

The drive to liberate technology from its philosophical constraints as "a mere machine—a technics in the service of language" ends up reifying it as a transcendental signified.[113] A pursuit of the technological real and its robust materiality ends up appealing to reality and materiality only in their negative senses as *not* culture, *not* text, *not* interpretation, *not* description, and therefore *not* specificity. This posthermeneutic stronghold, which reintroduces the poststructuralist, and specifically deconstructionist angles of critique it so admonishes, appears in other fields, notably affect studies. Eugenie Brinkema, in a sharp diagnosis of what she calls the "fantasy of something that predates the linguistic turn and that evades the slow, hard tussle of reading texts closely," suggests that the escape from signification maintains the very problems it is intended to challenge.[114] Indeed, Hansen's telling injunction to "bypass the mediation performed by the 'semiotic element' of a word or an image in order to engage physically with it"[115] ironically points to the necessary endeavor of the present book: to return mediation to words, meaning, *and* media so as to engage with them in all their specificities.

TECHNOTEXTS, LOOPS, AND NEW CHINESE WRITING

If a medium is form, then the media of language—that is, words and their significations—are materiality formalized. To claim that the urgent methodological task facing media studies today is to track the divergence and convergence between a particular technical form and its content requires us to return a sense of wonder to McLuhan's overused dictum in *Understanding Media*. Rather than take the copula "is" in "the medium is the message" for granted, we should interrogate how the equivalence comes about in the first place.

I have repeatedly risked stating the obvious: not all technologies are media in the strict sense, and not all media actively represent—that is, mechanically inscribe through writing or imaging. This distinction prompts media historian Lisa Gitelman to remark that "machines get some of their meaning from what is written about them in different ways and at specific junctures, in research plans, patent applications, promotional puff, and so on. Writing machines, in particular, get some of their meaning from the way they are used, including the writings they produce."[116] Such devices, in

other words, are especially fecund for analysis, and it is no surprise that they form the backbone of much interdisciplinary scholarship that straddles both media and literary studies such as my own. Writing machines, appropriately, make for the title of Katherine Hayles's book, which examines the media in which literary texts appear—print, computers, and other devices—and also the activity or process through which these "technotexts" illuminate "the machinery that gives their verbal constructions physical reality."[117] What defines a literary work as a "technotext" is that it effects a "reflexive loop" between the "imaginative world it creates and the material apparatus embodying that creation as a physical presence."[118]

But a technotext does not have to be a literary work. A telegram or photograph equally qualifies as one by foregrounding the connections between its material artifactuality (form) and its verbal or visual signification (content or message). A technotext, moreover, transforms its "material apparatus" into elements of textual or visual form, while also representing other media, peoples, and communicative processes that are not usually regarded as technical media proper. An American traveling photographer and war correspondent's photograph depicting the Boxers' destruction of telegraph and railway lines, the topic of chapter 4, does not so much reveal the material conditions of photographic production as it indexes other telecommunication and infrastructural networks, including the cultural and commercial systems in which visual media traffic. In her "Ziti xiaozhao" ("Self-Inscription on a Photograph," 1906), the revolutionary martyr Qiu Jin (1875–1907) incorporates poetic and photographic forms of address and indexicality, respectively, to channel what I foreground in chapter 3 as the figure of the female medium. The loop in Hayles's study should thus be seen as more of a plural, self-generating structure: "media constantly engage in a recursive dynamic of imitating each other, incorporating aspects of competing media into themselves while simultaneously flaunting the advantages their own forms of mediation offer."[119] In late nineteenth- and early twentieth-century China, it would be difficult to pinpoint who or what does the flaunting, since the recursive dynamic of the technotext applies to both the medium and its signification.

In this regard, Hayles's concept of a technotext extends Derrida's notion of "*arche*-writing," the antecedence and iterability of the mark, to other technologies of storage and transmission. The French philosopher Bernard Stiegler, similarly building on Derrida's concept and the related notion of the supplement, emphasizes mnemonic technologies in terms of this essential exteriorization of memory.[120] An *arche*-writing does not have to be a

"machine reduction of technology," "a static and mechanical figure [of the machine] that is by nature secondary and posterior to the primary and constitutive movement of thought and to whose sway, consequently it can pose no threat."[121] Outside thought, an *arche*-writing takes on material forms as print, the grooves scratched by the phonograph needle, the ink ejected by the pressing of a typewriter key, and so on. Indisputably, these material marks serve their intended inscriptive functions, beyond which they also take on symbolic meaning. Such dual identities do not reduce media's impact on our experience to cultural constructivism, but they do mean that language and form constitute part of this experience.

Hayles's notion of the technotext and Derridean *arche*-writing thus excavate the material richness of textuality and writing. By claiming that a focus on literary and aesthetic forms, theory, and close reading far from contravenes the study of communicative media, *The Stone and the Wireless* encourages further conversations between scholars of Chinese literature and culture, those working in *Medienphilosophie* or media philosophy, cultural techniques, and what Thomas Bartscherer, in his review of Alex Galloway, Eugene Thacker, and McKenzie Wark's *Excommunication*, calls "the New York school of media theory."[122] For this reason, this is a study largely driven by questions of disciplinary and epistemological formations. If *Television*, with its critique of McLuhan's media analysis, marks Williams's full elucidation of "material cultural production," *Marxism and Literature* extends the theoretical implications of all of the cultural materialist's previously more "detailed practical work."[123] There, literature serves as one example among others, but also a consistently theoretical concept with which to tie in other examples of cultural production. Specifically, literature is "a particular kind of work in the medium of language."[124] More generally, its forms testify to Williams's long commitment to the importance of literacy for communicative compositions as social material processes.[125]

> The hearing of certain traditional arrangement of words: the recognition and activation of certain rhythms; the perception, often through already shared themes, of certain basic flows and relations and in this deep sense real compositions, real performances: all these are parts of some of our most profound cultural experiences.[126]

This constitution of cultural experience is evidently more complex in the creation of a new form, and with it, novel arrangements of linguistic elements, subjects, and compositions, which require "newly shared perception, recognition, and consciousness [that] are offered, tested, and in many but

not in all cases accepted."[127] Innovative forms characterize social systems undergoing transitions in certain value systems from which a new form must necessarily distinguish itself, but this distinction does not therefore amount to an individualistic endeavor. On the contrary, the "historically variable" distance between collective modes and individual projects, but also between material linguistic elements and consciousness, emblematizes the "function of real social relationships." Every occasion to promote a new form, moreover, must underscore the components of its material elements and the means with which its materiality could be perceived and, hopefully, widely disseminated. In the case of speech and writing, the "materials" of forms pertain to "words, sounds, and notations." "The ultimately formative moment," Williams argues, is "the material articulation, the activation and generation of shared sounds and words."[128]

For a society around the turn of the twentieth century, obsessed with the sense of humiliation as well as the dynamism that accompanied its semicolonial experience, the introduction of new ways of writing hinged upon the very success of "the activation and generation of shared sounds and words."[129] "Given that writing was so clearly marked as indigenous," Theodore Huters argues, "the contradiction between preservation of the national tradition and the need for thoroughgoing reform were to prove particularly vexing in this period."[130] This dilemma was acutely felt in the rise of the Chinese novel (*xiaoshuo*) as a dominant genre toward the end of the nineteenth century, and one modeled on Western and Japanese works, which were seen to be more politically instructive than traditional Chinese novels.[131] Yet it was precisely its foreign import that tempered enthusiasm for the genre, and many theories of the novel from the period tackled this issue head on.

In 1902, the author and political reformist Liang Qichao (1873–1929) wrote an essay entitled "On the Relationship between Fiction and the Government of the People," originally published in his journal *Xin xiaoshuo* (*New Novel*). It remains to this date a classic text in the history of Chinese literary criticism. Some scholars have traced its intellectual basis to the Meiji tradition of political novels in Japan; others to Liang's interest in Buddhist philosophy around the same time.[132] Yet what has escaped scrutiny is how fiction's visceral, bodily effect on readers jars uncomfortably with larger forces of literary form such as the marketplace and language. However, the more stress is placed on novels' immediate hold over their readers—that is, on the transparency of the form—the more the essay helps expose what Williams calls "the materializing of recognition."[133]

Already in 1899, Liang evoked the power of novels to directly immerse and nourish (*jinrun*) citizen's brains.[134] In the better-known 1902 essay, Liang elaborates on fiction's power of influence, employing the Buddhist terminologies of thurification (*xun*), immersion (*jin*), stimulation (*ci*), and lifting (*ti*) for illustration. To highlight the extent to which readers are unconscious of these four powers' effect on their minds, Liang depicts their fondness for fiction over and above other kinds of writing as a "spontaneous psychological phenomenon beyond human control."[135] Even those who do not read fiction cannot help but "inherit" the lessons it imparts to society. The essay concludes with the hyperbolic comparison of fiction's indispensable role with air (*kongqi*) and subsistence (*shusu*). In addition to being indispensable needs without which one cannot live, air and subsistence also function as mediums. The new novel, according to Liang, should allow his fellow countrymen to absorb reformist and nationalist ideas, such as the ones espoused in his essay, as easily as breathing or eating.

If a "revolution in the realm of fiction" can "renovate the people of a nation," their "morality," "religion," "politics," and so on,[136] the essay intends its battle cry to sound less through the materiality of "words, sounds, and notations" and more through spontaneous, immediate transmissions. Liang's reliance on the Buddhist principles of thurification, immersion, stimulation, and lifting, along with his proclamation of the novel as the "Great Conveyance for literature"—"Great Conveyance" referring to the most powerful means of realizing Buddhist truths—can be seen as a way to downplay the sheer utility of the novel as an instrument of reform.[137] It would be challenging to find another view of fiction more at odds with Williams's materialist conception of form. Yet, in the face of such spirituality, or, rather, the conceptual framework that religion offered, it would be difficult to slough off all traces of materiality, the appeals to air and food being just one such slippage. Even the most idealistic understanding of literature's functions, of which Liang's essay is exemplary, cannot be entirely vague when it comes to the means through which fiction is transmitted. Hence, in admitting that the "power of stimulation" varies according to the kind of content in question, Liang addresses writing's effectiveness over speech's "spatial and "temporal" limitations.[138] Within writing, the vernacular is preferred over classical language, and the parable over grand, serious discourses. It is easy to blame a traditional literary form for causing undesirable behaviors such as superstition and lustfulness; such simplistic, one-to-one causality becomes more complex when the essay concludes by wedging booksellers' markets between individual consciousness and material linguistic elements.

"On the relationship between Fiction and the Government of the People" thus does not simply demonstrate the competing allures of traditional and foreign literary models. By revealing a related, though less detectable, contradiction between literature's immediate transmissibility and the irrefutable substantiality of air and food, not to mention the physical, written form and the marketplace of print, Liang's essay admits to the materiality of communication in the promotion of a new literary form. Similar contradictions confound other fiction writers of Liang's time as they, too, attempt to innovate Chinese fiction by insisting on the immediacy of literature, only to underscore what Williams calls the "work" undertaken by "the medium of language."[139] The stone and the wireless exemplify this conundrum in *New Story of the Stone* and "New Tales of Mr. Braggadocio" respectively: the two vastly differing technologies, which also title this book, emblematize the complex communicative processes through which oft-didactic messages of national and individual enlightenment can manifest in the first place.

I have chosen to reinterpret the likes of Liang, Wu Jianren, Guo Songtao, and Qiu Jin, all of whose works have long received critical attention for their visions of the Chinese nation and its literary modernity. I recast them here as witnesses to the new media technologies of their time with the hope that such reevaluations of their recordings (*ji*), transmissions (*chuan*), and self-writings (*zhuan*)—in short, their attempts to connect (*tong*)—may complicate or even contradict some of their by-now exhausted views on Westernization, semicolonialism, racial and ethnic classifications, as well as class and gender. If the result is that media and the concept of mediation uproot late Qing men and women to a field of study seen as removed from their historical contexts, such removal evinces once again the hitherto lack of mediation between literature, culture, politics, and science and technology; concept and history; and between amateurish Chinese tinkerers and celebrated European and American inventors. And if the present project succeeds in extending media theory to questions of sociality and governance outside Europe and America, the credit falls once again on the historical mediators shuttling back and forth between technical devices and the discursive processes of their signification.

CHAPTER OVERVIEW

The book's five chapters are organized around three inquiries into the mediated effects of "recordings" (*ji* 記), "transmissions" (*chuan* or *zhuan* 傳), and "interconnectivity" (*tong* 通). Each of these three headings captures a techni-

cal function or mode of inscription as well as a set of mediating principles or theories. These progress through the book through gradually increasing levels of intensity in the mediations between media forms and their formal significations in literary and visual texts. I alternate between nonfictional genres and works of science fiction and poetry in order to foreground the mutual interactions between forms, historical meanings, and technical media both real and imagined. Lest we expect imaginary media to be found only in fictional works, this book claims that diplomatic diaries, official telegrams, newspaper articles, letters, biographies, and photographs are equally capable of looking beyond the historical and material constraints of their times into possible futures. Both nonfiction and fiction, moreover, exhibit an extraordinary sense of self-reflexivity.

Despite the significance that early Chinese science fiction played in documenting media technologies,[140] this book distances itself from a genre study. Nathaniel Isaacson, in *Celestial Empire: The Emergence of Chinese Science Fiction*, attributes the rise of the genre to China's semicolonial status, which forced science fiction writers to engage not just with "foreign powers or alien invaders" but "the country's own indigenous traditions."[141] Needless to say, imperialism drove late Qing intellectuals in an oscillating frenzy between foreign and indigenous ideas. I am, however, primarily concerned with the extent to which media technology helped guide that frenzy's momentum. For this reason, I examine *New Story of the Stone* and "New Tales of Mr. Braggadocio," and conclude my study with the recently published *Waste Tide* for their defamiliarization of what it means to record and connect, and not because they fulfill any generic criteria.[142] *New Story of the Stone* enters the science fiction realm proper only in the second half of the novel, but even then, the author labeled it as "social fiction" (*shehui xiaoshuo*), and stylistically it shares similarities with travel narratives and utopian fiction. Such inconsistencies are unsurprising, given how confusion accompanies taxonomic proliferation during this period of literary production and translation. Liang himself listed ten genres of fiction, and at one point grouped Plato's *Republic* and Verne's *Twenty Thousand Leagues Under the Sea* together under the heading of "political fiction."[143] As an emergent form in Williams's sense, the science fiction examined in chapters 2, 4, and the conclusion foreground form not as the "passive disposition of material elements," but the activation of "social semiotic and communicative processes."[144]

Recording (*ji*), which branches into the first two chapters, is one of the four categories of imprint in the traditional Chinese classificatory scheme,

along with classics (*jing*), histories (*shi*), and philosophy (*zi*).[145] Its rich etymology in the classical tradition of record-keeping also extends to the functions of storage, production, and reproduction germane to new media processes.[146] Chapter 1 compares the plotting of old and new media experiences in three contemporaneous Western diplomatic reports or diaries (*shixi ji*) authored by Guo Songtao, his deputy Liu Xihong (?–1891), and one of his translators, Zhang Deyi (1847–1919). Despite their political differences, all three diplomats envision alternative communicative mediums and mediating processes unavailable or at least not yet known to them by name. Such imaginations, however, are belied by writing's anxieties about faithfully depicting new audio and visual recording mediums, an anxiety which spills over into chapter 2.

Like the diplomats I analyze in the previous chapter, Jia Baoyu, the protagonist of *New Story of the Stone*, ruminates on his Chinese identity vis-à-vis new technologies—albeit not in nineteenth-century England but in semicolonial Shanghai circa 1905 and, in the second part of the novel, in utopian China. Like the original character from the classic *Dream of the Red Chamber* on whom he is based, Baoyu, by the end of the novel, transforms into a piece of stone on which his entire adventure is inscribed. The story is then patiently copied and edited into vernacular Chinese by a minor character, Lao Shaonian, a bureaucrat of the utopian kingdom. Focusing on the use of the stone in the historical context of lithography's ascendance in Shanghai, where much of *New Story* is set, and the novel's obsessive detailing of documents, this chapter claims that the intertwining of the human observer, writer, copyist, and stone inscription reflects larger anxieties toward state bureaucracy, commercialization, and the status of work.

Chapter 3 mines the polyphonic meanings of 傳 as both transmission (*chuan*) and historical biography (*zhuan*) in poetry, photography, and the new hybrid form of photographed biographies and autobiographies of exemplary women. These mediums dramatize the transformations brought about by new media technologies through various constructions of female sentimentality specific to their formal structures: poetry, through lyricism; photography, through the tension between the photographic index and the deixis; and the text-image relation in photographed biographies and autobiographies. The question, then, is not whether women can represent their gendered consciousness "in" these new mediums but to radically posit gendered consciousness *as* a lyrical medium, one that no longer serves as instrument or tool for the project of nation-building. I begin by analyzing Huang Zunxian's poem "Jin bieli" ("Modern Parting," 1899), which employs

conventional notions of feminine sentimentality to foreground the relation between the poetic medium and new communicative technologies. In contradiction to this more instrumentalized deployment of feminine sentimentality, Qiu Jin's "Self-Inscription on a Photograph," written on the back of her own photographic portrait, challenges normative prescriptions of women's feelings and the erasure of femininity's "lyrical traces" by early Chinese feminists, both male and female.

The final section, "Interconnectivity" (*tong*), analyzes the ultimate dream of connectivity borne from the period's preoccupation with electricity. *Tong* indicates a constellation of principle meanings related to openness and thoroughness, penetrability, and exchangeability.[147] These inform the compound "to join" (*goutong*), the Chinese term also indicating the physical intersection of waterways dating to the *Zuozhuan* of late fourth century BCE.[148] We find it again in "communications" or "infrastructure" (*jiaotong*), which is also the intersection of roads in *Taohuan yuan ji* (*Peach Blossom Spring*, 421 CE) by Tao Yuanming (365?–427). *Tong*, as both noun and verb, appears at times better suited than the common translation for "communication" (*chuanbo*) for embodying general states of communicative accessibility. Wang Tao (1828–1897) praised newspapers for "connecting external affairs to the interior" (*tong waiqing yu nei*).[149] The reformist Tang Caicheng (1867–1900) lauded the popular press for its ability to connect literate people in different social strata, who could, by "grasping the changes and patterns in one phenomenon, infer those in others" (*chulei pangtong*).[150] Liang Qichao, ever so visceral in his appeals, invoked *tong* when he compared the nation without newspapers with the physical ailment of "having one's throat and tongue blocked" (*houshe butong*).[151] *Tong* also comprises the first half of "general history" (*tongshi*), which, in contrast to "dynastic history" (*duandai shi*), speaks to a total view of human activities. With the advent of the telegram, "circular telegrams" (*tongdian*, sometimes "public telegrams" *gongdian*) relied on an increasingly connected official infrastructure.

Chapter 4 continues the heuristics of disruption from the previous chapter, this time examining conflicting representations of interconnectivity in telegrams, letters, eyewitness reports, newspaper articles, and visual media leading up to and during the tumultuous events of the Boxer Rebellion and the Siege of the Legations of 1900. The telegraphic imagination's straddling of ineffable spirit and bodily matter, and its distortion of time and space when crossing over to print as public or circular telegrams, I argue, was a complementary medium, not an opposing one, to the Boxers' use of magic and public communication. By engaging with the recent turn from mediums

to infrastructure in media studies, this chapter demonstrates that the breakdown of transport and telegraphic communication during the Boxer Rebellion, instead of constraining the production of texts and images depicting the crisis, in fact helped fuel their global circulation.

The last chapter of the book settles appropriately on the fantasy of all communications: a medium that connects everything including the very distinction separating itself from other media. Toward the end of the story, the protagonist of "New Tales of Mr. Braggadocio" by Xu Nianci (1875–1908) invents brain electricity, the power of which replaces existing energy sources, transportation, and communications media, and eventually causes worldwide unemployment. I trace the genesis of this invention to earlier moments in the short story where a multiplication of the first-person narrative perspective stands in for the problem of representing the masses or the collective. At the same time, the problem of narratology intersects with the late nineteenth and early twentieth centuries' fascinations with neurology, electricity, and the powers of mental healing in New Thought and Spiritualist circles. More than a motif, brain electricity thus disconnects theoretical and discipline-specific interests in connectivity from more abstract concerns, bringing the notion of interconnectivity (*tong*) to resonate with developments in advertising, technical education, and economic productivity in this period of Chinese history.

The Stone and the Wireless concludes by extending early Chinese science fiction's imagination of boundless interconnectedness to Chen Qiufan's (Stanley Chan, 1981–) novel, *Huang chao* (*Waste Tide*, 2013). The latter's depiction of class warfare aided by augmented-reality technologies and cloud computing continues my analysis of the enigmatic ending of "New Tales of Mr. Braggadocio," whereby narrative form and subjectivity coalesce with the historical problem of an individual's relationship to their larger collective in the political economy. At the same time, Chen's novel, by martyring women's bodies and sentimentalities for the abstract, greater good of humanity at large, reintroduces the problematic figure of the female medium that both divides and connects this book. While I argue in chapter 3 for a technical instead of moral valorization of the feminine example, my concluding assessment shows that women's relationship to media technology remains easy prey for contemporary science fiction's digital exploits. If media mediate the tensions between the technical and the political-ethical undergirding early twentieth-century gender and class relations in the nascent nation-state, the work of mediation, to state it plainly, runs on overdrive in order to make sense of global China today.

The effort this book directs at unraveling the conceptual implications of mediation rather than at giving a history of any individual media technology means that the tumultuous events and works as treated here would find themselves awkwardly placed in existing media histories of the turn of the twentieth century, or even in political or literary studies focusing on the last decades of the late Qing, lurking rather as footnotes to more ostentatious parades of the new. If so, such a result would be fitting. With my study ending in the year 1906, I stop before the Xinhai Revolution of 1911–12, before the 1914 May Fourth Movement, when the Chinese language is often said to have been renewed, before the serious beginnings of Chinese film and gramophone industries in the 1930s, before the centralization of telecommunications, postal, and transportation networks during the Republican era, and before the fervent transnational imaginations of the Chinese typewriter during the interwar and postwar years. *The Stone and the Wireless* closes before these moments so as to capture the manifold, unpredictable potentials of media and mediation before they were eviscerated once they, as we say now, "went live."

NOTES

Introduction: The Forms of Media

1 Liu, *Translingual Practice*, 266, 351. *Tongxin xianji*, a neologism derived from English missionary texts, was used to refer to "communication device." A similar neologism from Japan, *dianqi tongxin xue*, refers more specifically to the modern usage of "telecommunications." Unfortunately, this resourceful appendix does not indicate the dates of these new Chinese terms.
2 Li Gui, *A Journey to the East*, 119.
3 Li Gui, *A Journey to the East*, 119.
4 Mullaney, *The Chinese Typewriter*, 24.
5 Li Gui, *A Journey to the East*, 121–22. It is not difficult to detect in Li's troubled hearing in the Machinery Hall allusions to twentieth-century studies of noise. Claude Shannon and Warner Weaver's 1949 book *The Mathematical Theory of Communication* has canonized the inclusion of noise, as informational entropy, into the consideration of information (see Bruce Clarke, "Information"). Drawing diversely from fables, physics, information theory, anthropology, music, art, and political economy, Michel Serres contends that only noisy, noncommunicative channels mediate, and that the parasitical relation, or nonrelation, spells the essence of relations (Serres, *The Parasite*, 78).
6 Li Gui, *A Journey to the East*, 119.
7 Desnoyers, "Translator's Preface," in Li Gui, *A Journey to the East*, vi.
8 Galloway, Thacker, and Wark, *Excommunication*, 9–10.
9 The phrase "when old technologies were new" evokes the title of Carolyn Marvin's seminal book.
10 An Haibo, "Wan Qing de 'guang yu chengxiang.'"
11 Tang Hongfeng, "Huandeng yu dianying de bianzheng."
12 Baark, *Lightning Wires*.
13 Karl, *The Magic of Concepts*, 12.
14 Liu, *Information Fantasies*, 15.

15 For an assessment of these historical demarcations, see the introduction in Starr's *Red-Light Novels of the Late Qing*.
16 Xiao Liu, *Information Fantasies*, 15–16.
17 For a helpful encapsulation of New Qing History, see Rawski, "Reenvisioning the Qing"; Waley-Cohen, "The New Qing History."
18 Karl, *The Magic of Concepts*, 13.
19 Zhang Longxi, "Western Theory and Chinese Reality," 116.
20 Zhang Longxi, "Western Theory and Chinese Reality," 128.
21 Saussy, "Outside the Parenthesis," 854. For other works that more indirectly confront this issue common in global or comparative Chinese literary studies, see Bush, *Ideographic Modernism*; Bachner, *Beyond Sinology*; Hayot, *Chinese Dreams*; Hayot, Saussy, and Yao, *Sinographies*; Klein, *The Organization of Distance*; Stalling, *Poetics of Emptiness*; Yao, *Foreign Accents*. For a link between the "container" model of historicizing and contextualizing to the posturing of suspicion in critical reading, see Felski, "Context Stinks!"
22 I borrow the phrase "chiasmus on the predicates" from Saussy, "Outside the Parenthesis," 853.
23 For an overview of these views, see Huters, *Bringing the World Home*, chapter 1, 23–42, wherein the author defends the second position.
24 Chen Depeng, "Wenhua jiegou," 35. For a reappraisal of Zhang's *Quanxue pian*, see Hon Tze-ki, "Zhang Zhidong's Proposal." For a discussion of the mapping of "Chinese learning as essence, Western learning as application" onto the *dao*/*qi* distinction by the merchant-reformer Zheng Guangyin (1842–1922), see Wu Guo, "Gailiang de di xian."
25 Chen Depeng, "Wenhua jiegou," 35. See also Huters, *Bringing the World Home*, 31–32. In the 1867 memorial by Woren (1804–1871) rejecting the progressive proposal of Prince Gong (Yixin, 1833–1898) to teach Western techniques to Chinese students, he insisted that "skills and crafts" are "trivial," not "fundamental," and that "reliance on technical skills" would fail to "raise [a country] out of weakness" (quoted in Huters, *Bringing the World Home*, 31–32). Philosophical precepts' superiority over technical skills is thus something that opposing factions of the Qing court mutually agreed upon.
26 Fraser, "Heterosexism, Misrecognition, and Capitalism," 286.
27 Karl, *The Magic of Concepts*, 13.
28 In his seminal *Chinese Intellectuals in Crisis*, Hao Chang calls this adaptation of more radical change after 1895 "a crisis of orientational order" (5).
29 Yan Fu, "Lun shi bian zhi ji."
30 Lu Xun, "Wenhua pianzhi lun."
31 Doleželová-Velingerová, "Literary Historiography." The Imperial Edict of January 4, 1904, introducing the new university curriculum, helped give rise to an expanded use of the term *wenxue*, "literature, belles lettres," to cover the broad meaning of "humanities." While humanities curricula excluded Neo-Confucianism and economics, it included historiography, early Chinese philosophy, archival studies, and stylistics. Literature was further divided into the "exegesis of script and prosody," "stylistics and creative writing," "literary

style and grammar," "and propaedeutics." Other new fields of study instituted by the edict included political science (*zhengzhi*), natural sciences (*gezhi*), agronomy (*nongxue*), industrial studies (*gongyi*), business (*shangwu*), and medicine (*yixue*).

32 Snow, *The Two Cultures*. Snow first critiqued the division of Western intellectual life into the sciences and the humanities in the Rede Lecture of May 1959.

33 Latour and Woolgar, *Laboratory Life*; Latour, *We Have Never Been Modern*.

34 Latour, *We Have Never Been Modern*, 81, 48.

35 Felski, "Context Stinks!," 578.

36 Tsu Jing and Elman, *Science and Technology in Modern China*.

37 Tsu Jing and Elman, "Introduction," 7.

38 Guillory, "Genesis of the Media Concept," 354. The under-theorizing of the concept of mediation in media and communication studies is all the more peculiar, Guillory suggests, given how relatively uncontroversial it has been to infer "modes of social mediation" from the operation of technical media, as in the work of John B. Thompson and others.

39 Guillory, "Genesis of the Media Concept," 354.

40 For instance, we could view the concept of *biantong* or dialectics, and the *dao* and *qi* debate, as executing comparable operations of mediation through the reconciliation of conflicting epistemologies, entities, processes, peoples, and domains. See Tian, *Chinese Dialectics*; Mao Zedong, *Mao Zedong on Dialectical Materialism*; Wang Qian, *"Dao" "ji" zhi jian*; Hui Yuk, *The Question Concerning Technology in China*.

41 Marvin, *When Old Technologies Were New*, 4.

42 Galloway, *The Interface Effect*, 17.

43 Rajagopal, "Communicationism," 355.

44 Larsen, "Literature, Immanent Critique, and the Problem of Standpoint"; Ma Shaoling, "To Compare Otherwise."

45 Jones, *Yellow Music*, 11. According to Jones, this slip reveals an ahistorical, analytical oversight, one which mires Chinese media culture in an anxiety of influence.

46 McLuhan, *Understanding Media*.

47 See Gitelman, *Scripts, Grooves, and Writing Machines*. On new media histories and theories that similarly focus on European and American contexts, see Acland, *Residual Media*; Chun and Keenan, *New Media, Old Media*; Gitelman and Pingree, *New Media*; and Wardhip-Fruin and Montfort, *The New Media Reader*. On the branch of German media studies focusing on cultural techniques (*Kulturtechnikforschung*), which is starting to attend to cross-cultural analysis, see Geoghegan, "After Kittler"; Siegert, "Cacography or Communication"; and Vismann, "Cultural Techniques and Sovereignty."

48 Jones, *Yellow Music*, 10.

49 The reverse impulse has similarly struck comparative philosophical studies, which accord materiality a Chinese orientation while tracing signification

and form to their provenance in European concerns with mimesis and transcendence. See Saussy, "No Time Like the Present."

50 Lydia H. Liu, to give but one prominent example, proposed more than two decades ago "the idea of 'translingual practice' in [her] book to raise the possibility of rethinking cross-cultural interpretation and forms of linguistic *mediation* between East and West," where mediation does not just operate across linguistic difference but also spans other "cross-cultural" relations between China and other nations (Liu, *Translingual Practice*, xviii).

51 Since David Wang's 1997 *Fin-de-Siècle Splendor*, scholars have successfully unsettled the narrative of decline and stagnation associated with Chinese literary historiography before the May Fourth period. Nevertheless, disagreements arise over the degrees to which such modernity is incipient, transitory, or simply unfixed, which imply that other mediating positions continue to nuance the modernity debate. Hence Starr suggests that rather than overdetermining the late Qing according to one terminology, we ought to "widen the debate by finessing definitions. . . . The new modernity debate needs to acknowledge the continuum of change in literary practices through the nineteenth century and on into the May Fourth era" (*Red-Light Novels*, 14). See also Schwartz, "The Limits of 'Tradition versus Modernity.'"

52 See Tsu Jing, *Failure, Nationalism, and Literature*.

53 Huters, *Bringing the World Home*, 6. Rather than take modernity as his central concept, Huters claims that Westernization, which he defines as "the thorny accommodation between China and the incoming rush of Western ideas and practices," gives the period 1895 and 1919 its "own unique character." Elsewhere in the book he refers to this process of accommodation as a "dialectic" of "Sino-Western relations" whereby the West had been admired and yet disdained at the same time (3).

54 Liu, *Translingual Practice*, xviii. Michael Gibbs Hill's focus on translation as labor, however, risks exposing a lack of mediation between labor and culture insofar as the latter is deemed to be less tangible and material (*Lin Shu, Inc.*, 12).

55 Reed, *Gutenberg in Shanghai*; Wagner, *Joining the Global Public*; Zhang Xiantao, *The Origins of the Modern Chinese Press*.

56 Bao Weihong, *Fiery Cinema*; Liu Xiao, *Information Fantasies*.

57 Saussy, *Great Walls of Discourse*, 2–3.

58 Saussy, *Great Walls of Discourse*, 3. I will further discuss Saussy's deconstructive logic in chapter 3.

59 For a discussion of Pierre Bourdieu's use of the term *praxeology*, see Everett, "Organizational Research." For a political economy approach, see Caldwell, "Praxeology and Its Critics."

60 Galloway, "What Is New Media?," 380.

61 Williams, *Television*, 127.

62 Jones, "The Technology Is Not the Cultural Form?," 6.

63 Jones, "The Technology Is Not the Cultural Form?," 6, emphasis added.

64 Williams, *Television*, 130.

65 Quoted in Jones, "The Technology Is Not the Cultural Form?," 7.
66 Jones describes Williams's use of homology and correspondence as an "embrace" of the "methodological legacy of aesthetic modernism" within a "sociological frame" ("The Technology Is Not the Cultural Form?," 7).
67 An important contribution to this formalist renewal is the March 2000 issue of *Modern Language Quarterly*, which was republished as a book in 2006. See Wolfson, "Reading for Form," and also Wolfson and Brown, *Reading for Form*. Caroline Levine argued for a notion of "strategic formalism" in her 2006 article of the same name, which generated a wave of responses in the subsequent issue of *Victorian Studies*. Levine continues her investigation of literary forms' destabilizing relation to social formation in her most recent work, simply titled *Forms*. Outside the field of literary studies, a most representative defense of cinematic form—and not just form, but also continental theory—can be found in Eugenie Brinkema's *The Forms of the Affects*, 36. There, she argues for a "radical formalism" in film and media studies to counter the dominant fashion of treating affects according to models of expressivity, embodiment, and lived intensities. She also distinguishes her approach from David Borwell and Kristin Thompson's neo-formalism in film studies.
68 Brinkema, *The Forms of the Affects*, 36–37, 39.
69 David Wellbery in 1990 first devised the phrase *post-hermeneutic criticism* to describe the work of Friedrich A. Kittler (Wellbery and Kittler, "Foreword," xiv). Since then, the phrase has been associated with posthumanism and names a subfield of media studies.
70 Geoghegan, "Mind the Gap"; Parks and Starosielski, *Signal Traffic*.
71 Mullaney, *The Chinese Typewriter*, 19. Mullaney develops the phrase *techno-linguistic* to account for the linguistic and infrastructural significance of the typewriter beyond what he calls the "sound-meaning-shape triad."
72 Kittler, *Gramophone, Film, Typewriter*, i.
73 Kittler, *Gramophone, Film, Typewriter*, xxxix–xl.
74 Wellbery and Kittler, "Foreword," xiii.
75 Winthrop-Young and Michael Wutz, "Translator's Introduction," xxxiv.
76 Kittler, *Gramophone, Film, Typewriter*, 33.
77 Kittler, *Gramophone, Film, Typewriter*, 56.
78 Kittler, *Gramophone, Film, Typewriter*, 133.
79 Kittler, *Gramophone, Film, Typewriter*, 155.
80 Kittler, *Gramophone, Film, Typewriter*, 163.
81 Kittler, *Gramophone, Film, Typewriter*, 163.
82 Kittler, *Gramophone, Film, Typewriter*, 200.
83 Kittler, *Gramophone, Film, Typewriter*, 200.
84 Sebastian and Geerke, "Technology Romanticized."
85 Kittler, *Discourse Networks*.
86 See Anker and Felski, *Critique and Postcritique*; Felski, *The Limits of Critique*; Latour, "Why Has Critique Run out of Steam?"
87 Rooney, "Symptomatic Reading," 129–30.
88 Rooney, "Symptomatic Reading," 137–38.

89 Rooney, "Symptomatic Reading," 139–40.
90 Best and Marcus, "Surface Reading," 15.
91 Schmitt, "Tidal Conrad," 13.
92 Schmitt, "Tidal Conrad," 15.
93 Schmitt, "Tidal Conrad," 15.
94 For a non-exhaustive list of scholarship devoted to refining the basic assumptions of what media and mediation are, see Galloway, Thacker, and Wark, *Excommunication*; Guillory, "Genesis of the Media Concept"; Hartley, *Communication, Cultural, and Media Studies*; Kafka, "Media/Medium"; Lacey, *Image and Representation*; Lacey, *Narrative and Genre*; Mitchell and Hansen, *Critical Terms*; Ouellette and Gray, *Keywords for Media Studies*; and Peters, *The Marvelous Clouds*.
95 Rooney, "Form and Contentment," 29.
96 Parikka, "New Materialism as Media Theory," 95–96; see also Allen-Robertson, "The Materiality of Digital Media."
97 Guillory, "Genesis of the Media Concept," 322.
98 Luo Dajing, *Helin yulu*, vol. 6, 109.
99 Williams, *Marxism and Literature*, 187.
100 Williams, *Marxism and Literature*, 97.
101 Williams, *Marxism and Literature*, 99.
102 Li Gui, *A Journey to the East*, 119.
103 Latour, *We Have Never Been Modern*, 81.
104 Hansen, *Embodying Technesis*, 7.
105 Hansen, *Embodying Technesis*, 3.
106 Hansen, *Embodying Technesis*, 8.
107 Hansen, *Embodying Technesis*, 19.
108 Hansen, *Embodying Technesis*, 19.
109 Hansen, *Embodying Technesis*, 21.
110 Hansen, *Embodying Technesis*, 34.
111 Hansen, *Embodying Technesis*, 82.
112 Hansen, *Embodying Technesis*, 85.
113 Hansen, *Embodying Technesis*, 85.
114 Brinkema, *The Forms of the Affects*, xiv.
115 Hansen, *Embodying Technesis*, 248.
116 Gitelman, *Scripts, Grooves, and Writing Machines*, 6.
117 Hayles, *Writing Machines*, 25–26.
118 Hayles, *Writing Machines*, 25.
119 Hayles, *Writing Machines*, 30.
120 Stiegler, "Derrida and Technology."
121 Hansen, *Embodying Technesis*, 8.
122 Thomas Bartscherer, Review quote, The University of Chicago Press Website, https://press.uchicago.edu/ucp/books/book/chicago/E/bo14413838.html.
123 Williams, *Marxism and Literature*, 6.
124 Williams, *Marxism and Literature*, 159.

125 Jones, "The Technology Is Not the Cultural Form?," 12.
126 Williams, *Marxism and Literature*, 188.
127 Williams, *Marxism and Literature*, 189–191.
128 Williams, *Marxism and Literature*, 191.
129 Williams, *Marxism and Literature*, 191.
130 Huters, *Bringing the World Home*, 74.
131 Huters, *Bringing the World Home*, 103.
132 Huters, *Bringing the World Home*, 113–14.
133 Williams, *Marxism and Literature*, 191.
134 Liang Qichao, "Yin bingshi ziyou shu," 23. Liang published this short essay in *Qingyi bao* in 1899 under the name Rengong.
135 Liang Qichao, "On the Relationship," 78.
136 Liang Qichao, "On the Relationship," 79.
137 See Huters, *Bringing the World Home*, 114. Liang's marriage of Buddhism with an increasingly vulnerable Confucian-based ideology fulfills a national outlook, but it is one undoubtedly ambiguous about how exactly to "pursue the understanding, the representation, and the transformation of the outer world."
138 Liang Qichao, "On the Relationship," 77.
139 Williams, *Marxism and Literature*, 159.
140 The first translated work of science fiction was an abridged serialization of the American writer Edward Bellamy's *Looking Backward: 2000–1887* in 1884 in *The Globe Magazine* (*Wanguo gongbao*) by Timothy Richard. Huangjiang Diaosou's 1904 *Tales of the Moon Colony* (*Yueqiu Zhimindi*) is generally believed to be the first Chinese science fiction story. Qian Jiang, "Translation and the Development of Science Fiction."
141 Isaacson, *Celestial Empire*, 7–8. The very term *science fiction* (*kexue xiaoshuo*) is a portmanteau of two major developments in early twentieth-century China: Western science and the novel.
142 Suvin, *Positions and Presuppositions in Science Fiction*. Suvin's authoritative definition of science fiction as "a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment" (66) has been adopted by many studies of Chinese-language science fiction, including Isaacson's, with some variation. See also Isaacson, *Celestial Empire*, 27–28. For problems of generic identification, see, in addition to Starr's *Red-Light Novels*, Des Forges, *Mediasphere Shanghai*; Isaacson, *Celestial Empire*; see also Keulemans, *Sound Rising from the Paper*; Yeh, *Shanghai Love*.
143 Zhang Zhi, "Wan Qing kexue xiaoshuo chuyi." The ten types of fiction, listed in a 1902 article published in *New Citizen* (*Xinmin congbao*), are "historical" (*lishi*); "political" (*zhengzhi*); "philosophical-scientific fiction" (*zheli kexue*); "military" (*junshi*); "adventure" (*maoyan*); "detective" (*zhentan*); romance (*xieqing*); stories of the strange (*zhiguai*); diaries (*zaji ti*); and tales of the marvelous (*chuanqi ti*). Specifically, "philosophical-scientific fiction" held "noble ideals and scientific observations" that were seen as being able to

bring "progress to the world, encourage imaginative thought" (69). Consequently, it became an important category featured in most late Qing fiction journals. According to Zhang, the transition from philosophical-scientific fiction to its latter-day designation as "science fiction" reflected a general sense of confusion over literary genres and the need to distinguish between scientific and political-societal ideals (69).

144 Williams, *Marxism and Literature*, 190–91.

145 McDermott, "The Ascendance of the Imprint in China."

146 *Ji* also names various types of historical chronicles (*dashi ji*, *shiji*, *jichuan*, *jidie*, *jifu*) and other forms of writing (*jishu*, a general biographical or family record; *youji*, travel journals; *riji*, diaries; *zaji*, miscellaneous notes; and more generally *jishu wen*, written narrations or belles lettres).

147 Regarding thoroughness, the second-century Chinese dictionary *Shuowen jiezi* defines *tong* as "extension and infinite reach" (*tong*, *da ye*). All etymologies and their sources in this section are excerpted from *Handian* online, https://www.zdic.net/, accessed November 7, 2017. With regard to penetrability, *The Classic of Filial Piety* (*Xiao jing*) uses *tong* to define filial piety as something that penetrates (*tongyu*) spiritual intelligences (*shenming*) and radiate all within the four seas (*wusuo butong*). In the *Daode jing*, the *dao* subtly and exquisitely penetrates (*weimiao xuantong*). I will discuss the significance of the *dao*'s relation to its perceived other, *qi* 器, for late Qing politics in the following chapter. Finally, regarding exchangeability, the *Comments of the Recluse* (*Qianfulun*) (102–67 CE) uses *tong* in *tonghuo*, the exchange and trading of goods.

148 This sense of communication is at once earlier than and at variance with the above noted *chuanbo* ("to propagate") found in the appendix of Liu's *Translingual Practice*. See also *The Commentary of Zuo* (*Chunqiu zuozhuan*), the chapter on "Lord Ai," 1826–1994.

149 Liu Guanglei, "Wan Qing chuanbo guannian," 15.

150 Liu Guanglei, "Wan Qing chuanbo guannian," 15.

151 Liu Guanglei, "Wan Qing chuanbo guannian," 15.

Chapter One. Guo Songtao's Phonograph

1 Fryer, "Chinese Education," 332, emphasis added.

2 Fryer, "Chinese Education," 334.

3 Hayles, *Writing Machines*, 22.

4 Taussig, *Mimesis and Alterity*, xviii.

5 It is well known that phonograph playbacks exhibit a low fidelity to the original sound because of scratching sounds produced by the needle following the groove created by the recording process. Rather than credit, or in Fryer's case deride Edison's invention, together with the woodblock and typewriter, for making perfect copies, it would be more accurate to associate them with more efficient information retrieval at a later stage. Misunderstandings over what related media can and cannot do, as Gitelman illustrates, can be very