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OUR HOUSES ARE EVER MORE CROWDED... THE CONSEQUENCES OF THE SONIFICATION OF TECHNOLOGY

A home is not only a place for living – a panoply of things rich in symbols and meanings, a space with importance for the human identity and shared with people we consider close to us – it is also an acoustic space. Like every aspect of the changing world, it is being transformed, and how houses sound today is not only an aesthetic issue but also an important aspect of our daily existence. In this article, I would like to focus on a small fragment of the transformations that the sonic aspects of the home are currently undergoing, namely those deriving from new home technologies that make sounds, communicate with us, and listen to us.

Thus I am not interested in a comprehensive analysis of home soundscapes, or in their social differences, but only in how new technologies in the home affect the acoustic experience the home provides. In this text, I will first introduce a conceptual apparatus that could be useful for systematic research, and I will then indicate the significant social consequences of the presence of sound-emitting technologies in homes. I believe that an analysis of the presence of such devices in our homes is cognitively important for three reasons. First, it gives us a pretext to think about an aspect of our home environment – its specific soundscape – that is rarely the subject of scientific reflection. Second, it allows us to capture the transformations of our homes brought about by new technologies. Third, the devices discussed in this article are interesting in themselves as a new kind of entity with which we interact: specific actors located somewhere between objects, machines, animals, and people, and thus extremely problematic in their hybridity.

HOME AUDIBILITY AND LISTENING

Our houses and apartments are full of sounds. Some come from ourselves: each of our actions has its acoustic aspect, no matter how hard we try to make it soundless. When we speak, sing, move, read or write, perform household chores or hygienic rituals, when we have sex, eat, excrete, use media, create artwork, or clean, sonic traces appear. We hear them, and other people do as well: those with whom we share our dwellings, and our neighbors (humans and other living creatures with a sense of

hearing), including those with whom we only share online spaces. Other people – the actors with whom we live – are another source of the sounds in our homes. These actors may be the members of our household or the people right behind the wall, or above or below us. They may also be domestic animals, rodents, or insects living within our houses and apartments. These *soundscape*s also, importantly (Losiak 2015; Schafer 2006), contain *acoustic events* (Schulze 2019) that have their source outside the home – in the public spaces outside the windows (the sound of a passing car, the sounds of the conversations and footfalls of passers-by, the sounds of nature, of public works, of sirens, and of music coming from an undetermined source, and so forth), but also those which have their source in places hundreds of kilometers from our homes (as in the case of music and soundtracks broadcast by mass media and the Internet). A home itself also makes sounds. The materials from which it was made are constantly changing their structure, causing pops, creaks, surprising knocks, and grinding sounds. Moreover, as noted by Karin Bijsterveld (Bijsterveld 2008), along with the processes of social modernization, our homes are also filled with sounds whose source are electricity, sewage, and the water and heating infrastructure. We usually perceive the sounds of these types of systems (noise, gurgling, dripping, squeaking, humming, etc.) to be unpleasant and strange, like all stimuli whose source and cause are difficult to locate and which are beyond our control.

The authors of the article *Sonic Interventions: Understanding and Extending the Domestic Soundscape* (Oleksik et al. 2008) not only scrupulously catalog the sounds present in homes¹ but also point out that, unlike other sensory impressions we experience within them (e.g., haptic, visual, or olfactory), those of an acoustic nature are very short lived, and their availability is (usually) subject to very strict temporal rhythms². They de-escalate at night, and as the day begins, they increase, reaching their climax during meals together, during preparations for going out, or on returning home, with a certain bustle in the evening, and gradually dying away closer to the night's rest. Additionally, houses and apartments, especially those inhabited by several people, have clear audio delineations. Some spaces are supposed to be quiet (places to work and rest), while others are naturally the loudest (kitchens, children's rooms); some act as soundproof booths, which should not make any noise, such as toilets or bedrooms³.

¹ They list the following categories of sounds present in our homes: sounds accompanying the operation of household appliances, sounds from the media, speech, non-verbal sounds made by people, alarms, sounds made by musical instruments, sonic ornamentations (fountains, bells and other decorations playing in the wind), sounds made by pets, external sounds, sounds made by neighbors. As you can see, the list is not complete and has been extended in this article.

² It is also worth noting that in some cases – such as, for example, in living on a busy street or in the vicinity of a railway line, airport, or factory – the acoustic experience is continuous and sometimes uninterrupted for the entire life span of the individual. In such cases, as always when we are exposed to a stimulus for a long time, we stop perceiving it; we become desensitized, becoming so familiar with the sounds that they become silent.

³ Of course, these are only expectations of how such spaces should function. In practice and in the case of multi-family housing, they are very difficult to meet.

Others are places created to allow easy listening (this is the function of living rooms, open kitchens, and halls or lobbies where we receive those who come to our homes from the outside). In our homes, there are also places where noise can be made freely (workshops, basements, audio-visual rooms) and places where nobody is bothered that we are talking only to ourselves.

Household members also regulate the intensity and nature of sounds reaching them by opening or closing doors and windows, by negotiating the time, place, and intensity of sounds emitted by others, or by isolating themselves in *sonic cocoons*, for e.g., thanks to headphones, earplugs, pillows pressed to their ears, etc. (LaBelle 2010).

The sounds we experience in the home space share most of the functions with other stimuli of this kind: they inform us of certain changing states of reality, warn and alert us, enable interpersonal (and also interspecies) communication, provide aesthetic and ludic impressions, and so forth (Baldwin 2012). This multiplicity – and the indisputable importance – of the role of sound means that we constantly monitor the auditory space and concentrate on those sounds we consider in some sense important to us. We also have the ability to switch between various auditory events quite easily. Instead of participating in a conversation, we listen to the voices coming from the radio. While listening to the latter, we focus on sounds coming from behind the wall, and during a shared meal we catch acoustic events that originate outside the window (Bakker et al. 2010). As in any other space, we also hear, listen, and hear too much. Sometimes we eavesdrop, or do not listen though we should, or immerse ourselves in acoustic experiences so deeply that we stop reacting to what is happening around us, and so forth. Our attitude toward the audial layer of experiences at home is therefore also passive (the reception of sounds) and active (the selection of sounds, switching between various sound events, interpreting them, investigating their source and causes). The above findings show that the experience of sounds is not an automatic process, and that it does not result solely from how the human hearing apparatus is constructed. On the contrary, it is also regulated by what Holger Schulze (Schulze 2019) calls *sonic patterns*⁴. This term signifies socially shared beliefs about what individual objects, actions, and situations should sound like, thus allowing us to assess whether their currently emitted sounds are in line with our expectations. Sonic patterns define the right place and time for specific acoustic events, the categories of actors authorized to evoke them, the specificity (the intensity, duration, hue, or frequency) of sounds, and also how we should interpret and evaluate them. It is the presence of these patterns that also causes some people to speak too quietly or too loudly (for us), for cars to roar instead of just purr, and certain

⁴ This does not mean determination, of course, but rather the co-conditioning of hearing by such patterns. How sounds are heard is very subjective and is not only associated with greater or lesser sensitivity to them, the ability to distinguish and interpret them, but is also extremely strongly related to our memory and to experiences that affect how we react to individual sound events. Of course, there is also a very objective aspect of experiencing what is acoustic – after all, we only hear sounds of a certain frequency, while those with too high an intensity always damage our hearing (see Keizer 2010).

conversations to be interpreted by us as whispers or brawls⁵. These patterns also determine whether home acoustic landscapes are a source of comfort or discomfort to us and are therefore one of the most important sensations in the context of the dwelling (Skowrońska 2015).

From the presence of such sonic patterns, it can be concluded that there are also generalized acoustic imaginings of the home which not only allow an individual to distinguish this place from others in auditory terms, but also create expectations in regard to the space the individual currently inhabits. According to the still prevailing bourgeois image (which is only contested by certain enclaves), the home is a kind of a sonically sealed cabin in which the only acceptable sounds are those the individual inhabiting this space has allowed. A home, including in auditory terms, should be an expression of an individual's ability to control existence, subjectivity, and agency, and thus the homeowner should be able to decide how this space sounds. In connection with the high density of life in modern societies, with the presence of close neighbors and the consequent shared auditory sphere, it would seem that the commonality of this ideal means that the most frequent cause of discomfort in urban settings (especially in multi-family housing) and the most significant source of conflict – including the most frequent reason for police interventions – is noise disturbance: the production of sounds unwanted by others, like playing too loud music (or music inconsistent with others' tastes) (Keizer 2010).

TECHNOLOGIES IN THE HOME – AN ATTEMPT AT ORGANIZATION

The technologies present in our homes can be organized in several different ways, including, first, by their general purpose. The application of this criterion allows us to distinguish two basic groups of appliances in our homes: all the instruments that help us meet our needs; and equipment whose use is an end in itself, providing a variety of pleasures. The former includes all the instruments that help us clean, wash, cook, provide fresh air at a certain temperature, store food, prepare drinks, serve meals to the table, control our body weight, maintain hygiene, segregate garbage and get rid of it, and so forth. The second group includes all technologies for entertainment and communication, especially when their purpose is communication – keeping in touch – and not warning or conveying a specific kind of information. Of course, the line between these two types of technology is fairly fluid. Ethnographic research shows that observing the work of the latest technologies is sometimes a source of fun or autotelic pleasure. Autonomous devices in particular fascinate us with the fact that they seem to be subjective, but we also wonder about the way they work, and it is intriguing that we interact with what is new and represents technological progress

⁵ Iwona Kabzińska writes very convincingly about the subjectivity of experiencing the tension between silence and noise in the article *O ciszy i hałasie, ich doświadczaniu, definiowaniu i sposobach opisywania* (Kabzińska 2018). She also draws attention to sensitivity to sounds, which creates significant adaptation problems (Kabzińska 2017).

in itself (Sung et al. 2007). It is also not difficult to imagine the extremely instrumental use of devices whose primary function is to provide entertainment – such as when a parent uses them to keep a child busy, or when we use them to pursue professional goals (as in the case of a music or film critic, an e-sport player, or network influencer).

A second possible division concerns the nature and operating method of the piece of technology; it would allow tools⁶, instruments⁷, and appliances⁸ in the home space to be placed in separate categories. Machines, including automatic machines⁹, are sub-types of appliances¹⁰. A characteristic feature of the changes taking place in recent years in the composition of the technologies present in our homes is the replacement of tools and devices by appliances and the equipping of these appliances with some form of automation. This means, for example, replacing a knife with an electric knife, a rotor washing machine with an automatic one, and also equipping all tools, devices, and appliances with functions of an automatic nature. Most of the equipment present in our homes has some form of notifier, timer, or meter for specific conditions. As a result, an implement such as, for example, a fork, may become an automatic measuring device that measures the calories we consume and signals that we are eating too quickly¹¹, or an appliance such as a refrigerator might inform us that we should restock a product and might order independently (after confirmation that we have purchased the item)¹².

A third division that can be made when trying to organize technologies present in the home relates to how individuals control them: directly or remotely. This distinction allows us to distinguish three categories of appliances: those we control directly and whose operation requires our direct presence (such is the nature of a kettle or frying pan); those that have the ability to control changing states and inform us about the beginnings, stages, or endings of the tasks they perform and demand our intervention (e.g., an oven whose timer informs us about the end of baking and the need to take the dish out); and finally those that can be controlled remotely via the Internet, to which they are connected (e.g., turning on the heating remotely so that the house we enter is warm) or by programming the implementation of specific activities when we are away from home or asleep (such is the nature of robotic vacuum cleaners or bread-baking machines).

⁶ Tools are simple material objects that require human strength to use and serve either to effect a change in reality or prevent it, for example, a knife, pan, pestle, grater, etc.

⁷ Instruments are simple objects whose use requires human activity and that are used to access certain objects or check certain states of reality, for example, a ladle, glass, thermometer, etc.

⁸ Appliances are all types of objects characterized by a certain complexity and serving to change or obtain access to reality, for example, a refrigerator, oven, bathroom faucet, etc.

⁹ Machines are instruments based on some mechanism for transferring energy to work, for example, a blender, an electric coffee machine, a grinder, etc.

¹⁰ Automatic machines are all kinds of machines that operate automatically or partially automatically, for example, washing machines, bread-making machines, autonomous vacuum cleaners, etc.

¹¹ See HAPIfork: <https://www.hapilabs.com/product/hapifork>.

¹² See Family Hub of the Samsung company: <https://news.samsung.com/pl/family-hub-lodowka-wymyslona-na-nowo>.

Along with the development of what is known as the Internet of Things (Nag et al. 2019) and the idea of the smart home (Park et al. 2003), the number of devices of the latter category is growing in homes, which is considered to mean an expansion in the scope of control that people exercise over their homes, for greater efficiency and time savings. It can easily be imagined that all these benefits of remote control are relative and carry a whole range of inconveniences: extending the time needed to maintain and set the devices, the high level of skill needed to operate them, their unclear method of operation (making individuals dependent on experts), the ease with which they can be hacked, and their use as yet another means of collecting information about consumers.

The last division I would like to propose is directly related to the subject of this text and concerns the sound events that come from technologies present in the home. The use of some of them is accompanied by sounds dependent on the specificity of the materials from which the objects were made – this applies in particular to simple tools and devices. We perfectly recognize the sounds of a companion pouring water into a glass, beating eggs for scrambled eggs, cutting bread, or hammering a nail into the wall. However, even with such strictly referential sounds, we are dealing with attempts to improve them – to mute or change their sound¹³. In the case of other devices, the sounds they make are primarily the result of the operation of drive units that are invisible to us and that activate these devices. Importantly, for a long time the noise they caused was not treated as something unpleasant; on the contrary, it was equated with power and treated as an important feature proving the high quality and efficiency of the particular device (Cleophas, Bijsterveld 2012). It was only with time and the growing tendency to soundproof homes – when soundproofing came to be considered a condition of relaxation, comfort, and, finally, of a home itself – that attempts were made to silence home mechanical devices, and the number of decibels they emit became one of the most important factors determining consumer choices (Altinsoy 2016; LaBelle 2010). Then there is the new type of device that produces sounds that are neither an index of the materials used to create the device, nor the operating noise of their drive units, but are synthetic in nature, added for a certain function: to notify or warn us of something or signal changes in certain conditions. There has also been another manifestation of the addition of sound to home technologies: devices that listen and talk to us have recently been introduced to the market, for example, the Candy company offers a Bianca washing machine¹⁴ that can be controlled by voice commands via a special smartphone application. Moreover, the washing machine gives us advice on the washing programs we should use, their duration, and the amount of detergent needed. There are also at least several types of so-called voice assistants (Google Assistant, Apple's Siri, or Amazon Alexa). With the help of these assistants, and by means of smartphones – of whose software they

¹³ An excellent example are all the kinds of soundproofing mats that are made of thin metal and are installed under a sink to reduce the sound of water hitting it.

¹⁴ On the subject of this product, see https://www.candy-domestic.co.uk/en_GB/bianca.

are a part – a person can remotely control home appliances and devices (such as TVs and audio systems, air conditioning and lighting systems, washing machines, etc.), and give voice commands, even from a completely different, often very remote place.

THE CONSEQUENCES OF ADDING SOUND TO TECHNOLOGY

The sound technologies briefly described above are important because they are the source of several new qualities of home soundscapes. I would now like to focus on their description and interpretation.

It is worth pointing out that the presence of various forms of *sonification*, that is, giving sound to what is basically without sound (information, phases of the device's operation, its failure, etc.) by means of synthetic sounds, is an important form of commodification of a dual nature. On the one hand, the sound itself is commodified, being created with the intention of selling it on the market. There is of course nothing new in this: most of the pieces of music with which we are familiar were paid for; some of us (such as actors, lecturers, or teachers) receive money for speaking, while others are willing to spend money to listen to someone (such as in the case of theater productions, radio plays, lectures and presentations, advice and motivational speeches). What is new, however, is that in the case of sonification, sounds that are a kind of shared resource are sold. The commodification of natural sounds (sounds of nature and those resulting from human activity), even when associated with their recording, processing, and multiplication, is undoubtedly a form of privatizing what is common – a kind of audial piracy. On the other hand, commodification consists in the fact that the audiality of home technologies becomes a kind of added value thanks to which certain devices are more often bought than others. As it turns out, such desirability is determined not only by the loudness of the device's operation or the timber of the sounds it makes, but also by other sounds. As sound designers point out, before buying home appliances, consumers not only examine them in terms of their appearance or functionality, but they also tap them, drum on their casings, and press on them while listening for sounds that prove they are made of solid materials. Since the appliances usually are not made of such materials, the materials are selected so that they at least sound like the more expensive ones associated with durability or reliability (Thomas et al. 2019).

The commodification of sounds, which is interesting in itself as an example of how deep the economic exploitation of reality is, also allows us to see another phenomenon, namely what Schafer called “schizophony” (Losiak 2012; Schafer 1973). This is a situation involving the detachment of sounds from their original source and locating them in a completely new context through electro-acoustic replications and long-distance transmission. This question can be understood in the narrow sense and related to music, whose recording and reproduction deprives it of the meanings that resulted from the context of its creation, in the same way that mechanical reproduction stripped works of art of their aura (Benjamin 1996).

However, it can also be understood more broadly, namely as a situation of specific cognitive disorientation that occurs when objects stop sounding as we expect, when that which is voiceless begins to emit sounds, and what is by definition silent (because inhuman) begins to speak to us. Such situations, which arise as a result, among other causes, of the addition of sound to home technologies, can of course provide the ludic pleasure resulting from communing with something new, which we have not experienced before, and thus they fulfill one of the most important consumer needs – the need for stimulation (North 2015). However, I have the impression that by proliferating they also lead to a kind of dematerialization¹⁵ of the objects around us, and thus they take away the sense of security that is so important for our well-being.

Sonification dematerializes the objects we use every day, because it deprives them of the properties on which we based our knowledge of what they are, how and what they are made of, and what relations exist between themselves and between themselves and us. This knowledge was tacit and an effect of the socialization process; it was thus also considered obvious and indisputable, and so we based our actions on it (Krajewski 2013). Adding new properties – in this case, sounds – to objects confuses us not only in regard to specific situations, but also undermines our more general trust in the world. Sonification has very similar effects to manipulating indexal images (such as photography), using dyes and flavorings in the production of foodstuffs, or replacing natural materials with artificial ones.

By this I do not mean to say that our world has suddenly become artificial but rather that it has become less stable (assuming that the basic reality for people is the cultural reality they create, our world has always been non-natural, artificial). Although the resulting uncertainty, which is often treated as a distinctive feature of life in the modern world (Adams 1995; Bauman 2011; Waiton 2008), may be unpleasant as a state felt by individuals, it is also very economically effective. While confusing us cognitively, the market also provides us with tools to heal this kind of anxiety. The market of what could be called anesthetics offers not only earplugs and headphones, or windows and doors that effectively cut off all unwanted sounds, but also the acoustic screening of houses in order to distinguish separate sonic zones, or pharmaceuticals that induce in us a state of soothing indifference (Sutter 2018).

Many of the home audio devices are also examples of what Bernard Stiegler (Stiegler 2010) calls *psychotechnology*. These are technical measures with a dual action:

¹⁵ Dematerialization is not only a practice aimed at reducing the consumption of various materials during production processes, but it also destabilizes the meanings, senses, and functions of the objects we use. As suggested by Slater (1997), destabilization results from each attempt to introduce new goods to the market; it is also visible in the processes of disseminating disposable items and those manufactured on the principle of planned obsolescence, which are extremely perishable, as well as when new functions, possibilities, or properties are added to existing objects. Dematerialization also has its source in the processes of reviewing consumer goods, comparing them with each other, and subjecting them to deep reflection. All these activities mean that the objects cease simply to be; they are no longer just givens, obvious and without alternative. They become problematic in their own way, and therefore they cannot be a solid basis for our everyday activities, for identity, or for a sense of security.

they monitor states of reality on our behalf and, in notifying us of them, force us to action. The simplest example of psychotechnology is a wall clock or an alarm clock. These devices measure time, freeing us from the need to make independent attempts to monitor its flow, and also use mechanical or electronic auditory signals to notify us of its passage and that it is time to do what we planned to do at a specific time (wake up, get up, start a meeting, put something in the oven, call someone, start exercising, etc.).

Some psychotechnologies also make it possible to synchronize the activities of many individuals: for instance, acoustic notifications linked to our calendars and reminding us that we were supposed to do something together; media informing entire populations of the need to begin or cease an activity; or the bells calling us to church. Psychotechnologies are present in most of the automated devices present in our homes: in ovens, washing machines, refrigerators, vacuum cleaners, electric kettles, multi-cookers, air purifiers and, of course, all the media connected to the network. The nesting of psychotechnology in homes may seem of marginal significance at first glance, but on closer inspection it turns out to have some meaningful consequences, which I would like to highlight now.

It seems particularly important that psychotechnologies slacken our body and senses, and delegate the activity of monitoring changing states of reality to machines. On our behalf, the latter listen, measure time and temperature, weigh, and then make decisions about how to respond and inform us what they are doing or what actions have ended. This type of delegation is supposed – and does – save us time, which we can devote to other activities. The problem, however, is that because there are a lot of such devices and they are often used simultaneously, we are placed in a state of vibration, in which separate activities begin to intertwine with each other, and the notifications we receive do not allow us to finish what we have begun. Our activities become discontinuous and fragmented as a result of assigning them to devices that are not synchronized with each other, operate at their own rhythms, and demand our attention precisely when we are doing something else. The paradoxical consequence of delegating some of our household duties to automated devices is our inability to control those duties to the same extent as when we performed them ourselves. But this is not all. Psychotechnologies not only disengage our senses as tools for monitoring reality but also cause our bodies to unlearn the performance of various everyday activities, which, in addition, become very similar to each other. As a result, our adaptation practices involve pressing buttons and audio-visual reduction. The first phenomenon consists in the extreme similarity of all household activities – many are reduced to pressing the appropriate control buttons of the devices that perform them for us. The latter phenomenon causes the multisensory experience of doing the laundry, cleaning, or cooking to become audio-visual, that is, it engages only hearing and eyesight, and primarily eliminates the sense of touch.

I am not in any way passing judgment on this phenomenon, because although our ability to understand the world is largely determined by how full and multidimensional our sensual experience of it is, at the same time it is hard not to notice that

psychotechnologies have not appeared solely as market innovations satisfying our need for novelty. On the contrary, they are also tools for solving real dilemmas related to the complexity of the modern world, including, above all, the need to perform many activities at the same time, to combine household duties, work, and child-raising activities, to be up-to-date and in touch, and to focus on what is important.

Psychotechnologies and the sounds they emit also have another consequence. It can be described as standardization, which is probably the most visible and common manifestation of modernity in all its conceivable aspects (Giddens 2001; Peña 2011): from the cultural aspect (where cultural diversity is replaced by national culture) and educational aspect (where a homogenous curriculum eliminates the multiplicity of socialization experiences), through economic, communication, and technological aspects (where compatibility and the use of similar standards have become a condition of effectiveness), and ending with the legal aspect (where the uniformity of rules, including in the global dimension, becomes a condition for cooperation, exchange, and communication). Psychotechnologies standardize the acoustic spaces of our homes, introducing to them sounds that are very much alike regardless of when and where they are emitted. Such standardization significantly impoverishes our home soundscapes, making the living places of people who are extremely different from each other begin to sound disturbingly similar. This in turn means that sounds lose their distinctive power, which is important because the struggle for distinction involves not only what is visual, but also what is fragrant or acoustic (Bennett 2010; Bourdieu 2005).

Individual social categories have different musical tastes (Wyrzykowska 2018), and their houses sound slightly different, which reflects the differences in the places where they were built, the dimensions of the houses, the specificity of the objects gathered in them, the population density, and the different practices of the household members. If we consider that Bourdieu is correct in pointing out that a legitimate taste is a taste in which distance, harmony, and aesthetic complexity are preferred (Bourdieu 2005; Matuchniak-Krasuska 1988), then we must also assume that houses belonging to people with such taste are rather quiet, devoid of loud noise – their soundscapes are cleansed of “plebeian” music, and of uncontrolled sounds of despair, joy, or quarreling, or of sounds connected with physiological processes.

The acoustic standardization brought about by the development and dissemination of psychotechnology forces people to search for means of differentiating sounds so that they correspond to and signify social differences. It is no accident that acoustic logos (sounds associated with specific brands) or target sounds (i.e., the sounds of devices designed to match the tastes of specific social categories) have become important (Cleophas, Bijsterveld 2012). Both the standardization and differentiation of the sounds of home appliances prove that what seems to us to be an uncontrolled aspect of reality is in fact an object of manipulation undertaken in order to make certain consumer behavior probable. Our houses only seemingly express what we think they should look like (or smell like, or sound like). They are also often a kind of index of preferences of which we are not fully conscious, which are deeply imprinted in our body's inclination to specific reactions, that is, our habituses (Bourdieu 2005).

The addition of sound to home technologies also takes place in a specific context that is worth mentioning here, namely the intense struggle for our attention that is being fought in every possible area and that is especially intense in media networks (Citton 2019): the networks to which we are permanently connected and to which our homes are also connected. The result of these battles for our attention is a saturation of our places of residence with sounds that in the past could clearly not be present there, because they were assigned to distant places, and inaccessible for spatial, temporal, or social reasons.

In our homes, we can hear Paderewski's speech, the sounds of a New York street, the sound of the Amazon forest, the crackling of glaciers, home conversations with loved ones at the Christmas table recorded years ago, the singing of an opera star, the chanting of an excited audience at an alternative concert, the overheard love moans of celebrities, and the completely fictional sounds of the world of the future, created for a science-fiction film. The home soundscape is getting denser and more saturated with acoustic events taking place outside of it, making individual sounds less and less likely to be heard in this sonic cacophony. This, in turn, forces sounds to be modified in order to resemble the kind of alarms that are hard to miss. Many earcons are just like that: it's hard not to hear the annoying squeaking of the washing machine that has stopped working, the pulsating sounds of the coffee machine asking to be cleaned, or the irritating bell of the oven which has reached baking temperature. Such noises must be distinctive and a bit irritating, because this is the only way they have a chance to be heard and that is the only way they can force us to react. In order to be heard and obeyed, home technologies must become more and more insistent. At the same time, the sounds of their operation have been muted. As a result, they become silent as devices and more noisy as actors demanding our attention. Of necessity, we stop treating them as tools that are completely under our control, and we begin to see them as partners in an interaction. Our homes are dominated by an unprecedented tumult, but they have also become crowded with more and more causative beings. The complex outside world, from which we seemingly escape as we enter our home and close the door, catches up with us inside.

CONCLUSION

Wolfgang Welsch, in a text written in 1996 and translated into Polish in 2001, entitled *Towards a Culture of Hearing?* noticed that:

A hearing man is a better person – he is able to enter into something else and respect something else instead of simply dominating it. [...] A culture of hearing would increase the attention we direct towards other people and towards nature; it would be learning, not just decree; combinations and networks – the forms of thinking we will need in the future – are inherently closer to it than the inherited logical segments [...] ¹⁶ (Welsch 2001, pp. 56–57).

¹⁶ Translated from the Polish translation.

This apology of culture, in which hearing rather than seeing dominates, is understandable in its own way after all we have learned in the last century about visual culture and its manipulative, violent, objectifying nature. Welsch himself, however, is aware of the nature of the surrounding acoustic landscapes, their density, overloading, and noisiness, and criticizes them, noticing in them a specific consequence of a visual centricism that leads in this case to neglecting the value of what is auditory. In my view, the sonic dimension of the present is even less optimistic, because in the last decades there has been a process of very intense commercial exploitation of the auditory sphere, a struggle for attention resulting in the cacophonous noise present in every sphere of life and making silence one of the most desirable resources. The issue that I have tried to draw attention to while reflecting on the sonification of home technologies is not the problem of noise, but rather the reduction of the private sphere to the microscopic size of the pillow we place on our head to cut off all the sounds that flow into our homes against our will and resistance. However, the commercial exploitation of home soundscapes is not only dangerous because we no longer control it but also because it makes those soundscapes very unstable and thus undermines our feelings of security, rootedness, and confidence.

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OUR HOUSES ARE EVER MORE CROWDED...
THE CONSEQUENCES OF THE SONIFICATION OF TECHNOLOGY

Keywords: soundscape; home appliances, sonification, sound culture, Poland

This paper discusses the consequences of introducing new sound technologies into our homes. The author is particularly interested in how devices that emit sounds and communicate with us through earcons, acoustic icons, and other forms of sonification change our perception of the home itself, our perception of reality, and our actions. This analysis leads to the pessimistic conclusion that sounded devices only seemingly expand the scope of our control over the world, while in fact they deprive us of certainty.

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