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Ringtones, or the Auditory Logic of Globalization

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The Cellphone Project: Demobilizing, Delinking, Disconnecting the Commodity Chain

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You hear them everywhere. Ringtones, or the specialized sounds used to alert mobile phone owners that someone is calling them, are liable to sound within earshot in almost every conceivable modernized public and private space. Their unmistakable, ubiquitous presence is found on streets and sidewalks; in offices and workplaces; in buses, trains, subways, and cars; in shops and malls; in schools and public buildings; in concert halls and performance spaces; in parks and outdoor areas; and in homes and places of residence—houses, apartments, condominiums, dormitories, trailers, hotels. As some scholars have noted, cellular telephones are becoming a central feature in popular music and everyday sonic experience.[1] But although few have been untouched by the dramatic shifts in global auditory cultures during the last ten to fifteen years due to mobile telephony, almost no scholars have as of yet deemed the ringtone worthy of serious investigation.[2] Much more than simply an ancillary phenomenon—merely a part of the mobile phone—I would like to suggest here that ringtones are central to the contemporary sonic imaginary and are in several ways indicative of the transformations in capitalism taking place in the wake of the Third Industrial (or digital) Revolution. In particular, the commodification of the ringtone, motivated by a groundswell of demand and facilitated by the easy production of digitally-coded information, has progressed quickly in a series of stages or moments from the initial, functional ringtone to the tone as a digital sound file. Indeed, entire cultural practices have appeared in conjunction with particular stages and seem likely to decline, as the outdated forms of ringtones with which these practices are correlated become increasingly infrequent. To elucidate these dynamics, I will outline a brief history of the ringtone, provide a model of its development and describe corresponding cultural practices, and situate the ringtone and cellphone within the auditory cultures of Post-Fordism and contemporary capitalism.

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How did the ringtone transform from a functional component on a mobile phone into a device for playing back music? For numerous possible reasons, such as the increasing presence of confusing (and ostensibly irritating) cell phone rings in public and, more significantly, mobile handset designers' development of a novelty technology, during the mid-late 1990s cell-phone manufacturers began to include simple melodies and sound effects (or monophonic ringtones)

Thanks to Brad Zutaut of Xingtone and Keith Nowak at Nokia for providing a great deal of information on ringtones during telephone interviews in May 2003. All news articles cited without page numbers or URLs were obtained through academic search databases like Lexis-Nexis, and EBSCO. Many thanks also to Michael Denning, Thomas Campbell, Eric Drott, Michael Klein, and Patrick McCreless for reading earlier drafts of this essay.

[1] See Alexander Weheliye, " 'Feenin': Posthuman Voices in Contemporary Black Popular Music," *Social Text* 20.2 (2002), 21-47; and Caroline Bassett, "How Many Movements?", in Michael Bull and Les Back, eds., *The Auditory Culture Reader* (Oxford: Berg, 2003), 343-355.

[2] One significant exception is Heikki Uimonen's "'Sorry, Can't Hear You! I'm on a Train': Ringing Tones, Meanings and the Finnish Soundscape," *Popular Music* 23/1 (January 2004), 51-62.

as preset options for their phones.[3] With the massive growth in global mobile telephony in those years, particularly in Europe and Asia, mobile phone manufacturers began to include features on handsets that would encourage phone customization, and companies like Nokia introduced phones that could play newly uploaded ringtones. In particular, Nokia designed the uploadable ringtone by encoding it through a previously developed variant of the messaging system called the Short Messaging Service (SMS)—the same system now used worldwide to send text messages.[4] As early as 1998, small phone shops in Hong Kong were selling pirated ringtones, "often charging $10 for a 15-second ring."[5] In July 1999, a 23-year-old college graduate based in Nottingham, England named James Winsoar took advantage of this new technology and began to compose new ringtones, first selling them to customers individually online and eventually automating the delivery system. Originally naming his company My Nokia, he changed its name to Phat Tonez and initiated a national phenomenon in the United Kingdom.[6] Numerous small companies began imitating Winsoar's model, in some cases switching over to ringtone production from providing phone sex lines.[7] Meanwhile, ringtone providers' increasing use of (copyrighted) popular music meant that music publishers were licensing material for ringtones and receiving royalties—thus planting the seed for the music industry's plan of trying to make up for financial losses due to file-sharing, which became popular at roughly the same time. Soon, the phenomenon was widespread in Europe and Asia, with the United States market developing a few years behind.

By 2000, cell phone manufacturers had developed and mass-marketed a polyphonic ringtone capacity, or the ability to make multiple, relatively sophisticated sounds at once rather than a single beeping melody. Unlike monophonic ringtones, which used simple text languages to encode simple

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[3] Apparently the first among handset manufacturers to provide melodic rings, Nokia began offer a list of newly composed and public domain melodies on their phones in 1996. The preset melodies did not, for the most part, differ from country to country—though there were exceptions such as "Take Me Out to the Ballgame," which appeared only in the US.

[4] Subrahmanyam Karuturi, "What is SMS?", viewed online at www.funsms.net on 15 June 2004. In "SMS History," available at the same website, Karuturi notes that "Nokia had started its smart messaging protocol that was built on binary SMS rather than the standard text SMS. Nokia had expected this technology to be used for information services and over the air service profiling and it had languished for years, until suddenly in the year 2000, it found its application- ringtones that allow users to change the way their mobile phone rang." SMS is a protocol that was initially created in the late 1980s by GSM (originally Groupe Spécial Mobile, now Global System for Mobile telecommunications), the main mobile system protocol that accounts for about 80% of new wireless use worldwide. See "GSM captures 80% of digital mobile market," *Scoop*, 27 January 2004, viewed online at http://www.scoop.co.nz/mason/stories/BU0401/S00115.htm on 1 September 2004. Also see John Scourias, "A Brief Overview of GSM," viewed online at http://kbs.cs.tu-berlin.de/~jutta/gsm/js-intro.html on 15 June 2004.

[5] Vivienne Chow, "Tone of the Future," *South China Morning Post (Hong Kong)*, 27 September 2001, Feature, 2.

[6] See "An Interview with James Winsoar," viewed online at http://www.tonez.co.uk/news/interview_with_james_winsoar.htm on 6 May 2004.

[7] See "Ringing the Changes," *Economist*, 17 April 2004, 62: "The dubious firms that currently dominate the ringtone business (many of which began life as providers of porn phone lines) may be squeezed out."

melodies or sound effects,[8] polyphonic ringtones involved sending an encoded set of instructions to an in-built synthesizer using one of several variants of the Musical Instrument Digital Interface (MIDI) protocol.[9] Polyphonic ringtones produce music straddling a fine line between video-game music and elevator music; effectively, this is synthesized instrumental music, because the phone's synthesizer cannot accurately produce the sound of human voices. Since its appearance over four years ago, the polyphonic ringtone has spread steadily and has now all but replaced the monophonic ringtone. Whereas in November 2000 only 9.2% of handsets worldwide could produce polyphone ringtones, by November 2003 66.1% had this capacity, according to a survey conducted by the NPD Group.[10]

As early as 2000, the German company Siemens had developed a phone that could also play MP3 files, but due to memory constraints phones that played digital sound files as ringtones appeared only in 2003 (for example, Nokia's True Tones format). At present, most newer handset models feature the capacity to play sound files as ringtones, which are typically limited by a maximum length of thirty seconds like other ringtones. Numerous file formats are used for this purpose instead of MP3 files, which are still typically too large to download efficiently via mobile. For the most part, sound file ringtones (sometimes called "ringtunes" or "mastertones") involve low-grade, highly compressed files that only use the small phone speaker's 300 to 3000 Hz frequency range. Although sound file ringtones account for only a small percentage of global ringtone sales, the strongest ringtone markets (Europe and East Asia) have been slightly boosted by the appearance of sound file ringtones. For example, the Japanese ringtone market, which in 2003 alone was worth $900 million or between a quarter and a third of the year's global ringtone sales, witnessed $66.4 million worth of sound file ringtone (or *chaku-uta*) sales.[11]

The process of accumulation within what one might term the "global ringtone industry"—worth somewhere between $2.5 and $3.5 billion in 2003[12]—

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[8] Hayden Porter notes that there are two main text formats for monophonic tones, Ring Tone Text Transfer Language (RTTTL) which was developed and used by Nokia, and iMelody, developed by the Infrared Data Association (iRDA) and adopted by Ericsson, Motorola, and Siemens. See Porter, "Phone It In!", *Electronic Musician*, February 2004, 77.

[9] MIDI was developed in the early 1980s by synthesizer manufacturers (especially Japanese companies like Yamaha and Roland) in order to coordinate many different synthesizers in rock concerts. Despite its numerous limitations, MIDI become the standard protocol for the transfer of digital instructions to electronic musical instruments.

[10] See Joseph Palenchar, "NPD Tracks Rising Adoption Rate of Highly Featured Cellphones," *TWICE: This Week in Consumer Electronics*, 9 February 2004, 36. The NPD Group is a consumer tracking company based in Port Washington, NY that has tabulated consumer information for business use since 1967 (see www.npd.com).

[11] Steve McClure, "'Ring Tunes' Ready to Roar for Japanese," *Billboard*, 13 March 2004. Estimates for the global ringtone market in 2004 are around $4 billion, as described in Scott Banerjee, "Who'll Drive the U.S. Ringtones Market?", *Billboard*, 18 September 2004.

[12] According to the Yankee Group, based in Boston, the global ringtone market in 2003 amounted to $2.5 billion; the London-based ARC Group estimates that that market at $3.5 billion. See Laurie Flynn, "The

is rather complicated, owing to the numerous financial interests impinging upon each ringtone sale. First, after a customer has initiated the process of purchasing a ringtone, the ringtone must be delivered by an aggregator (or what in the wireless world is described as the "content provider"), usually a mobile entertainment company that sells ringtones, video games, cell phone wallpaper, and the like. The production of a ringtone involves either the arrangement of some preexisting music or the composition of new music (usually by in-house composers), the encoding of that music into a proper file format, and the transmission of that file via SMS to an individual phone. Second, if the ringtone makes use of preexisting copyrighted material, which is typically the case, some percentage of the price of the ringtone must go to the music publisher who owns the copyright of the song or musical selection in question. Third, the wireless service provider takes a cut of the ringtone sale, which it can do easily since payments are made through the mobile phone itself. Finally, the wireless provider contracts one or more separate billing companies to take care of billing arrangements and verification of sales. Each participant in the ringtone market receives a certain proportion of ringtone sales that varies with to the type of ringtone sold and with the particular companies involved. In the case of polyphonic ringtones, the mobile entertainment companies providing the ringtones get the majority of the profits, around 58%, with the wireless carrier, different billing companies, and music publishing firms all receiving a relatively smaller proportion of profits (20%, 20%, and %12, respectively).[13]

In the case of sound file ringtones, the situation is somewhat different. In particular, this kind of ringtone favors the music industry, since legally sound files fall under the more lucrative category of sampling rather than covering or arrangement. For monophonic or polyphonic synthesizer arrangements of tunes, only a small royalty (about %10 of the $1-2 cost of the ringtone) goes to the original music's composer or songwriter via a publishing company, with an additional 2-2.5% royalty going to a performing-rights organization (ASCAP, BMI, etc.).[14] For a sound file ringtone, however, sampling rights allow the music label that released the original sound recording to claim 40-50% of these more expensive ringtones (about $2.50-$3). Sound file ringtones appear to promise even higher returns generally, given their ability to accurately reproduce current radio hits, their higher price, and their relative ease of production (clipping and conversion of a preexisting sound file). The search for lucrative markets has led music industry conglomerates to partner with wireless companies—such as BMG and EMI with Verizon Wireless in the US, or Sony and Universal with T-Mobile in Europe[15]—in the hopes of squeezing out the larger ringtone providers that

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Cellphone's Next Makeover: Affordable Jukebox on the Move," *New York Times*, 2 August 2004; and Scott Banerjee, "WMG Inks Mobileway Deal," *Billboard*, 24 July 2004.

[13] Scott Banerjee, "Ringtone Rumble Brewing," *Billboard*, 22 May 2004.

[14] The two major forms of music publishing royalties are mechanical and performance royalties. The former governs the mechanical reproduction of a particular musical composition (in the form of sheet music or recording), whereas the latter covers performances of such music (either scores or recordings) in public spaces.

[15] "Ringing the Changes," 62.

currently dominate regional ringtone sales.[16] Indeed, with recent indicators suggesting that in many cases ringtone sales are outpacing recording single sales of the same song,[17] music industry officials are doing all they can to ensure that ringtone sales will help them recover their losses. The ringtone, in this imaginary, might thereby "save the music industry," whose declining global profits caused partially by file-sharing are well known.[18] And with the music industry's efforts to reclassify sound file ringtones as being record single sales rather than licensed products—whereby artists would only receive contractual royalty rates (say 15%) rather than 50% of profits as with licensed goods—we can see a step being taken in the direction of equating (and perhaps eventually supplanting) recordings with more profitable ringtones.[19] Aiding in, or perhaps enlisted for, this effort, a global trade organization called Mobile Entertainment Forum has created a sales chart for ringtones sold in the UK, in the manner of a hit singles chart.[20] Billboard has recently adopted the idea for the North American market, creating the Hot Ringtones top-20 list for polyphonic ringtone sales.[21]

The great irony in this flurry of financial activity to make ringtones increasingly profitable is that initially they were not predicted as potential means of accumulation by capitalists. The technology was essentially conceived as a novelty, but young consumers creatively used ringtones and similar mobile entertainments to "personalize" their phones. Of course, with the industry's rising profitability, marketers have glommed onto the notion of personalization itself, almost treating the concept as a dogma within the world of wireless accessories—and trade industry journalists have predictably reproduced the idea with alacrity. Even one recent scholarly article by Heikki Uimonen makes the same kind of argument. Researching ringtones in Finland, Uimonen interviewed a peer group of 19 teenagers about their use of ringtones, describing the

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[16] For example, in the small but growing US market, the dominant companies currently are Zingy, Moviso, and Modtones (see "Ringtone Rumble Brewing").

[17] Jason Ankeny notes that "While the top-selling single in the U.S. during the last week of September, rapper Lil' Kim's "Magic Stick," moved 7000 retail units, Moviso sold 17,000 "Magic Stick" ringtones over the same period." In Jason Ankeny, "The New Sounds of Music: Ringtones, the Celestial Jukebox and the Mobilization of Media," *Wireless Review*, November 2003, 30-31.

[18] A succinct discussion of this phenomenon can be found in Dave Laing's "World Record Sales 1992-2002," as part of "The Music Industry, Technology and Utopia – An Exchange between Marcus Breen and Eamonn Forde," *Popular Music* 23/1 (January 2004), 88-89. Laing's short piece includes a telling chart noting global record sales over a ten-year period: after peaking in 1996 at $39.8 billion, sales have been on a steady decline, reaching $31.0 billion in 2002.

[19] Scott Banerjee, "Getting Their Cut," *Billboard*, 22 May 2004.

[20] Paul Sexton, "New Chart Calls Up U.K. Ringtone Sales," *Billboard*, 5 June 2004, 44. Sexton notes that the "[f]inancial and professional services firm KPMG will compile [the chart]," "London-based Official U.K. Charts Co. will market" it, and "David Simmons, CEO of music rights and publishing company Songseekers, conceived the chart last year. Simmons is also head of the MEF Ringtones Initiative. He says he has heard 'good noises of support' from Vodafone and other major network operators." Far from being unprecedented, however, this new chart merely codifies the informal "top ten" charts on many ringtone websites.

[21] "Billboard Bows Ringtones Chart," *Billboard*, 6 November 2004. Thanks to Hazel Carby for pointing out this recent development to me.

numerous ways in which the youths strove to make their ringtones unique.[22] But this phenomenon isn't as simple as the paradox of "the mass appeal of individuality,"[23] as some have suggested: from another perspective, it looks like the promotion of an apparent individuality to a demographic most powerfully molded by peer and marketing pressure. The target markets driving all of this personalization are the young adult and teen youth market; the latter's spending on consumer electronics (esp. cell phones and iPods) and accessories is currently so high that it has significantly eaten into youth clothing consumption.[24] Still, marketing executives seem unable to predict exactly what will become the next fashionable form of mobile entertainment, and instead companies have been incredibly vague in their promotion of newer technologies like the 3G (or third generation phones), which offer a host of accessories and devices.[25] Thus, the appearance of ever new gadgets and devices on phones (from screen "wallpaper" to video games to cameras to video recorders to the newly touted "ring back tones") is driven by that familiar dialectic of youth consumption desires and the consumer marketing strategies, in this case of the mobile industry. The meeting point of these two forces results in the increased consumption of both new handsets and mobile entertainment files, the latter of which in the case of the newest ringtones are provided by mobile entertainment companies and record labels.

The global ringtone industry presently appears to be at a crossroads. Analysts are rather optimistically predicting that ringtone and mobile entertainment consumption will increase significantly within the next few years. The UK-based group Informa Media believes that ringtones will generate $4.7 billion in profits by 2008, and the ARC Group predicts that by 2006 mobile-music subscribers will exceed 700 million. Another group, Datamonitor, claims that ring back tones—popular in South Korea, they allow users to alter the ringing sound heard by callers[26]—will *alone* result in profits of $4 billion by 2008.[27] Currently the vast majority of ringtone sales are taking place in Europe and Asia, with the US accounting for only about $100-150 million (under 5%) of global ringtone sales in 2003.[28] Hinging on all of these predictions is the hope that, with the help of further governmental and international-trade-organizational

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[22] Uimonen, "'Sorry, Can't Hear You!'" Uimonen's main argument concerns the idea that ringtones are actually music instead of noise, but the author also argues for a more nuanced version of the personalization thesis: "[r]inging tones offer alternative means to personalize one's phone. Personal and/or collective music tastes define the melodies that are selected" (61).

[23] "The New Sounds of Music."

[24] A survey by Yankee Group revealed that 18% of mobile phone users are interested in ringtones. The greatest interest in ringtones is found in young adult (18-24) and teen (11-17) age groups, with 41% of the former and 22% of the latter downloading at least one ringtone per month. The NPD Group has claimed that teens between the ages of 13 and 17 have decreased spending on clothing by 10% in order to pay for electronics goods. See Sue Marek, "Raising the Bar on Ringtones," *Wireless Week*, 15 May 2004, 25; and Yuki Noguchi, "Teens Ring Up Market Share," *The Washington Post*, 25 April 2004.

[25] Oliver Burkeman, "Fellowship of the Rings," *The Guardian*, 13 August 2003.

[26] See Juliana Korantang, "Gold Rush is on in Mobile-Music Sector," *Billboard*, 26 June 2004.

[27] Ibid.

[28] Strategy Analytics, a research firm in Boston, estimates US ringtone sales in 2003 at $128.6 million. See Michel Marriott, "They Ring, Sing and Make Phone Companies a Bundle," *New York Times*, 4 May 2004.

subsidizing of mobile telephony, the massive US consumer goods market will turn more fully to cell phones and correspondingly increase its consumption of mobile entertainment like ringtones.[29] Tensions and competitive pressures within the ringtone industry could threaten these rosy forecasts. For example, the interests of the music industry and mobile entertainment companies point in different directions. Seeking to recuperate lost profits due to file-sharing, the music industry is pushing hard to keep ringtones at the center of the mobile-music market. Indeed, with ringtones accounting for approximately 10% of global music sales (which were $32.2 billion in 2003), the global music industry has already become significantly dependent on ringtones to boost profits.[30] In one scenario favorable to the industry, phones might ultimately merge with devices like the iPod, but they would maintain the profitable billing structure and financial arrangements of ringtones—perhaps with ringtones still serving as profitable advertising for albums or MP3 files. With respect to the US, this strategy would seek to generate new ringtone sales by recuperating an already existing, but declining, music recordings market—worth $12.5 billion in 2003.[31] Mobile entertainment companies, in contrast, seem to be pointing towards further personalization of the cell phone and different applications like ring-back tones and video recording. Patrick Parodi, the newly appointed chairman of Mobile Entertainment Forum, has noted, "I don't think the next mobile iTunes is what the consumer wants. They want things tied to personalization and discovery [of music]."[32] The appearance of more sound effects in the ringtone market—such as the verbal gags of the Three Stooges[33]—also points away from the predominantly musical horizon of the ringtone at present.

Perhaps a stronger threat to the profitability of the ringtone industry lies in the development of strategies and technologies by consumers and companies to create ringtones at inexpensive prices. Ringtone piracy by small companies and individual users, in the manner of MP3 files, is rampant worldwide, particularly in Asia—where music piracy in many forms is widespread.[34] In this case, ringtone websites are selling ringtones based on copyrighted material at low prices without paying licensing fees to music publishers or record labels. With the appearance of the sound file ringtone, the potential for free duplication of ringtones seems limitless, as it could easily follow the MP3 model of peer-to-peer distribution. Despite the much-vaunted ability of the cell phone to monitor and control individual transactions—which is not equally true of Internet activities—some software companies are creating products for combining peer-

[29] The growing Chinese consumer goods market is another potential site for ringtone sales, the significance of which I discuss below.
[30] The oft-cited figures of $3.5 billion global ringtone sales in 2003 and $32.2 billion in music industry sales in the same year are mentioned in "Tingalingalingaling!", *New York Times*, 18 January 2004.
[31] Phil Hardy, "Music Executives are Guardedly Optimistic Despite the 7.6% Fall in Global Recorded Music Sales in 2003," *Music & Copyright*, 28 April 2004.
[32] Korantang, "Gold Rush."
[33] "Technology Briefing Telecommunications: Stooge Sounds Invade Ring Tones," *New York Times*, 11 August 2004.
[34] "Ringtone Music Piracy Flourishes in Asia," *Sify News*, 27 August 2003, viewed online at http://sify.com/news/internet/fullstory.php?id=13234789 on 18 August 2004.

to-peer file-sharing with ringtone creation.[35] Furthermore, even legal enterprises have produced technologies that threaten ringtone consumption. Xingtone, a company founded in early 2003 and based in Los Angeles, has produced a downloadable computer program that allows an individual to transform any sound file (from a CD or an MP3, for example) into a sound file ringtone. After a consumer pays the one-time fee of $15 for the software, she can easily produce ringtones for her phone without any further cost. Brad Zutaut, the CEO and co-founder of the small company, has stated repeatedly (with the support of the Recording Industry Association of America) that the program falls under the domain of fair use in copyright law. Beginning his enterprise from the impulse of wanting to make ringtones that were not commercially available, Zutaut argues that ringtones, which are merely data transfers, should not be so expensive and that "ring tones are not going to save the music industry."[36] The company seems to have been successful and has pioneered music promotion deals with record labels like Disney's Hollywood records and the independent Artemis Records (whose band Sugarcult released a single from its album via ringtone in partnership with Xingtone). More recently, Xingtone has received financial support from Siemens to expand its operations.[37] Although Zutaut has stated that the company has a 3-5 year window, it is unclear whether Xingtone will be bought out by a major media or entertainment conglomerate—whose financial interests might seem to conflict with those of the company.[38] Other companies such as ToneThis (also from LA) have followed Xingtone's lead and are producing similar software packages.[39] Since the software in question has

[35] Jason Ankeny presents the typical viewpoint in "The New Sounds of Music:" "But most important, wireless network activity is carefully monitored and controlled by carriers, guaranteeing that while a library of rich media files created for download and distribution over mobile devices is not only possible but likely inevitable, it will never fall prey to the Napster and Kazaa online models whereby users exchange free, unlicensed and pirated content." But media company TDK has produced a program called Fona Style that appears to combine file-sharing and ringtone-creation, seemingly on the model of Xingtone, and is now available in the UK. See "TDK Fone Styla Lets Users Rip, Upload Content to Handsets for Free," *DMEurope*, 24 May 2004, viewed online at www.dmeurope.com on 18 August 2004.

[36] Alec Foege, "Going Gold? Maybe if Enough Cellphones Ring," *New York Times*, 31 August 2003.

[37] Scott Banerjee, "Xingtone Gains New Financing," *Billboard*, 19 June 2004.

[38] Zutaut's background is in the film industry; he began as an actor in B-movies and comedies like *Back to School* (1986), *Hardbodies 2* (1986), and *The Big Picture* (1989). After leaving the film industry, he became involved in retail and eventually moved into mobile-related applications. Through his brother Tom Zutaut, a well-known record executive with Elektra and Geffen, he was able to make contacts with the music industry, eventually leading to his work with Hollywood Records and Artemis Records. More recently Zutaut has become involved in a documentary film project dealing with the CIA's coup and removal of Guatemalan President Jacobo Arbenz in 1954, which was arranged in response to Arbenz's modest land reforms that threatened the profits of the United Fruit Company. Despite the clear legality of Xingtone, Zutaut has been portrayed as somewhat of a maverick in the mobile entertainment industry and as having created a "Napster of the mobile." (Cited from "Xingtone's Ringtones Zing Labels," *Online Reporter*, 15 March 2003.) However, one facet of the Xingtone software that belies such a description is that it is designed to be used by only one computer and one phone, presumably owned by the same person. Further information on the company can be found at http://www.xingtone.com/press/index.html, a collection of news reports on Xingtone posted on the company's homepage. Much of the information here derives from an interview with Zutaut in May 2004.

[39] The company seems to have been founded in late 2003, marketing itself as selling software for converting MP3 files to ringtones. See "ToneThis Loads MP3 onto Cellphone," viewed online at http://www.tonethis.com/index.php?page=news on 18 August 2004.

appeared recently and only affects sound file ringtones, it remains to be seen whether it, or pirated versions thereof, will have an impact on global ringtone sales or prices. It certainly is the case that piracy generally eats into ringtone sales—for example, an estimated 90% of ringtones in Malaysia are pirated—and the recording industry is attempting to forestall further declines in profits by eradicating what it refers to as a piracy "epidemic."[40]

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As described above, the commodification of the ringtone has occurred in several stages. These stages provide the outline of a model for ringtone development, whereby functional tones become: 1) monophonic ringtones or simple melodies, 2) polyphonic tones (MIDI synthesizer music), and 3) digital sound files (True Tones or other company-specific formats, and ultimately MP3 files). These developments in the ringtone have not progressed uniformly around the world. Instead, particular convergences of national legal systems, consumer preferences, and the interests of local wireless firms and handset manufacturers have led to differing rates of acceptance for each type of ringtone, as well as ringtones generally. For example, the high rates of cell-phone use in Asia have led to particularly enthusiastic adoption of both older and newer forms of ringtones. South Korea is a striking case. 70% of the population owns cell phones, the ring-back tone was pioneered there, and mobile music sales (estimated at 400 billion Won or $336 million in 2003, increasing 400% in one year) seem to be quickly replacing recorded music sales (193.5 billion Won or $162.4 million in 2003, declining %30 in a year). When Ricky Martin's new Spanish-language album was about to be released in May 2003, the South Korean director of Sony (Korea) Yang Beom-joon released the album six days ahead of schedule in ringtone form. This precipitated a rush of downloading in which over 100,000 downloads of album-track sound file ringtones and related materials occurred in a few weeks. In Japan, the massive mobile music market (estimated at $900 million in 2003) seems to be saturated with polyphonic ringtones and has been steadily shifting to sound file ringtones. In Europe, many of the older cell-phone markets (as in the UK, Spain, France, Germany, and Italy) are focused on polyphonic ringtones and seem less inclined to switch to sound file ringtones. Paradoxically, regions that have been slower to adopt mobile telephony, as in Central and Eastern Europe, are adopting the newest technologies and thus seem to be more amenable to sound file ringtones. The US market has been generally slow to adopt ringtones, although they seem to be popular within particular ethnic communities—African-Americans seem to have been among the more avid consumers of ringtones, a tendency perhaps reflected in the presence of cell phone references in hip-hop and R&B, as have been

[40] See Steven Patrick, "RIM Out to Eradicate 'Truetone' Piracy Disease," *The Star*, 17 December 2004, viewed online at http://star-techcentral.com/tech/story.asp?file=/2004/12/17/technology/9693246&sec=technology on 5 January 2005.

Latino/as.[41] The fragmentation of the mobile telephone market, incompatible networks, the delay in providing 3G services, and the bill-structure of calling (American cell phone users pay to make and receive calls) are all factors in hindering cell-phone use in the US, which predictably correlates with ringtone consumption. Moreover, the US demonstrates a resilient culture of computer and Internet use, making rare the use of services like text-messaging (which have become significant cultural phenomena elsewhere).[42]

The digital utopia of the perfectly integrated, portable entertainment device is the limit towards which many phones currently point and has loomed on the cellular horizon for some time. The competing visions of the cell phone as music player and integrated entertainment device constitute somewhat different, if certainly compatible, goals for the phone of the future. *Wireless Review* and *Allmusic.com* writer Jason Ankeny perhaps best articulated the former perspective with the phrase "the celestial jukebox."[43] Borrowed from Shawn Conahan, president of the LA-based mobile entertainment firm Moviso, the phrase encapsulates a vision of complete musical access available instantaneously through a cellular phone. Indeed, similar outlooks on the future of music have been articulated by music industry artists like Jay Sean, copyright experts like Lawrence Lessig, and online companies like Kazaa—with the differences between them hinging on the nature and amount of payment required by music consumers.[44] But Conahan has articulated an ideal that extends beyond music alone: "my vision is that someday you'll be able to reach into the sky and pull down entertainment content, no matter what the device."[45] Perhaps unknown to Ankeny, the term "celestial jukebox" has in fact been in use since the mid-1990s, and is currently used by media executives, to describe this total media device in which every accessed cultural good is paid for by an individual transaction.[46] Such a perspective on the future of the mobile phone

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[41] See Weheliye, 33-34. At least one website charting Latino/a trends notes that 29% download ringtones, as opposed to 9% of the general US population. Information viewed online at http://www.hispaniconline.com/trends/2004/aug/briefcase/dynamictrends.html on 18 August 2004.

[42] Figures and information on global ringtone use is drawn primarily from Phil Hardy's "Music Licensing Revenues on the Increase Driven by the Fast-Growing $3bn plus Mobile Music Market," *Music & Copyright*, 12 May 2004. One remarkable essay describing the political aspects of text-messaging cultures in the Philippines is Vincente Rafael's "The Cell Phone and the Crowd: Messianic Politics in the Contemporary Philippines," *Public Culture* 15/3 (Fall 2003), 399-425.

[43] Ankeny, "The New Sounds of Music."

[44] Sean discusses his support of for-pay online music in Hamish Mackintosh, "Talk Time: Jay Sean," *The Guardian*, 12 August 2004, viewed online at http://www.guardian.co.uk/online/story/0,3605,1280757,00.html on 1 September 2004. Lessig's ideal would be to provide faster and better for-pay online music services that would compete sufficiently well with free access so that file-sharing would not have to be criminalized. See Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (New York: The Penguin Press, 2004), 296-304; thanks to Michael Denning for this reference. Kazaa itself seems to adopt a similar perspective by promoting legal, licensed content available through the website while still defending its facilitation of free file-sharing. See www.kazaa.com.

[45] Ankeny, "The New Sounds of Music."

[46] See Patrick Burkart and Tom McCourt, "Infrastructure for the Celestial Jukebox," *Popular Music* 23/3 (August 2004), 349-350. The authors argue that the term first appeared in Paul Goldstein's book *Copyright's Highway* (1994), in which a broad, pay-per-transaction *gesamtapparat* was imagined (349).

seems to be corroborated by the rapid growth of multimedia messaging services (MMS). Through MMS, different kinds of media—music, video games, photos, text-messaging, e-mail, and video—are increasingly available through one's mobile phone, with the ultimate goal of transmitting TV broadcasts on cellular networks. Although these networks for the most part cannot yet handle the volume of information required to show TV broadcasts, at least four handset manufacturers (NEC, Nokia, Samsung, and Toshiba) are designing phones for exactly that purpose, and wireless carriers like Sprint even currently offer streaming TV to their subscribers.[47] In either case, such services are still hindered by the physical capacities of batteries, which cannot yet power such devices for more than a couple of hours; by the bandwidth limitations of cellular networks; and by a market increasingly flooded with phones that redundantly reproduce features on other portable hand-held gadgets (like the iPod or portable video game devices). But despite these obstacles, a number of new devices are being developed that move the cell phone closer to some version of the cell phone's theoretical endpoint. Perhaps most significant is Motorola's decision to mass-market MP3-playing cell phones. Working in tandem with Apple Computer, the handset manufacturer has announced that a mass-market Motorola music phone will appear in 2005 and will be able to hold anywhere from a half-dozen to a few dozen songs, depending on the model. Disabusing any notions that as the designer and vendor of the iPod Apple is working against its own financial interests, the company argues that a the ability to purchase and play a few iTunes on a cell phone will encourage phone users to purchase the iPod.[48] On the software end of such projects, a new company called MusicGremlin is attempting to create programs that can connect its own song database directly to cell phones, bypassing computer-based websites (like Apple's iTunes site).[49] Moreover, with Qualcomm's attempt to create high-quality, three-dimensional audio sound from cell phone using only two speakers or headphones, one might glimpse the outlines of a competitive, multi-sector project to construct a more literal, publicly-oriented version of the "celestial jukebox." Moving in the direction of integrated mobile entertainment, Nokia has announced a plan to offer "visual radio," in which mobile phone users receive FM radio broadcasts directly on their phones, along with synchronized text and images.[50]

Constantly assaulted by a dizzying whirl of technological developments, cultural memory in the world of mobile entertainment seems startlingly short. But as capital's march of progress to produce ever-better electronic devices continues inexorably down a path unknown even to itself, entire cultural

[47] Brad Smith, "Multimedia Unplugged," *Wireless Week*, 15 May 2004. More recently, Nokia has decided to withdraw from marketing a TV phone for the time being, despite the company's recent demonstration of the technology in Singapore. The company argues that the problems lie less in the technology and infrastructure and more in constructing a business model for connecting the TV phone to the media/TV industry and the wireless world. See Brad Smith, "Nokia Cans TV Phone but not TV Plans," *Wireless Week*, 15 July 2004.
[48] Flynn, "The Cellphone's Next Makeover."
[49] Joe Bant, "Music Downloads Sans PC," *Wireless Week*, 15 August 2004.
[50] Smith, "Multimedia Unplugged."

practices and phenomena are created, persist, and show signs of decline—all within a span of 6-7 years. Joseph Schumpeter's famous characterization of capitalism as "creative destruction" seems perhaps melodramatic in this context, but the world of wireless entertainment, like the wireless and entertainment industries generally, is characterized by yearly shifts in fashion and technologies, highly unstable employment, and small firms systematically succumbing to media and entertainment conglomerates. In the wake of these shifts, careers are made and lost (almost always without the benefits of union representation that appear in the broader wireless and entertainment sectors); innumerable websites, stored files, and electronic devices accumulate in cyberspace and real space, leading to a troubling agglomeration of digital junk; and real and symbolic cultural battles are waged and fought, with the outcomes in many cases remaining uncertain at present.

Ringtone Composers

It is worth recognizing that early ringtone entrepreneurs like James Winsoar were often composers. Although Winsoar describes his main interest as "marketing," his early catalog of original monophonic ringtones grew to over 100 at his "My Nokia" website.[51] Of course, the majority of the earliest uploadable ringtones were unlicensed arrangements of popular songs, but fears of legal reprisals and the desire to differentiate one's own product ensured that at least some early ringtone companies would produce original compositions. Winsoar notes that

> A rival company called "Your Mobile" was set up, which was offering ringtones free of charge initially. Because it was free it was hugely popular, and I did begin to get worried. The quality of their ringtones though was very poor. They soon got into trouble with EMI who demanded royalty payments for the ringtones they were giving away. More recently Your Mobile has started charging for their ringtones. As well as them, thousands of other companies also copied the successful formula of My Nokia, albeit with far inferior sounding tones![52]

With the increasing popularity of ringtones, it is unsurprising that some musicians would find employment composing ringtones for mobile entertainment firms. Among the most touted of such composers in the Anglo-American press, Martin Plante has taken a circuitous but not atypical route to a part-time job as a ringtone composer. A classically-trained pianist and child of a violinist and an opera-singer, Plante first gained notoriety in the 1980s as a keyboardist in the now-defunct Montreal-based rock band Bundock. Working as a piano accompanist with Cirque du Soleil and ballet companies, Plante was hired to compose original ringtones for a New York website, About.com, in early 2001. Giving the ringtones away for free, the website paid Plante based on how many visits the website received per month. Although the work is still a second

[51] "An Interview with James Winsoar," viewed online at http://www.tonez.co.uk/news/interview_with_james_winsoar.htm on 19 August 2004.
[52] Ibid.

job for him, Plante mentions that "every month I get a sort of salary and at times the amount has been surprising, especially when the dollar was down, almost enough to live on."[53]

Few ringtone composers have received as much media attention as Plante, however. Most work anonymously in mobile entertainment firms or handset manufacturing companies, often performing other tasks in addition to composing ringtones. Judging from the plethora of ringtone websites, most ringtone composers spend their time composing arrangements of preexisting music rather than composing new music, although original ringtones do appear regularly. The number of such musicians employed in this capacity does not seem to be very high. Keith Nowak, a spokesperson for Nokia, emphasizes that there are very few people who are employed to compose ringtones at the company and even fewer who do so as a primary occupation.[54] Still, some European companies have broadcast their success in providing employment to young musicians. Melodi Ltd, founded by Iain Kerr and Jason Shaw in Lichfield, Staffordshire, UK in 2002, followed Winsoar's entrepreneurial model and formed a small ringtone company for the UK and Australian markets. A year later, the company boasted hiring four full-time musicians.[55] Indeed, Winsoar himself has hired a number of "freelance" musicians, who seem to be employed on a temporary basis and are paid on a piecework basis. A recent employment ad posted on his website reads

> **Freelance Ringtone Composer**
>
> Specialising in Hip Hop and Rap music you will produce Nokring RTTTL format and SP MIDI polyphonic ringtones (4 note polyphony) by listening to the original music and copying it by ear. You should be able to copy the rhythm, bass lines and melody with no wrong notes. You will be paid £10 per ringtone on a self-employed basis.[56]

One should immediately notice the incredibly low pay for what is highly specialized work—the transcription of popular songs. But such ads appear to target young musicians who cannot read musical notation—a skill that both commands higher payment rates and is unnecessary in the creation of ringtones. As such, the industry appears to draw on the very fact that the work being done by ringtone composers is cultural and is thus subject to what Andrew Ross calls

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[53] Andy Riga, "Job Has a Nice Ring to It," *The Gazette* (Montreal), 24 May 2003.
[54] As discussed an interview with Keith Nowak in May 2004.
[55] "Craze is a Key to Success," *Express & Star*, 16 August 2003, viewed online at http://www.expressandstar.com/cgi-bin/artman/exec/view.cgi?archive=18&num=39626 on 19 August 2004. Also, I should note that my characterization of other companies following Winsoar's business model of creating ringtone provider companies is a generalization that assumes the priority of Winsoar's company in the business. Whether or not Winsoar actually created the first ringtone company in the UK or even the world (and it is not clear to me that another company did not hit upon the idea independently around the same time or even beforehand), my characterization does not necessarily assume the direct influence of Winsoar on these other companies. Instead, Winsoar appears here as a figure for a certain kind of enterprise, a small, independently-owned and managed ringtone and mobile entertainment provider.
[56] Listing viewed at http://www.tonez.co.uk/jobs.htm on 19 August 2004.

the "cultural discount," or the willingness of culture workers to "discount the price of their labor for love of their craft."[57] At any rate, this employment pattern seems to be widespread. Also exploiting the availability of talented and underemployed musicians, larger handset manufacturing firms have subcontracted ringtone and mobile-music companies to produce preset ringtones. A Norwegian company called Soundonweb has hired twenty-five musicians to construct ringtones for delivery to the SonyEricsson assembly line. Apparently, the company has ties to Nokia as well, possibly as a subcontracted ringtone provider for the Finnish handset manufacturer.[58]

In principle, the work of composing ringtones is not particularly glamorous: it is, in a sense, an updated form of composing jingles or advertising music whose product is mobile telephony itself. In the case of the monophonic ringtone, it benefits from being a highly-constrained art form. The composer has a single melody line of limited length (maximum 30 seconds) and range (up to 4 octaves) at her disposal, with little to no possibility of varying timbre or dynamic. The simplicity of such melodies, which must balance an aesthetic interest (sounding "good," in the abstract) with a function (being an effective signal to the mobile user), seems most flattering when they are short, a few seconds long perhaps. (Plante's monophonic melodies are under 10 seconds long.) Although it is by no means simple to compose such a melody, it is readily accessible to those with a basic knowledge of Western music theory and the ability to encode a melodic idea in the relevant ringtone text language. (Ringtone text languages usually employ standard Western letter names, accidentals, octaves, and numerical tempo designations, although many use a 12-tone numerical system for pitches instead of letter names). Furthermore, a number of ringtone composer programs appeared in the wake of the monophonic ringtone craze (including some on handsets themselves), allowing those unfamiliar with ringtone text languages to compose melodies using standard Western music notation. Judging from discussions on online forums, individual mobile users seem to have composed their own monophonic ringtones with some frequency. Of all the forms of ringtone composition, there is a reassuring accessibility and democratic sensibility with which monophonic ringtone melodies are made. The moment of the polyphonic ringtone, however, brought new possibilities that were in turn realized by the imaginations of professional or semiprofessional ringtone composers. The multivoiced synthesizers that produce such ringtones required a greater knowledge of textural arrangements and harmony, and except in the rarest of cases they tend to sound like musical genre exercises in a video-game or elevator music format. The greater degree of expertise involved in composing polyphonic ringtones has meant that average cell phone users have been less likely to compose their own such tones, but monophonic composers like Winsoar and Plante have continued in their line of work by producing

[57] In Andrew Ross, *Low Pay, High Profile: The Global Push for Fair Labor* (New York: The New Press, 2004), 198.

[58] Emily Turrettini, "Behind the Ringtone Scene," *Ringtonia.com*, 25 July 2003, viewed online at http://www.textually.org/ringtonia/archives/001233.htm on 19 August 2004. Relatively little can be gleaned from the websites of Melodi Ltd (now Melodi Media) and Soundonweb, respectively www.melodimedia.co.uk and www.soundonweb.com.

polyphonic ringtones. The expanded set of musical possibilities has also encouraged many others to begin producing original polyphonic ringtones: a German electronica group called Super Smart has produced an album in titled *Panda Babies* as a collection of polyphonic ringtones (released in April 2004 by the GoFresh mobile music label).[59]

With the predicted success of the sound file ringtone and its connections to the music industry, one creeping possibility is that music celebrities will supplant present-day ringtone composers. It is true that celebrities have been involved with ringtones from the days of the earliest monophonic ringtones. Boy George, the English pop star with Culture Club in the 1980s and presently successful electronica DJ, produced an early monophonic ringtone called "Sonic Trigger Ringtone" that was distributed exclusively to Vodaphone subscribers in the UK. [60] More recently, in 2002 the Danish musician Lee Oskar signed with a Seattle-based mobile entertainment company called Vesaly Games to produce a series of exclusive, high-quality polyphonic ringtones. Oskar is perhaps most famous as a harmonica player and founding member of the funk-rock band War. Able to construct catchy harmonica riffs in songs like "Low Rider" or innovatively combine his instrument with horn arrangements, Oskar decided to lend his melodic gift to the construction of ringtones, stating

> I'm a melody writer. Give me three notes, and I'll give you the best melody you've ever heard. You don't need a long stretch of time to create a melody. If you've got the right tone and tempo and a great, catchy riff, you've got the game.[61]

Other musicians associated with famous rock bands, like the Deep Purple guitarist Steve Morse, have also signed deals with mobile entertainment firms to compose new ringtones.[62] But with the appearance of the sound file ringtone, the rules of the game appear to have changed. For one, the advertising function of the ringtone no longer calls attention to the mobile phone alone; it also serves as promotion for the recordings of major-label artists. With hip-hop artists like 50 Cent and Snoop Dog signing distribution deals with the mobile entertainment company Zingy, ringtones appear to be heading decisively in a new direction.[63] Perhaps most telling is the presence of television advertisements on MTV1 and MTV2 for ringtones created by the punk-revival band Green Day that are themselves advertisements for a new album, *American Idiot*, released in August

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[59] "GoFresh Launches Music Album as Ringtones," *Moco News*, 26 April 2004, viewed online at http://www.moconews.net/archives/2004_04_26.shtml#006906 on 19 August 2004.
[60] Emily Turrettini, "Original Ringtones by Marin Plante," *Ringtonia.com*, 20 May 2003, viewed online at http://www.textually.org/ringtonia/archives/000633.htm on 19 August 2004.
[61] Jason Ankeny, "Lee Oskar," *Wireless Review*, 1 April 2002.
[62] See "Deep Purple Plot Album," *UltimateGuitar.com*, posted 2 November 2004, viewed online at http://www.ultimate-guitar.com/news/general_music_news/deep_purple_plot_album.html?200411020414 on 19 November 2004.
[63] It is worth noting that hip-hop artists like the Wu-Tang Clan and Mobb Deep have been promoting their music via ringtones at least as early as 2001. The mobile entertainment firm Zingy promoted the artists' 2001 albums by releasing ringtones of album tracks in advance of the albums' release dates. See Benny Evangelista, "Ring Tones Raise a Buzz," *The San Francisco Chronicle*, 7 December 2001.

2004. Rather than merely reproducing singles from the album in sound file ringtone format, the advertised ringtones present spoken statements from Green Day bandmembers like "Pick up the phone! It's your mother. I know. She's with me."[64]

In a context in which creating ringtones means nothing more than editing and converting sound files, the ringtone industry would have little need to hire unknown musicians and thus might ultimately destroy the already dwindling space for musical creativity that exists in the mobile entertainment sector. But this decline in creative freedom looks quite different depending on where one is situated within the ringtone industry's labor pool. Repeating a dominant labor pattern in the global economy, ringtone work is performed within an expanding two-tier system of laborers who are compensated at radically different pay scales. "Star" musicians make lucrative deals with mobile entertainment firms; and they are themselves divided between currently popular groups or artists licensing their radio hits and less-famous artists (especially sidemen) in well-known groups producing new ringtones. At the other end is a vast industrial reserve army of "flexible," high-tech music workers increasingly doing some form of data processing without any form of job security.[65]

Weblogs and Chat Groups

The monophonic ringtone and composer programs that appeared a few years ago gave rise to an even more curious phenomenon. Within the past couple of years, one could easily observe the proliferation of websites and chat groups listing hundreds of song titles, each with instructions for inputting monophonic ringtones into different phone formats. Such sites were divided according to language and existed for ringtone enthusiasts interested in particular music genres or repertoires from all over the world, especially those from regions with prominent mobile phone use. Hence, one could find particular websites devoted to monophonic ringtones of Japanese anime music, Canto-pop melodies, Bollywood film songs, Hollywood film scores, Western classical tunes, American TV shows, and the like. Some websites merely listed song after song in the relevant genre, often dividing them up according to handset manufacturers (who each have different coding languages for ringtones). In other cases, a single song would be posted, with the melody translated into several different manufacturers' coding languages and listed in a column below the song title. On discussion groups, one might find participants asking each other how to code a particular favorite song or how one would

[64] Jeff Leeds, "The Guy from Green Day Says He Has Your Mother on the Cellphone," *New York Times*, 18 August 2004. Leeds also notes that promotion through ringtones is fast becoming the norm for artists and that many artists have agreed to sell their music as ringtones after having resisted doing so (like U2).
[65] In addition to mirroring the widening gulf between most corporate employees and upper-level executives, this pattern is also reminiscent of the academic labor market, in which "star" academics are courted by prestigious institutions while casual laborers supply most of the teaching and research labor power. On the academic star system, see Jonathan VanAntewerpen and David L. Kirp, "Star Wars: New York University," in David Kirp, ed., *Shakespeare, Einstein, and the Bottom Line: The Marketing of Higher Education* (Cambridge, MA: Harvard University Press, 2003), 66-89.

translate a particular set of instructions from one handset maker's coding language to another's.

Cryptic in appearance, the long lists of numbers and letters on such websites constituted a new kind of musical score or set of instructions for musical production. Understood in this way, these sites might be seen as part of a growing online archive of music information that also includes song lyrics, guitar tablature and chords, material on music groups and bands, reviews, and, of course, sound files (both pirated and original files, as in the case of remix websites[66]). Significantly, this haphazard archive is quite different from the institutionally sanctioned collections of scores, musical writings, journals, audio files, historical information, and reviews available online through universities or websites like Allmusic.com—individual sites are rarely thorough or comprehensive, often include mistakes in transcriptions of lyrics and musical materials, and are often sustained financially by highly irritating Internet advertising. But as part of a continuum of online musical materials, this desultory archive forms the core of resources used by many musicians and listeners in everyday life, providing a sprawling repertory of music available online for performance use, fact-checking, analysis, and composition.

Such monophonic ringtone code websites are already becoming rarer at present, giving way to for-pay websites from which one can purchase polyphonic ringtones. Given that such "scores" require in many cases a basic knowledge of Western music theory, these sites ironically seemed to flourish (and to some degree continue to persist) for East and South Asian repertories. One example from a Bollywood ringtones website will illustrate how they seem to work.

For Nokia mobile phone

Ankhein - Gustakhian
Tempo 125

4c1 8g1 8f1 4g1 8f1 8#d1 4f1 8#d1 8d1 4#d1 8d1 4.c1 8g1 8f1
8g1 8f1 8d1 8#d1 1f1 4c1 8g1 8f1 4g1 8f1 8#d1 4f1 8#d1 8d1
4#d1 8d1 4.c1 8g1 8f1 8g1 8f1 8d1 8#d1 1f1

For Ericsson cell phone

C g f G f #d F #d d #D d C g f g f d #d F C g f G f #d F #d d #D d C g f g f d #d F

For Motorola cell phone

[66] See the discussion, for example, of a remarkable, but now defunct, website for posting remixes of songs by Bjork (www.arktikos.com) in Matthew Mirapaul, "Arts Online: Why Just Listen to Pop When You Can Mix Your Own?", *New York Times*, 20 August 2001. Another website (http://sunday-in-the-park.com/bjork/, viewed on 1 September 2004) includes a selection of one person's favorite remixes from the original remix website.

4 C-4 G-4 F-4 G-4 F-4 D-#4 F-4 D-#4 D-4 D-#4 D-4 C-4 R2 G-4 F-4 G-4 F-4 D-4 D-#4 F-4 C-4 G-4 F-4 G-4 F-4 D-#4 F-4 D-#4 D-4 D-#4 D-4 C-4 R2 G-4 F-4 G-4 F-4 D-4 D-#4 F-4

For Siemens cell phone

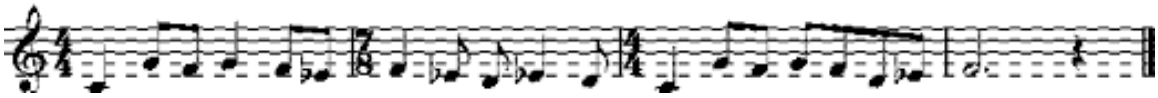
C1(1/4) G1(1/8) F1(1/8) G1(1/4) F1(1/8) Dis1(1/8) F1(1/4) Dis1(1/8) D1(1/8) Dis1(1/4) D1(1/8) C1(1/4) G1(1/8) F1(1/8) G1(1/8) F1(1/8) D1(1/8) Dis1(1/8) F1(1/1) C1(1/4) G1(1/8) F1(1/8) G1(1/4) F1(1/8) Dis1(1/8) F1(1/4) Dis1(1/8) D1(1/8) Dis1(1/4) D1(1/8) C1(1/4) G1(1/8) F1(1/8) G1(1/8) F1(1/8) D1(1/8) Dis1(1/8) F1(1/1)

Samsung

1 5*** 4 5 4 2# 4 2# 2 2# 2 1 0*** 5 4 5 4 2 2# 4 1 5 4 5 4 2# 4 2# 2 2# 2 1 0*** 5 4 5 4 2 2# 4[67]

The song, "Gustakhiyan" or "Gustakhiyan Hai," is from a movie called *Aankhen* (2002, meaning "eyes"), directed by Vipul Amrutal Shah and starring Amitabh Bachchan as a fired bank worker who robs his former employer for revenge. Following the Nokia and Siemens instructions listed above, the ringtone melody should sound like that given in example 1.

Example 1: "Gustakhiyan" ringtone



The melody immediately strikes one as strange due to what seems to be a missing half-beat in the second measure. However, upon having verified the melody with a website that sells monophonic ringtones, it seems to have been correct or at least consistent with what is available on the market.

Listening to the song "Gustakhiyan" (or "transgression") itself helps to clarify how the ringtone was created. The song is essentially a Bollywood-ized piece of dance music, constituting a lavishly produced but highly generic version of an ethnic or tribal house track, on top of which is overlaid a male-female duet characteristic of Hindi film love songs. The track begins with a moderately fast (about 125 beats per minute) "four on the floor" disco/house beat (0:00-0:08) and then adds a sampled layer of a South Asian percussion instrument, probably a tabla (0:08-0:23). The track continues by adding a syncopated synthesizer line that is filtered (along the harmonic series of the tonic) from high frequencies to low frequencies and back up to high frequencies (0:24-0:53), in the manner of much acid house—the synthesizer could be a Roland TB-303 bass synthesizer,

[67] Viewed at http://www.indianchild.com/new_hindi_bollywood_ringtones.htm on 19 August 2004.

the instrument that provides the characteristic sound of acid house music. At 0:54 the male singer enters, singing the melodic line in example 2 in a highly stylized fashion (reminiscent both of earlier Bollywood singing styles and American dance-pop singers like Michael Jackson and others).

Example 2: "Gustakhiyan" vocal line

The line is treated as a wordless refrain that returns throughout the course of the song, and it is unsurprising that it would stand out to a ringtone arranger as the best melodic line to excerpt. But it should be immediately apparent that this line, appearing in the context of a metrically-regular, 4-4 beat, does not include the strange "dropped beat" of the ringtone, although it seems easy enough to hear for the purpose of transcription.

The commonsensical answer to this conundrum is that the original transcriber of the song made a mistake, and the mistake was then replicated in other contexts, ultimately becoming normalized as part of the monophonic ringtone of "Gustakhiyan." Certainly this is a plausible explanation: the nature of online information is such that it propagates quickly, whether or not mistakes are present. Lacking professional editors who might catch such oversights, other ringtone websites often adopt preexisting transcriptions found online rather than redoing the somewhat tedious labor of transcribing melodies. Another explanation, however, might lie in the unusual transliteration of the film and song names ("Ankhein" and "Gustakhian"). Although nonstandard transliterations of Hindi are certainly typical, especially those done in an Urdu context (as these may have been), the discrepancy perhaps implicitly points to the widespread presence of piracy in Asian ringtone production.[68] One might argue that the respellings and even the melodic "error" are subtle attempts to disguise a pirated melody. And it is worth mentioning that the transcription mistake occurs at the lowest point in the melodic line, where the singer slurs over the notes and the lower range is somewhat more covered over by the backing instrumental tracks—the melody thus remains fully recognizable and is still quantifiably different from the original.[69]

Though prevalent in Asia, piracy of ringtones seems less urgent to local music industry leaders than the widespread piracy of recordings. With remixes of classic Bollywood hits by singers like Lata Mangeshkar and Asha Bhosle becoming less viable—in part due to disapproval by those singers—ringtone sales have become a way for Indian music industry executives to compensate for

[68] See "Ringtone Music Piracy Flourishes in Asia" and "RIM Out to Eradicate 'Truetone' Piracy Disease."
[69] Thanks to Nandini Deo and Madhura Gopinath for providing the translations of the film's and song's Hindi titles and lyrics.

sagging profits from record sales.[70] As the more lucrative polyphonic and sound file ringtones become increasingly prominent on the subcontinent, do-it-yourself Bollywood monophonic ringtone websites will drift out of view and ultimately disappear. As similar stores of accumulated information all over the globe go unused, they will float for some time in cyberspace like digital junk, demoted on the ever-changing Google hierarchy before they are ultimately deleted or removed. As such, they correlate to the real junk of older mobile handsets with outdated features like monophonic ringtones. These phones will be disposed of, gathered into mountains of electronic junk, and in some cases recycled, making room for newer handset models.[71]

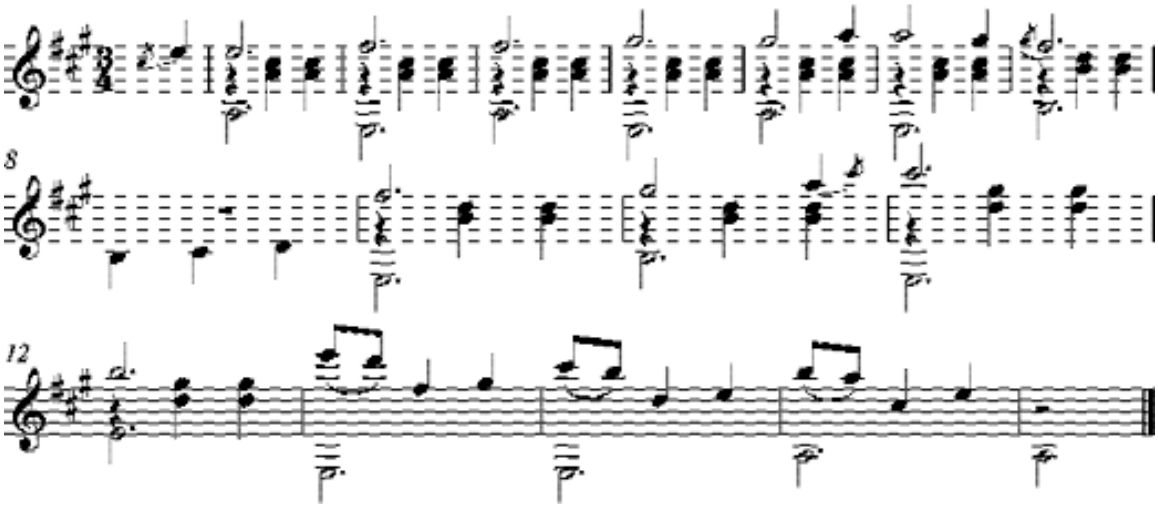
Ringtones and Western Classical Tonality

In the earliest days of the monophonic ringtone's appearance, the sound of the ringtone was inextricably linked to the greatest hits of older musics, especially Western classical music. Voicing a popular sentiment at the time, Angela Santo, a 23-year old English civil servant, said in 2001, "Those classical ring tones, the ones that are of classical music, I hate them with a passion."[72] Indeed, the early monophonic ringtone was a veritable primer in some of the most overplayed melodies in the history of Western music. Who can forget the once-ubiquitous presence of truncated, cheap oscillator-tone renditions of classic pieces by Beethoven (Fur Elise, Symphony No. 5 in C minor), Mozart (Symphony No. 40 in G minor, Eine Kleine Nachtmusik), Bach (numerous examples, including the A minor 2-Part invention, the "Badinerie" from the b minor Orchestral Suite), and Brahms (g minor Hungarian Dance, no. 5)?

However, lest one think that the early monophonic ringtone—the classical ringtone, as it were—is solely dominated by the great German masters, one only has to examine the inescapable Nokia Tune, the most classical of ringtones. The thirteen note melody is an excerpt from the "Gran Vals" by 19th-c. Spanish guitar composer Francisco Tarrega. The original piece is a multi-strain waltz in ABCDA form, with individual tunes moving symmetrically from A major to E major to B major to E major before returning to the original A major key. The main tune consists of two parallel phrases, with the first (mm. 1-16) including a striking cadential passage (mm. 13-16) that ends the phrase (see example 3).

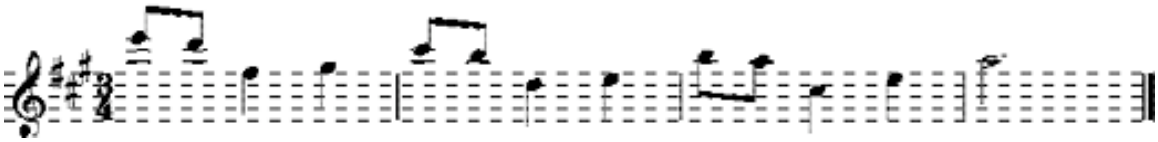
[70] Sudipto Dey, "Think Twice before you Remix Songs," *The Times of India*, 8 November 2003.
[71] See Ad Crable, "Trashing Your Cell Phone," *Lancaster New Era*, 15 April 2004 on recycling cell phones. The author also notes that a recent FCC ruling, allowing phone number transferring between different cell phones and from land lines to cell phones, requires the purchase of a new phone—resulting in guaranteed profits for handset manufacturers and further creation of electronics waste. For a remarkably multilayered treatment of e-waste, see Andrew Ross, "The Flight of Silicon Wafers," in his *Low Pay, High Profile*, 157-173.
[72] "What is the Most Annoying Mobile Phone Ring Tone You Have Heard?", *MX* (Melbourne, Australia), 16 November 2001.

Example 3: "Gran Vals," mm. 1-16



In 1996, ringtone composers and arrangers borrowed the melody of that cadential passage, adding an extra tonic pitch at the end to provide a sense of finality or closure (see example 4).[73]

Example 4: "Nokia Tune"



Originally part of a Nokia advertisement in which the entire piece was played on guitar, the melody was included as one of the preset ringtones on early monophonic ringtone Nokia phones in 1996, simply and accurately titled "Gran Vals" (without providing any more information).[74] By 1998, however, the tune proved to be popular enough—perhaps in part among office employees, who were eager to acquire ringtone-playing phones themselves[75]—such that the

[73] In basic music-theoretical terms, the two phrases constitute a period, or an antecedent and consequent phrase (two musical phrases that have something like a question-answer relationship). The first phrase ends without the tonic note in the melody, thus closing with an imperfect authentic cadence, and the second phrase responds to this relatively inconclusive phrase ending by starting the same music again and finishing with the tonic note and tonic harmony (or a perfect authentic cadence).

[74] Thanks to Steven Rings for the information on the advertisements, which he watched while in Europe in 1995. Rings has also mentioned to me that several classical guitarists might be employed as ringtone composers and arrangers, given the obscurity of the Tarrega piece. Rings noted that he had heard a ringtone arrangement of a melody from Mozart's *The Magic Flute* that was clearly taken not from the original work but from a blander arrangement of the tune by the early 19th-c. Spanish guitar composer Fernando Sor. (This arrangement was part of the latter's *Introduction and Variations on a Theme by Mozart from "The Magic Flute"*, op. 9.)

[75] Burkeman, "Fellowship of the Rings."

company renamed it the "Nokia Tune" and made it the default ringtone on its phones.[76]

There are several reasons why music of the Western classical tradition became prominent in early monophonic ringtones. According to Keith Nowak, a spokesperson at Nokia, after hitting upon the ringtone concept the company wanted to use public domain melodies to avoid potential legal problems. This explanation has certainly been promulgated in the press as the most salient factor in the selection of default ringtones.[77] And in examining default ringtone selections, one does occasionally note the presence of Souza marches and familiar Tin Pan Alley tunes (like Albert von Tilzer and Jack Norworth's "Take Me Out to the Ball Game" of 1908) or other public domain materials not necessarily conceived of as "classical music" among the classical selections. Another reason some have argued has as much to do with the residual distinction value of Western classical music as elite or sophisticated, associated with the upper class. Certainly this explanation bears some merit as well. From their inception in 1975 to as late as 1990 (and even later in the US) cell phones were associated with elite and "yuppie" lifestyles, and cell-phones continue to play a significant role in these class strata. One psychiatrist classified ringtone choices according to personality and class types, arguing that "traditional, conservative and cerebral types," especially those "belonging to an older age group who like the idea they are sophisticated," are prone to choose classical music ringtones.[78] But these explanations seem inadequate in some ways. For one, the preset melodies did not typically vary between countries or regional markets, except in minor ways.[79] Although such changes would inevitably raise manufacturing costs, they are eminently possible, leading one to wonder why manufacturers did not pursue such strategies to tailor their products to their target markets.[80] Moreover, with the cell phone emerging as a mass market item in the 1990s, the residual class distinctions of the handsets themselves seem to have given way to a recognition that, at least within the developed world, anyone can own a cell phone.[81]

Perhaps the answer lies the fact that the major markets for mobile telephony—Europe and East Asia—are regions in which Western classical music

[76] Keith Nowak, spokesman for Nokia, recounted the dates and basic details of this history to me in a telephone interview in May 2004.
[77] For example, Andy Riga, in "Job Has a Nice Ring to It," states, "Cell phones come with a standard ring tone, plus a few alternatives, usually bits of music no longer protected by copyright, such as fragments from Bolero or Carmen."
[78] Uimonen, "'Sorry, Can't Hear You!", 52. Gavin Naden, "Real Life: What Your Ring Tone Says about You," *Sunday Mirror*, 13 May 2001. The psychiatrist interviewed for the article was named Dr. Glenn Wilson.
[79] Nowak mentioned that one rare variation was that "Take Me Out to the Ball Game" appeared only in US markets.
[80] One might argue, however, that with the appearance of the downloadable ringtone, such changes weren't necessary, but it did take at least a year or two between the first appearance of the ringtone and a ringtone format that was uploadable.
[81] Uimonen, drawing on the work of T. Kopomaa, argues that from 1990-1995 cell phones were mass-marketed, and then since 1995 should be best understood as diversified mass market products (52-53).

are particularly prominent. Indeed, classical music itself may have been a bridge between these two earliest and still strongest among global mobile telephone markets, as the ringtone concept and its classical repertoire spread quickly from Finland (Nokia) to Germany (Siemens), Japan (Sony/Ericsson), and South Korea (Samsung). In other words, the appearance of classical music on cell phones may have been a part of promoting their increasing popularity in these two regions, with intimations of upward mobility being evoked by the object itself. Although in the Asian context a cultural imperialist viewpoint would merely see this as a globalized stage of Western dominance, in which Western cultural forms are still viewed as hierarchically superior by post-colonial subjects, I would argue instead that the phenomenon must be understood in relation to the fact that Western classical music is now, and has been for some time, a central part of global mass culture.[82] That this mass culture is inseparable from the mass consumption of cell phone handsets thus seems all the more fitting.

A second answer to this conundrum lies in the structure of monophonic ringtone sound production itself. The earliest means of sound production on cell phones were quite limited. These phones could produce a single melody with an unflattering digital timbre that was tuned in a twelve-note equally-tempered chromatic scale. The melody was of relatively short duration (maximum 30 seconds), played within a small range (three to four octaves), and allowed for rhythmic subdivisions into multiples of 2 only.[83] Such limitations encoded a number of musical assumptions into the monophonic ringtone itself. They prevented both standardized and non-standardized tuning systems of many world musics such as Arabic scales, Indonesian and Southeast Asian scales, African tuning practices and scales, and the like. They encouraged the coding of rhythmically simple melodies, making unusual rhythmic subdivisions difficult (though not impossible) to create. And they fixed music into a single melodic line with fixed pitches and simple timbres, making even simple unpitched music difficult to create. Of course, given the technological limitations of the cell phone in the late 1990s and the widespread global presence of Westernized tunings and musical styles—which had been promulgated in a somewhat analogous way through the digital keyboard synthesizer—such a sound production system probably seemed both cost-efficient and eminently reasonable for the purpose.

After all, the ringtone's original purpose was not to accurately reproduce music but to *represent* it, with simultaneously functional and amusing intentions. As Shawn Conahan of Moviso has aptly noted, "we're not selling music—we're selling a representation of a song someone has heard[.]"[84] Clearly, certain musics

[82] An excellent discussion of the impact of Western music on the rest of the world is found in Bruno Nettl, *The Western Impact on World Music: Change, Adaptation, and Survival* (New York: Schirmer, 1985). Another version of the globalization of classical music would be its corporate mass-culturization and resulting control by global music conglomerates, as found in Norman Lebrecht, *Who Killed Classical Music?: Maestros, Managers, and Corporate Politics* (Secaucus, NJ: Carol Pub. Group, 1997), esp. 394-414.

[83] Porter discusses the physical and technical limitations of the monophonic cell phone melody, as well as cell phone music generally, in "Phone it In!" Matthew Mirapaul also mentions the three-octave ranges of early cell phones in "Composer Plans to Strike Up the Cell Phones," *New York Times*, 16 August 2001.

[84] Quoted in Ankeny, "The New Sounds of Music."

were incapable of being represented even somewhat accurately with the monophonic ringtone, such as those mentioned above, and even (Westernized) popular songs, with their distinctive textures and timbres, sound unimpressive as monophonic ringtones. The monophonic ringtone's structural limitations produce a highly abstract form of a particular musical selection by excerpting its main melodic line and playing it back with an undistinctive timbre and mechanical rhythmic articulation. But I would like to advance the argument that the Western classical music appearing on early ringtones is eminently *representable* and *abstractable* music, in at least three ways. First, such music—and this would include virtually all public domain music that would appear as default ringtones—stems from an era in which sheet music or musical scores were the primary vehicles for composing, understanding, interpreting, and commodifying music in the West. Indeed, this is the first inescapable legacy of Western musical technology: that it produced a musical practice whose audible result was inseparable from its written form. From this perspective, a ringtone essentially functions as a means of abstraction not dissimilar to a musical score—even more so like reference pages or books that notate the first or main theme or a particular piece of music. A second, related aspect of this music that provides a means of abstraction is its formal focus on important melodic themes, tunes, or motives, which are highlighted for the listener as being particularly important within the long-range flow of the music. Variously connected to ideologies of romantic organicism (especially in 19th c. classical music) or a catchy melody line (as in popular songs and advertising jingles in the era of mass culture), the music provides particular melodic fragments that one can easily recall, a feature that can be easily marshaled for use in a ringtone and other forms of advertising generally.[85]

Third, the music in question all derives from the period of Western music history in which a relatively consistent set of compositional practices predominated. Chief among these is what music theorists describe as tonality, a term used to describe a period of Western (art-)musical history from about 1600 to 1900. As Brian Hyer elegantly explains,

> Perhaps the most common use of the term [tonality], then, in either its noun or adjective forms, is to designate the arrangement of musical phenomena around a referential tonic in European music from about 1600 to about 1910. However this arrangement is conceptualized, musicians agree that there are two basic modal genera, major and minor, with different but analogous musical and expressive properties. It gives rise, moreover, to abstract relations that control melodic motion and harmonic succession over long expanses of musical time. In its power to form musical goals and regulate the progress of the music towards these moments of arrival, tonality has become, in Western culture, the principal musical means with which to manage expectation and structure desire. It is thus understood to be essential to modern Western music: it determines the coordination of harmony with melody, metre with phrasing, and

[85] A musicological treatment of organicism can be found in Ruth Solie's "The Living Work: Organicism and Musical Analysis," *19th-Century Music* 4/2 (fall 1980), 147-156.

> texture with register, thus encompassing – within its historical domain – the whole of music.[86]

One of the crucial aspects of tonal music, as the music theorist Heinrich Schenker observed, was the way in which melodic lines seemed interpenetrated with harmonies or chords and vice-versa. As Schenker himself argued, this form of interpenetration provided a way for listeners of tonal music to remember melodies without taking recourse to memorization alone.[87] Arguing the same point from the perspective of information theory, musicologist Leonard Meyer argued that tonal music includes various forms of redundancy that allow the listener to comprehend quite complex musical forms and styles.[88] For a monophonic ringtone, then, the isolated tonal melody is thus able to encapsulate and communicate—or represent—the whole of the musical structure without actually including all of its components. Even reconsidering the Nokia Tune, many listeners would be able to implicitly hear the chords that underlie the melody—the E6-D6-F#6-G#6 and C#6-B6-D5-E5 parts of the melody include mostly pitches associated with an E-dominant 7th chord (or a V^7 chord in A major), whereas the B5-A5-C#5-E5-A5 mostly outlines an A major triad (or I chord in A major).

As a form of advertising for the mobile telephone itself, the Western classical tunes abstracted in the form of monophonic ringtones served their function extremely well. With limited technical means, they provided catchy and informationally-rich jingles that would haunt and torment unsuspecting listeners who had already internalized the norms of Western tonality, making it impossible for them to ignore the pervasive social presence of the cell phone. But Angela Santo's irritation at the classical ringtone extends beyond its effectiveness and into the realm of cultural distinction. To many young Western listeners, Western classical music represents the music of their elders—parents and

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[86] Brian Hyer, "Tonality," *The New Grove Dictionary of Music*, 2nd ed., viewed online at http://www.grovemusic.com/shared/views/article.html?section=music.28102.1 on 21 August 2004.

[87] Schenker makes this point in a highly civilizationalist way, arguing that Western music before tonality was extremely primitive, in *Harmony*, ed. Oswald Jonas, trans. Elisabeth Mann Borgese (Chicago: University of Chicago Press, 1954 [1906]), 134-7. Schenker is a fascinating and contradictory figure. Almost a modernist as a scholar and an arch-conservative in his musical tastes and politics, perhaps his contradictions are best encapsulated in his status, towards the end of his life, as a Jew attracted to aspects of Nazi ideology. An early piece on Schenker that situates him in relation to early structuralist thinkers is Charles Rosen's, "Concealed Structures: Heinrich Schenker, Ferdinand de Saussure, Roman Jakobsen" (originally a book review in 1971), in his book *Romantic Poets, Critics, and Other Madmen* (Cambridge, MA: Harvard University Press, 1998), 182-211. Thanks to Roman Ivanovitch for this reference. For a lucid and insightful discussion of Schenker's political views, see Andrea Reiter, "'Von der Sendung des deutschen Genies': The Music Theorist Heinrich Schenker (1868-1935) and Cultural Conservatism," in Rüdiger Görner, ed., *Resounding Concerns* (Munich: Iudicium, 2003), 135-159.

[88] See Leonard Meyer, "The Perception and Cognition of Complex Music," in his book *Music, The Arts, and Ideas: Patterns and Predictions in Twentieth-Century Culture* (Chicago: University of Chicago Press, 1967), 266-293, esp. 283-93. Meyer doesn't use the term "tonal music" and only discusses the music of composers like Bach or Wagner as instances of such redundant music that allows for musical communication. Meyer's main purpose in the essay is to argue that total serial music is a style of music that does not include such redundancy and is therefore very difficult, or even impossible, to understand perceptually. Thanks to Eric Drott for this reference.

especially grandparents—and the much-discussed decline in classical music record sales and concert attendance attest to the presence of a generational conflict being waged through musical taste. For these younger listeners, music has been inescapably structured not by sheet music but by recorded sound—the second major contribution of the West to musical experience and practice. Western and Western-derived popular musics famously define and sell themselves not through abstract melodies or harmonies but through distinctive, even brandable timbres.[89] Thus, one might see both the production of uploadable monophonic ringtones based on popular songs and the appearance of higher-quality polyphonic and sound-file ringtones as attempts to distance mobile music from its classical, score-based roots and embrace a timbre-based popular music. The history of the ringtone would then seem to recapitulate the history of modern and postmodern Western music in the span of a few years.[90] And the story would appear to be simultaneously one of generational change, with the young defeating the old, and of corporate consolidation, with the music industry pushing for its already commodified timbres to appear as mobile phone music.[91] But if the already outdated monophonic ringtone is a strange flashback of Western classical music's moment of cultural hegemony, its abstract quality also discloses utopian political aspects. In 2001, while at a news conference in Jerusalem, the conductor Daniel Barenboim heard the unmistakable sound of Wagner's "Ride of the Valkyries" as a (monophonic) cell-phone ringtone. Realizing that Israeli citizens were already listening to the composer's music, which, due to its anti-Semitic composer and later ties to Nazi culture, was implicitly banned in concert, the conductor decided to break the ban, attempting

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[89] John Oswald, composer of sample-based works like *Plunderphonics* (1989) and *Plexure* (1993), has written about timbre as the central musical commodity in popular music today and how it has superceded older, more easily copyrighted musical parameters like melody and harmony. See his essay, "Plunderphonics, or Audio Piracy as a Compositional Prerogative," presented at the Wired Society Electro-Acoustic Conference, Toronto, 1985, viewed online at http://www.plunderphonics.com/xhtml/xplunder.html on 2 September 2004. Oswald writes,

> The precarious commodity in music today is no longer the tune. A fan can recognize a hit from a ten millisecond burst, faster than a Fairlight can whistle Dixie. Notes with their rhythm and pitch values are trivial components in the corporate harmonization of cacophony. Few pop musicians can read music with any facility. The Art of Noise, a studio based, mass market targeted recording firm, strings atonal arrays of timbres on the line of an ubiquitous beat. The Emulator fills the bill. Singers with original material aren't studying Bruce Springsteen's melodic contours, they're trying to sound just like him. And sonic impersonation is quite legal. While performing rights organizations continue to farm for proceeds for tunesters and poetricians, those who are shaping the way the buck says the music should be, rhythmatists, timbralists and mixologists under various monikers, have rarely been given compositional credit.

[90] As Brad Zutaut noted to me, the history of video games is also being reproduced through the cell phone, with games like *Snake* repeating the technology of early video games like *Pong*. In this case, Zutaut believes that the games are capitalizing on nostalgia value for older video game formats.

[91] Of course, the decline of Western classical music as part of the ringtone also signals the possibility of a greater non-Western presence (at least in principle)—sound files are able to capture many, if not all, of the nuances and cultural differences of world musics that the monophonic and even polyphonic ringtones cannot. But with Western and Western-derived popular styles dominating the sound file ringtone and with Western classical music having become "non-Westernized," as it were, it seems to me that this argument is less compelling than one that places the main conflict in terms of generational cohorts.

to push Israeli society beyond the politically-dangerous reification of the Holocaust.[92]

Conceptual Art and Composition with Ringtones

The pervasive social presence of the mobile phone and ringtone over the past half-decade has not remained unregistered in global cultural production. Cell phones have appeared as central accessories or narrative devices in recent Hollywood thrillers like *Collateral* (2004) and *Cellular* (2004) and the Chinese film comedy *Cell Phone* (2004).[93] Alexander Weheliye has insightfully identified the presence of cell phones in numerous contemporary R&B songs, even arguing that vocoder-like vocal alterations are being used to mimic the low fidelity of cell phone conversations for various expressive purposes.[94] But for the most part the ringtone as an artistic reference point seems to have remained the province of classical composers and media artists—cultural producers whose artistic media are either extremely isolated from or uncomfortably close to new technologies like cell phones. In the case of the former, orchestral musicians like composers of new orchestral works and innovative conductors have attempted to integrate cell phones and ringtone melodies into their compositions, either as bids to make their work more current and socially-relevant or to ironically distance themselves from contemporary social phenomena. In one case, British composer Jocelyn Pook produced a 10-minute orchestral piece titled *Mobile* (2002) based on the Nokia Tune theme by Tarrega, almost as a way to exorcise its irritating presence around her.[95] In another, a light symphonic medley titled *Spring Cellphony* (2001) performed in Jerusalem, a cell phone ringtone sounded the initial part of several famous classical tunes (including Rossini's *William Tell Overture* and pieces by Bach and Mozart), with the orchestra finishing the rest of each tune in turn.[96] Also, in 2003 conductor Bernd Kremling of the Drumming Hands Orchestra in Würzburg, Germany performed a composition that uses ringtones of classical composers (Bach, Mozart) and tunes like "Old MacDonald

[92] James Rampton, "The Sound of Peace-Making," *The Independent* (London), 5 December 2003.
[93] As discussed in a weblog posting by Mia titled "When the Phone Dies, SO DOES SHE!!", at www.popupgadget.net, 16 August 2004, viewed online at http://www.popgadget.net/2004/08/when-phone-dies-so-does-she.html on 23 August 2004.
[94] Among these include the representation of phone-surveillance in The Firm's "Phone Tap." See Weheliye, 33-34. Writing sometime in 2002 (if not earlier), the author did not find ringtones appearing per se in the songs he examined. But he does note that in a song titled "Final Warning," by Ginuwine and Aaliyah on the album *%100 Ginuwine* (1999), a ringing cell phone is integrated into the complex rhythm track of the song. In that case, the electronic ringer sound reflects the song's references to phone numbers and cell phones (33). Weheliye does note that "the ringing of the cell phone on this recording, however, is an exception rather than the rule" (33).
[95] The piece was premiered at Albert Hall on 25 July 2002 at the Proms; Andrew Motion wrote lyrics to the piece that were sung by a choir. Jack Malvern, "Mobile Drone," 26 July 2002, *The Times* (London).
[96] "Orchestra Performs First Mobile Phone Symphony," *Ananova*, viewed online at http://www.ananova.com/entertainment_quirky/story/sm_312997.html on 23 August 2004. Two excellent websites that have provided many of the following references to ringtone works and concerts include Golan Levin's "An Informal Catalogue of Mobile Phone Performances, Installations and Artworks," viewed online at http://www.flong.com/telesymphony/related/ on 23 August 2004; and "Ringtone Concerts," *Ringtonia.com*, viewed online at http://www.textually.org/ringtonia/archives/cat_ringtone_concerts.htm on 23 August 2004. Many thanks to Amanda Ciafone for referring me to Levin's website.

Had a Farm."[97] In most of these cases, ringtones are mostly novelty effects, often directly poking fun at audience members whose ringtones have interrupted concerts on other occasions. In the most explicit example of such a ringtone usage, American musicologist Peter Schickele, as a performer of music by his composer alter-ego P.D.Q. Bach, composed a concerto in which the soloist's cellphone goes off just as the soloist enters—with the soloist taking the call.[98]

Operating within a somewhat different artistic framework, new media artists have found ways of exploiting the technologies of cell phones and ringtones more directly through installations and interactive works. In all cases, these works use mobile handsets as objects in their works, often requiring corporate funding and sponsorship by mobile phone manufacturers and wireless providers. These works for the most part serve to promote mobile telephony and even particular companies, often explicitly at corporate and technological expositions. Among such works include an installation by Nokia Finland at the Hanover Exposition in 2000, in which Nokia phones were affixed to a wall with a painted tree backdrop and were themselves painted like birds, periodically sounding birdsongs as ringtones. Perhaps this was an attempt to naturalize the handsets and the sounds they produce, although it also may have been reference to the often-reported story that birds have been increasingly imitating cellphone ringtones.[99] Other cell phone works and installations in such venues include a one-minute piece for seven ringing cellphones at the opening of the International Funkaustellung in Berlin in August 2001 and a Virgin Mobile promotional event in September 2001 in Leicester Square in London, at which several hundred people gathered together to attempt to set a world record for the greatest number of mobile phones ringing at the same time.[100]

Many of these new works are to some degree built on a principle of interactivity, in which audience members' activities help in real ways to constitute or construct the work itself. The intended effect is to give the gallery visitor or concert listener a sense of agency in the process of experiencing an installation or performance, and interacting audiences are often absolutely necessary to the existence and success of these works. Yet it is rarely the case that an individual's contribution to these works is anything but perfunctory or superficial, perhaps creating a false sense of agency on the part of attendees, whose efforts merely serve to glorify the creator of the work in question.[101] A

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[97] "Orchestra Incorporates Ringtones," *Ananova*, viewed online at http://www.ananova.com/news/story/sm_813801.html?menu=news.technology on 23 August 2004.

[98] The gag in Schickele's works is that, as a musicologist, he continues to "discover" new works by a particularly untalented son of J.S. Bach (famous for his many talented composer-children, including C.P.E. Bach and J.C. Bach). Jeremy Eichler, "Music Review: A Trove of New-Found Gems Brings P.D.Q. Bach More Kudos," *New York Times*, 30 December 2003.

[99] See, for example, Sujata Sen, "Cyberklick: The Music of Ringtones: The Last Couple of Years Has Seen Extraordinary Progress in Telecommunications. Danish Birds Confirm That," *The Statesman* (India), 27 May 2001.

[100] See the references to these works at Golan Levin's "An Informal Catalog,"

[101] Indeed, a long history of attempts to break barriers between artists and artworks would have to extend at least as far back as the work of John Cage and Fluxus, then moving through the sound installations of the 1970s and beyond, which were direct precursors to the works described above. Crucial in this history is the

representative example of such an interactive work is *Handywolke* (or Cellphone Cloud, 2001) by Peter Hrubesch and Dirk Scherkowski, which was installed at the Berlin Communication Museum and partially funded by Siemens Mobile. A cloud-like arrangement of 1200 Siemens mobile phones is suspended under the main glass dome of the museum. Museumgoers' movements and dialing of phones below in the installation room help to determine the overall sound produced by the installation, and outsiders can also phone in and talk directly to the museum visitors.[102] Such artworks might seem more reminiscent of displays at science and technology museums, in which children are meant to interact with the display (and perhaps each other) by pressing a few buttons. Marveling at the technological wonders of the feat installed before their eyes and ears, museum visitors are reduced to the status of children at a high-tech jungle-gym and, despite the stated intentions of the artists and museum, are not particularly intended to reflect upon "the contradictory aspects of wireless communication."[103]

Among the best publicized of such works is a collaborative effort titled *Dialtones: A Telesymphony* (2001-2) conceived of and organized by the media artist Golan Levin. Levin, a master's- and bachelor's-level graduate of the MIT Media Lab program, sought to combine with relative precision the ringers and ringtones of 200 cell phones to produce an extended multimedia work that could "make a sacred space for the enjoyment of these phones."[104] Levin worked in collaboration with several musicians and programmers, most notably electronic musician Scott Gibbons (of the electronica groups Lillith and Strawberry) and sound sculptor Gregory Shakar. The three artists created a three-part composition structured as 1) a section using audience members' own cell phones as an "orchestra," 2) a solo section for cell phones played by Gibbons, and 3) a combined section in which "soloist" and "orchestra" play together. The technical

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development of interaction not only with other artists or performers but with technologies (like sound recordings, etc.). The utopian aspirations of the neo-avant-garde, which at its height produced communities and artistic situations that were highly interactive, have since given way to more formulaic approaches to audience participation—and yet, the victory of that 1960s moment is that audiences do structure their own aesthetic experiences on a regular basis, even if they do so in uncomplicated and even trivial ways. The reproduction at present of audience-artist boundaries is not solely due to the capitulation of artists after the defeats of the long 1960s; part of the difficulty in producing highly interactive works is that a comparable interactive aesthetic was never fully internalized by participants, thus leading to the perception (and reality) that many interactive works are unsuccessful, being either too heterogeneous (too many voices) or to homogenous (one overarching voice). One of works in Levin's "Catalog" includes Gilles Perring's *The Exchange* (2001), an ongoing interactive project in which musical improvisers phone in their contributions to a collective improvisation. Such work is quite common with high-speed digital formats—like DSL or cable-modem connections, etc.—but not with the low technology of the phone. The timbral limitations of the phone help to blend the different elements of the performance sonically, and the results are surprisingly effective.

[102] Levin, "An Informal Catalog." A description of the project also appears at The Communication Museum homepage at http://www.museumsstiftung.de/stiftung/detail.asp?site=berlin&id=644&kat=2001, viewed online on 23 August 2004.

[103] "Die widersprüchliche Aspekte drahtloser Kommunikation," ibid.

[104] "Music to his Ears," *Bangkok Post*, 21 August 2001, viewed online at http://www.flong.com/telesymphony/press/bangkok/index.html on 23 August 2004. All of the press on *Dialtones* comes from Levin's own website at www.flong.com/telesymphony.

requirements of the multimedia work were extraordinarily complicated, working on three levels. First, audience members' phones were pre-registered in a database and were either assigned new ringtones or were allowed to play already existing ringtones. Second, Levin and Shakar manipulated onstage graphical-user interfaces live onstage. The interfaces allowed each person to activate groups of cellphones in the audience, who were organized into a large grid, by touching an image of a grid on a computer screen. Third, the team of technicians led by Yasmin Sohrawardy worked out a complicated switchboard mechanism. With the help of access to the high-speed mobile switching center of MobileCom Austria, the Levin and Shakar were able to ring up to 60 phones simultaneously.[105] In addition to the sonic aspects of the performance, each member of the grid-arranged audience was given a small keychain red LED light that illuminated when a cell phone rang within 1 meter. The audience and light-effects were in turn reflected by a huge (6 meters x 12 meters) angled mirror, which was hung towards the front of the stage. According to Levin, the entire operation was quite expensive and turned out to be an exercise in fundraising more than creative activity—about 9 months were devoted to the former and 3 months to the latter.[106] Some of the major funding sources included jet2web Mobilkom Austria, Aculab Germany, Cellphoneart.net, Design Machine, Ericsson, The Daniel Langlois Foundation for Art, Science, and Technology, Nokia Austria, and Siemens.[107]

The opening of the recording of *Dialtones* on the Staalplaat recording begins with the sound of a single cell phone ringer, drawing laughs from the audience. With the commencement of the first section, we hear the growth of phone ringer and ringtone textures that are reminiscent of forest soundscapes, replete with imitations of birds and insects. Around 1:23, the textures shift as drones appear, simultaneously recalling organs, synthesizers, and cicadas; within the texture, the Nokia Tune is sometimes present. Around 3:19, the music shifts into a kind of minimalist, pseudo-Baroque arpeggio texture, which intensifies with the addition of more loops for some time. The music grows a bit more dissonant as the section continues, and a new ostinato pattern ultimately appears (5:30), then is accompanied by a looping, arpeggiated figure (7:10) which continues to the end of the section. Section II also begins with a gag, with "soloist" Gibbons clearly dialing a number, evoking laughs. After a series of repeated note figures (0:13-0:47) and arpeggiated triads (0:47-1:35), a bird like-melody anticipates an atonal ostinato (beginning in proper at 1:56), on top of which numerous bird-like ringtones and the like are superimposed. Eventually drumming sounds (around 4:00), created by the phone's tapping against an amplified pad on a table, providing an electronic-sounding but also vaguely

[105] David Dayen and Joanna Lux, "Cellphone Symphony: In Composer's Hands, Annoying Ringtones Have Musical Potential," interview of Golan Levin with TechTV, 15 November 2001, viewed online at http://www.flong.com/telesymphony/press/techtv/index.htm on 23 August 2004.
[106] Sawatzki, Frank. "Dialtones (A Telesymphony): Interview with Scott Gibbons and Golan Levin," *Receiver*, October 2002, viewed online at http://www.receiver.vodafone.com/06/articles/index03.html on 24 August 2004.
[107] This information and most of the foregoing facts were available at http://www.flong.com/telesymphony/, viewed on 24 August 2004.

African-esque dance-beat to accompany the proceedings. A new ostinato appears (5:16), this one tonal, with birdsong melodies and fragments of Bach ringtone references superimposed on the ostinato. Cicada/organ-like drones appear (6:33-7:12) to transition the music into Section III. Ten minutes in length, section III builds on the drones, with low humming drones appearing accompanying. New Philip Glass-like ostinati appear periodically, accompanying increasingly growling, industrial low sounds—these too draw laughs, initially sounding elephant-like, but quickly come to resemble jackhammers and other construction equipment. The music intensifies to a significant pitch around 7:00-8:00, with the music then receding into a final set of superimposed ostinati recalling earlier ones used in the piece. The music decays for the next two minutes, ending with a single phone ringer.

We might interpret the visual, sonic, and technical references of *Dialtones* in three ways. First, the music in combination with the visual effects seems to evoke a kind of atomized connectedness associated with global digital communications. The lights which cause areas with ringing phones to light up and the mirror reflecting the lights activate the otherwise inactive grid, resembling both some kind of illuminated microchip and a time-lapsed apartment building, in which lights go on and off during the night according to a semi-random logic. At this level, the music seems to be about *connectedness*, communicating the notion that we as participants are part of a bigger global phenomenon around us—and the participants holding their cellphones up like lighters at rock concerts only underscores this sense.[108] Second, the sonic references seem to evoke a narrative pattern that switches between the "natural" sounds of birds and insects; "human" sounds of ringers, phone-dialing, drumming, and heavy machinery; and the "reflective" sounds of minimalist, minor-mode or modal ostinatos that provide an air of pseudo-profundity to the music. From this view, the music seems to be a high-frequency, video-game-like tone-painting of the history of human development and human society's evolving relationship with the natural world—but evoked almost starting from the daydream of a ringing or dialing phone. The work proceeds by portraying the intensifying conflicts between nature and human society, the potential catastrophes of which are hinted at, but never represented, towards the end of the piece.[109] Such a message recalls that of another minimalist masterpiece, Godfrey Reggio and Philip Glass's film *Koyaanisqatsi* (1982). Borrowing its title from a Hopi word meaning "life out of control," the film's time-lapse images of nature and human society, taken and edited by Reggio, provide testimony for rampant global development and its untold ecological damage. The film image is perfectly juxtaposed with Glass's repetitive score, which communicates profound stasis and monumentality at times and buzzing activity at others.

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[108] See mentions of the recent phenomenon of cell phones being held up at rock concerts in Emily Turrettini, "'Ha, Ha' to 'Wish You Were Here': Why Cell Phones Have Killed the Concert Lighter," *Ringtonia.com*, 29 July 2004, viewed online at http://www.textually.org/ringtonia/archives/004752.htm on 24 August 2004.

[109] Themes of conflicts between nature and human society are common in postwar experimental tape music—one might hear such themes articulated implicitly in Edgard Varese's *Poeme Electronique* (1957-8) and explicitly in Ingram Marshall's *Cortez* (1973).

Indeed, *Dialtones* might be viewed as a contemporary recomposition or re-imagination of that earlier work—but in this case, Glass's medieval and Wagnerian minimalist grooves are replaced by loops of beeping timbres produced by cell phone ringtones and dialing tones, evoking video-game tunes and electronic dance musics. And for the latter work's historical moment—which was that of the monophonic ringtone—such a revisiting of the Glass/Reggio collaboration seems to have been particularly apt, given the way that cell phone ring-signals and monophonic ringtones have become almost "naturalized" in modernity. In writing corporate research reports overemphasizing the natural qualities of cell phones, cultural studies scholars like Sadie Plant have helped to make the cell phone seem like a natural phenomenon, arguing that ringing cell phones are like a form of "electronic birdsong."[110] And with the previously mentioned reports that birds have learned to imitate ringtones and that birdsongs are popular as ringtones, the actual conflicts between nature and capitalist technology are yet further mystified.[111] Third, the technical setup of the piece hints at a particularly ominous aspect of cellular technology. The fact that every person's phone is pre-registered in a database, with many but not all phones being reprogrammed with new ringtones, paints an image of a society constantly under surveillance, with each individual citizen's strings being pulled at will by a hegemonic force—and the apparent freedom of some to retain their message is contrasted with the fact that not all participants maintain the "integrity" of their original voices. With profitability and policing going hand in hand in mobile telephony, the piece's intensification towards the end signals both the ever-greater expansion of a society of surveillance and the paranoia that the awareness of such a society engenders.

Although *Dialtones*'s messages might in some ways seem profound, its means also might be seen as inflated, gimmicky, and highly contingent upon corporate sponsorship.[112] More modest cellphone and ringtone works have been created that are often able to project equally powerful ideas and aesthetic

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[110] As quoted in Burkeman, "Fellowship of the Rings." The entire quotation of Plant's, from a study of cell phone use funded by Motorola, is illuminating:

> The warbles, beeps and tunes of the mobile have become so common that their calls have begun to constitute a new kind of electronic birdsong, changing the soundtrack of the cities and altering the background noise in regions as varied as the forests of Finland and the deserts of Dubai. Many urban song birds have become adept at impersonating mobile tones and melodies... like a calling bird, a ringing phone demands a response. Public uses of the mobile spread this tension to all those within earshot, while leaving them powerless to intervene: only the person to whom the call is made is in a position to respond.

With the sound file ringtone, such phenomena and perceptions seem likely to disappear.

[111] See Ian Herbert, "Birdwatchers of the World Unite to Hear a Dawn Symphony," *The Independent* (UK), 1 May 2004, viewed online at http://news.independent.co.uk/uk/environment/story.jsp?story=517055 on 6 May 2004.

[112] A rather fascinating series of discussions and criticisms of Levin's piece appear on Tom Moody's weblog at http://www.digitalmediatree.com/tommoody/comment/19324/, viewed on 2 September 2004. At the site, Moody offers some trenchant criticisms of the piece and Levin responds with thoughtful comments.

experiences while still remaining relatively independent of the advertising role that big budget works must often play. Special mention must go to the work of Allison Craighead and Jon Thomson, whose online store produced some of the earliest atonal ringtones and perhaps the first silent ringtone—which has since become incredibly popular as a way of avoiding unwanted calls. The store has been a powerful symbol of the most utopian meaning of Internet art: the creation of a means of producing, owning, and distributing one's artwork independent of the exploitative gallery system and its corporate backing.[113] One work by Craighead and Thomson elegantly investigates the ideologies of the cell phone in ways similar to *Dialtones* and other interactive ringtone works. Visitors to their installation *#Telephony* (2000) are encouraged to dial the numbers of Nokia cell phones arranged in a grid on the wall. As the phones are dialed, they are programmed to dial each other in turn, and a massed texture built from the familiar Nokia Tune results. In addition, elevator-style ambient music based on the Nokia Tune accompanies the phones, adding a strikingly New Age touch to the experience. Finally, a real-audio link to the United States Naval Observatory Master Clock periodically reads off the precise hour and minute of the Eastern Standard Time Zone. The result, I would argue, communicates both the sense of the enclosed space created by the cell phone, in which phone users become almost completely autonomous from their surroundings, and, ironically, a military-ready awareness of information which each bubble inhabitant seems to need. Emphasizing the (false) experience of autonomy over the message of connectedness in *Dialtones*, *#Telephony* thus communicates the militarized paranoia of the cell-phone bubble inhabitant with a detached irony that makes some of the same points as does Levin's piece in an arguably more elegant fashion.

Of course, the point here is not to choose between the two works, but merely to point out their differences, both obvious and subtle. From a broader historical viewpoint, however, the works by Craighead/Thomson and Levin look rather similar—they both occupy positions within a moment dominated by the monophonic ringtone. With the appearance of later forms of the ringtone, one might argue that something is lost in exchange for the greater fidelity that appears. The abstracted, now quaint sounds of the monophonic ringtone were distinctive enough to merit artistic treatment on their own as *new* phenomena. The sound file ringtone, on the other hand, merely relegates the sonic aspect of the cell phone to the same bin as other portable sound-file playing devices like the iPod or even Discman. But perhaps this move away from the peculiar and unique monophonic ringtone recapitulates a broader, parallel shift within the 20th century from the verbal to the visual, as Perry Anderson has noted.[114] Indeed, the newest accessories on cellphones—"wallpaper," photos, video, visual radio, and eventually television—all draw upon picture-based media; the trajectory of

[113] Julian Stallabrass has written an excellent piece on Thomson and Craighead's work, addressing the ramifications of their online store, titled "Thomson & Craighead," *Evening Standard*, January 2003, viewed online at http://www.thomson-craighead.net/docs/juliaf.html on 2 September 2004. The store itself can be accessed at www.dot-store.com, which is slated to be sold by auction on e-Bay on 15 September 2005. The artists' website http://www.thomson-craighead.net/ includes online works and useful resources.

[114] See Perry Anderson, "Renewals" *New Left Review* 1 (January-February 2001), 20.

the cell phone, a fundamentally auditory device, seems to drifting into the realm of the visual. As such, the newest forms of artistic exploration regarding the cell phone have less to do with sound and more to do with the image—as in the case of new films for viewing on cell phones or photo-mosaics taken with cell phone cameras.[115] In retrospect, the years after the decline of the monophonic ringtone may come to be seen as initiating a trajectory in which the cell phone approached its ultimate status as a primarily visual device.

The Reaction against Ringtones

Its aesthetic merits and artistic potential notwithstanding, the ringtone is very often understood as a form of *noise*.[116] The social meanings of the ringtone are always positioned between its function as a signal and its cultural—distinction and aesthetic—value. This fact alone perhaps differentiates the ringtone from apparently radical or resistant forms of noise—such as that of loud car stereos or so-called ghetto blasters—or even noise as a prophetic social and stylistic disruption as described by Jacques Attali.[117] Indeed, understanding the ringtone as being the commodification of a particular commodity's previously uncommodified use value—the cell phone ringer or signal—requires that we situate the social disruptions caused by the ringtone within a broader problematic of cell phone disruptions within society. These disruptions, caused by the spectacular increase in global mobile telephony beginning in the early 1990s, are among the most discussed and debated aspects of cell phone culture. One striking example is the embarrassment and near-universal irritation caused by cell phones ringing in typically quiet spaces: performance and artistic spaces such as concerts, theaters, dance performances, cinemas, museums, and galleries; workplaces, especially indoor offices; places of worship, i.e., churches, synagogues, mosques, temples; libraries, reading rooms, and research facilities; and sites of public transportation, especially trains and buses, and to some degree subways. Performance spaces in particular have become highly contested battlegrounds, in which cell phone users struggle to keep their phones from ringing, thereby avoiding unnecessary interruptions of performances or arousing the ire of fellow patrons. In the embalmed culture of classical music concerts (particularly in the United States) where absolute silence is expected, the phenomenon of "concert rage" is perhaps only one extreme variant of a much larger problem. Here we find angry outbursts in concerts by patrons in response to audience noise, which in many cases is ironically the sounding of a classical music ringtone.[118]

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[115] Sue Marek, "Artists Turn Phones into Canvas," *Wireless Week*, 1 July 2004.
[116] See Uimonen, 54, 59.
[117] See Attali, *Noise: The Political Economy of Music*, trans. Brian Massumi (Minneapolis: University of Minnesota Press, 1985), esp. 3-12.
[118] For a discussion of concert rage, see Alex Ross, "Concert Rage," *New Yorker*, 26 March 2001. A general discussion of the conceptual roots of the museum culture of classical music as found in the concept of *Werktreue* or faithfulness to the musical work can be found in Lydia Goehr's *The Imaginary Museum of Musical Works: An Essay in the Philosophy of Music* (Oxford: Clarendon, 1992), esp. 205-286. Goehr also mentions the composer Franz Liszt's idea for a real museum of musical works (205-206), which is perhaps the most extreme version of a museum-based ideal for such music.

The reactions to these disturbances have ranged from reasonable to extreme. Towards the former end, announcements to turn off phones or signs noting that phones should be shut off have become routine in many public spaces—one might recall, for example, the obligatory requests to shut off phones at the beginning of concerts or artistic performances. In addition, handset manufacturers early on designed a non-ringing mode of alerting users, in which phones would light or vibrate—although some have complained that these devices are gender-biased, since they do little good in purses.[119] With slightly more severity, some owners of public spaces like restaurants and even bars have demanded that cell phone owners use their phones outside, along with (increasingly in the United States) smokers.[120] For the most part, these reactions have remained within the realm of courtesy, but in at least one case such restrictions have become part of city law. In February 2003, preceding a higher-profile ban on smoking in public places, the New York City Council overrode Mayor Bloomberg's veto of a law fining cell phone users $50 if their phones ring during public performances of movies, concerts, or plays.[121] Employers are also beginning to ban cell phone and ringtone use in workplaces—one Australian employer charges employees $5 every time a ringtone interrupts a meeting.[122] But perhaps the most extreme reaction to public ringing of cellphones has been the development of new surveillance and control technologies to detect and disable cell phones. Companies like Cell Block Technologies sell numerous devices that jam or stop cell phones from ringing, ranging from inexpensive handheld jammers (about $200) to larger models with greater ranges, often for government and military uses (about $10,000).[123] The legality of such devices is questionable, given that the airwaves (as sound transmitters) are public property, and justifications for their use have been made due not only to the irritations caused by ringing phones but also by illegal and unwanted cell phone use.[124] In England, such actions constitute an offense of tampering with communications systems, with the possible charge of up to 5,000 pounds in fines and six months in jail.[125] Other high-tech methods of dealing with cell phones include detectors, which also vary in price and range, and the use of building construction materials that block cell phone frequencies.[126]

Unwanted cell phone rings in public are one category of a number of cell phone uses that bystanders find insensitive, unpleasant, and even dangerous.

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[119] See Catherine Greenman, "Download a Melody Directly to a Cell Phone," *New York Times*, 27 April 2000.
[120] See Andrew Gumbel, "Mobile Phone Users Join Smokers as Outcasts," *The Independent* (London), 27 April 2000.
[121] Frankie Edozien, "Council Stems Cells," *New York Post*, 13 February 2003.
[122] See Fleur Anderson, "Ring Rage on the Rise," *The Australian*, 30 December 2004, viewed online at http://www.theaustralian.news.com.au/common/story_page/0,5744,11809169%255E421,00.html on 5 January 2005.
[123] Sam Lubell, "Block That Ring Tone!", *New York Times*, 8 April 2004.
[124] These illegal uses include cheating at casinos, using cell phone cameras to glean information and articles at newsstands, and the arranging of drug deals by prisoners. With cell phone cameras becoming increasingly prevalent, locker rooms and bathrooms have become cell-phone free areas. See ibid.
[125] Chris Partridge, "When Manners Maketh the Mobile," *The Times* (London), 19 July 2001.
[126] Lubell, "Block That Ring Tone!"

These uses might include: having inordinately loud conversations on cell phones, especially in public places; answering calls while in conversation, or even more intimately engaged, with someone in person; a general lack of restraint in answering calls and a brusque manner when doing so; and talking on the phone while driving an automobile or otherwise involved in potentially dangerous activities. These shifts in social morays did not go unregistered. A recent MIT survey asking Americans to name the most hated technology that they can't live without, 30% of respondents chose the cell phone, topping the list.[127] With cell phones becoming more popular worldwide, discussions of cell phone etiquette in newspapers and on websites and weblogs were increasingly prominent. Self-styled Emily Posts of mobile telephone behavior wrote editorials in small and large newspapers, advising cell phone users on the proprieties of mobile phone interaction.[128] As early as 1998, American journalist Peter Laufer published *Wireless Etiquette: A Guide to the Changing World of Instant Communication*, the first in a series of publications that attempted to codify a cell phone etiquette in response to inconsiderate behaviors created by mobile telepony.[129] Such writings were by no means limited to the United States: Nokia produced its own *Book of Mobile Manners*, which circulated in Australia in 1999 and appeared in India in 2000 as part of a campaign to improve cellphone etiquette.[130] But if rudeness is the paradigm under which the cell phone is frequently viewed, it doesn't seem to entirely capture the nature of the social transformations engendered by mobile telephony. For example, the dangerous compulsions of drivers to talk nonstop on the telephone, often resulting in fatal accidents, is well known.[131] Perhaps closer to the mark is that cell phone use generates a form of addiction, enabled by the security of near-instant contact and constant communication. One experiment revealed that most of a group of young cellphone users experienced withdrawal symptoms after being deprived of their handsets for two weeks, and a study by the Italian consumers' association revealed that after depriving 300 users for two weeks, a quarter stated that it affected their confidence and led to sexual problems, and a sixth experienced depression or loss of appetite. The Priory Clinic in London has begun treating for "text addiction," in response to the addictive qualities of text messaging on cell phones.[132]

From the perspective of these societal developments, the ringtone might be seen either as an ameliorating device or as exacerbating some of these problems. Advocating for the former position, Mark Squires, head of communications in Britain for Nokia, argues that a ringtone like the admittedly

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[127] Theo Emery, "Survey: The Dreaded Cell Phone Tops List of Great Innovations Americans Hate," *Associated Press Wire*, 20 January 2004.

[128] Attempting to draw upon the tradition of American etiquette writing, Nevada Bell Wireless hired Peggy Post, great granddaughter of Emily Post, to write a wireless etiquette guide. See Felice Wilson, "To Beep or Not to Beep," *Prague Post*, 16 August 2000.

[129] Peggy Albright, "Etiquette Book Aims to Humor, Teach," *Wireless Week*, 19 October 1998, viewed online at http://www.wirelessweek.com/article/CA4104?spacedesc=&stt=001 on 30 August 2004.

[130] "India: Making Mobile Manners," *Business Line*, 9 November 2000; and Chetan Krishnaswamy, "Now Learn Some Mobile' Manners," *The Times of India*, 28 November 2000.

[131] See, for example, the brief discussion of a pedestrian's death at the hands of a cell-phone talking driver in Gumbel, "Mobile Phone Users Join Smokers as Outcasts."

[132] Shane Hegarty, "Can't Live With Them, Can't Live Without Them," *Irish Times*, 27 February 2004.

irritating Nokia Tune is "a little bit more gentle on the ear"[133] than a standard ringer signal. But for most people, the ringtone is an annoying jingle whose musical qualities only draw more attention to the cellphone. And depending on the timbral qualities of particular phones, monophonic ringtones can sound particularly harsh—as in the case of older Nokia phones, which have rather bright and tinny monophonic synthesizers.[134] But in addition to altering or amplifying preexisting disruptions, the ringtone has also inspired new forms of offensive behavior. In a survey of a hundred professionals with cell-phones by the British PR agency Burston-Marsteller, 18% of respondents found the worst cell phone etiquette offense to be playing through all of your cellphone ringtones while sitting on the train.[135] And although ringtone addiction does not seem to be clinically distinct from other putative forms of mobile phone addiction, several contributors to weblogs somewhat jokingly describe themselves as ringtone addicts.[136]

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[133] Burkeman, "Fellowship of the Rings."
[134] Golan Levin discusses the difference between the warmer Siemens ringtones and harsher Nokia ringtones in Frank Sawatzky, "Dialtones (A Telesymphony): Interview with Scott Gibbons and Golan Levin," *Receiver*, October 2002, viewed online at http://www.receiver.vodafone.com/06/articles/index03.html on 30 August 2004.
[135] Partridge, "When Manners Maketh the Mobile."
[136] For example, note the following humorous contributions:

> [October 9, 2003 10:06 AM] by madd scientist
> i would like to admit to the world that not unlike a pre-teen japanesse girl, i am addicted to ringtones. i began looking and sending to my phone an hour ago and i cant stop. i'm getting themes to such classics as knight rider and super mario bros, to more established songs such as wanksta, hitemup and live and let die. then i started getting WWF opening music for our olympic her and stone cold. all of this is completely pointless and defers from my ideal phone that simply lets you talk to other people and know when they are trying to talk to you. i have been sucked in and now i want hello kitty panties and a neon backpack. argh.

And

> **I have a problem**
>
> Well since Rush Limbaugh has admitted to his addiction, I have to admit to mine....So here goes.
>
> I'M ADDICTED TO RINGTONES! It's a horrible disease, and it's gotten out of control. Last night I downloaded one of the songs from "Buckaroo Bonzai Across the Eigth Dimension" as a ringtone. After I did it, I realized I had a problem. Not as big a problem as my obsession with sunglasses (I have seven pairs), but a far more perverse addiction.
>
> There, that feels better.
>
> *October 28, 2003*

Viewed online at http://www.whazzmaster.com/~whazz/whazzmaster/archives/2003/03/my_soul_hurts.php and http://coloradoconservative.blogs.com/colorado_conservative/2003/10/28/ respectively on 30 August 2004.

But as the musicalization of the functional cell phone ringer signal, the uploadable ringtone reframes the cellphone's contestation over public space—which occurs through the creation of a new private space in public[137]—into a battle of musical taste. As such, the ringtone transforms the cellphone into a device that combines aspects of two crucial sound-reproduction devices of the 1980s: the boom box (or "ghetto blaster"), which launched a sonic assault on the public sphere, and the walkman, which facilitated a retreat from the public sphere into a private musical world. By reproducing a favorite tune in a public setting for the purpose of alerting the user of an incoming call, the ringtone both shares that tune with the public but also cues one's private call. The ringtone thus provides a mediating link between public and private for the user, demanding to be heard and silenced at once. Moreover, with the appearance of the sound file ringtone, the cellphone appears to be gradually transforming into an actual combination of the boom box and walkman, producing high quality soundfiles for both the public and, in a subtler way, as a gate to private conversation. But if the present use of the ringtone appears to be weighted towards its presence as a public sound, towards the boom box, its future might lie more clearly in the private world, as a walkman. Indeed, cell phone users seem to have largely adjusted to the uncomfortable teething period of mobile phone boorishness and, in the case of many adults at least, now speak in low murmurs in public and listen to their phones and iPods on speaker headsets. The celestial jukebox of the music industry's dreams might combine the cell phone with a device like the iPod, allowing future users to experience a seamless flow of music and conversation that would exist in a bubble sonically insulated from the outside world.

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The foregoing discussions of some of the global cultural ramifications of the ringtone attempt to illustrate, from different perspectives, a small set of points. First, the appearance of the ringtone itself helped to create new forms of high-tech production and consumption, demonstrating a broad continuum between those employed as ringtone composers and those involved in (especially "critical") forms of consuming/using and representing the ringtone, such as professional artists, songwriters, and composers on the one hand and everyday users encoding their own ringtones on the other.[138] Second, the still-ongoing shift from the earliest preset monophonic ringtones to the latest sound file ringtone (the latter of which are being promoted heavily by the music industry) has resulted in a number of minor upheavals in the ringtone industry and broader society. These upheavals are not highly visible: if at all observed, they are taken for granted as part of the general instability of the high-tech and entertainment industries and therefore ignored. Third, the ringtone can be

[137] Uimonen describes this dual aspect of the device as constructing both *offensive* (directed outward) and *defensive* (directed inward) barriers against the prevailing soundscape, or social order as constituted through a sound world (58).

[138] Less represented in the above are discussions of how everyday consumers use their own ringtones for the goal of personalization. For one such treatment, see Uimonen, 54-58, in which the author describes results from interviews with 19 sixteen-year-old Finnish ringtone consumers.

understood as a particularly charged site of social conflicts, in which generational, regional/national, ethnic, and even gender divisions are apparent.

Although these points and the previously outlined effects of the ringtone on society are somewhat illuminating, we would miss the historical significance of this new technology in global culture if we were to avoid synthesizing these cultural tendencies with the political economy of the ringtone industry, as described in the first part of this essay. Hence, the desultory observations and tendencies described above might be placed in a more systematic framework that connects the economic aspects of the ringtone with its global cultural impact. Such a framework can be found in the first chapter of Fredric Jameson's *The Political Unconscious*, in which the Marxist literary and cultural theorist outlines an interpretive analytic of multiple, overlapping time scales.

> …we will suggest that [] semantic enrichment and enlargement of the inert givens and materials of a particular text must take place within three concentric frameworks, which mark a widening out of the sense of the social ground of a text through the notions, first, of political history, in the narrow sense of punctual event and a chroniclelike sequence of happenings in time; then of society, in the now already less diachronic and time-bound sense of a constitutive tension and struggle between social classes; and, ultimately, of history now conceived in its vastest sense of the sequence of modes of production and the succession and destiny of the various human social formations, from prehistoric life to whatever far future history has in store for us.[139]

Jameson's treatise famously privileges the political as the "absolute horizon of…all interpretation,"[140] but as a Marxist scholar Jameson never leaves the economic out of his analysis of culture or politics. Indeed, Jameson's formulation provides a brilliant synthesis of Marxist theories, in which the analysis of ideological utterances, class struggle, and modes of production are combined in overlapping temporal frameworks. In particular, the author creates two parallel sets of time scales devoted to *cultural production*—in his case, literature—and *politics-economics*—the two of which are interwoven together, with the economic taking greater priority as the latter time-scale broadens. The goal is then to map cultural phenomena onto these broader social tendencies. However, one might also simply extrapolate from Jameson's "concentric frameworks" a way of orienting the analysis of economic sectors like mobile entertainment or of the cultural impacts of ringtones worldwide. In particular, one would see the *event*, the *conjuncture*, and the *epoch* as operating in overlapping, differentiated time scales, within which an observer might focus on political, economic, and cultural features, inasmuch as they can be separated at all—and each time scale, in any case, would always be constituted differentially by all three registers at once.[141]

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[139] See Fredric Jameson, *The Political Unconscious: Narrative as a Socially Symbolic Act* (Ithaca, NY: Cornell University Press, 1981), 75.
[140] Ibid., 17.
[141] This formulation owes much to Michael Denning's reinterpretation of Jameson's framework, as explained in discussions as part of the Working Group in Marxism and Cultural Theory at Yale University.

But it seems to me that, despite my emphasis on the economic and cultural aspects of the ringtone, an attempt to combine these in a Jamesonian fashion would also be to see the political in the economic or cultural.[142] Keeping this in mind, I would like to propose a framework for analyzing the phenomenon of the ringtone, in which we consider, in turn, the ringtone as a high-tech fad, the ringtone as a conflict between larger and smaller forms of capital, and the ringtone as indicative of a long-term shift in productive capacity from the United States to East Asia.

From the most immediate perspective, the ringtone is one of a number of fads or fashions associated with the cell phone. Almost single-handedly providing the revenue that facilitated the creation of mobile entertainment, the ringtone was soon followed by wallpaper, video games, cell phone cameras, and now ring back tones, among the many gadgets and customizable features available on handsets. Perhaps the ringtone's moment is already passing, after which it will become normalized as a mobile phone function (which already seems to be happening) or will disappear altogether, in a manner reminiscent of other novelty uses of new technologies. For example, as consumer psychologist Lars Perner has noted, "With answering machines that kind of puffery became irritating, and I suspect that the cell phone tones will become irritating."[143] But the thrill of the new and the irritation of the newly old are central to the logic of fashion, which demands the perpetual reinvention of the old. Speaking of clothing fashion, Walter Benjamin once noted that "each generation experiences the fashions of the one immediately preceding it as the most radical antiaphrodisiac imaginable,"[144] and something similar might be said about now-old-fashioned sound of monophonic ringtones. Moreover, fashions like cell-phone entertainments are perpetually cannibalizing older entertainments such as

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In Denning's conception, the Gramscian conjuncture is inserted as the middle framework in place of the less well-defined social tensions or class struggle in Jameson's original description. Also, one might argue that capitalism's transformations take place on a slow scale, much slower than that shifts in political power, and thus point to a real divergence in Marxist thought historically: the reading of history as a history of competing classes or class struggle, and history as a sequence of different modes of production. The theoretical articulations between the former and the latter, which operate at such different time scales, would thus need to be more sophisticated than reductionist viewpoints that, on the one hand, see class struggles as an epiphenomenon of production mode shifts or, on the other hand, understand mode of production shifts as primarily catalyzed by class conflicts or related social antagonisms. Thanks to Michael Denning for his comments on the two readings of Marxist history in a course on 19th-century Marxism and social movements in the Fall 2004 semester at Yale University, New Haven.

[142] The interrelation of economics and politics is a complex one and is mystified at the outset of capitalism's historical treatment, which typically claims that a necessary requirement for the development of capitalism is its relative autonomy from politics. However true such a claim might be, debates about the relationships under capitalist modernity between political entities, such as nation-states, and economic entities, such as corporations, are incredibly difficult to sort out. Consider, for example, the issue of national capitals: are nation-states tied to sources of capital stemming largely from within their borders? The question is significant, for it determines whether economic competition can be understood in terms of geopolitical conflicts, as is done in much world-systems theory. In my inability to assess such concerns, I will largely refrain from fixing my analysis of the political and economic and prefer instead to find particular syntheses that appear to capture their interrelation in a given analytic situation.

[143] As quoted in Eric Wolff, "It's Not Only Rock 'n' Roll, It's My Phone," *New York Sun*, 26 April 2004.

[144] Walter Benjamin, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge, MA: Harvard University Press, 1999 [1982]), 79 [B9. 1].

hand-held video game machines, digital cameras, portable music players and televisions, all with the purpose of encouraging new handset and mobile entertainment consumption.[145] By fusing the cell phone with these other devices and by commodifying previously functional aspects of the phone like its ringer, its display screen, or its ring back signal, the mobile phone industry can continue to grow—and thus, in capitalism, survive—even in the many already-saturated mobile markets in Asia and Europe. Mobile marketers consistently utter the phrase "impulse buying" as something they want to encourage, and the target markets of teenagers and young adults seem most amenable to the whims of these new fashions.[146] The political moment in such commodities is thus best characterized by the dialectic of reification and utopia present in all forms of mass cultural production.[147] As a means of extracting wealth from consumers and keeping them occupied, the newest fads in mobile entertainment are mystifying forces. As symbols of the immediate accessibility of information and entertainment in the palm of the hand, however, they demonstrate a utopian quality that both helps to perpetuate their further consumption and yet points beyond the present social order.[148] The utopian aspect of the ringtone is, then, not the sonic surface and interpretive meanings of any one particular ringtone but the aural quality (whether abstract or high-fidelity) and ease of accessibility of the ringtone in general.

The ringtone and its companion mobile entertainment fashions, however, might be understood somewhat differently at a broader, conjunctural level. In this case, the ringtone as revitalizing a stagnant music-industry oligopoly is crucial. Consider, for example, the tendency of monopolies and oligopolies to decrease competitive production wherever possible and rely on more secure forms of accumulation, often acquired as a result of the demise of viable competitors. One such reliable means of accumulation is rent, in which profits are assured by means of simply owning property and allowing others some form of use of that property for a fee. But if a classic example of the tendencies of such large monopolies might be company towns, in which capitalists also become rentiers as the landlords of employees, rent can appear in situations not tied to land or housing use. In the case of ringtones and musicians, the owners of song

[145] Benjamin also notes this cannibalizing aspect of fashion, remarking that "fashion takes its cue from everything" (68 [B2a, 10]) when noting that early 20th c. dresses appeared with programs similar to those attached to the latest symphonic compositions.

[146] See Brian Garrity and Carla Hay, "Wireless Deals Focus on Ring Tunes," *Billboard*, 3 April 2004, in which Reidar Wasenius, a "senior project manager with Nokia's multimedia group," discusses the company's recent development of visual radio. Wasenius notes, "What we're bringing to the table with visual radio is impulse buying. You happen to hear something in a certain mood, and the radio station offers you the purchase opportunity. You do it there and then."

[147] This formulation is drawn from Fredric Jameson's own discussion of these two polarities in his essay "Reification and Utopia in Mass Culture," *Social Text* 1 (1979), 130-148.

[148] I concur here with Jameson's comment that "we cannot fully do justice to the ideological function of [mass cultural works] unless we are willing to concede the presence within them of a more positive function as well: of what I will call, following the Frankfurt School, their Utopian or transcendent potential—that dimension of even the most degraded type of mass culture which remains implicitly, and no matter how faintly, negative and critical of the social order from which, as a product and a commodity, it springs" (ibid., 144). Indeed, it is in part this utopian quality that makes these commodities worth purchasing in the first place.

copyrights—music publishers, often owned or managed by composers or songwriters, are perfect examples of rentiers, as they produce property in the form of codified songs, then rent those songs to performers, licensers, and recording companies for a fee. These rentiers are then situated within a typical capitalist network of value producers and extractors. In Jacques Attali's terms,

> The labor of the composer is not in itself productive labor, labor that is productive of commercial wealth. He is thus outside capitalism, at the origin of its expansion, except when even he is a wage earner selling his labor to capitalists (as is sometimes the case with film musicians). Generally remunerated with a percentage of the surplus-value obtained from the sale of the commercial object (the score) and its use (performance), he is reproduced in every copy of the score and in each performance, by virtue of he royalty laws. His remuneration is therefore a kind of *rent*. A strange situation: a category of workers has thus succeeded in preserving ownership of their labor, in avoiding the position of wage earner, in being remunerated as a rentier who dips into the surplus-value produced by wage earners who valorize their labor in the commodity cycle. As the creator of the program that all of the capitalist production plugs into, he belongs to a more general category of people, whom I shall call *moulders*. Entertainment entrepreneurs are capitalists: workers in publishing and performers are productive workers. Composers are rentiers.[149]

Although one might quibble with Attali's traditional Marxist characterization of composers as unproductive laborers—indeed, I would argue against a dogmatic materialism that intellectual and artistic creation and even the creation of property generally do in fact require materially-productive labor and thus create some amount of value—he is correct to ascribe to them rentier status. In the twentieth century, the perceived need for the enforcement of copyright laws for performances of copyrighted music led to the rise of licensing organizations that enforced the payment of royalty rent not only on sheet music but also on performances. In the United States, the rise of the music publishers' organization the American Society of Composers, Authors and Publishers (ASCAP) in 1917 due to a favorable Supreme Court ruling on the part of music publishers allowed the organization to charge flat licensing fees to venues that presented performances of copyrighted music like concert halls, vaudeville theaters, movie theaters, and the like.[150] Another licensing organization Broadcast Music, Incorporated formed somewhat later in 1940, and since the 1950s the two organizations have maintained the vast majority of licensing control of American popular music and maintaining prominent statuses as music-copyright rentier organizations.[151]

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[149] Jacques Attali, *Noise: The Political Economy of Music*, 40.
[150] See Russell Sanjek and David Sanjek, *American Popular Music Business in the 20th Century* (New York: Oxford University Press, 1991), 16-19.
[151] Ibid., 63.

Cutting to the present, the case of the ringtone provides a rather extreme example of rentier control over a product. As described earlier, wireless companies also extract rent from ringtone providers by allowing those providers to use particular wireless networks. Wireless billing companies, which sell billing software to wireless providers, in some cases also extract rent for the uses of the software—this depends on whether the payment arrangements are made per use of billing software or flat fees for software purchases (a decreasingly popular option). These rentier costs leave mobile entertainment providers, the capitalist organizations that produce the ringtones with a very small share of the surplus generated by ringtones, perhaps 20% as described above. Indeed, as information property the ringtone itself might also be understood as rent in a sense—since one cannot keep the ringtone indefinitely, one effectively rents it from the mobile provider. This makes ringtones a characteristic form of the "pay-per" society, in which cultural goods are "purchased on a transitory, rather than permanent, basis"[152] or rented. And in the case of sound file ringtones, music labels and recording artists become rentiers as well, often reducing mobile entertainment companies' share even lower (to 0% in some cases). The result is that the cost of the ringtone itself is highly inflated—sometimes 200% and even 300% of the cost of an MP3 file, which typically costs around $1 at present. The relatively high profits of the ringtone raise the stakes of these forms of monopoly rentier control, which has impinged most heavily on mobile entertainment companies: in Japan, the Fair Trade Commission recently raided several top record companies on the suspicion that they were preventing other firms from selling ringtones.[153]

The extra costs involved in placing what is exactly the same product (a sound file) in a different medium (the cell phone as opposed to the Internet) seem rather extreme and unwarranted. But they are certainly not accidental: they are part of a broader trend within global capital to shift content delivery away from the Internet and towards mobile telephones. Corporate research companies like Ovum are encouraging mobile entertainment companies and other "content providers" to make use of the particular aspects of mobile telephony to increase profitability. The easily tracked and highly secure transactions of the mobile phone make it more favorable to bill collection for

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[152] Burkart and McCourt, 349. The authors describe the legal expression of the "pay-per society" in the Digital Millennium Copyright Act of 1998 (353) and refer to music service providers' goal of creating lucrative subscription-based services (356-7). The authors borrow the term "pay-per society" from Vincent Mosco's *The Pay-Per Society: Computers and Communication in the Information Age: Essays in Critical Theory and Public Policy* (Norwood, NJ: Ablex, 1989). Indeed, the "pay-per society" might be otherwise understood as a monopoly rentier society, which means that social conflicts and social movements would have to be oriented around issues of rent. For example, in referring to a possible backlash against such services, Burkart and McCourt describe the possibility of "rent strikes" by "tenants" of music service providers (359).

[153] See "Japanese Music Companies are Raided," *Associated Press*, 26 August 2004, viewed at *Yahoo! News* online at http://story.news.yahoo.com/news?tmpl=story2&u=/ap/20040826/ap_en_bu/japan_ringtones on 31 August 2004.

individual purchases of services.[154] Unlike the Internet, where a longstanding culture of free service has predominated for some time, the cultural expectations of payment for service via phones are already in place. And, there are a vastly greater number of mobile users than Internet users, making the former much more potentially profitable on a global scale.[155] Indeed, some software providers have already announced that they are developing rather complex applications for use and distribution via mobile networks instead of the Internet.[156] Such practices confirm the broader trend that capitalists—including those in the music industry—are finding mobile distribution more profitable than online distribution and, in some cases, are attempting to switch to or focus more on the former in order to recoup losses from the latter. For some companies, the ultimate aim would be to transfer content to mobile systems, devalue the Internet in the process, then buy up those online assets and eventually transform them into for-pay services. In the case of the music industry, which was slow to get on the ball with digital communications and information technology, the stages of its reaction to the MP3 file have been: 1) lawsuits to stop file-sharing, 2) set up or partner with for-pay online music services, and 3) ultimately distribute content via a new network (mobile). Although the file-sharing lawsuits against individuals have ceased for the time being, the second and third strategies seem to have been somewhat successful in compensating for declining profits.[157]

The main social antagonism involved at this level of analysis, then, is the conflicting interests of music producers and consumers within the present neoliberal order. The former characterize the latter as engaging in outright property theft, while the latter draw on a long tradition of music sharing and claim that the inflated music industry is now rightfully reeling after failing to provide good products and squashing competition by monopolistic and

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[154] Dan Sobo has mentioned to me that wireless providers are involved in a constant struggle to develop better encryption schemes, due to hackers' ability to detect breaks and flaws in existing schemes.

[155] Some of this material is drawn from a summary for the report Ovum report "Billing for Content" by Eirwen Nichols and John Delaney, published by Ovum on 7 January 2004. A short summary of the report was found at the Ovum website (www.ovum.com), at http://store.ovum.com/detail.aspx?ID=725 as viewed on 3 September 2004. At least one article notes that firms like Ovum might be distorting the true picture of the mobile market in favor of promoting newer, more lucrative technologies. For example, regarding the potential shift from Short Message Service (SMS) to Multimedia Message Service (MMS), the later of which includes lots of multimedia content (images, video, etc.) as opposed to text alone, Mike Grenville of the messaging association 160 Characters notes that "When CTOs [Chief Technology Officers] try to justify expenditure to the FD [Federated Department Stores, Inc.], or the banks, they look at the analysts' predictions. And these say that SMS is on its way out, so it inhibits operators from investing any more." As cited in Mike Hibberd, "Whatever Next," *Mobile Communications International*, 1 May 2004.

[156] See Emily Turrettini, "Will Ringtones Lead to Mobilized Apps?", *Ringtonia.com*, 28 July 2004, viewed online at http://www.textually.org/ringtonia/archives/004724.htm on 31 August 2004.

[157] One should also note the possibility that excessive rentier control of profits can suffocate an industry—and record labels' attempts to squeeze independent mobile entertainment firms out of the ringtone market might be having such an effect on the industry. However, another possibility that seems unlikely at this point would be if wireless providers began to dominate the largest portion of the surplus value accrued by ringtone sales. In the latter case, wireless providers would, through rentier control, actually inhibit or even destroy the ringtone industry itself. Needless to say, the record industry is at pains to ensure that this will not take place, and since the resulting ruin of the ringtone industry would serve the economic interests of neither wireless firms nor the music industry, such a scenario seems unlikely at present.

underhanded means. In the place of the music industry as it is currently constituted, many consumers believe in the possibility that independent record labels will continue to gain prominence in the short term and celebrate the existence of an independent online culture that extends beyond small record labels into online political collectives and informational sites, weblogs, and news media (such as indymedia.org), for example, much of which maintains a distinctly anarchist sensibility. But Internet utopians should be wary of the sustainable independence of new media under capitalism—forms of originally independent media like cable television were understood and used in a similar way to the present Internet and ultimately found themselves under the ownership of large media conglomerates.[158]

Stepping back yet further away from the conjuncture, one might begin to identify sub-epochal shifts in the cultures of contemporary capitalism that have a longer pedigree than a few years or even a decade. The generational divides that mark ringtone and cell phone use might point to a tendency different from the typical commodity fashions of present-day capitalism. Instead, the cell phone might be understood as an example of the numerous manifestations of hand-held digital technologies appearing in the wake of the late 1970s and early 1980s. Appearing during the long decline of American productive hegemony and the rise of Japan and East Asia as competitive capital centers that began in the early 1970s and was already apparent in the 1960s, portable digital technologies in the form of miniaturized electronic devices became ubiquitous among the younger generational cohort in the 1980s and were made possible by the new production techniques of integrated circuit design. Japanese companies in particular—such as Yamaha, NEC, Fuji, Toshiba, and Sony—produced devices like the Walkman, boom boxes, mini-TV sets with LCD screens, new automatic cameras, digital watches and clocks, karaoke players, video cameras and recorders, and musical instruments like keyboard synthesizers and drum machines. Aptly described by Michael Denning as "Sonyism" in response to the concept of Post-Fordism, the canonical example here is the Sony Walkman, constitutive of the consuming subject's new relation to public space and studied in depth by the Birmingham

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[158] On the radical origins of cable television, the movement to deregulate TV and the results of that deregulation, see David Joselit, "Tale of the Tape: David Joselit on Radical Software – Periodical of Media Criticism," *Artforum*, May 2002, 152-5, 196, viewed online at http://www.findarticles.com/p/articles/mi_m0268/is_9_40/ai_86647179 on 2 September 2004. In an interview with Ian MacKaye, founder of Dischord Records and member of the bands Minor Threat and Fugazi, discusses his ideas on forming an independent label out of necessity, file-sharing, and ideas about the music industry. Concerning the last of these, MacKaye discusses his belief that music cannot be owned, and that the music industry should not be claiming rights over its ownership. He states,

> And that's the good news about music, it can't be stopped, it will always happen, people will always make music, and regardless of whether or not there's money to be made form it or not, it's still going to happen, it can't be stopped. So in my mind with the sales of records, the industry has done their best to claim ownership of music but they don't-- they only own the things that they sell, so when people who are songwriters say, "That's my property and if you give it away for free then I lose my incentive," then, well, good riddance.

See "Interview: Ian MacKaye," *Downhill Battle*, viewed online at http://www.downhillbattle.org/interviews/ian_mackaye.php on 2 September 2004.

School and scholars like Shuhei Hosokawa.[159] For what we have here is the simultaneous autonomization of consciousness inside a sonic bubble and the display of the autonomous self in the public, a strange dialectic present in a somewhat different form with the cell phone. Whereas the distinctive ringtone only heightens the display function of the object, the increasingly popular silent ringtone (assigned to everyone except friends and family) tightens the close kinship networks reinforced by mobile communication.

The Walkman seemed to inaugurate a new era within global modernity, creating from outside the West a variant of what cultural theorist Raymond Williams described as "mobile privatization." Described as a condition of "unprecedented mobility of [highly] restricted privacies," Williams sees the concept embodied in the automobile.

> Looked at from right outside, the traffic flows and their regulation are clearly a social order of a determined kind, yet what is experienced inside them—in the conditioned atmosphere and internal music of this windowed shell—is movement, choice of direction, the pursuit of self-determined private purposes. All the other shells are moving, in comparable ways but for their own different private ends. They are not so much other people, in any full sense, but other units which signal and are signaled to, so that private mobilities can proceed safely and relatively unhindered. And if all this is seen from outside as in deep ways determined, or in some sweeping glance as dehumanized, that is not at all how it feels like inside the shell, with people you want to be with, going where you want to go.[160]

This inside/outside dialectic of the automobile, which also engages in its own forms of social noise through the use of the car horn and car stereo,[161] is repeated in a different way with the Walkman and particularly the cell phone. In these latter cases, one might perceive the different relation to the body within Japanese modernity, in which a certain distance from nature is typical and for which, in recent times, digital gadgets have compensated.[162] The shell created by the Walkman or cell phone is not physical so much as affective, created by the learned ability to sink into the aural, visual, and tactile experience of the particular device and, in the case of the cell phone, its networks of communication.

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[159] See Paul du Gay, et al., *Doing Cultural Studies: The Story of the Sony Walkman* (London: Sage, 1997); and Shuhei Hosokawa, "The Walkman Effect," *Popular Music* 4 (1984), 165-180. Denning's concept of "Sonyism" was drawn from a lecture in the course titled Formations of Modern American Culture, taught at Yale University, Spring 2004.

[160] Quoted in du Gay, 129.

[161] Attali describes the automobile as the cause of the first significant campaigns against urban noise and development of noise ordinances (123-4).

[162] Thanks to Jessica Berson and Eric Drott for their comments on this. Drott has also mentioned the presence of a Japanese *manga* that deals with the subject of a boy and his robot, in which the robot is clearly treated like a pet.

If the measure of the global social impact of a particular culture, nation, or region would be the creation and spread of new cultural forms and practices beyond the geographic boundaries of their source, one might note the greater presence of Japan in the rest of the world after 1970. Indeed, one might make an analogy with this Japanese presence to the way in which American cultural forms like rock and roll and Hollywood cinema attained a particularly global presence after the postwar beginning of the "American Century," with jazz prophetically signaling the coming American dominance. But the impact of Japan cannot be separated from the entire East Asian region, whose relative economic strength has variously shifted from Japan (1980s) to South Korea (1990s before the 1997 crash) and now to China (at present). Indicative of these economic and cultural tendencies, the ringtone industry has been highly significant in this region. Ringtone consumption is widespread throughout and profits remain incredibly high in Japan and South Korea, whereas the state-control of the ringtone market has kept prices and profits low within China.[163] But with the presence of massive social expenditures and rising development and consumption, often at the cost of human lives and the environment, China seems poised to become the predominant site of capital accumulation in the East Asian region, which in turn would attain economic dominance within the world-system.[164] It remains to be seen what new global cultural forms will arise as result of the specific cultural impact of China. In the face of a globalized (and, in some ways, internalized) Western ethnocentrism, in addition to linguistic barriers and relative cultural insularity, the production logics of this regional economy may function so as to keep newer Chinese cultural forms largely within the region, preventing their broader dissemination across the globe outside of diasporic communities for some time.[165] Marxists like myself might hope for cultural forms and practices from China that could help to spark the resurgence of a global culture of socialism, but sober assessments of the undemocratic "market socialism" of the present-day People's Republic of China seem to suggest that utopian forms and practices would emerge in reaction to the regional system or may have to arise from elsewhere.[166]

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[163] As discussed in Hardy, "Music Licensing Revenues."

[164] See David Harvey, *The New Imperialism* (Oxford: Oxford University Press, 2003), 115-124.

[165] The exceptions outside of the East Asian region would be niche markets that provide smatterings of the most prominent or lavishly-produced Chinese films, novels, music, visual artworks, and the like. And despite their global popularity, kung-fu films—a preexisting Hong Kong-dominated cultural genre—really emerges in a moment prior to the appearance of broader mainland China's new trajectory.

[166] For three fascinating pieces dealing with China, see Martin Hart-Landsberg and Paul Burkett, "China and Socialism: Market Reforms and Class Struggle," *Monthly Review* 56/3 (July-August 2004), Arif Dirlik, "China's Critical Intelligentsia," *New Left Review* 28 (July-August 2004), 130-138, and Mike Davis, "Planet of Slums," *New Left Review* 26 (January-Feburary 2004), 5-34. Hart-Landsberg and Burkett argue that "market socialism" has had disastrous consequences for the working-class and poor in China, and Dirlik's review of Chaohua Wang's edited collection *One China, Many Paths* (2003) shows the tensions in the Chinese intellectuals' responses to the country's new capitalist developmentalism. Davis sees at China as a quickly modernizing consumer society, to be contrasted with much of the rest of the disenfranchised world, in which poverty, informal economies, and growing global mass religions (radical Islam and Pentecostalism) predominate. Indeed, with the cultures and movements of anti-globalization emerging from Brazil and Latin America, the South American continent seems to be providing the political and cultural models for emancipation at present.