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Received: 12 September 2018 / Accepted: 29 January 2019
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Abstract This article examines the roles of magnetic recording in China’s sound governance. Through analyses of archival documents and personal accounts, this article argues that in the early 1980s, the magnetic recording infrastructure and its common usage underwent dramatic transformations. In the 1960s and 1970s, state officials and language educators configured the magnetic recording infrastructure to propagandize authoritative and normative sounds while maintaining strict hierarchical distinctions between those who recorded and those who listened. In the early 1980s, with the rapid popularization of compact cassettes and recorders, these distinctions dissolved as millions of people began to produce and exchange dubbed cassettes. Widespread home dubbing created a decentralized network of sound production and circulation that not only defied government regulation, but also fueled the anxieties that moral, social, and ideological catastrophes would soon descend on the country. Through this media history of magnetic tape, this article shows how the governance of sound infrastructure and protocols was integral to the governance of people.

Keywords magnetic tape · cassette · recorder · media infrastructure · protocol · music · sound studies · Maoist China · post-Mao China

A fifteen-year-old boy named Haipeng Yang was patiently waiting for the right moment. For some time, he had watched his mother using a tape recorder to listen to Russian lessons, but he knew other ways to use this novel device. One day, he

Acknowledgments I thank Thomas S. Mullaney for making this project intellectually conceivable and Eugenia Lean, Andrew F. Jones, Richard R. John, and Paulina Hartono for commenting on previous versions of this article. Detailed suggestions from Wen-Hua Kuo and two anonymous reviewers helped turn this article into its publishable form. I also want to thank Michelle Mengsu Chang, Truman Chen, and Shan Huang, three friends who encountered me at the very beginning of this project and kept me afloat and anchored amid the vicissitudes of early graduate life.

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brought a cassette to a friend who collected the songs of Teresa Teng (Deng Lijun 邓丽君), a popular Taiwanese singer, and asked his friend to dub Teng’s songs onto his tape. Once he returned home, Yang secretly took his mother’s recorder and played his cassette. Yang’s father, who soon discovered the mischief, was furious. Newspapers had already labeled Teng’s songs as jingshen wuran 精神污染 (spiritual pollution). A directive from the central government had alerted the public that Teng’s songs were “seriously eroding the ideology” of China’s vulnerable youth (Party Center and State Council 1982). The father did what every responsible parent was supposed to do: he scolded his son for listening to such degenerate music and confiscated the offending cassette. The moral indignation, however, quickly fizzled out. As his son recalled almost three decades later, the father shut himself in his bedroom and stayed up the entire night listening to the cassette. He was thoroughly mesmerized by Teng’s mellow voice (Xinjingbao she 2008: 169).

Haipeng Yang and his father were not alone. In the early 1980s, despite the government’s shrill warnings and heavy-handed crackdowns, the voice of Teresa Teng spread like wildfire across China on the back of dubbed cassette tapes. Teng, though still labeled as an ideological enemy, quickly became one of the most popular singers in the country. In China today, Teng’s name still conjures up images of the early post-Mao period. According to popular narratives, people who emerged from the Mao period endured several decades of sensual repression and finally satisfied their desires by listening to Teng’s sweet tunes. Mesmerized by these new sounds, the revolutionary, principled, and self-sacrificing Maoist subject reputedly had his last gasp (Jin 2002). Teng’s meteoric rise in popularity, as a result, has signified a critical historical transition in popular imaginations.

Rather than examining this transition by recounting how Teng replaced Mao-era singers, this article examines this transition from the perspective of “sound regime.” By investigating the role of magnetic recordings from the late 1950s, when China produced its first magnetic tape recorder, to 1983, when millions of people such as Haipeng Yang listened to cassettes dubbed with Teng’s voice, I trace the history of the Mao-era sound regime. A sound regime, as I define it, does not refer to a person or an institution. Instead, it refers to the composite of sound infrastructure and its associated social protocols. An analysis of sound regime, therefore, examines not only the technological objects, but also the social practices through which people interacted with these objects. Through the word regime, I hope to emphasize that this composite of sound infrastructure and social protocols can govern who we are and what we do. However, unlike an authoritarian person or institution, a sound regime exercises its power not by punishing specific transgressions, but by conditioning our behaviors through infrastructural and protocological means. Exercising power through these mundane means does not necessarily make the sound regime more resilient. When changes in the sound infrastructure and protocols take place, the material and social relationships that sustained the old sound regime can quickly unravel. This article will examine the unraveling of the Mao-era sound regime through the medium of magnetic recording. While the Mao-era sound regime encompassed the infrastructure and protocols of a great variety of media, many of which remained relatively stable beyond the end of the Mao period, the infrastructure and protocols of magnetic recording changed dramatically in the early 1980s and provided an illuminating example of how the material and social relationships undergirding the Mao-era sound regime unraveled.
In making this definition of “sound regime,” I follow media scholars such as Lisa Gitelman and Charles Hirschkind who seek to demonstrate how social and technological factors are integral to each other, thereby averting the Scylla and Charybdis of social and technological determinism. Many recent works on media technologies have veered dangerously toward technological determinism. Despite warnings against the reification of “technology,” the rise of “new media” has unleashed a torrent of popular books on how media technologies transform human society (Marx 2010). Scholarship on cassette tapes, though extremely limited, also displays this tendency. Hong Zhang, a culture critic, argued that the replacement of radio by tape recorders in the early post-Mao period promoted the replacement of revolutionary ideals by individualist impulses. Magnetic tapes, he implied, have some inherent democratizing functions (Zhang 2005). Studies such as Zhang’s focus on the supposedly self-evident functions of technological objects and do not examine people’s actual engagement with these objects in specific historical contexts. In contrast with scholars such as Zhang, Gitelman and Hirschkind show that media technologies, far from ready-made objects with “intrinsic technological logic,” were sites of intense social negotiations (Gitelman 2000; Hirschkind 2006). Because existing social relationships and cultural norms always condition the usage and meaning of media technologies, “new media,” no matter how “new,” can never be “entirely revolutionary” (Gitelman 2006). It makes no sense, therefore, to study media technologies detached from their associated cultural meanings and social practices. At the same time, media scholars such as Gitelman and Hirschkind also point out how technological objects remake social categories. Hirschkind, in his study of cassette sermons in Egypt, demonstrated how the spread of cassette tapes fashioned new urban spaces and listeners’ subjectivity, giving rise to new types of religious publics (Hirschkind 2006). Rather than exchanging the fallacy of technological determinism for the fallacy of social determinism, these scholars focus on describing the entanglement of social and technological factors. Their analyses of technological objects and their analyses of social protocols are integral to each other. The notion of sound regime, as a result, must encompass both registers.

The analysis below proceeds in four sections, with the first two on the Mao period and the last two on the early post-Mao period. Section 1 describes how state institutions in the Mao period used magnetic recording devices in ways that promoted the distinction between those people who recorded sounds and those who listened. The magnetic recording infrastructure and this social relationship between two groups of people were critical components of the Mao-era sound regime. Section 2 further examines this social distinction by illustrating how recorded sounds in the Mao period were often sonic mofan 模范 (models) that authorities carefully crafted and listeners strenuously emulated. Section 3 describes how the popularization of tape recorders in the early 1980s reconfigured the media infrastructure and eliminated the aforementioned distinction between sound recorders and listeners. Section 4 examines the implications of this infrastructural and protocological transformation by demonstrating how recorded sounds often became sonic liumang 流氓 (hooligans), whose multiplication through dubbed cassettes was deemed by many officials and intellectuals to pose moral, social, and ideological threats. Through these four sections, I hope to demonstrate the end of the Mao period via changes in the media infrastructure and its associated social protocols.
1 Magnetic Recording as a Medium of Hierarchies

Before cassette tapes and recorders became household goods in the early 1980s, most Chinese had never used or even seen tape recorders. Throughout the Mao period, production capacity of these devices was small due to both political and technical reasons. Expanding access to this technology was never a priority for policy makers and propaganda officials, who saw greater value in popularizing radios than in popularizing tape recorders. Technically, producing recorders was also more difficult than producing radios. Until foreign investors brought in the tools to manufacture precision instrument in the early 1980s, Chinese engineers could not manufacture inexpensive, high-quality magnetic heads, the components in recorders that translate magnetic polarities on tapes into electronic signals. Many archival documents about recorder production in the 1970s and 1980s were requests by domestic manufacturers to import foreign equipment and know-how (Beijing Municipal Archives [BMA], 1 380–001–00017). As a result of these political and technical impediments, magnetic recorders and tapes were relatively rare in China. According to government estimates in 1981, the total number of recorders in a country of nearly 1 billion people was only about 2 million (Shanghai Municipal Archives [SMA], 2 B1–9–402–45). Such numbers posed sharp contrasts with those of the Soviet Union. In 1969, the Union of Soviet Socialist Republics (USSR) was already producing more than 1 million recorders annually, and this figure eventually reached 4.7 million in 1984 (Yurchak 2005: 187). Soviet policy makers also made recorders available for consumer purchase. In the Brezhnev era, young people widely used recorders to secretly dub “unhealthy” rock music smuggled across the Iron Curtain, leading to a cultural craze that some people satirized as the “magnitozikatsia (tape-recording) of the whole country” (Yurchak: 185–90). The Chinese experience was drastically different.

In the Mao period, only the nation’s propaganda apparatus and some bureaucratic and educational institutions could use magnetic recorders and tapes. The primary owners of recorders in the Mao period were radio stations. Zhanqing Song (1958: 2), the engineer of China’s first domestically produced magnetic tape recorder, wrote explicitly in 1958 that his product was primarily designed to facilitate “the recording and transfers of public broadcast programs.” Over the next twenty years, the factory where Song worked produced around twenty-five thousand units of L601 Open-Reel Recorder, which became the information backbone of China’s sprawling radio propaganda system (Fig. 1). Tape assumed this importance because it was an effective weapon in the government’s war against radio noise. A key challenge facing propaganda officials and radio engineers in the Mao period was how to decrease noise incurred during the transmission of radio signals. At a time when radio was the regime’s primary propaganda tool, it was a high priority to preserve the fidelity of radio sounds so that people across the country could hear the same message crafted by propaganda officials. Before an extensive system of microwave relay towers was finally created in 1979, officials had only two ways of transferring sound materials among radio stations (Zhang 2003). The first was to beam shortwave signals from

1 Beijing Municipal Archives, 42 Puhuangyu Road, Fengtai District, Beijing, People’s Republic of China.
2 Shanghai Municipal Archives, 2 Zhongshan East 2nd Road, Shanghai, People’s Republic of China.
central stations such as the one in Beijing. After receiving the signals, local stations would then air the program on local frequencies. This method, though relatively convenient, was not very reliable because shortwave signals are easily disrupted by noise in transmission. The second method involved sending sounds not through radio waves, but through magnetic tapes. Officials often taped programs at one place, made multiple copies of the tape, and then mailed one copy to each relevant station, which played the tapes to air the program. Since most stations had the same model of recorders and tapes, this distribution of sound materials was relatively smooth (Shanghai shi difangzhi bangongshi n.d.). Propaganda officials relied on these open-reel tapes to ensure radio stations across the country could air radio programs of the same fidelity (Zhang 2003). The sound from Beijing could, as a result, reach every part of the country’s vast expanse.

Such usage reveals that magnetic tapes, long before they became the ungovernable carriers of Teng’s music, were ironically the linchpins of the state’s propaganda apparatus. The media infrastructure of magnetic tape at the time essentially functioned as a “radio” for radio stations: it recorded sounds created at one place and transmitted them to different localities across the country. In the early days of magnetic recording, radio, with its one-to-many distribution model, provided a master metaphor for how to use this novel technology. As many media scholars have noticed, the meanings and practices associated new-media objects, rather than deriving from some self-evident functions of the objects themselves, are always conditioned by existing media systems.
“New media,” Gitelman (2006: 6) wrote, “are less points of epistemic rupture than they are socially embedded sites of ongoing negotiation,” where existing social and material relationships are entangled with each other. In the case of Maoist China, the relationships that shaped the early days of magnetic recording centered around a critical distinction between those who recorded sounds and those who listened. Just as the infrastructure of radio broadcast differentiated those who recorded sounds from those who listened, the infrastructure of magnetic tape enforced similar relationships.

This distinction is clear not only in how radio stations used open-reel recorders, but also in how bureaucratic agencies used portable recorders. In the 1970s, a gradual expansion in production capacity enabled some work units to acquire magnetic recording devices. Even in these new institutional settings, recorders continued to perform radio-like functions. We can get a glimpse of these functions in the petitions written by work unit officials to request new recorders. The cadres at Shanghai Marine Fishery Company, for example, wrote to their supervisors: “Due to the unique features of fishery work, our workers stay on the sea for long periods. They are not able to listen to the directives, reports, and important speeches of central, municipal, bureau-level, and company leaders in time and have to transmit orders through tape recorders” (SMA, B255–2–444–40). A similar request came from the Headquarters of Haifeng Reclamation Corps in February 1976: “Because we are now engaged in roadside revetment construction, we have many people, and they are very spread out. We are deeply aware of the lack of broadcasting equipment in propaganda work. . . . To study Chairman Mao’s Three Directives and the experiences from the recent Counterattack against Right Deviationists, we desperately need to purchase a transistor recorder” (SMA, B250–2–1014–7). In Beijing, the Public Sanitation Bureau of Mentougou District, which was far from the city center, submitted a similar petition. The Bureau stated that every time a meeting took place in the city, Bureau delegates would borrow a tape recorder to record the speeches of municipal leaders, which would be played later for Bureau members who could not travel to attend the meeting. It would be very helpful, the petition stated, if the Bureau could have its own recorder (BMA, 320–002–00141–00085). Most petitions, similar to the ones mentioned here, claimed to use tape recorders to convey orders and conduct political campaigns for a geographically stretched workforce (SMA, B255–2–518–94; BMA, 320–002–00086–00027, 320–002–00141–00151; Haidian District Archives [HDA],3 025–101–0303–020). Of course, these sanctimonious justifications must be taken with a grain of salt, as it was entirely possible that some work units acquired recorders only to use them for undeclared purposes. However, these petitions did point out that people commonly recognized magnetic tapes and recorders as broadcasting devices. The function of these devices was to serve as extensions of the radio broadcast infrastructure. When limitations of that infrastructure arose, magnetic recorders stepped in so that the authoritative messages could reach where the radio waves could not. Just as how radio stations used recorders to transmit a common program, bureaucratic institutions used recorders to convey a common bureaucratic and political directive.

These petitions, which might seem like just petty matters of bureaucracy, can be illuminating historical sources. They illustrate not only the infrastructural configuration

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3 Haidian District Archives, 47 Wenquan Road, Haidian District, Beijing, People’s Republic of China.
of magnetic recorders, but also the cultural protocols of recording. These petitions reveal how recording devices fit into the structure of bureaucratic institutions, telling us who produced recordings and who listened. As shown above, this infrastructure of magnetic tape was configured in such a way so that the people who spoke to recorders almost always occupied superior positions than the people who listened. We may speculate how the revetment workers at Haifeng Reclamation Corps might have regarded the sounds blasting from the work unit’s new tape recorder. For these workers, the sounds from the recorder, in terms of their cultural meanings, were probably indistinguishable from the sounds from radio programs. The usage of magnetic recordings as broadcasting devices has many parallels in Euro-American corporate worlds, in which the boss often recorded his commands on a dictation machine for his female underlings to implement. The situation in Maoist China was rather different, but the same aura of authority surrounded recorded voices in both instances. The infrastructure of magnetic recordings, by conveying orders from speakers to listeners, helped reinforce the hierarchy that privileged the former over the latter.

The deep hierarchical distinctions between speakers and listeners are clearest if we consider instances in which listeners defied protocols and temporarily trespassed the boundary to become sound recorders. After Shanghai resident Bifa Chen bought a recorder in the early post-Mao years, he pranked his guests by secretly recording their dinner conversations and then playing the tape after dinner. The guests, Chen remembered with amusement, were completely dumbfounded when they heard their own voices, probably for the first time in their lives (Shanghai yingxiang gongzuoshi 2016b). Through his prank, Chen had transformed his guests from listeners into sound recorders. The guests expressed speechless amazement because they had just unexpectedly overcome a hitherto deep distinction between those who recorded and those who listened. For people accustomed to recording their own voices, hearing themselves could hardly inspire the same reactions. Chen’s prank worked in the early 1980s, but it would not have worked later in the decade, when recording devices became much more widely available.

Another anecdote is from Zhanfen Hu, a media commentator who was living in Shanghai in the 1970s. He remembers there was a recording studio close to where he lived. A glaring sign hung over the studio’s door: “IMPORTANT BROADCASTING SITE, NO ADMITTANCE FOR IRRELEVANT PERSONNEL” (Shanghai yingxiang gongzuo shi 2016a). This sign, which was quite common outside radio studios in China, demarcated an authoritative space exclusively reserved for sound producers. As a teenager, Hu was mortally curious about the world behind the forbidding door. One day, a friend who worked at the studio secretly invited Hu into the studio and showed him an open-reel tape recorder. After receiving permission to record himself, Hu cleared his throat and chose to record, out of all things, Qinyuanchun: Snow, a famous poem by Mao. Perhaps anything by a less authoritative source would have seemed unsuitable for the occasion. Though he had never recorded himself before, Hu understood the social protocols associated with recording: you must speak with an authoritative voice on an authoritative subject. After he stepped into the exclusive space of the broadcasting studio, Hu behaved as if he had dramatically transformed into a responsible radio announcer. Hu’s anecdote ended on the same note as Chen’s. Hu said that the “utterly magical moment” came when he heard his own voice during playback: “I thought I had become yongchui
buxiu 永垂不朽 (immortal)” (Shanghai yingxiang gongzuo shi 2016a). Why the sound of magnetic recordings had this aura of immortality is a subject of the next section.

2 Crafting and Emulating Sonic Models

In the Mao period, sounds recorded on tapes were often not only authoritative, but also normative. The infrastructure of magnetic tape and recorders enabled the careful construction of these sonic norms. The following paragraphs will first recount the role of magnetic tape in the craftsmanship of sounds and then examine one specific type of normative sounds: standardized language pronunciations. Through an analysis of the infrastructure and bodily practices associated with these sounds, I seek to show that under a Mao-era sound regime that distinguished between sound recorders and listeners, emulation was one of the primary modes in which people related to recorded sounds.

Sounds, just like rock and wood, are craftable objects. Sound media such as magnetic tape are technologies of sound craftsmanship. The extensive usage of magnetic tape for such a purpose can be traced back to postwar United States. After the defeat of Nazi Germany, Jack Mullin, a US Army Signals Corps officer, brought back several magnetophones from Frankfurt. The high-fidelity sounds produced by these machines quickly attracted the attention of pop icon Bing Crosby, who found that instead of recording his radio shows live, he could prerecord them on tapes, edit the tapes through cutting and splicing, and then air the remixed tape as if his show was live. Through these techniques, Crosby was able to relieve himself from the pressure of live recording and mix segments of laugh tracks into the aired tape to enhance his show’s comedic effects.4 Listeners of Crosby’s show had no way to tell that what they heard was actually a replay meticulously reconstructed in postproduction. Technically, Crosby’s team could remix multiple vinyl records or acetate disks to achieve similar effects (Cummings 2013: 65–67). But magnetic tape, which could be easily cut and spliced with no noticeable effects on sound quality, was much more reliable and convenient than disks. Soon after Crosby adopted Mullin’s machines, radio show producers across the United States followed suit. Postproduction, during which materials were literally removed from and added to tapes, became a requisite procedure in the radio show business (Morton 1999). By the 1960s, magnetic recorder and tape were already standard equipment at radio stations, including Chinese stations.

Radio show producers were not the only ones who recognized that magnetic tape could be used to craft sounds. Another group of early adopters were the experimental phoneticians. Since at least the 1950s, these researchers had been using magnetic tape for phonetic research. Unsatisfied with the traditional methods of phonetic research, which mostly relied on unassisted hearing and observation, these phoneticians sought to employ the latest tools from acoustics and telecommunications to better dissect the sonic composition of human speech. The leading Chinese phoneticians in this field were Zongji Wu and Dianfu Zhou, who studied under Republican China’s foremost

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4 Restored digital versions of tapes that Crosby and his team used are available in the Richard Hess Mullin-Palmer Tape Restoration Project Collection at the Stanford Digital Repository. Reel 94 in this collection, recorded in 1947, contains the sound of one of the first prerecorded radio shows in history. The laugh tracks in this reel were possibly recorded separately from the show itself.
linguists Yuanren Zhao and Bannong Liu. On a research trip passing through East Germany in 1957, Wu discovered at Humboldt University that researchers were using tape recorders to isolate and analyze spoken sounds that were too fleeting to be audible to human ears (Li 2017). In 1958, soon after the dialect surveys concluded and language standardization campaigns swung into full motion (Tam 2016), Wu came back to China and, with Zhou, founded a lab for experimental phonetics in the Chinese Academy of Sciences.

In an article that introduced this new field to Chinese linguists, Wu explained how experimental phoneticians using tape recorders could contribute to the study and crafting of sound: by looping a segment of recorded tape, one can listen to the same phonemic sequence repeatedly; by reversing a segment, one can listen to the phonemic sequence in reverse; by cutting a segment, one can listen to the separate phonemes individually; by slowing a segment, one can listen to a phonemic sequence in slow motion (Wu 1961). These abilities were indispensable for phonetic research. For example, to analyze some sounds, experimental phoneticians would record them on tape and then, by cutting the tape and splicing each segment into a separate loop, break the sound sequence into individual phonemes. Each phoneme could then be measured by a variety of instruments, which can yield the phoneme’s unique frequency characteristics. Through these techniques, phoneticians such as Wu tried to give each phoneme a unique visual identification (Wu). These identifications are critical for phonetic standardization. The consonants and vowels of standardized Mandarin were no longer fleeting sonic impressions, but fixed numbers and diagrams, attaining the qualities of Bruno Latour’s (1987) “immutable mobiles.” Examples of these traveling diagrams include *Diagrams of Mandarin Pronunciations* that Zhou and Wu published in 1963. The book shows the configurations of lips, teeth, and tongues to pronounce each of the forty-two phonemes of standardized Mandarin speech (Fig. 2). The book, whose diagrams soon became the authoritative visual representations of how Mandarin should be pronounced, quickly attained canonical status. Today, variations of these diagrams still hang on the walls of many kindergartens and elementary schools, constantly reminding children how they should shape their mouths to speak every word “properly.” With these diagrams, every slip of the tongue would be hereafter labeled as a deviation.

Figure 2  Physiological diagrams for the pronunciations of four phonemes in Mandarin. Zhou and Wu 1963: 43–46.
The normative ideals established by Wu and Zhou served as sonic models in the Mao period because they, similar to models such as Feng Lei, were carefully crafted targets of mass emulation. This mass emulation was possible because, with the extensive distribution of tape recordings among radio stations, people across the country could easily access the same set of standardized pronunciations. The voice of standardized Mandarin over radio and the diagrams in *Diagrams of Mandarin Pronunciations* pasted on classroom walls were not just objects to calmly hear and observe; during the nationwide promotion of Mandarin, they were objects that people needed to strenuously emulate. The promulgation of the national tongue, in other words, enjoined millions of people to become sound emulators. In the example of standardized language pronunciations, the hierarchical distinction between those who recorded and those who listened morphed into the distinction between sonic models and their emulators.

Emulating sonic models took place not only in Mandarin education, but also in English education. In the 1970s, when China’s diplomatic realignment on the global stage made English education a priority, tapes and recorders became critical tools for English instructors. In 1974, the Revolutionary Committee of Shanghai’s Education Bureau complained to the city’s supplier of tape recorders that, although most schools in the city had begun offering English classes, recorders were “extremely scarce.” The 950 middle schools in Shanghai, the Bureau pointed out, had only two hundred recorders in total (SMA, B105–4–1313–35). Over the next few years, education officials made serious efforts to bring more tapes and recorders into classrooms. Many Chinese who attended urban middle schools in the late 1970s might have had their first encounters with magnetic recorders in English classes. During these encounters, teachers demanded that students imitate the taped pronunciations in order to acquire “authentic” English pronunciations (Zhang 1987). Around 1979, Shanghai Television University launched a class that specifically taught “standard” English intonations. The class became so popular that representatives from many work units came to request copies of its tapes (SMA, B285–2–926–4). In these instances, magnetic tapes continued to play a function not unlike that of radio: they distributed the sonic models exclusively crafted at one place to the listening and emulating masses. The infrastructure of magnetic recording, therefore, continued to make a hierarchical distinction between those who recorded and those who listened.

The deeply ingrained nature of this distinction should not make us discount instances in which such distinction broke down. Just as people could “misuse” radios by listening to “enemy radio stations” (Wang 2016), people could “misuse” tape recorders and subvert the recorder-listener hierarchy. The Mao-era sound regime was neither monolithic nor omnipotent: many people did not obediently submit to the humble role of an emulating listener. With the help of permissive friends, “irrelevent personnel” such as Zhanfen Hu could enter recording studios and tape their own voices. As tape recorders appeared outside guarded studios, opportunities for “misuse” multiplied. The fishermen who brought recorders with them into the sea to allegedly “listen to political speeches” probably did something rather different. Students and teachers whose

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5 For example, Shanghai’s Municipal Government established Gaojiao Dianjiao Guan 高教电教馆 (Higher Education Electronic Education Hall), whose mission was specifically to promote the usage of electronic technologies in education. SMA, B244–4–559–180.
schools had recording devices in classrooms secretly used them to record and play entertainment programs (SMA, B244–4–559–175). However, though such opportunities to tinker with and “misuse” recorders existed, they were still scarce. In a country with very few recorders, most of which were sealed in exclusive spaces such as recording studios, mass tinkering with recorders was not yet possible. By limiting access to this sound device, one could effectively police the distinction between the sound recorders and listeners.

Other than limiting access, officials could also enforce the social protocols of magnetic recording usage through the recorders’ mechanical designs. In a 1973 letter to the city’s Education Bureau, officials at Shanghai Foreign Language College proposed to begin production of a recorder that could only be used for emulating sonic “models.” Known in America as language-learning (LL) recorders, these repeat recorders were common in post-Mao texts that discuss electronic appliances, indicating that many people had used and seen this machine (Liang 1985; Zang and Li 1981). Unlike common recorders seen today, repeat recorders read from two separate but parallel tapes, with tape A recording the carefully crafted “standard sounds” of the “authentic” English speaker and tape B recording students’ emulations (Fig. 3). During recordings, the play head on tape A and the erase head on tape B would be deployed, and the students would first hear the prerecorded “standard” pronunciations on tape A and then immediately record their own emulations on tape B. During playback, the play heads on both A and B would be deployed, and the students would listen to the prerecorded pronunciations and their emulations in quick succession, thereby identifying any deviations in the latter that needed correction (SMA, B105–4–1027–3). In the repeat recorder, the model sounds and the emulators’ sounds were segregated onto different tapes. Most interestingly, these two tapes were subject to very different mechanical treatments: whereas tape B passed under both a play head and an erase head, tape A passed under only a play head. Users of the repeat recorder, as a result, could wipe out only the tape containing their emulations (Liang 1985). The discrimination hardwired into the repeat recorder is clear: unlike the deviant sounds of students’ emulations, the normative, carefully crafted sounds of “standardized pronunciation” was not subject to the destructive power of the erase head.

Figure 3  The basic design of gendu luoyinji 跟读录音机 (repeat recorder). Play head is the component that “reads” the tape; erase head is the component that “erases” the tape.
The material design of the repeat recorder illuminated how the Mao-era sound regime often functioned through differentiations between sonic models and sonic emulations. Significantly, the repeat recorder was the first magnetic recording device designed to record nonauthoritative voices, which, in this case, were students’ deviant English pronunciations. But even then, these voices were doomed to an ephemeral track, whereas the carefully crafted sounds of the sonic models occupied a permanent track. This 1973 proposal indicates that officials at Shanghai Foreign Language College were so earnest to maintain this distinction and keep sonic models unerasable that they were ready to justify the expenses incurred by the mass production of a new machine. The repeat recorder, therefore, was the exception that proved the rule: even though it allowed both “model” sounds and emulations to be recorded, it continued to illustrate the importance of differentiating between these two types of sounds. The rationale of the repeat recorder was not as innocent as just facilitating language learning. Officials promoted repeat recorders as part of the Mao-era sound regime, which distinguished between sound recorders and listeners and, in the specific case of repeat recorders, between normative sounds and deviant sounds. As the example of the repeat recorder has shown, this differentiation was not only rhetorical, but also infrastructural and protocological.

The repeat recorder can also help us answer the question posed at the end of the last section: Why did the sound on magnetic tape have an aura of immortality in the Mao period? One explanation for this aura was that users of tape recorders, such as the language instructors, rarely erased the carefully crafted tape sounds, so they became literally immortal. Erasure was the fate reserved for the deviant sounds of emulators, but not for the normative, authoritative sounds of “models.” The “model” sounds, including the sounds of standardized Mandarin, supposedly constituted universal standards that transcend history. In the minds of their promoters, these sounds, once promulgated, were supposed to be the eternal tongue of the eternal nation. This transcendence was, however, an illusion that lasted only as long as the infrastructural configuration that helped secure the sounds’ immortality. In the early 1980s, the magnetic recording infrastructure and the protocols for its usage began to change. With the unraveling of the Mao-era sound regime, officials soon discovered that there was no longer any sharp distinction between sound recorders and listeners.

3 Magnetic Recording as a Medium of Networks

If magnetic recordings in the 1960s and 1970s mediated hierarchies, conveying orders and norms from authoritative sources to the broader public, in the 1980s magnetic recordings also began to mediate networks. The nodes of these networks were not propaganda officials, but ordinary people such as Haipeng Yang and his friends, who helped spread the politically suspicious sounds of Teresa Teng across China through home dubbing. The abrupt emergence of this new usage was only possible thanks to the rapid popularization of magnetic tapes and recorders in the early 1980s. Within the span of a few years, this technology transformed from a rare, exclusive machine into a popular commercial gadget.

Economic data indicate an explosion of the number of cassette tapes and recorders available in China. In the late 1970s, the annual domestic production of cassette tape
was probably no more than 3 million units. In 1980, production had already expanded to about 15 million. Various government agencies and international trade companies also began massive import programs, purchasing 32 million cassettes in 1980 alone (Zhongguo Gongshang Yinhang Shanghai Fenhang jihua xindai chu, hereafter “Jihua xindai chu,” 1981: 154). By 1982, domestic production capacity had already reached 18 million per year, and the State Planning Committee and the Ministry of Chemical Industries were pushing for further expansion (SMA, B76–5–491–1). By 1983, the dramatic increase in imports and domestic production had resulted in a supply glut. The Shanghai Magnetic Tape Factory, a leading domestic manufacturer, was selling its products for as cheap as ¥2 apiece, putting cassettes within the reach of the vast majority of urban residents (Jihua xindai chu 1981: 156–157).

The same trend was also happening with cassette recorders. Dramatic increases in government-initiated imports helped transform the recorder from a rarely seen novelty into a popular commodity in major cities. In 1980, while domestic manufacturers only produced six hundred thousand units, the Ministry of Commerce and its subsidiaries imported over 1 million units, and the provincial governments of Guangdong and Fujian imported another quarter million (BMA, B123–10–897–1). By the end of 1980, there were already 2 million recorders in China, not including the large number of contrabands from Hong Kong (SMA, B1–9–402–45). According to a plan by the National Committee of Machinery Industry, the production of cassette recorders was to be 0.8 million for 1982, 1.5 million for 1983, 2.5 million for 1984, and 3 million for 1985 (SMA, B1–9–402–45). From 1979 to 1983, ownership of cassette recorders in urban households across the country increased from 2 percent to 30 percent, making recorders one of the most widely available electronic appliances after radio (Xu 2014: 508).

The government’s promotion of cassettes and recorders stemmed from both economic imperatives and a belief that these technologies were critical instruments of China’s modernization. When the post-Mao government decided to import foreign technologies to revamp domestic production, one primary challenge was capital scarcity, especially the scarcity of foreign reserves. In order to modernize the economy with a low capital stock, the government encouraged the development of light industry, which needed relatively little initial investment and promised quick returns. Proposals of new cassette factories sent to economic planning agencies in the early 1980s invariably emphasized that the initial investments would be recouped within a few years. Some proposals also noted that cassette exports could help the government earn desperately needed foreign currency, which was critical for the government’s ambitious plan to import know-how and equipment (BMA, 380–001–00053–00025, 380–001–00017–00001, 380–001–00016–00013). Economic imperatives alone, however, cannot explain the aggressive imports of cassettes and recorders, which used up large quantities of foreign reserves. The other incentive was that officials believed magnetic recordings were critical for China’s modernization. The cultural discourse on recorders portrayed these devices as indispensable equipment in the modernization of industry, agriculture, national defense, research and development, and electronic education (Cao 1981). As late as June 1983, in a defensive letter to the municipal agency in charge of eliminating pop music cassettes, the Shanghai Magnetic Tape Factory was still trying to justify its capacity expansion by stating that its products were primarily used in music classes, English classes, birth control propaganda, and so on (SMA, B76–5–
757–91). By that time, the reality was already becoming clear: a large quantity of cassettes circulating in society was not distributing pedagogical materials or government propaganda, but spreading much more politically suspicious contents.

As magnetic tapes and recorders became widely available, young people such as Haipeng Yang tinkered with these new gadgets and engaged in extensive home dubbing. Available records of this usually secretive practice are spotty but still offer clues to its general methods and scale. On China’s southeastern coast, well within the reach of Taiwanese radio signals, people dubbed radio programs onto their magnetic tapes. Beginning in 1979, Taiwan began to broadcast a twenty-five-minute program called Teresa Teng Time six days a week. Recordings of this program, as well as recordings smuggled from Hong Kong, quickly spread into China’s vast hinterlands, where people multiplied these recordings by dubbing these cassettes onto more cassettes (Ma 2013). Yong Xie (2002: 289), who attended a university in Shanxi Province in the early 1980s, said: “In those days, it was very rare to see an original tape, all I could find were dubbed tapes. It was fashionable in those days to dub the tapes of Teresa Teng.”

The ideal equipment for home dubbing was a double-compartment recorder, which could accommodate two cassettes and automatically dub one onto the other. By early 1982, there were already more than two hundred small stores in Beijing that sold dubbed tapes, including those of Teresa Teng (Zhongguo Renmin Daxue shubao ziliao she 1982). If people wanted to dub their own tapes, a double-compartment recorder was probably too expensive, so many people resorted to a primitive dubbing technique: they placed two single-compartment recorders face-to-face and then clicked the Record button on one and the Play button on the other. Tapes dubbed in this manner were of rather poor quality. Since most urban residents lived in cramped quarters in the early 1980s, dubbed tapes often captured a variety of background noises. Listeners such as Bin Yu (2014: 190) remembered that they could hear the sounds of coughing, chopping, and cats meowing on their dubbed tapes. In order to block these noises, a heavy quilt was sometimes placed over the two recorders to provide sonic insulation. Zhanfen Hu said he and his friends dubbed Teng’s tapes in a dark underground bomb shelter infested with mosquitoes, which was the quietest place he could find around his home in Shanghai (Shanghai yingxiang gongzuoshi 2016a). None of these people passively accepted the usage protocols prescribed in the Mao period. As these devices left the confines of exclusive studios and entered ordinary households, mass tinkering became possible, and people began to interact with these devices in new ways.

Once dubbed tapes proliferated, the sounds of Teresa Teng became impossible to eradicate. Most state officials regarded Teng, an outspoken supporter of the Kuomintang government in Taiwan, as an enemy of the People’s Republic, comparing the power of her voice to “three divisions of the Kuomintang army.” With the alleged power to corrupt millions of hardworking young people into pleasure-seeking criminals, the singer’s songs were portrayed as existential threats to the socialist republic and something to be eradicated. By 1982, local governments had already begun to arrest and prosecute vendors of dubbed tapes (Party Center and State Council 1982). However, these crackdowns on specific individuals and institutions proved futile because the spread of Teng’s songs through home dubbing did not depend on any central node of distribution. An administrator at a university in Beijing summarized the frustrations of many officials: “We often go to student dormitories. When we go, students don’t listen [to Teresa Teng]; when we leave, they start playing it again. If we take the
cassettes away, the students will dub more. Censure did not help either because too many students would be implicated” (Political Education Bureau of the Ministry of Education 1983: 124). At a time when millions of people had recorders and could dub cassettes, it was no longer possible to easily remove some specific sounds from circulation. The only solutions were to confiscate all magnetic recordings by conducting comprehensive door-to-door searches of cassettes, which the governments of some small cities indeed tried. Shaohua Dong, a police officer who served in the northeastern city of Yichun, remembered his many police hunts for cassettes as part of the Strike Hard on Crime Campaign that started in 1983 (Chu 2013: 146). But since cassettes and recorders were portable and easy to hide, even these harsh measures were ineffective. Realizing that they were waging unwinnable battles, government officials acknowledged their defeat and allowed the crackdowns to fizzle out after the mid-1980s.

By expanding access to magnetic recordings, the government had inadvertently helped change the media infrastructure and its associated social protocols, which no longer facilitated the distinction between those who recorded sounds and those who listened. A quote from Zhanfen Hu summarized the roles of people like him who practiced home dubbing: “We were both the producers and the consumers of recordings” (Shanghai yingxiang gongzuoshi 2016a). The music of Teresa Teng could not have spread all over China without millions of people such as Hu. Once they realized that their devices enabled them to record as well as listen, they quickly learned to dub tapes. Through home dubbing, they changed the social protocols associated with magnetic recordings. When he first recorded himself in the studio, Hu felt compelled to speak with an authoritative voice on an authoritative subject. In the early 1980s, in contrast, he had no problem recording ideologically suspicious songs for his personal entertainment. As tape recorder became a household commodity, it no longer functioned like radio. This divergence between radio and tape recorder was clear in a quip that began to circulate in major cities: “Listen to Old Deng [Deng Xiaoping] during the day; listen to Little Deng [Teresa Teng] at night” (Xinjingbao she 2008: 172). If Old Deng’s sounds mostly came from radio, Little Deng’s sounds mostly came from tape recorders. The distinction was, of course, not absolute: many people continued to listen to Old Deng on recorders and Little Deng on radio. But the social protocols and cultural meanings associated with the two media technologies had undeniably diverged. The reconfigured infrastructure of magnetic recording no longer maintained any distinction between those who recorded and those who listened. Radio no longer provided the master metaphor for how to use tape recorders.

4 Dubbing and Savoring Sonic Hooligans

As both the media infrastructure of magnetic recordings and its associated social protocols changed, the distinction between sound recorders and listeners blurred. When people such as Zhanfen Hu became sound recorders as well as listeners, they began to multiply ideologically suspicious contents despite the government’s warnings and crackdowns. A new mode of sound production and circulation took shape. The supply and demand governing the underground production of dubbed cassettes responded to personal tastes rather than government regulations. People began to dub whatever was popular at the time. In many work units, as soon as someone found a
popular cassette, “one cassette was dubbed into ten, and ten dubbed into a hundred” (Shi 2004: 151). Dubbed cassettes were much more agile than radio programs in satisfying the shifting demands of listeners. When Teresa Teng shot to fame, everyone dubbed her songs; when her stardom began to fade, people erased her to make space for new stars. On dubbed tapes, no one could be “immortal.”

Liping Wang, a songwriter and composer, learned this lesson firsthand when he visited a remote forest in northeast China in the early 1980s. The several young men living in the forest told Wang they liked Teng and had dubbed the only two cassettes they owned with Teng’s songs. After Wang played his latest works, which apparently pleased the young men, they felt extremely ambivalent but ultimately dubbed one of their two cassettes with Wang’s songs, thereby wiping out half of their Teresa Teng collection. Wang wrote that the encounter taught him a lesson: “No one can tell them what they should erase and what they should record, but if they like your songs, they will wipe out Teng’s songs. . . . I realized artistic work was a competition” (Renmin zhengxie bao 2010: 125). Wang, a member of the state-run music establishment, recognized that the government could no longer guarantee the immortality of any sounds on magnetic tapes. To achieve successful careers, musicians like him must understand what listeners enjoyed and try to win over their hearts and minds. In this competition with Teng, most Chinese musicians did not fare as well as Wang did. Many cassettes storing the authoritative sounds of revolutionary songs, foreign language lessons, and birth control propaganda were probably erased and dubbed with popular songs and even pornographic novels. In this battle of popularity fought on magnetic tapes, “spiritual pollution” quickly prevailed over government propaganda.

This easy victory would not have been possible without magnetic tapes. Though the technological determinists often attributed excessive agency to the reified category of “technology,” they were correct in pointing out the significance of magnetic tapes’ material affordances. Unlike phonograph records or CDs, tapes were re-recordable. The magnetic polarities on tapes could be easily altered without damaging the medium itself. Once the contents of a cassette no longer satisfied one’s tastes, he or she could dub it with new contents. At a time when cassette tapes were still scarce and expensive, this ability to re-record tapes enabled many people to obtain new songs without purchasing new cassettes. Surviving cassettes from the 1980s are material evidence of how recorded sounds were subject to listeners’ shifting tastes. Cassettes with songs that no longer appealed to personal tastes were put away or erased to make room for new songs. Cassette owners, in order to keep track of their collections, often wrote down the contents of dubbed cassettes on the back cover (Fig. 4). These handwritten lists were then edited to reflect changes in contents through later rounds of dubbing. Old song titles were erased or crossed out, and new song titles were added. No song was guaranteed to stay on the list forever. In an era of widespread home dubbing, recorded sounds no longer had the aura of immortality simply because they were recorded.

To use a frequently mentioned contemporaneous term as a metaphor, if recorded sounds in the Mao period were often sonic “models,” in this new era they were often sonic “hooligans.” People produce, circulate, and receive sonic models and hooligans in different ways. Sonic models presupposed a distinction between those who recorded and crafted sounds and those who listened and emulated. The former prescribed the normative ideals that the latter were supposed to follow. The distinction between these
two groups of people, as shown in the example of the repeat recorder, was often hardwired into the media infrastructure. Sonic hooligans, in contrast, did not presuppose the distinction between those who recorded and those who listened. As Hu said, home dubbers were both “the producers and the consumers.” Answerable to nothing except shifting personal tastes, the home dubbers did not care much about crafting normative sounds for others to emulate. As a result, the sounds on dubbed cassettes were not immortal ideals, but products of passing fads. Moreover, just like the hooligans who roamed in society, corrupted mores, and defied government authorities, the sounds on dubbed cassettes proliferated across society despite government
crackdowns. If the sounds of Mandarin and English were sonic models, the sounds of dubbed cassettes were sonic hooligans.

By emphasizing the proliferation of sonic hooligans through magnetic recording, I do not mean to argue that sonic hooligans had replaced sonic models. Just as not every bite of recorded sound in the Mao period was a sonic model, not every bite of recorded sound in the post-Mao period was a sonic hooligan. The rise of home dubbing in no way implies the disappearance of sonic norms. Radio and phonograph, two media whose infrastructure and social protocols remained relatively stable in the early 1980s, continued to disseminate sonic models. Throughout the post-Mao period, publishers in China also continued to distribute government propaganda and language lessons on cassettes. Well into the 2000s, students still emulated the magnetically recorded sounds of “standard” Mandarin and “authentic” English. The obsession with sonic norms is still clear in the government’s discrimination against local dialects. Moreover, the music of Teresa Teng, the epitome of sonic hooligan, arguably became a normative model of some sort with its own emulators and aura of immortality. However, even though these sonic norms continued to shape everyday life, they were no longer supported and enforced by the magnetic recording infrastructure and its associated protocols. The material and social relationships that governed the usage of magnetic recording under the Mao-era sound regime had irrevocably changed. These post-Mao sonic norms became normative through different mechanisms. To equate these sonic norms in contemporary China with the sonic models of the Mao period is to overlook a critical transformation in the sound regime.

For officials who witnessed the unraveling of the Mao-era sound regime, the future did not bode well. They had always recognized that the governance of sound infrastructure and protocols was integral to the governance of people. Officials and also many intellectuals worried that dubbed cassettes were not only circulating deviant sounds, but also creating deviant people. It was feared that the multiplication of sonic hooligans could produce real hooligans, whose social behaviors and ideological orientations made them grave threats to social, moral, and political orders. To understand how people in the early 1980s made this connection between the governance of sounds and the governance of people, it is necessary to explain the discourse of “yellow music.” The notion of “yellow music,” first used by leftist composers in the 1930s to denounce popular dance hall songs in Shanghai, initially referred to “decadent” songs that encouraged listeners to wallow in private sensual enjoyments rather than dedicate themselves to China’s fight for national survival (Jones 2001). Leftist musicians warned that such music, with its mesmerizing tunes, could turn hardworking people into pleasure-seeking invalids. Over the next four decades, the party organized numerous campaigns to eliminate “yellow music.” In the 1980s, as Teng’s songs gained popularity, this anxiety over the effects of “yellow music” resurfaced. A legal casebook published in 1984 warned that the spread of “yellow music” “had seriously stimulated the senses of the youth” and might cause “obscene hooligan behaviors to breed and infest like an epidemic” (Faxue chubanshe bianjibu 1984: 26–45). A case study published in the same year included the testimony of a rapist awaiting his

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6 Over the last decade, there have been multiple competitions where young female singers vie for the title of “Reborn Teresa Teng.”
execution, who allegedly confessed that he became a “hooligan” because he listened to “yellow songs from Hong Kong all day” (Xu 1984: 138). A criminologist also observed in 1984 that most inmates in a juvenile labor correction center of Jilin knew how to sing “yellow songs.” He wrote: “The juvenile delinquents . . . hummed yellow songs as they walked. They were obsessed with yellow culture” (92). Students at middle schools in Beijing attended mandatory lectures on the danger of “yellow music.” At Xinyuanli Middle School, the lectures were apparently so effective that a worried student in the sixth grade asked his instructor, “Will I become a hooligan if I have already listened to Teresa Teng’s music?” (Chu 2013: 146). This discourse on “yellow music,” which consistently characterized it as a cause of hooliganism, implied that Teng’s songs, if not eliminated, would result in national catastrophes.

Propaganda in the early 1980s often illustrated what China would become if the government failed to contain the proliferation of dubbed cassettes. By encouraging listeners to wallow in private sentiments, Teng’s music allegedly encouraged people to detach themselves from collective political life. Criminologists and educators explained that since these people’s lives outside of the collective could offer no lasting meaning, they became “spiritually empty” (jingshen kongxu). In order to fill this “spiritual void,” people began to search for sensual stimuli. After the mellow tunes of “yellow music” could no longer satisfy them, they had to resort to “thrilling” activities such as rape and murder (Zhang 1988: 20). Some “hooligans,” still yearning for some type of collective life, were allegedly not satisfied with performing these hideous crimes alone, so they formed into gangs that marauded streets and villages (Manuscript Collection of East Asian Library at Stanford University, 7 box 27). There were many highly publicized stories of “hooligan gangs” from the early 1980s. On a mid-July day in 1983, for example, a group of eight local young men allegedly attacked a village in Anhui. They dressed themselves in women’s clothes, stormed through the village’s main street, and shouted to the panicking residents, “We are from Taiwan!” Some of them held up umbrellas imprinted with gaudy flowery designs, and others wielded knives, swords, and iron clubs. They uprooted trees lining the village street, slaughtered livestock on their path, and chased terrified women down the alleys (Faxue chubanshe bianjibu 1984: 34). Regardless of its veracity, this lurid story captures the existential threat posed by hooligans in the early 1980s. As they searched for “sensually stimulating” exploits, they committed hideous crimes and subverted social order. Moreover, the alleged reference to Taiwan points to the association between hooliganism and imported cultural influence. In this discourse of hooliganism, the breakdown of social order was a direct consequence of the infiltration of corrupting cultural products such as Teng’s music.

For many officials, therefore, losing control over the circulation of sound meant losing control over society. They feared that sonic hooligans were producing real hooligans. But just as they had no means of stopping the spread of dubbed cassettes, they found it difficult to stem the rise of hideous crimes. They recognized that both the networks of cassettes and the network of hooligans were proliferating across society despite their crackdowns. In a state of anxiety, officials issued shrill warnings over

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7 Manuscript Collection of the East Asia Library at Stanford University, 518 Memorial Way, Stanford, CA, USA.
“yellow music” and “hooliganism” and openly worried that the retrenchment of the state in the early 1980s would cause the breakdown of all social, moral, and political orders. Only in this context can we appreciate the rationale of the multiple campaigns at the time: the Strike Hard on Crime Campaign, the Cleanse Spiritual Pollution Campaign, and the multiple roubejing muninds of regional crackdowns on “yellow music.”

Official sources seldom mention these campaigns today because they do not fit the image of the early reform era, which is remembered for its ideological thaw as well as cultural and intellectual vitality. At the time, however, many officials deemed these campaigns to be crucial to the survival of the socialist republic. They strongly rebelled against a possible future where “yellow music” muffled revolutionary rhythms and private sentiments overwhelmed revolutionary affects. To their dismay, history did not follow their wishes. More than three decades later, their serious admonitions over “yellow music” sound unfathomable if not ridiculous. The Mao-era sound regime and the concerns provoked by its unraveling have both disappeared into the twilights of history.

On that sleepless night in the early 1980s, Haipeng Yang’s father listened to his son’s dubbed cassette and gave in to the mellow voice of Teresa Teng. This article tells the stories of millions of people like Yang and his father, whose innovative usage of the tape recorder changed how people produced and circulated recorded sounds. But the story presented here is not just a story of human actors, nor is it just a story of technological objects. Instead, it is a story of how the technological infrastructure and its users came together in different ways at different historical moments. Contrary to Friedrich Kittler’s (1999) characterizations, media such as magnetic tape did not have an “intrinsic technological logic.” The same technology that proved useful to propaganda officials also proved useful to the underground home dubbers who spread “spiritual pollution.” Herein lies the irony of all technological forms of human governance. At any historical moment, the governance of technological infrastructure was integral to the governance of people. Officials who understood this relationship configured the infrastructure so that they could consolidate their influence over the population. The problem, however, is that technological objects are not loyal allies. As they develop new functions through new social engagement, they could quickly turn against those in power. The functions inscribed on technological objects are similar to the sounds recorded on magnetic tapes: both, no matter how “immortal” they seem and sound, are subject to erasure and change.

References


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8 The Strike Hard on Crime Campaign resulted in more than 10,000 executions from 1983 to 1986 (Tanner 1999: 140).


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