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'What Do I Do with My Tape Recorder ...?': sound hunting and the sounds of everyday Dutch life in the 1950s and 1960s

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FIG. 1. Advertisement Grundig. Grundig Radio Handelmaatschappij J.N.J. Sieverding N.V., Amsterdam 1962. Source: *Photo Archives NVG*, Wassenaar. Courtesy Grundig Benelux.

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Introduction 1: modern day hunters

> Today's hunters no longer turn to the woods or fields, but to the noisy big cities. Instead of banging rifles they take their silent tape recorders with them. These modern day hunters call themselves 'sound hunters'. Instead of hunting for deer, foxes and rabbits, they are after sounds and noises. To be sure, sound hunting is no less exciting than hunting in the green fields [2].

Thus in 1964 sound tape manufacturer BASF promoted the hobby of sound hunting in the Netherlands: as peaceable and yet exciting. Eight years before, in 1956, these 'modern day hunters' formally organized as the Dutch Society of Sound Hunters (*Nederlandse Vereniging van Geluidsjagers*, NVG) (Fig. 2). This non-profit organization was geared toward 'making the wonderful qualities of modern tape recording devices' more known to the public [3]. The NVG was hardly a unique phenomenon in Europe. Sound recording hobbyists elsewhere might join the *Chasseurs de Son Belges*, the *Deutsche Tonjäger-Verband*, the *Dansk Magnettone Klub* or the *Federation of British Tape Recording Clubs*, while similar organizations were active in France, Switzerland, Austria, Sweden and Norway, as well as in Canada, Australia, South Africa and Japan. The United States had its World Tape Pals, an organization with some 25,000 members worldwide in the mid-1960s; they corresponded with each other by means of sound tapes [4] (Fig. 3). Most of these organizations collaborated in the *Fédération Internationale des Chasseurs de Sons* (FICS), established in 1956. The first annual international competition of sound hunters took place already in 1952; later it became known as the *Concours International du Meilleur Enregistrement Sonore* (CIMES).

Although many of these sound hunter societies exist to this day, after the late 1960s their membership began to decline and most gradually shifted their attention to visual

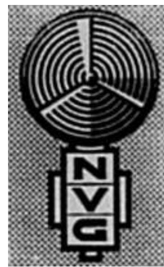

FIG. 2. Logo NVG. Source: *Bandopname*, November 1963, p. 1. Courtesy NVG.

FIG. 3. Logo World Tape Pals. Source: *Bandopname*, November 1963, p. 1. Courtesy NVG.

practices (slides and video), to which sound activities became subordinate [5]. In this paper I explore the various historical, cultural and technological dimensions of sound hunting by focusing on the heyday of this hobby in the Netherlands. Why, for instance, was it such a popular hobby only for a short while? Did this happen, as one Dutch sound hunter argues, because the tape recorder lost out to the compact cassette recorder, a new medium that with its non-editable tape was both literally and figuratively less open to users, hobbyists in particular [6]? Did people dislike listening to their taped voices, or did they discover that 'sound recording demanded more creativity than they were willing to invest', an explanation advanced by David Morton in this context for the United States [7]? Or, as Morton also suggests, did the cassette recorder better suit the needs of the new culture of the 1960s, as marked by increased mobility and youngsters craving for music [8]? How did manufacturers of tape and tape recorders sell their product? How did they and other promoters target sound recording hobbyists? Which sounds did the sound hunters actually pursue? And why, apparently, did these same sounds become less appealing by the early 1970s, even to the extent that people barely hunted sounds anymore?

These questions will be addressed on the basis of several interviews with Dutch sound hunters, archival research and a study of the websites and periodicals from various societies of sound hunters. Furthermore, this article relies on publications by BASF, advertising materials and internal studies from Philips, as well as a sample of the many tape recorder handbooks from the 1950s and 1960s. Although special attention will be given to the activities of the Dutch NVG, which in Europe was one of the larger sound hunter societies [9], we will also listen in to relevant developments in other countries.

Sounds as Hobby

The source materials for this article do not include sound tapes. This may seem odd, especially because the NVG issued *Phonorama*, a tape with sound contributions that was circulated among its members. But most tapes from the 1950s and early 1960s no longer exist. The tapes were so expensive that commonly they were re-used until they showed signs of wear. Moreover, much of the material from those early years that was initially saved did not survive, because it got lost or was thrown away after the makers died. Recently, after the death of an NVG member several old tapes surfaced, but they were not yet available for my research.

Thus it is important to realize that in the early days of sound hunting sounds were still very expensive. Tapes were costly, but tape recorders as well [10]. Prior to the 1950s, tape recorders were almost exclusively made for the professional and semi-professional markets. In 1953 Philips, at that time already the leading Dutch electronics company, introduced its first tape recorder for consumers, the EL 3530, a two-track recorder that operated off the mains and came with a price tag of 740 guilders [11]. A year later the company put the portable battery-operated recorder on the market, and after 1960 four-track recorders became available [12]. In 1958 Philips was the first company to develop and market the stereo tape recorder, followed eight years later by the first Philips radio-cassette recorder [13].

According to an internal study by Philips, in 1960 one could find a tape recorder in 6.4% of the Dutch households. Five years later this figure had gone up to 12.3%, but this number also includes the spread of the compact cassette recorder, which was introduced in 1963. For 1971 the study projected a spread of 19.3%. Although the

1960 percentage of 6.4% may hardly seem impressive, compared to the other industrialized countries it was substantial. Only in Norway, with 9.4%, was it higher. In 1965, two years after the birth of the cassette recorder, things were very different already. At that point, Sweden (15.7%), West Germany (13.8%), Denmark (12.9%), the United Kingdom (12.8%) and Switzerland (12.5%) had the highest percentages of households with a tape or cassette recorder. For nearly all countries it was expected that the absolute sales figures for tape recorders would peak in 1966–1967. Although France and Switzerland had an active sound hunting culture, the spread of tape recorders in these countries was remarkably low in 1960, namely, 0.9% and 2.5%, respectively, while five years later, with 4.1% and 12.5%, it was still not spectacular [14].

In an earlier published Philips report the percentage of households with a tape recorder was compared to that with a gramophone (40%), which triggered the sorry expectation that the tape recorder was not quite going to make it [15]. The tape recorder, though, was not primarily marketed as a music-playing device. On the contrary, the industry's advertisements and promotional brochures and the many tape recorder books, some of which were also published by tape manufacturers and the tape recorder industry, presented the recorder as a device with a host of options, of which playing music was only mentioned as one option.

In most cases, the family sound album topped the list of things to do with a tape recorder. The function of such a 'talking family album' [16] was to record the precious moments of family life, like 'little John's first speech'. Subsequently one would share the tape with 'relatives, friends and acquaintances living elsewhere' [17]. But having a tape recorder was also important with respect to one's own memory. Every family, after all, had one or more albums with photos of important or happy moments. From now on, Philips submitted, these memorable moments could be relived more completely, thanks to 'a faithful reproduction of all that was said and done, played and sung' [18]. The tape recorder, in other words, was introduced as a family 'memory' device [19]. 'Even though your constantly crying and screaming baby may almost give you a nervous breakdown, I do not want to refrain from advising you to record this sound', as the author of *Het Bandrecorderboek* put it [20] (Fig. 4). Similarly, the sound of grandpa snoring or of dad adjusting the legs of the table with a saw, another handbook claimed, was quite eligible for recording [21]. In a Philips ad from 1962 the significance of saving audible memories was even pushed further: 'Treasure her songs-in-front-of-the-chimney … What a bounty of memories gets lost as children grow up. It is really a pity. Such a sweetheart, who with her shrieking voice sings her song for the generous Spanish old man[St. Nicholas, KB] … You should be able to save it all. Forever' [22] (Fig. 5).

The notion of the sound tape as family album, as Morton rightly observes, implied a comparison between sound recording and amateur photography [23]. This analogy was also explicitly made in tape recorder books: playing sounds loud was like blowing up a photo, the sound level indicator could be compared to the light meter, and to the sound hobbyist the recorder was what the camera was to the photographer. But, according to a handbook published by Philips, the advantage of the tape recorder over the photo camera was that the sound 'print' was ready available, while it could also be erased at all times [24]. It was emphasized, moreover, that sounds carried more meaning than photos. As the importer of Grundig recorders said, the power of sound was 'that it remains vivacious and binds people together more forcefully than no matter what picture. In a person's voice we encounter his personal moods; in the sound of a running machine we can hear force and speed; the sound of birds connects us with nature' [25]. The sounds of a vacation, the author of a tape recorder book claimed,

FIG. 4. Advertisement Grundig. Grundig Radio Handelmaatschappij J.N.J. Sieverding N.V., Amsterdam 1962. Source: *Photo Archives NVG*, Wassenaar. Courtesy Grundig Benelux.

'may engulf and entirely absorb you again; you do not only hear it again, you *experience* it all over'. Also among other listeners, the author argued, a sound brings about deeper contact with the ambiance than a photo [26].

The same applied to the 'voice letter', another repeatedly promoted product the tape recorder hobbyist might pursue. 'With Gevasonor, the magnetic tape, you may … record whatever you want to tell to relatives in Canada, Australia and South Africa. This allows them to really hear your voice later on, with all its warmth, all its emotion'. Sound tapes thus became a form of 'family ties' [27] (Fig. 6). Simply reading a letter aloud was not so interesting, as one Dutch how-to book on tape recording from the mid-1960s indicated. The challenge was to realize creative sound recordings by combining the sounds 'of all sorts of domestic events, such as living room music, the knocking together of a rabbit cage, … bickering, pet sounds, … a characteristically creaking door, the ding-dong of a pendulum, the milkman at the door, the radio tuned to Hilversum I or II[the Dutch BBC, KB] on the background, … all sounds that for

FIG. 5. Advertisement Grundig TK 20. Grundig Radio Handelmaatschappij J.N.J. Sieverding N.V., Amsterdam 1962. Source: *Photo Archives NVG,* Wassenaar. Courtesy Grundig Benelux.

relatives faraway from home will be enjoyed like honey on the tongue. They will get that homey feel again and be intensely part of everyday life at home for a little while!' [28]

The tape recorder could not only be used as a family memory device, but also as a 'mirror' for try-outs of lectures, singing and music performances, or when learning a new language. Thus the tape recorder, as Philips communicated in its brochures, was a patient instructor. It allowed dad to 'listen for himself what really went wrong when he last gave a lecture'. In tiny detail the recorder tells mum about the weak spots in her piano playing. And what about daughter Joan? 'Joan's shorthand speed is improving day by day, since she started practicing with the aid of dictations she records herself. Almost automatically she also dropped one or two mispronunciations that marred her speech' [29]. Obviously, by working with a tape recorder each word would automatically receive the proper pronunciation, while singers could work on improving their tone and pacing. 'For a Philips tape recorder hears everything—registers it all' [30]. In the United States, the emphasis was less on tape recorders as implacable devices for self-instruction as on their potential role in boosting self-confidence: 'For one thing it is much less humiliating to listen to your faults than to have them pointed out' [31].

Yet the tape recorder, both at work and at home, offered many other unheard-of uses, according to the ad materials and how-to books. In the office one might use a tape recorder for saving the good ideas that came up in brainstorming sessions, while the use of a microphone would keep people focused during meetings. Doctors could use it for diverting the attention of young fearful patients, but also for recording symptoms like coughs, speech defects and breathing, so as to determine possible progression. The tape recorder was in fact many devices in one: an answering machine, a dictaphone, an

FIG. 6. Advertisment Gevasonor. Source: *Bandopname*, December 1964, p. 289. Courtesy NVG.

instructor, an announcer in stores, an assistant of the anthropologist, an information-provider in museums and a gramophone replacement in dance halls and theaters.

At home one could use a tape recorder for entertainment, such as making radio plays or playing music at parties. The brochures and how-to books recommended that pathos and pretense be avoided when making a radio play. It was also indicated how sounds could be imitated. Popular sound imitations included weather phenomena, such as rain, wind, water, storm and thunder; sounds that announced a change, such as footsteps in gravel, opening a letter, closing a car door; and modes of transportation, such as a train, a running horse and a boat's steam whistle. A publication from BASF even provided hobbyists with a small so-called 'sounds cookbook' with several 'major recipes': dried peas in a sieve (rain), blowing into a bottle with water in it (steamboat), electric hairdryer (jet airplane), squeezing cellophane (fire) [32]. In contrast to the more serious tape recorder books that were published in Europe, an American book on recording emphasized the fun potential of a recorder [33]. After all, the device had everything in it to add luster to a party, for instance, by playing tapes at a faster speed, by mimicking voices to suggest a political debate, by playing a never-ending tape of bird singing, or by playing games like 'mystery voices', 'mystery noises' and 'candid microphone' (if at least the proprieties were respected).

In the course of time the list of things to do with a tape recorder kept growing, from dozens to hundreds of options. Remarkably, the role of music shifted substantially. At first, recording radio programs was mentioned side by side with other activities, if not after them. A radio recording offered the opportunity to listen to your 'favorite melody'

or 'favorite lecture' again and again [34]. You might even use the technology to put together your own music collection [35]. To keep track of the recordings you had to make a systematic index. BASF encouraged consumers to put their tapes in cases on the bookshelves, next to a 'row of "classics" '; after all, listening to a tape that you recorded yourself could be 'as pleasant' as reading 'good books' [36]. From the late 1950s, though, music more often topped the list of things to do at home with a tape recorder. It was also promoted more often to use the device as a way to ensure several hours of nonstop musical background during a dance party at home [37]. The introduction of the stereo tape recorder stressed the role of music even further: the rich sound of a complete orchestra could now be spatially reproduced in one's living room.

Furthermore, increasing emphasis was put on making outdoor recordings and bringing home sounds from elsewhere: the sound of a street organ, a military parade, or guitar-playing at a campsite or a picnic with your sweetheart. This particular aspect was highlighted in particular in ad campaigns from Philips that accompanied the introduction in 1961 of, for those days, the exceptionally compact portable transistor-battery recorder EL 3585, a very successful product [38]. Again, music proved to be an important factor: 'Popular-music fans can now record and replay concerts and jam sessions and all their favourite music *wherever* they like' [39]. Subsequent ad campaigns increasingly relied on pictures of youth in outdoor situations: a young couple in a sailboat, attending a boat race or near a car, their portable tape recorder always at their side [40].

In time, the emphasis on the many options of a tape recorder was carried to great extremes. Apparently the recorder's usefulness had to be established against all odds, for tape recorder books also highlighted, and exasperatingly so, that after a short period of great enthusiasm many people no longer knew what to do with their tape recorder. '"I bought it on impulse for my family, but after some time the fun of it was over. After all, you cannot go on making recordings of Frits's nursery rhymes and little Margot's recorder tunes … And recording living room conversations becomes tedious quite soon as well" ', read the first lines of *Avonturen met een bandrecorder* (*Adventures with a Tape Recorder*) [41]. Another book, *Wat doe ik met m'n bandrecorder …?* (*What Do I Do with My Tape Recorder …?*), expressed this very problem even in its title. These and other publications underlined that the tape recorder, unlike the gramophone or the radio or TV set, did not produce sounds automatically, but that this quality depended on the effort and creativity of the user and that therein was the secret of the satisfaction the device could give. 'You get a lot more satisfaction out of the results *because* you've had a finger in the pie. So don't grudge the little bit of effort it costs to get all your machine has to offer', a handbook by Philips explained [42]. 'Whoever buys a paint brush', another author wrote, 'is not yet a painter' [43]. As the importer of BASF tapes told, creativity and effort were needed to raise the tape recorder above the level of the music box and turn it into a 'musical instrument' that managed to enthrall 'player' and 'listener' alike [44].

In other words, one had to *do* things and this is why authors of tape recorder books discussed microphone positions, music recordings, outdoor recordings, tricks, reverberation, tape speeds, editing, reel sizes, the options of two-track and four-track recorders, plugs, cables, splices, the role of dust or dirt on tremulant tapes, or the causes of the fact that one's voice always sounded strange on a tape. In a series of ads for sound tapes from 1963 in *Radio Electronica*, Philips exclusively targeted men; at least this is what the male hands and serious and concentrated male faces on the illustrations suggest. The emphasis was on do-it-yourself experimenting with sounds. 'You start tinkering with

sounds again', as one ad put it unambiguously. Those for whom recording is a hobby, another ad reasoned, 'do not sit back and stare at' their tape recorder. They experiment 'with microphone positions, mixing consoles and echo'. Another ad directly addressed the active consumer as follows: 'You did a nice job of tinkering with your equipment ... this new linkage of mixing console and resonance looks promising!' [45].

In these various ways the enthusiasts and manufacturers of tape recorders tried to link up the tape recorder fad with hobbies and leisure activities that were already familiar: photography, writing letters, amateur music-playing, learning languages, tinkering, and even cooking, painting, reading and, increasingly so, music listening. Through the leisure activities that contributed to shaping the tape recorder hobby, ideals about the act of listening were formulated as well, such as nostalgic listening (tape recorder as memory), critical listening (tape recorder as mirror) and creative listening (tape recorder as musical instrument). Only the making of radio plays tied in directly with a professional-artistic practice. It is of course a common and often successful marketing ploy to link up a new technology with old and familiar practices [46]. Especially the association with tinkering seemed a smart choice. In many ways this do-it-yourself strategy, as scholars demonstrated in the case of the United States, tied in with the need of men to create their own space at home, which especially in the 1950s had increasingly become the domain of women [47]. Yet, the tape recording hobby did not succeed, or only briefly, in attaching itself to these various practices. Nor did it develop in analogous ways on its own. Why did it fail to do so? Is it possible to understand this by looking at the behavior of what in innovation theories are called 'early adopters' [48]? How did the 'early users' among the tape recorder hobbyists, the sound hunters, tackle the problem of shaping and developing their hobby?

Realizing Distinctive Everyday Sounds

The Dutch sound hunters were obviously interested in the technical possibilities of their equipment and in tinkering with it. Especially in the beginning, when tape recorders were not yet standardized, it could be quite useful to compare and discuss diagrams with each other. In lectures they explained each other how to weld cables and plugs or edit sound tapes. One of the NVG's shared activities was the putting together of tapes with members' recordings—for instance, of a jazz concert, a fish market, a radio play or a school performance—and subsequently circulate them (Fig. 7). Until the NVG began to pay attention to the making of slide-sound sequences (or diaporamas) it was mostly middle class men who took part in these activities [49].

Yet despite the many technical chapters in the various tape recorder books, the average Dutch sound hunter was hardly an expert about the inside of his tape recorder. This was in part related to the NVG's origin: the society was an offshoot of both the World Tape Pals and the volunteer-based radio programming effort in hospitals with a rediffusion system, rather than that is was based in circles of radio hobbyists [50]. A 1960 survey among NVG members showed that 90% had 'no knowledge of electrical engineering, electronics in general or magnetic sound registration'. Consequently, *De Geluidsjager* (*The Sound Hunter*), the NVG's journal, felt that its mission began where a tape recorder's 'instructions for use ended', meaning that it was not going to supply 'technical diagrams ... for building hi-fi amplifiers, battery recorders etc' [51]. Of course, the journal published reviews of the latest models, while some of its pages were also devoted to practical advice on how to keep the tape recorder clean and prevent bad

FIG. 7. Soundhunters preparing the shipping of the *Phonorama*-sound tapes. Source: *Photo archives NVG*, Wassenaar. Courtesy NVG.

signal-noise levels, clicking on the tape or overmodulation. But, generally speaking, the sound hunters were no technology fetishists.

If we examine the NVG's periodical more closely, it shows that Dutch sound hunters did not consider their hobby a version of 'familial' amateur photography, at least not to the degree in which Philips and the authors of tape recorder books seemed to promote this interconnection. Every now and then one comes across a comparison between sound recording and photography in *De Geluidsjager*, but generally it did not encourage its members to pursue a talking family album. More important to them was the metaphor of the 'hunt'—a notion that in the marketing of Philips, in contrast to that of BASF, barely played a role. Certainly, 'sound hunter' was a deliberate, official name. As such, it might have had a more 'respectable ring', as someone indicated later on, but the members were aware of 'the central sporty and fascinating element of this hobby. They appreciated the name "sound hunter" because this hobby indeed requires many hours of hunting for sound' [52]. The editors of the *De Geluidsjager* and its successor, *Bandopname* (*Tape Recording*), clearly enjoyed the various wordplays made possible by 'sound hunting'. The first section of *De Geluidsjager* was called 'Hunting Season Opened', contributors used the boy scouts' expression 'Proper Track' readily, and of course the result of the hunt was the 'catch' [53]. Moreover, in the various sound *competitions* the sporty element was reflected as well.

The NVG cultivated several specific sound hunting values. A first major value was that the hunt should be primarily geared toward distinctive everyday sounds. According to *De Geluidsjager*, the most obvious subject for contributions to sound competitions was 'the registration of the characteristic sounds we hear … on a daily basis':

FIG. 8. Eduard van Heese, president of the NVG, makes a recording at the aircraft show IJpenburg, 23 June 1961. Source: *Photo Archives NVG*, Wassenaar. Courtesy NVG.

> The wonderful bells of the local church tower absolutely deserve a recording. A rewarding subject is the roar of traffic with its sounds of cars, mopeds, horse and carriage, the screeching of a tram turning a corner. An excellent object is children's voices on a playground or even a recording of children in a singing group. Bird sounds in your garden, the din in the harbor, the noise of a fair, a storm, the surf, thunder, the brass band, jet fighters from the airbase near you, the typical sounds near a railway station, the cattle market, the noise of machinery, the call of a street vender etc. [54].

The NVG considered this everyday quality a major virtue. In 1956, for example, a British sound hunter won a prize with a sound registration that 'simply' consisted of 'a little girl's narration of a fairy tale' [55]. The same was true for recordings commissioned by the UNESCO. When this organization wanted to put together a collection of sounds with a 'characteristic, national, regional or local atmosphere' for radio stations of limited means, the NVG identified church bells, carillons, street organs, fairs, street venders, playing children, street noise, the din of a harbor and 'the creaking of the wings of a windmill' as illustrative sounds [56]. The same applied to sound tape-based correspondence, which the society recommended as a 'hobby with almost unlimited possibilities for modern, dynamic individuals' [57]. The success of such oral letter was assured, according to the NVG, if one managed to give it 'a typical Dutch flavor' [58].

Not surprisingly, an actual recording of the sound of a windmill was highly praised: 'Whizzing wings and flapping sails; the turning and creaking of the axle and the wheel of a flourmill; the sound of grinding stones; the conspicuous sounds of an oil mill when pressing seeds; the noise of a water wheel when the water mill is set into motion' [59].

A group of sound hunters also did 'a good job' by using a script to realize a creative sound recording of 'an ordinary workday'. They did recordings 'in factories, offices, on construction sites, amidst raging traffic, on military bases etc.' [60]. One member recorded 'the sounds of airplanes at Schiphol Airport with the help of a portable recorder' [61]. In short, as one could read in a 1961 issue of *De Geluidsjager*, 'Everyday life provides you a host of opportunities' [62].

A second major value that determined the hunt for sounds was the level of difficulty involved. The harder it was to catch a particular sound, the more highly its merit. This applied, for instance, when the recording circumstances were challenging because of the cold, the darkness or the distance, or when a particular sound required endless copying, cutting and pasting [63]. When participating in international sound competitions, the hunters had to include documentation on their project and frequently they underlined the particular effort that went into its production. For example, Roger-Paul Besan(on, a salesman in wristwatches, described how hard it was to record the sound of wristwatches, including their works, for his five-minute production 'Insomnia'. Despite this title, Besan(on was very passionate about these sounds. But his project proved difficult to realize:

> During the recording each separate sound had to be isolated and subsequently much amplified, in order for it to be audible as a separate phenomenon on the magnetic tape … We did not succeed in fully suppressing the breathing and background noises … We tried for months and probably needed over 100 hours of work to realize these recordings [64].

Similarly, the prize-winning recording 'Variationen mit A' by the Swiss Willi Baumann 'was realized with endless patience', in 60 hours and with 900 meters of tape. 'By pasting, extending, fast-winding etc. he transformed the keynote "A" into, for example, an air-raid alarm, a battlefield, a Swiss mail delivery car, fireworks etc.' [65].

This emphasis on the effort behind recordings in fact constituted the heart of sound hunting. If criteria like originality, humor and technical quality were important in a sound competition contribution (be it in the form of a documentary, report, slide-sound recording, radio play or music recording), the challenges that were part of the recording itself definitely added luster to it. Strikingly, as in the hunt for game, what often mattered was the seizing of sounds that were either tied to fast-moving objects or 'hidden', hard-to-get-at objects, like carillons and birds. In the former case the sounds of technological culture were exciting trophies in particular; aside from the traditional sound of mill wings and bells, this was true of the noise of cars, mopeds, trams, trains, jet airplanes, seaports, factories, stations, airports and military bases.

Occasionally, the hunt's dynamic, degree of difficulty or sportsmanlike quality were manipulated in special competitive events, like automobile rallies or sound drags. Some Dutch sound hunters, for example, participated in an automobile rally in Switzerland, in which they received directions to drive to sites where they received specific assignments for doing recordings—like on a market square, during a singing lesson at a school or in the factory of a Swiss watch or bell maker. Proudly they mentioned the little time they needed to get all the equipment ready: 'Unreel cables, put the plug of the recorder in the socket at a gas station, connect the microphone …' [66]. But even outside such special competitions, it proved hard enough to record the sounds of modern life. 'Just try recording the sound of a tram that gets into motion', as a BASF publication puts it: 'The first time a crackling moped happens to pass by. When after 15 minutes the next tram arrives, a hasty passenger knocks you off your feet at the critical moment. Be

patient—in 15 minutes there will be another tram! But then it starts raining and you rather not want your microphone to get wet. At last, the fifth or sixth tram finally gets recorded!' [67].

Precisely in the interest for *moving* objects the difference between tape recording and photography as hobbies became apparent. For taking a photo, especially in a family context, a situation was often frozen for a minute or so, to allow the photographer to get things right. Conversely, movement generated sound by setting air into vibration and as such it referred to the characteristic element of sound and sound hunting, an element that was even reinforced by the effort needed to capture the sound. Moreover, the largest beginner's error of a sound hunter was to think visually. Who wanted to register the sounds of a seaport on a tape should place the microphone right in between the 'smelling crates and barrels of fish'—not in the spot from where one had the most fantastic view of the port [68]. The hunter-like way of listening seemed most akin to 'exploratory listening', a term that Susan Douglas introduced to describe how radio hobbyists in the 1920s explored the ether with their homemade rigs to capture special sounds [69].

The notion that sounds had to be registered in context, a third major value promoted by the NVG, was closely tied to the values of effort and everydayness. According to the August 1960 issue of *De Geluidsjager*, sound hunters would only produce truly 'remarkable' work if they composed 'reports with a flavor of their own'. 'Preferably not in the style of professional radio broadcasting', it was added [70]:

> Of course it is possible to make a perfect recording of a street organ in a studio or in some other location that is acoustically suitable. But generally the result of such professional sound registration is a completely sterile recording without distinction. The sound hunter, by contrast, does such a recording somewhere in the middle of town. He may rely on less expensive machines than the professional sound-technician, but his tape has a sound of its own. The children's voices around the street organ, the butcher's assistant who whistles along, the clattering of coins in the organ grinder's money box, the buzz of traffic, the bells of the carillon in the distance—it is all on the tape [71].

There was a constant emphasis, then, on taking a 'fresh approach'. Sound hunters were expected to make 'original contributions'—and 'not imitate professional radio broadcasting' [72]. Preferably, for instance, a person interviewed spoke dialect rather than perfect Dutch in a forced manner, because this would 'take away from the recording's charm and authenticity' [73]. It is one of 'the highlights' in a sound hunter's life, it was argued, 'when he realizes that his outdoor recordings, which often require a great extra effort on his part, prove to be a perfect reflection of reality' [74]. This is why there were warnings against imitating sounds, an issue to which tape recorder books devoted so much attention. If imitations are not absolutely perfect, they 'tickle people's funny-bone unintentionally' [75]. 'Only reach for the milk bottle if there is no way around it', as one sound hunter depreciated the standard technique for imitating a steam whistle [76].

That sound hunters tried to detach themselves from the world of professional radio should mainly be understood as part of their effort to fashion an identity of their own. It was not motivated by the goal of providing a realistic representation of radio broadcasting. Typically, postwar radio documentaries consisted of a mixture of voice-over, short fragments from interviews, characteristic sounds and 'scenes from everyday life' copied by actors in studios. This was in part a technological matter, as making

FIG. 9. Eduard van Heese (left) and unknown person make a recording at the *Dam* in Amsterdam. Probably 1962. Source: *Photo-archives NVG*, Wassenaar. Courtesy NVG.

sound recordings frequently required a complete mobile facility, which was 'a hell of a job' [77]. Furthermore, literary qualities like 'language use, form and style' were considered very important. In the 1960s it also became normal in radio to do original sound recordings of substantial length in which individuals addressed listeners 'directly and in a personal way, as well as from their personal and professional angle and circumstances' [78].

To some degree, sound hunters needed professional radio as well. Although in sound competitions professionals were generally excluded from participating, many Dutch radio networks strongly contributed to the promotion of the NVG. Especially Joop Smits of VARA Radio, who in the 1950s presented programs like *Hobbyscoop*, did much for the society [79]. In one of these programs, for instance, the sound hunters were given 25 minutes of airtime each month as of November 1958 [80]. Later on, a program of AVRO Radio equally paid attention to sound hunting. Moreover, the radio networks provided material support for sound competitions, as did Philips and BASF [81]. Already by the early 1960s, though, the AVRO program suffered from a lack of contributions from sound hunters [82]. In the mid-1960s, radio networks withdrew from organizing competitions. Officially they did so for financial reasons [83]. But a shortage of contributions from sound hunters may have been a factor as well.

In other countries the ties between sound hunting and national radio networks seemed much tighter. As early as 1948, sound hunters in France were given the opportunity to broadcast their sound recordings once every two weeks. Switzerland too had a similar radio program early on [84]. While by 1962 England, Belgium, Germany and Austria had one sound hunter program, France had as many as five with names like

Aux Quatre Vents, Chasseurs de Son and *Magnétophones* [85]. That this involvement of radio networks mattered can be derived from the fact that the French and the Swiss won many of the sound competitions [86], even though these countries had a low percentage of households with a tape recorder.

In the mid-1960s the NVG met with financial troubles, but the nature of its pursuit became less clearly defined as well. In 1962, at a general meeting of its members, the possibility of changing the society's name was raised, but its playful, sporty element was still valued by many [87]. Four years later, however, there was no more escaping: the 'perhaps frivolous sounding name' of Society of Sound Hunters was discarded in favor of the 'serious' Society of Sound and Image Registration (*Vereniging voor Geluid- en Beeldregistratie*) [88]. This name change reflected the increased attention for slide-sound sequences and video, but it also implied that the society was going to be concerned more with the 'artistic side of the tape hobby' [89]. The change from 'hunt' to 'art' was also reflected in the articles its periodical published. In the 1970s, for instance, it printed a 'tape recorder workshop' by Herman Broekhuizen [90] and Wim van Bussel that addressed the potential of 'abstract sounds'. These sounds, which could be generated by slightly abusing the recorder, might be used 'in a radio play, but also … in separate sound compositions, also referred to as "Musique Sonique", or, in short, "sonic" '. This was, the authors claimed, a 'very contemporary, literally unrestricted creative form of expression and therefore it opens up broad perspectives, especially to modern, exploration-minded man. Sonics involves the playing with sound and rhythm, with pitch and volume, whereby the tape recorder is center-stage' [91]. In another context, Broekhuizen also advocated 'a modern approach to sound hunting that certainly does not stop in recording natural and realistic sounds'. The point was to generate a 'creative whole' that 'was striking or even shocking to listeners' [92].

In the NVG, however, this new attention for the artistic dimension did not lead to a revival of the sound hobby; nor did tape recorder hobbyists move toward the kind of creative sound realizations that were to be developed in other contexts. Since the NVG was no longer able to publish its *Bandopname* on its own, given a lack of funds and contributions, this periodical was put into the hands of a commercial publisher in 1967, after which the attention for slide projectors and video recorders rapidly increased. In 1970 the baton was handed to *Toon en Beeld*, a 'Popular Journal for Audio-Hifi-Stereo and Video', which was no longer officially tied to the NVG. In time, however, the society got its periodicals back again, including *Diatoon*, a separate journal for the NVG members with a major interest in slide-sound sequences. In 1986 it reported that only about a quarter of its membership could still be identified as 'real sound hunters' [93].

Through the years, the NVG nevertheless continued to build its sound archive, which was started in the 1950s and currently contains some 4,600 sounds. The make-up of the archive betrays a more decontextualized perspective of sounds than was reflected by the emphasis on realist recordings. The archive's catalog lists information on the source of the sound, the length of the fragment, and in some instances also about its meaning and quality, but nothing about the recording date or location. In this archive, then, the sounds primarily function as collected artifacts:

0:17 Anvil—smith at work, hitting on iron (distorted)

0:56 Roller coaster—shouting, heard in carts

0:59 Air conditioning—also: large fan

This is tied to the archive's pragmatic function: the sounds are meant for use in radio plays, sound collages, radio reports, slides and movies. In these contexts, sounds mainly function as 'signs'; one sound may refer to two different objects and the sounds are often quite stereotypical. There are, for example, eight different versions of men who moan, snore, burp, hawk, shout, bellow, whistle and throw up. When women laugh, they 'giggle', 'cackle', laugh 'exaggeratedly' or 'chicken-like'; similarly, they yell or sigh in four different ways.

By far the largest category of sounds, amounting to nearly 40%, is that of transport and technology. There are, for example, over 250 sounds that refer to automobiles or car racing. In addition to the sounds of consumer appliances, like lawn mowers, hair dryers, telephones and Hoovers, the archive also has many science-fiction sounds, including that of an 'UFO' that lands on the 'spire of a church'. Clearly, the sound hunters pricked up their ears when it came to the more imaginative forms of technology. As a whole, however, the NVG archive is rather a reflection of the sound hunting effort of the past than that it betrays recent vitality. Today, the archive's sounds are mostly used in slide-sound sequences.

The Diminuendo of a Pastime

The introduction of the compact cassette recorder in 1963 signaled the beginning of the end of sound hunting because the cassette did not allow montage, according to Mark van der Kloet, board member of the NVG. Dutch sound hunters were indeed quite critical of the cassette recorder. A 1972 publication of the NVG claimed that although it might be 'a tricky, yes even … a desperate job' to put on a new tape on a tape recorder, for the true recording hobbyist the 'closed cassette' with its hidden tape 'precisely obstructed creative expression. It entirely precluded tape editing. For lovers of quality, too, the cassette system offers little perspective, at least not yet right now'. But, as this same publication argued, the cassette recorder was not just 'useful to those who view the recorder mainly as a music box'; given its 'practical, small lightweight system', sound hunters might employ it for 'mobile use and outdoor recordings' or for dubbing sound fragments to the tape equipment. At the same time, the cassette recorder's evident drawbacks were pointed out: in the absence of a counter and a fast-winding system, particular sound fragments were all but easy to trace swiftly, and 'putting a specific passage in front of the recorder head accurately to the millimeter was quite difficult' [94].

If the cassette recorder's introduction opened up several new opportunities for sound hunters, more advanced tape recorders were still put on the market as well, albeit in smaller numbers. It mostly involved luxury models with gimmicks like remote control, a high frequency range, high-frequency pre-magnetization, fast-winding speeds, various input and output resolutions and quartz-driven direct-drive motors. Thus the tape recorder did not disappear: those who wanted it as hobby could continue to do so.

Similarly, the argument that the tape recorder hobby got the short end of the stick because the cassette recorder better fitted the mobility-minded and popular music-oriented youth culture of the 1960s is valid only in part. The compact cassette recorder was developed in a Philips laboratory in Hasselt (Belgium), after the example of the four-track cartridge from RCA, introduced in the US in 1958. Philips engineer L. Ottens felt that a cassette that was easy to handle constituted 'the perfect solution' for the inconveniences of common tape recorders, such as having to wind a tape back and forth all the time or putting on a new tape [95]. The development of cassettes was also in line with the design philosophy of the Hasselt laboratory: gramophones and

recorders had to be as small, portable and inexpensive as possible. This became clear to Philips from the success of the EL 3585, the convenient tape recorder that was issued in 1961. The Philips compact cassette recorder of 1963 was also highly successful. In 1965 the sales of cassette recorders, compared to the year before, increased nearly fivefold [96].

These data reveal, however, that the success of the EL 3585 tape recorder *preceded* the introduction of the cassette recorder and that its very success in fact contributed to the development of the compact cassette recorder. Moreover, as a small-sized tape recorder, the EL 3585 was equally meant to cater to the new lifestyle of people who spend an increasing amount of time away from home, as well as to the new group of young, music-loving consumers. For some time already the same was true of the transistor radio, as studies by Michael Schiffer on the United States and Onno de Wit on the Netherlands indicate [97]. This suggests that it was user-friendliness—rather than portability or being inexpensive—that most distinguished the cassette recorder from the tape recorder. Also, Morton's thesis that people found out that the tape recorder hobby consumed more of their time than they were willing to invest in it is tautological: it suggests that the hobby was no success because people did not enjoy it. All hobbies require the investment of time. It does not explain, however, why the tape recorder hobby failed to gain a wide following. It *is* true, though, that when consumers discovered that others did nothing with their tape recorder, they were less inclined the buy one themselves, as was argued in a Philips report [98]. But the issue remains why the tape recorder hobby failed to catch on, or, in other words, why the many strategies of the manufacturers and promoters did not succeed in establishing a connection between the tape recorder hobby and the already established hobbies.

Concerning the analogy with photography it is striking that this hobby itself was modeled after painting: photos were framed, galleries organized exhibitions and sold photos, and photo exhibitions were reviewed in newspapers and periodicals. For sound 'snapshots' such model practice did not exist. Nor was it possible to pass sounds, like photos, from hand to hand at parties or to hang them on the wall. Moreover, collecting everyday sounds, unlike collecting paintings or stamps, had no element of financial investment: although there was a market for gramophone records with sound effects, the value of sounds did not increase with time.

The establishing of a connection between the new tape recorder hobby and the existing hobby culture, then, proved harder than the ads seemed to suggest. In addition, as the 1960s progressed, the number of situations in which a tape recorder could be functional decreased. For instance, corresponding by means of sound tapes was mainly promoted as a way to maintain emotional contact with relatives oversees. By the mid-1960s, however, the number of people who emigrated from the Netherlands began to drop. Of course people still wanted to know how their faraway children and cousins were doing, but the phenomenon itself received less attention, while it also had become easier to travel and visit distant relatives. Next, the emphasis on the tape recorder as a fairly strict instruction or self-correction tool in music-making and language acquisition will have appealed less to consumers at the end of the 1960s, as the notion of self-development had increasingly become imbued with a sense of liberation and casualness. Furthermore, technological changes challenged certain aspects of the tape recording hobby; as the equipment became more sophisticated and its sound more true to nature, the recipes for imitations were less effective, as one who spoke from experience told *Toon en Beeld* in 1970. Peas on a tin plate, he felt, did not sound like rain, but 'like "throwing peas on a tin plate" ' [99]. This was perhaps the beginning of

the demise of the radio play [100]. Finally, the heroism of making outdoor recordings declined, as technically speaking it had become much easier to realize recordings, for instance, through the introduction of the remote microphone in 1963.

For those most active among the tape recorder hobbyists, the sound hunters, the *hunt* for sounds (as well as editing sounds) was what mattered most—not the tinkering with technology. But the hunt itself became less prominent as the 1960s evolved, and by dropping it is a guiding metaphor of their activity the sound hunters also lost their identity in part. The alternative of *artistic sonics* emerged outside of the sound hunting world, in circles of avant-garde composers and radio artists [101]. The sound hunters were only in contact with these circles indirectly, through professional radio. But in the mid-1960s, on the initiative of the broadcasters, this institutional contact was basically discontinued.

Finally, the appreciation of sounds itself shifted. The interest of the sound hunters for everyday sounds made perfect sense within the context of the domestic culture of the 1950s, but it tied in less naturally with the Dutch cultural climate of the 1960s, in which making trips and going on vacation abroad became common pastimes. Moreover, in the late 1960s the admiration for the noise of the modern era, as exemplified by the reports and articles from sound hunters, became less widely shared. Although sound hunters also pursued the sounds of nature, in their publications their enthusiasm for urban sounds was most evident. Machines like cars, trains or trams were interesting objects to pursue, precisely because of their speed and loudness. Furthermore, these sounds, as in the UNESCO example of street and port noises, were deemed characteristic for contemporary life in the Netherlands. Noisiness still hardly seemed a concern, and the hunters even exploited the sounds of construction work, factories, airports and traffic eagerly. This too made sense in the context of postwar 1950s culture: housing construction and industrialization were major priorities, while the sounds of traffic and airplanes embodied the new spirit. That the European tape recorder books were written in a more serious tone than the American ones can be situated in this same context.

This penchant for urban, industrial and traffic sounds did not remain unproblematic, though. One article about the potential of sound recording in Amsterdam in 1968 began as follows: 'When in our newspapers we read about sound these days, it is mostly in a negative sense. Our modern society is constantly under attack by sound; that is to say, by noise nuisance: roaring jet airplanes, sputtering mopeds and squealing transistor radios, just to name some of the major quietude-disturbing sources'. It hardly seemed a coincidence, for at that time the rising environmental movement first began to view noise as a form of pollution [102]. 'And yet, amidst this noisy décor of sounds there are still some that are worth listening to and … recording', the same article goes on. These included carillons, street organs, the market, the zoo, the neighborhood fair, the port and fireworks, but the noise of streets, traffic, construction and the airport were no longer mentioned [103]. This is not to suggest that urban sounds were never mentioned as suitable for recording anymore, but they had definitely lost their earlier prominence. Strikingly, the NVG's most recent new regional section on sound, established in 1970 in Twente, almost exclusively focused on recording nature sounds.

Conclusion

The fate of sound hunting in the Netherlands may well be summarized with recourse to the notion of 'remediation'. Media theorists Jay David Bolter and Richard Grusin

introduced this concept to underscore that successful new media often incorporate elements from the practice of older media [104]. Thus photography remediated painting; film remediated photography and drama; television remediated film, drama and radio; and the Internet remediated television. But that which for hobbyists tape recording remediated most successfully, gramophones, was also done by radio and cassette recording. And efforts at remediating photography, written correspondence, imitative radio play or painting 'with sound' failed.

This remediation theory does not explain, however, why in specific cases remediation fails or succeeds. In our case, as we have seen, the explanation of the demise of sound hunting in the Netherlands depended on a consideration of several social and technological changes in the 1950s and 1960s, including changes in the culture of sound and the role of the hobbyist. The analogies with photography, letter writing, making radio plays and composing music fell short because the experience of sounds, unlike that of photos, could not be shared as easily, because emigration was no longer as prominent a phenomenon in Dutch society, because high-fidelity unmasked imitation and because abstract sonics was socially a bridge too far for the sound hunters. The analogy of the tape recording hobby with hunting was active longest, until the hunt became less exciting, the appreciation of everyday and technological sounds, or the culture of sound, shifted and the hunting metaphor was dismissed as too frivolous by the sound hunters themselves.

Significantly, as a hobby sound hunting produced most quality where it was tied to the world of professional radio, thus remediating radio: in France and Switzerland. Gung-ho hobbyists can serve as intermediary between professional-artistic practices and the mass of consumers, much in the same way as serious photo hobbyists form a link between photo art and the crowd that merely takes snapshots. These photo hobbyists, in terms of their ideals, are geared toward art, but they also may inspire those who take snapshots or help them with advice. The Dutch sound hunters, however, fell between two stools. While Philips especially approached the 'early adopters' of tape recording as makers of family albums and virtuoso hobbyists, those who were most interested among the early users focused on the hunt and action—an obvious mismatch. And when sound hunters wanted to switch from hunting sounds to making radio art, radio withdrew from their world. In both phases, then, the sound hobbyists could not serve as a link between existing model practices and large-scale adoption of their hobby.

In the course of the 1970s the NVG membership that primarily had an interest in sound declined, while the number of members who worked with slide-sound sequences went up. It would be misguided, though, to view this as underscoring the victory of image over sound. Although nostalgic, critical, creative and exploratory listening did not survive within the context of tape recording as hobby, millions of people meanwhile listen to music on their car stereo, walkman or hi-fi set, in an effort to make their dynamic everyday life manageable. With the help of new technology, a small group of members from the new NVG, the Society for Sound and Image Registration, has made appealing sound collages. Moreover, in recent years museums increasingly exhibit sound-producing installations and computer sound projects as artworks, and this has given rise to a distinct, new model practice, which might appeal to young people as well. For the new NVG this could well offer a fresh opportunity to expand its membership once again.

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NOTES

[1] The title of this paper is derived from: C. F. Ruyter, *Wat doe ik met m'n bandrecorder …? Toepassingen en gebruiksmogelijkheden, alsmede praktische wenken voor de aankoop van uw bandrecorder* (Bussum, 1972; originally 1968).
[2] Geluiden kan men steeds gebruiken, *Geluid + Band, BASF Mededelingen voor Geluidsbandvrienden*, 16 (1964), p. 6.
[3] Archives Nederlandse Vereniging voor Geluid en Beeldregistratie, Wassenaar (Archives NVG), File No. 20, *De Geluidsjager. Publikatie voor iedereen die belang stelt in tape-recording*, S.n. (1968), p. 1.
[4] C. G. Nijsen, *The Tape Recorder: a complete handbook on magnetic recording* (London, 1964), p. 134.
[5] In 1969, when membership rates reached its height, the NVG had 1,552 members. Nowadays the membership rates varies between 500 and 600. See Membership Overview NVG 1960–1999 and the interview of Karin Bijsterveld with the NVG members Mark van der Kloet, Peter Turenhout and Cor Nierse, 21 February 2003 (hereafter: Interview KB with NVG). In the mid-1960s, the British Federation comprised 150 clubs, with 10 to 100 members per circle; see Nijsen, *The Tape Recorder*, p. 133. Yet one of the founders of the British Federation, Douglas Brown, claims that the Federation had, at its height in the mid-1960s, over 25 clubs, with 200–250 members each (personal communication by e-mail, 18 September 2003).
[6] Informal interview of Karin Bijsterveld with Mark van der Kloet, Wassenaar, 21 February 2003 (hereafter: Interview KB with MK).
[7] D. Morton, *Off the Record: the technology and culture of sound recording in America* (New Brunswick, NJ and London, 2000), p. 169.
[8] Morton, *Off the Record*, p. 12.
[9] Interview KB with NVG.
[10] Interview KB with MK. See also: *De Geluidsjager* (hereafter: DG), 8 (April 1961), p. 3.
[11] Philips Company Archives (PCA), File No. 811.232, brochure 68/C/4489, especially 4/53. See also F. Purves, *The Philips Tape Recording Book* (London and New York, 1962), p. 31. See for the price of the EL3530: *Radio-Bulletin*, 22:12 (1953), p. 750.
[12] Purves, *The Philips Tape Recording Book*, pp. 31–34.
[13] *Kroniek der Elektrotechniek*, 3:5 (1958), p. 51.
[14] PCA, File No. 811.232: 822, Recorder Market July 1967, C.V. &P. Market Research, pp. 2–10.
[15] PCA, File No. 811.232: 822, G. Arnesen and G. Arno, Prognosis for the sales of tape-recorders 1965–1968, for Denmark, 16 December 1964, Copenhagen, p. 3.
[16] PCA, File No.. 811.232, Type EL 3510, brochure 69/c/4934 N 7/54, 1954.
[17] Ibid., Type EL 3511, Brochure Enkele van de vele toepassingsmogelijkgeheden, 1956.
[18] Ibid., Type EL 3516, Brochure No. 10.1958.
[19] J. M. Lloyd, *The All-in-One Tape Recorder Book* (London and New York, 1975; originally 1958), p. 9.
[20] H. L. Koekoek, *Het bandrecorderboek* (Amsterdam, 1968), p. 91.
[21] W. van Bussel, *Prisma Bandrecorderboek* (Utrecht/Antwerpen, 1965).
[22] PCA, Philips Advertenties, 1960–1969, Type EL 3541, 3541 H, Ad No. 2 4574, 1962.
[23] Morton, *Off the Record*, p. 139.
[24] Nijsen, *The Tape Recorder*, Introduction.
[25] De bandrecorder als hobby-object, *Bandopname* (hereafter: BO) September 1963, p. 35.
[26] Koekoek, *Het Bandrecorderboek*, p. 93.
[27] BO, December 1964, p. 289.
[28] Van Bussel, *Prisma Bandrecorderboek*, p. 134.

[29] PCA, File No. 811.232, Type EL 3516, Brochure 10.1958.
[30] PCA, Philips advertenties, 1960–1969, Ad 'When the saints', 1962.
[31] Purves, *The Philips Tape Recording Book*, p. 135.
[32] *Op geluidsjacht. Een speurtocht naar alles wat met geluidsband BASF in verband staat*, S.n. (1963–1966), p. 53. See for the imitation of sounds also: H. D. Weiler, *Tape Recorders and Tape Recordings* (Mineola, NY, 1956).
[33] Ibid., p. 114.
[34] PCA, File No. 811.232, Type EL 3511, Enkele van de vele toepassingsmogelijkheden, 1956.
[35] H. Knobloch, *Der Tonband-Amateur. Ratgeber für die Praxis mit dem Heimtongerät und für die Schmalfilm-und-Dia-Vertonung* (München, 1963; originally 1954), pp. 152–154.
[36] *Geluid + Band, BASF-Mededelingen voor Geluidsbandvrienden*, 16 (1964), p. 13.
[37] PCA, File No. 811.232, Type EL 3538; brochure for the retail trade EL 3542 and EL 3536; Type EL 3527 and 3516-G, 70.153 B/E-6/60, 1960.
[38] PCA, Philips advertenties, 1960–1969, Series Ads EL 3585, 1962.
[39] PCA, File No. 811.232, EL 3585, 70.164/Eng/9-61, 1961. See also EL 3585, 70-181B/E-5-'61, 1961; EL 3585, 70.271 B/E—8/62, 1963.
[40] Ibid., EL 3586, 70.453 B/E'11-64, 1964; EL 3587, 3922.981.117 4.1. See also cover *Bandopname*, August 1963.
[41] N. Gobits and H. Broekhuizen, *Avonturen met een bandrecorder* (Bussum, 1969; originally 1964), p. 5.
[42] Purves, *The Philips Tape Recording Book*, pp. 131–132.
[43] Van Bussel, *Prisma Bandrecorderboek*, p. 7.
[44] De bandrecorder als hobby-object, BO, September 1963, p. 35.
[45] PCA, Philips Advertenties, 1960–1969, respectively, ad 34559, June 1963, p. 342; 34560, July 1963, p. 406; 34561, August 1963 (without page number).
[46] K. Lipartito, Picturephone and the information age: the social meaning of failure, *Technology and Culture*, 44:1 (2003), pp. 50–81.
[47] This process already started between 1870 and 1910. See S. J. Douglas, *Listening in. Radio and the American Imagination from Amos 'N' Andy and Edward R. Murrow to Wolfman Jack and Howard Sterne* (New York, 1999), pp. 14–15; Kristen Haring, The 'freer men' of ham radio: how a technical hobby provided social and spatial distance, *Technology and Culture*, 44:4 (2003), pp. 734–761; S. Waksman, California noise: tinkering with hardcore and heavy metal in Southern California, paper for *Sound Matters. New Technology in Music*, Maastricht, 15–17 November 2002.
[48] W. A. Smit and E. C. J. van Oost, *De wederzijdse beïnvloeding van technologie en maatschappij. Een Technology Assessment-benadering* (Bussum, 1999), p. 114.
[49] Interview KB with MK; interview KB with NVG. Die achtergrond is ook af te leiden uit de korte portretten van leden die aanvankelijk in *De Geluidsjager* werden opgenomen.
[50] Joop Goossen, Verleden, heden, toekomst, *NVG-Nieuwsbrief*, 17:5, p. 20. **Q1**
[51] DG, 5 (August 1960), p. 4.
[52] DG, 8 (April 1961), p. 2.
[53] DG, 8 (April 1961), pp. 1, 15; DG, 5 (August 1960), p. 7.
[54] DG, 1 (1958), p. 2.
[55] Ibid.
[56] DG, 2 (1959), p. 7.
[57] Ibid., p. 5.
[58] Ibid., p. 14.
[59] DG, 5 (August 1960), p. 7.
[60] Ibid., p. 22
[61] DG, 8 (April 1961), p. 13.
[62] DG, 9 (July 1961), p. 3.
[63] Interview KB with NVG. See also: Over de transistor-recorder en nog meer …, BO, April 1962, pp. 9–10, and Geluidsjacht in het vrije veld, BO, September 1963, pp. 21–23.
[64] Archives NVG, File No. 76, CIMES 1958, documentation about 'Insomnia' of Roger-Paul Besancon.
[65] Op alle sporen, BO, April 1962, p. 3.
[66] DG, 6 (December 1960), p. 8.
[67] Geluiden kan men steeds gebruiken, *Geluid + Band*, 16 (1964), p. 6.
[68] H. Anpacher, Hoorspel-band-knipsels, *Toon en Beeld*, 5 (1970), p. 170.

[69] Douglas, *Listening in*, p. 34.
[70] DG, 5 (August 1960), p. 7.
[71] Ibid., p. 10.
[72] Devies van de N.V.G.: Doe meer met je bandrecorder!, *5 jaar geluidsjageractiviteit in Nederland, 1956–1961* (jubilee issue *Bandopname*), pp. 3-7; p. 6.
[73] Wenken voor het maken van wedstrijdbanden, BO, January 1962, p. 6.
[74] Geluidsjacht in het vrije veld, BO, September 1963, pp. 21–23; p. 21.
[75] De batterijrecorder heeft ongekende mogelijkheden, *5 jaar geluidsjageractiviteit in Nederland*, pp. 24–25; p. 24.
[76] Muziek en geluidseffecten, BO, January 1964, p. 42.
[77] U. Zindel en W. Rein, *De radiodocumentaire. Een handboek voor radiomakers* (Hilversum, 2000), pp. 19–21.
[78] Zindel and Rein, De radiodocumentaire, p. 27.
[79] Henny Visser, Toekomst ja!, *NVG-Nieuwsbrief*, 17:5 (1996), pp. 8–14.
[80] DG, 2 (1959), p. 1; 4 (1960), pp. 19–20.
[81] DG, 4 (1960), p. 19. BASF also financed *Phonorama*.
[82] R. van Wezel, Geluidsjagersprogramma's. Geen eenvoudige zaak, *5 jaar geluidsjageractiviteit in Nederland*, p. 35.
[83] Interview KB with MK.
[84] DG, 1:1 (1958), p. 3; Radio-uitzendingen voor geluidsjagers, BO, February 1961, p. 17.
[85] BO, May 1963, p. 9.
[86] Interview KB with NVG.
[87] Op alle sporen, BO, April 1962, p. 3.
[88] Verenigingsnieuws, BO, January 1967, pp. 14–15; p. 15.
[89] Een nieuwe koers, *NVG-Nieuws*, 17:5 (1996), p. 25.
[90] Herman Broekhuizen was head of the department Youth Programs of AVRO radio and founder of the *Miniatuur Jeugdomroep Nederland* (Minjon) that trained young radiomakers.
[91] H. Broekhuizen and W.van Bussel, Bandrecorderpracticum, *Toon en Beeld*, 3 (March 1970), pp. 88–90.
[92] H. Broekhuizen, Schilderen met geluid, *Toon en Beeld*, 5, p. 169. **Q2**
[93] P. Willems, Even stilstaan bij dertig jaar NVG, *NVG-Nieuws*, 7:5 (1986), pp. 4–5; p. 5.
[94] *Geluid-en Beeldboek* (Amsterdam, 1972), pp. 10–11. This book was published by the NVG.
[95] I. J. Blanken, *Geschiedenis van Koninklijke Philips Electronics N.V. Een industriële wereldfederatie* (Zaltbommel, 2002), p. 295.
[96] Ibid., p. 298.
[97] M. B. Schiffer, *The Portable Radio in American Life* (Tucson and London, 1991); O. de Wit, Techniek als cultuurverschijnsel. De transistorradio, Philips en Hilversum in de periode 1950–1970, *Tijdschrift voor Mediageschiedenis*, 4:1, pp. 87–107.
[98] PCA, File No. 811.232:822, Arnesen and Arno, Prognosis, p. 4.
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