## Sounding Plastic: The "Great Career" of the Flexidisc in Socialist Poland

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The collection is small and coherent: a guartet of postcards printed for the National Publishing Agency (KAW, Polska Agencja Wydawnicza), each addressed in the same hand (figure 1). 1 Brightly colored photographs of flowers flank their fronts, and a playfully ornate and studied penmanship unites the set, sketching intimacy through terms of endearment: "To my dear husband. -K."; "To dear Kaziu"; and—twice—"For my most cherished wife, Krystyna." The sweet domestic scenario I imagine, in which a child participates in a gift exchange between parents, is the postcard archives' final conventional feature. These were never posted and have no further written message. What is more, the thin layer of plastic that coats each card's flamboyant imagery has a ring of grooves that surrounds a hole punched in the middle. Ink stamps on their reverse sides confirm that these are sound recordings—records to be played back on a turntable—and provide the address of a Społem supermarket in Kielce, Poland, where they were presumably sold. A haphazard scribble gives each label an artist and a song. The pocket archive of everyday intimacy accrues a sonic dimension. I listen to one on my own record player and am surprised to hear a voice interrupt the ballad by Polish star Anna Jantar to say, "Kazio, all the best greetings—with a song—for your birthday, from Krystyna and Zdzisława." My ears understand the vocal delivery as caring, an addition that reframes the commodity in terms of its social and domestic value.

This essay asks what archival sound objects—in this case a vast stockpile of unofficial music recordings—can tell us about cultures of listening and the cultivation of intimacy through sound under state socialism. I focus on a format for popular music that circulated through an alternative economy in the People's Republic of Poland from the 1950s through the 1980s: the "sound postcard" (pocztówka dźwiękowa). Polish sound postcards were a localized culture of what is usually called (in English) a flexidisc, a term that refers to brief phonographic imprints on material (paper or plastic) without

1. Thanks to Mark Katz, Michael Palm, and Elodie Roy, as well as the conveners of this critical forum for generous engagement with this essay. I am very grateful for conversations with sound postcard makers and listeners from 2016–20 that were crucial as I sought to write about these material objects' social histories and afterlives. I am grateful for support from Viktoria Tkaczyk and the community of the "Epistemes of Modern Acoustics" research group at the Max Planck Institute for the History of Science, who hosted me and funded fieldwork in spring 2019.All translations of Polish text, including in the image captions, are the author's.

Slavic Review 82, no. 4 (Winter 2023)

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doi: 10.1017/slr.2024.4



Figure 1. Four sound postcards addressed in the same hand (Collection of the author).

the stability or fidelity of vinyl.<sup>2</sup> As cheap records, Polish sound postcards were predominantly homemade, circulated within national borders, and consumed in intimate social circles. That is, it is through particular socio-material

2. Other popular music fans "hacked" communist government owned equipment to make bootleg records, see Sergei I. Zhuk, *Rock and Roll in the Rocket City: The West, Identity, and Ideology in Soviet Dniepropetrovsk, 1960–1985* (Washington, DC, 2010), 82–84. I do not wish to imply the sound postcard is uniquely Polish, simply bountiful and notable in People's Poland.

practices that sound postcards conjure a socialist sound world. It has often been via bigger, heavier records (the shellac 78 and vinyl LP) that music has been hitched to globalization processes, whether these standardized mass-produced recordings encapsulate the liberal potential for more musics to reach more people, sounding shared humanity, or exacerbate (neo)colonial processes by amplifying economic exploitation and escalating environmental extraction, in the process rendering empire audible.<sup>3</sup> The sound postcard's circulation almost exclusively within People's Poland reorients such questions about power, agency, and materiality that have been asked in the context of global political economies to that of the national.

I emphasize these recordings' embeddedness in social worlds, infrastructures, and listening cultures to show how sound postcards' easy production and hand-to-hand circulation did work to repair an inadequate infrastructure and the economic shortcomings of the music industry in Poland. Elodie Roy's definition of phonography as the work of "recording, collecting, retrieving, and passing on sound—involving a vast variety of intermediaries, materials, machines and localities" is a crucial orientation point. Simultaneously widely available and of adequate-but-mediocre audio quality, sound postcards resonate a socialist world that resisted, even if it still yearned to take part in, western, capitalist understandings of technology that understood devices, innovation, and reified musical commodities as signs of progress. By the 1980s the primary textbook for budding librarians described and explained the non-intuitive format of sound postcards to students thus:

In addition to the discs pressed out of a mass of plastic, there are also sound postcards made of card stock and plastic overlay. Such postcards are produced by [the label] 'Tonpress' and private manufacturers. The postcards are substantially cheaper than records, but they do have a shorter lifespan than them and are a notch down in reproduction quality. Despite this, people buy them happily because of the low price, because they record the newest musical hits, and because it is possible to send them in the mail.<sup>5</sup>

Understanding the recordings—which replicated the most sought-after music—as themselves repair situates these objects as immanent rejections of high fidelity culture and reminders of any technology's material frailty.

The music critic Dariusz Michalski circumscribed the format's abundance, fixing it to the socialist state, in his 1990 popular history of recording in Poland, noting with characteristic flair that the "sound postcard had the greatest career in our country." This was not a compliment: it was a dig

- 3. Michael Denning, "Decolonizing the Ear: The Transcolonial Reverberations of Vernacular Phonograph Music," 25–44; and Andrew Jones, "Circuit Listening: Grace Chang and the Dawn of the Chinese 1960s," both in Ronald Radano and Tejumola Olaniyam, eds., *Audible Empire: Music, Global Politics, Critique* (Durham, 2016), 66–91; Kyle Devine, *Decomposed: The Political Ecology of Music* (Cambridge, Mass., 2019).
- 4. Elodie Roy, "Introduction" in Eva Moreda Rodriguez and Elodie Roy, eds., *Phonographic Encounters: Mapping Transnational Cultures of Sound*, 1890–1945 (New York, 2021). 2.
- 5. Kazimierz Rzewuski, Księgoznawstwo: W podręczniku przedstawiono dzieje ksiązki i czasopismiennictwa oraz wydawnictwa fonograficzne . . . (Warsaw, 1987), 145.
  - 6. Dariusz Michalski, Za kulisami przeboju (Warsaw, 1990), 121.



Figure 2. Illustration of "Record manufacture "po polsku" (Dariusz Michalski, Za kulisami przeboju [Warsaw: Wiedza Powszechna, 1990], 94).

at the latency of record production—quality and quantity—through decades of state socialism after landmark financial growth and musical distribution of the label Syrena Records in the interwar period. To illustrate this infrastructural shortcoming, Michalski's account includes a caricature of a record manufacturer pressing vinyl at his kitchen stovetop (figure 2). The homespun record maker conjures two figures. First, the storied Mieczysław Wejman, who

7. On phonography in Poland before 1939 see Mieczysław Kominek, *Zaczęło się od fonografu* (Kraków, 1986), 267–76; Tamar Sztyma, "On the Dance Floor, on the Screen, on the Stage: Popular Music in the Interwar Period: Polish, Jewish, Shared," in François Guesnet, Benjamin Matis, and Antony Polosnky, eds., *Polin: Studies in Polish Jewry* 32 (Liverpool, 2020), 165–76; and Tomasz Lerski, *Syrena Record: Pierwsza polska wytwórnia fonograficzna: 1904–1939* (New York, 2004).



Figure 3. Polyethylene Sound Postcards (pocztówki dźwiękowe).

rescued matrices from the rubble of the Syrena Factory to restart record production out of his apartment in 1945. Second, the entrepreneurs who, from the 1950s through 80s, housed injection molding machines in private homes to press sound postcards made of polyethylene: these 18×22 cm rectangles with screen-print decoration were the most abundant type of sound postcard in socialist Poland (figure 3).<sup>8</sup> As the legendary Polish rock band Perfekt put it in their 1982 hit, "Autobiografia" (Autobiography): "That postcard frenzy,/ Every one of us had some 500 or so/ Instead of a new pair of jeans."

From 2013–20, I purchased many stashes of memorabilia like the bundle of a dozen in which I noticed the quartet with which I start this essay. The informal and non-representative collection of circa 500 sound postcards this practice generated served as the springboard for several sites of ethnographic

<sup>8.</sup> Instructions for how to build, use, and tailor the presses that could make consumer goods from polyethylene were widely available. For example, Izabela Hyla, "Niektóre zagadnienia technologii wyprasek z tworzyw sztucznych," *Zeszyty Naukowe Mechanika 25*, no. 147 (1966), 53–62.

listening that inform my analysis: conversations with Warsaw-based sound engineers about the technological skill required to make these recordings, a day spent with two generations of a family that rented their basement to the entrepreneurs who oversaw these cards' pressing, and several listening parties in Warsaw and Berlin at which I invited people who had spent their teenage years in socialist Poland to spin my discs. The bulk of my collection was acquired from vendors selling at Allegro.com, the dominant Polish consumer-to-consumer sales service. Also sold at flea markets and in record shops, sound postcards are "newborn socialist things" that bridge two collectors' markets: audiophiles invested in the quirks of recording history and investors in the afterlives of socialist everyday objects.<sup>9</sup>

## What Do Sound Postcards Sound Like?

We can take the floral sound postcards I introduced at the head of this essay on a musicological spin and configure the quartet as a playlist of sorts, like a mixtape rerouted from its conventional one-way path from one lover to another into a reciprocal course of musical gift-giving. 10 To do so would respond to the records' double labelling and listen to music for social generosity. 11 Do the songs tell a love story together? In "Russian Gingerbreads" (Rosyjskie Pierniki, 1975), Anna Jantar sings of baking's sensory domestic warmth to ease a lovers' squabble. The track highlights the Polish estrada star's agile voice, which leaps between suave, confident chest and flirtatious head voices to charge the tune with erotics. ABBA's break-up banger "S.O.S." (1975) is brimming with the latest affordances of recording studio technology, most notably the clever use of minimoog to lace the tune's boisterous keyboard riff with psychedelic effects. Two of the postcards have Dutch singer George Baker's international hit, "Una paloma blanca" (A white dove, 1975), an incessantly cheerful schlager across which a bounding square beat and trilling recorders relish in the world's simple—simplistic—beauty. In other words, what unites these tunes is not a narrative of love or romance, it is their musical star power. These tracks were super-loaded with the musical trademarks of each artist, all of whom captured the hearts of live audiences in Europe and North America.

As a music archive, they render their moment in European mainstream popular music history, east and west. In socialist Poland the circulation of commercial recordings was dependent on a complex chain of manufacturing infrastructure, transnational legal agreements, and domestic and foreign licensing payments.<sup>12</sup> In the 1970s, singles—usually pre-releases on 7-inch

<sup>9.</sup> Laurence Coderre, Newborn Socialist Things: Materiality in Maoist China (Durham, 2021).

<sup>10.</sup> Judith Peraino, "I'll Be Your Mixtape: Lou Reed, Andy Warhol, and the Queer Intimacies of Cassettes," *Journal of Musicology* 36, no. 4 (Summer 2019), 401–36; Andrea F. Bohlman, "Making Tapes in Poland: The Compact Cassette at Home," *Twentieth-Century Music* 14, special issue (February 2017), 119–34.

<sup>11.</sup> Jim Sykes, *The Musical Gift: Sonic Generosity in Post-War Sri Lanka* (New York, 2018), 6.

<sup>12.</sup> Anna Pluszyńska, "Collective Management of Copyright During Communism and Transition: A Case Study of the Society of Authors ZAiKS," in Patryk Galuszka, ed., *Eastern* 

vinyl records—put long-playing albums on radio charts before they were even pressed or moved music materially across borders.<sup>13</sup> The compact cassette and vinyl record were standard formats for home playback, with the latter cherished by audiophiles then and now.

The floral sound postcard quartet was recorded on cardstock; these would be referred to as phonocards outside the Polish context. Phonocards were marketed as occasional items and did the work of greeting cards, tourist memorabilia, and gimmicky advertisements. As novelty objects around the world in the 1940s and 50s, they were often doubly inscribed with prefabricated image and sound and sold in news kiosks and gift shops. Contemporary companies, like the US American Voice-O-Graph, installed booths with rudimentary lathe technology that made it possible for customers to record their own brief greetings and leave with a phonographic pressing to send away. Polish-Jewish poet Julian Tuwim famously recorded his "Grande Valse Brilliante" during his wartime US exile as a missive to his sister on such a phonocard.

Hitched to commerce and commodities, phonocards were valued because of their flexidisc format. Their bendy and light-weight materiality made it easy to yoke them to a magazine or book—or throw them in the mail. In the western world, they were included in McDonalds Happy Meals, inserted into bird song guides, and integral to punk's zine culture. In the socialist east, phonocards similarly complemented print. For example, a rare extended interview with the preeminent Polish composer Witold Lutosławski was truncated onto one that was glued inside the back cover of a book-length transcript of the conversation. And the Soviet label Melodiya bound thin, transparent, blue plastic records with music and other audio into the music magazine *Krugozor* (1964–93). Plastic spiral binding allowed readers to fold over the magazine's pages and place it directly on the record player for playback. As Gabrielle Cornish describes in her contribution to this forum, *Krugozor*'s recordings ranged from historical recordings of ideological significance to Russian-language covers of Beatles' hits. Phonocards were not necessarily bootlegs.

Across the nodes in the postwar global music industry, flexidiscs were always low prestige and presumed to be temporary audio storage. Two of the

European Music Industries and Policies after the Fall of Communism: From State Control to Free Market, (New York, 2021), 94–106.

<sup>13.</sup> Roman Waschko, "Poland Gets Foreign 45s," Billboard (September 1, 1979), 54.

<sup>14.</sup> Thomas Y. Levin, "Before the Beep: A Short History of Voice Mail," in Norie Neumark, Ross Gibson, and Theo Van Leeuwen, eds., *VOICE: Vocal Aesthetics in Digital Arts and Media* (Cambridge, Mass., 2010), 27–29.

<sup>15.</sup> Aleksandra Kremer, *The Sound of Modern Polish Poetry: Performance and Recording after World War II* (Cambridge, Mass., 2021), 39–43.

<sup>16.</sup> Here I follow the understanding of format developed by Marek Jancovic, Alexandra Schneider, and Axel Volmar, who write that "Format denotes a whole range of decisions that affect the look, feel, experience, and workings of a medium. It also names a set of rules according to which a technology can operate." See Marek Jankovic, Axel Volmar, and Alexandra Schneider, eds., *Format Matters: Standards, Practices, and Politics in Media* (Lüneburg, Germany, 2020), 11.

<sup>17.</sup> Arthur A. Allen and Peter Paul Kellogg, *Bird Songs of Garden Woodland and Meadow* (Washintgon DC, 1964). Book that features audio recordings of birdsong, book and birdsong album appear to have the same name.

<sup>18.</sup> Tadeusz Kaczyński, Rozmowy z Witoldem Lutosławskim (Kraków, 1972).

quartet's postcards are so warped that the needle skips and scratches as I listen today: these are unstable storage media. Two play back with just a smattering of pops and some hiss. Sound postcards had and have a dwarfed cultural relevance to the sleek, vinyl record, always again collected (and repurposed by DJs). Other, longer duration, late-twentieth century sound recording formats, like the compact cassette tape, spurred prominent discourse because they invited original user content and playful editing. Like radio broadcasting, magnetic recording afforded more possibilities for amateur and countercapitalist circulations, providing tapes the political traction that placed them at the center of several social histories of sound and everyday life in the late twentieth-century.<sup>19</sup>

As an idea, fidelity has been an organizing concept for the history of sound recording, its eastern European hauntings underexplored. From the first public demonstrations of phonography by Thomas Edison, fidelity has been a promise and product of innovation that has shaped the everyday experience of reproduced sound in primary relationship to truth, whether that implies faithfulness to a live event, the high-quality reproduction of a studio recording, or a home stereo set-up that can affect the feeling of immersion in sound. As an ideology, fidelity harnesses progress and permanence together. Scholars in sound studies have argued that fidelity's discursive prominence exemplifies the ways that epistemologies of sound emphasize and celebrate "technology as a 'modern' Western practice that reproduces, isolates, and idealizes sound," in the process obscuring sound technologies' social enmeshment, and frequent imperfection. The attention I pay to sound postcards' plastic participates in unsettling fidelity as central to the history of listening and record production.

## **Listening to Plastic**

I do not wish to imply that sound postcard production was articulated as a socialist critique of technologies' hegemonic structuring power through values like fidelity and progress. In the twenty-first century, memories of sound postcards are steeped with distaste, distance, and the implication that these recordings are lesser and lacking. It is indeed challenging to untangle the discourses of obsolescence from attitudes about and experiences of the disappearance of socialist everyday life—what Jonathan Bach has described as the "garbage moment that spurred the collector culture" in his study of the

- 19. Andrea F. Bohlman, Musical Solidarities: Political Action and Music in Late Twentieth-Century Poland (New York, 2020); Peter Manuel, Cassette Culture: Popular Music and Technology in North India (Chicago, 1993); David Novak, Japanoise: Music at the Edge of Circulation (Durham, 2013), 198–226; Andrew Simon, Media of the Masses: Cassette Culture in Modern Egypt (Stanford, 2023).
- 20. Jonathan Sterne, *The Audible Past: Cultural Origins of Sound Reproduction* (Durham, 2003), 215–86; Paul Théberge, Kyle Devine, and Tom Everrett, eds., *Living Stereo: Histories and Cultures of Multichannel Sound* (New York, 2015), 21–28.
- 21. Gavin Steingo and Jim Sykes, "Introduction: Remapping Sound Studies in the Global South," in Gavin Steingo and Jim Sykes, eds., *Remapping Sound Studies* (Durham, 2019), 11.

afterlives of East German material culture.<sup>22</sup> For every research associate who cursed their parents for leaving them to sort through storage boxes of sound postcards, another would claim to have long thrown theirs away.

When I invited Roman (pseudonym), a 50-something social worker from Poznań living in Berlin since 1990, over to my home to listen to records and have tea, he first scoffed and said, "I didn't really listen to them: they had bad music and bad sound."<sup>23</sup> I noted his distinction between musical quality and recording quality, itself a clue about his discerning ears. Once we started listening to a pile of mostly early Polish rock (such as Czerwone Gitary), Roman started telling stories about teenage listening habits, singing along to songs his parents enjoyed, and remembering that when he had bought sound postcards, he traded them with friends, keeping the sounds moving. We heard moments of what we decided together was technical failure, most memorably a sound postcard that had been transferred incorrectly, so that one could hear the motor of the original playback device grumble loudly over the music.<sup>24</sup> But these unwanted noisy moments were few and far between, certainly more banal in their faultiness than the acoustic and aesthetic barrier Roman had constructed toward the postcards before our collective backwards listen. The memory work the postcards inspire and scorn they have consistently garnered links them with what Lisa Cooper Vest has analyzed as socialist Poland's negotiation of musical backwardness vis a vis the West.<sup>25</sup>

In socialist Poland, polyethylene sound postcards were in fact able to retain their life in the shadows of scrutiny precisely because they were presumed to be audibly inferior and thus not a long-term threat to the vinyl industry. These were pirated bootlegs, not blacklisted artists or albums. Sometimes they were made using albums smuggled across the border. They were sold at the spaces central to the post-Thaw Polish consumer experience: at market kiosks, at grocery stores, and through newspaper ads. My informal collection contains addresses for at least forty distinct production sites (named "Private Recording Studios") and vendors clustered near or in the country's metropoles; I am sure this only scratches the surface of their terrain and circulation. The entrepreneurs worked around the clock and drew on personal networks to

- 22. Jonathan Bach, What Remains: Everyday Encounters with the Socialist Past in Germany (New York, 2017), 49.
  - 23. Roman (pseudonym), informal conversation, Berlin, April 14, 2017.
- 24. This was likely an intermediary reel-to-reel tape player, commonly used in the transfer process. See the discussion of the makes from other socialist industries—the East German Smaragd and the Sonet "Tesla" from Czechoslovakia in Maria Szabłowska and Krzysztof Szewczyk, *Ludzkie Gadanie: Życie, rock and roll i inne nałogi* (Kraków, 2013), 22.
- 25. Lisa Cooper Vest, Awangarda: Tradition and Modernity in Postwar Polish Music (Oakland, 2021).
- 26. For example, jazz critic Roman Waschko traveled to the United States as the President of the Polish Jazz Federation, informing on Polish musicians and writers in exile. He was allowed to bring American records across the border, which he promptly deposited with a friend who pressed plastic duplicates. See Joanna Siedlecka, *Kryptonim "Liryka": Bezpieka wobec Literatów* (Warsaw, 2008), 92–96.
- 27. Zdzisław Dobrowolski, "Agencja Wydwanicza "Ruch,"", in Zdzisaw Dobrowolski, *Co Każdy Sprzedawca "Ruchu" Wiedzieć o Płytach Gramofonowych* (Warsaw, 1966); David Crowley, "Warsaw's Shops, Stalinism and the Thaw," in Susan E. Reid and David Crowley, eds.. *Style and Socialism* (New York, 2000), 25–48.

get the product moving. Contemporary radio personality Krzysztof Szewczyk recalled his father's work in the 50s and 60s:

The demand was huge. Day and night the press slammed. First, they recorded one song on a postcard, then two or even more. The postcard workshop was located at Puławska 74. In addition to selling car parts, the father of future race car driver Janusz Kiljańczyk managed this business. There was a press downstairs in the basement and Mr. Zenek worked from dawn to dusk. Mr. Zenek was my dad's friend from the Kościuszko Army [Division]. The company was registered with the wife of a friend of my father's from the army, Ludwik Kwapiński. . . And my father delivered them all over Poland [to kiosks and private shops.] He brought them home in gray envelopes, laid them on the couch, and then carefully packed them into a suitcase, brought the suitcase to the car, and drove. 28

In 1969 a memo circulated through the Economic Division of the Department of Culture expressed surprise at how widespread these plastic duplicates of vinyl 45s made by "private manufacturers" had become. The document underscored that the work done by the copiers and the products they made were a service to the population (ludność). From 1958 onward, the Party had had a policy of not intervening in their production; in 1970 they rearticulated that policy, emphasizing that despite concern from regional censors, the Censorship Bureau understood that at least 50% of the musical content was that of Polish artists.<sup>29</sup> By 1978, they invested in the market themselves: the state recording company started to print their own variation on card stock records under the Tonpress imprint (figure 4).<sup>30</sup>

Sound postcards existed as products of plastics' malleability. Their makers enacted repair by reusing material: polyethylene.<sup>31</sup> The task of copying a record, of course, is not as easy as broadcasting its music or dubbing it on tape. Most commonly, sound recordings were produced with a negative impression disc made of nickel, a process that generated enough general curiosity that it was explained and illustrated in a 1960s children's book on the history of sound recording (figure 5). A teacher takes their school class to a recording studio. Exploring what are portrayed as bountiful possibilities for capturing sound, the teacher says to the school children: "Maybe we'll record a letter on tape and send it to some Polish school abroad. . . . It's certainly possible to send such sounding letters. I have even seen sound postcards. On one side you write and on the other, instead of something to look at, there is a recorded song."<sup>32</sup>

- 28. Szabłowska and Krzysztof Szewczyk, Ludzkie Gadanie, 26.
- 29. Archive of Modern Acts, Warsaw, Culture Department, LVI-858.
- 30. For an analysis of how the Polish Communist Party turned to popular music as a site of economic reform, especially in the 1980s, see Raymond Patton, "The Communist Culture Industry: The Music Business in 1980s Poland," *Journal of Contemporary History* 47, no. 2 (April 2012): 427–49.
- 31. On consumer goods that can be easily pressed and the bountiful nature of polyethylene, see Eli Rubin, "The Order of Substitutes: Plastic Consumer Goods in the Volkswirtschaft and Everyday Domestic Life in the GDR," in David Crew, ed., *Consuming Germany in the Cold War* (Oxford, 2003), 94.
  - 32. Tadeusz Pszczołowski, Zaklęty dźwięk (Warsaw, 1964), n.p.

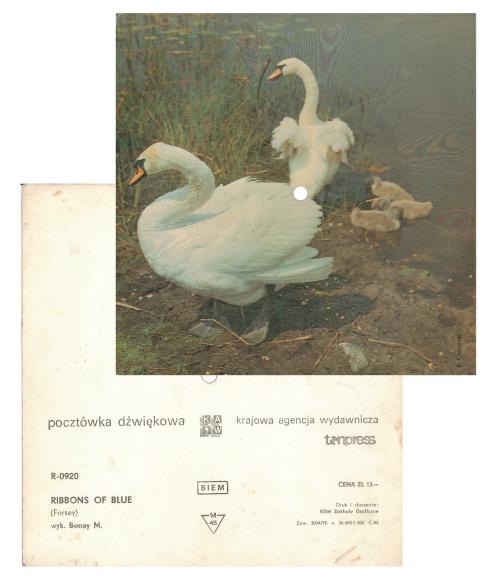


Figure 4. A sound postcard published by the national publishing agency featuring the 1979 release "Ribbons of Blue" by the West German disco group Boney M.

Home record production happened in basements and storage units: places where the equipment's stench could be kept away from food and where there was access to plumbing and electricity. In contemporary Poland, these domestic pressing sites remain, abandoned by the petty entrepreneurs who worked in them, renting space from people who sought to supplement their prorated working-class salaries. A couple from Białobrzegi insisted to me in conversation that they subleased purely for economic reasons—not out of interest in popular music. Their son, Stanisław (pseudonym)—now an HVAC

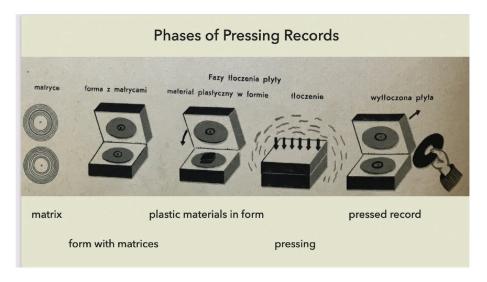


Figure 5. Annotated diagram from Tadeusz Pszczołowski. *Enchanted Sound*. Illustrated by A. A. Kowalewski. 1964.

designer—recollected working as an apprentice alongside them as a young boy, learning from the tinkerers in his parents' basement, fixing and replacing the used equipment they pieced together for their business. After a few years, he recalled, they moved their business elsewhere, leaving behind a hydraulic cooling system that remains in the home to this day (figure 6).

As in the case of perhaps the most iconic pirate media of state socialism, Soviet X-Ray records, material and malleability mattered.<sup>33</sup> Regarding the Russian bootlegs, Viktor D. relayed the quick wear of the soft gellatinate emulsion in musical time to Donald Raleigh: "You'd listen to them three times, and naturally the emulsion would rub off and erase the recording. Nonetheless, the Beatles made a huge impression on everyone." Polish sound postcards were not—first and foremost—malleable in this way. The polyethylene cards that were the most common have been more durable through the test of time. Their firmer, thicker plastic is more resilient to scratches, heat, and the elements and endures the friction of the turntables' stylus longer. I listened to one such record forty-two times (five hours) and still find the record wholly listenable.

Indeed, these plastics were valued for their durability over fidelity. Hubert (pseudonym) evocatively described their plasticity as the life of the party at listening clubs he attended as a student at Warsaw's Polytechnic University in the 1960s. "People would bring their postcards and put them in a pile next to the record player. That was great: you could spill beer and vodka on the postcards and it was no problem. The record player: that was my job, to rewire it if

<sup>33.</sup> Stephen Coates, X-Ray Audio: The Strange Story of Soviet Music on the Bone (London, 2015).

<sup>34.</sup> Donald J. Raleigh, Soviet Baby Boomers: An Oral History of Russia's Cold War Generation (New York, 2012), 140.





Figure 6. Elements of the hydraulic cooling system left behind in a home studio in the 1970s. Photos by the author.

the party got too rowdy. At the end of the night we would leave with the same number of records, just different music."<sup>35</sup>

When the critic Michalski scoffed at the "great career" of Polish sound postcards looking back in 1990, he identified them as a symptom of material lack. But listening back—listening to memories along with the discs themselves—it becomes clear that they are evidence of a larger practice of life in socialist Poland, where creative adaptations to maintain, reuse, and repair materials, infrastructure, and industry generated cherished connections and sociality. Sound postcards were a kind of musical backup, an archive that was consistently conceived of as transferable (to other sound media) or shareable, among friends. I am reminded of Hillel Schwartz's sly suggestion that duplication processes reveal an emotional connection to the content which is copied: "anything unique is at risk of vanishing: we make a twin." As necessary as this institution of piracy may have been in order to make music accessible and affordable as a domestic good, what is remarkable about the sound postcard's career is the many social worlds of sound to which it gave rise.

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<sup>35.</sup> Hubert (pseudonym), interview, Chapel Hill, USA, September 18, 2018.

<sup>36.</sup> Hillel Schwarz, *Culture of the Copy: Striking Likenesses, Unreasonable Facsimiles* (New York, 1996), 175.