The Solid State of Radio

Dr Sam Coley, May 2021

Abstract

The ephemerality of radio is one of its defining characteristics. Lewis and Booth (1989) memorably described radio as an invisible medium, while Sieveking commented on the "ghastly impermanence" of sound (Hilmes 2013). And yet, the artefact of *a* radio is certainly real enough. This chapter explores the interplay between the physicality of radio and its existence as an intangible medium. It reflects on the attachment that can develop between a listener and their radio, before considering how modern radio manufacturers have influenced this relationship through design and functionality.

An emotional connection is often formed between a radio listener and the programming they enjoy. This sense of regard can subsequently inform a listener's bond with the materiality of radio as an object. Lewis (2000) calls radio a "friend and trusted informant" and, as such, we tend to stick with a reliable model, rather than replace it with the latest design. A radio can also become a totem for other powerful memories, such as past family members, historic events, or perhaps time spent abroad. Whether the radio actually works can be unimportant. The artefact serves its purpose as a symbolic reminder of the past. I explore this sense of nostalgia for radio, which has led many manufacturers to intentionally reference the past while offering the latest advances in radio and audio technology. Bluetooth streaming, DAB and smart speaker functionality are frequently disguised within a veneer of 'war time radio', or designs 'inspired by the style of the fifties and sixties'. Forty's (1986) benchmark study identified three distinct stages in radio manufacturing, culminating in an era of technological futurism. This chapter suggests the possible addition of a fourth design stage, which recognises a return to more classical radio forms. While the proliferation of platforms, content and station choice provide an inexhaustible supply of radio via a series of simple swipes or clicks, for many listeners there remains a preference for the human-machine interface of traditional knobs and dials. Unpicking this nostalgia for the medium's supposed 'golden age' and its associated aesthetics provides insight into the bond between the listener and the materiality of the radio.

Introduction

The idea for this chapter grew from my attachment to a radio which has been with me since the age of six. My parents bought it at Kai Tak Airport's Duty-Free shop in Hong Kong, and it remains the best gift I've ever received. The radio is only 10 centimetres tall and has a

commando-style design in military khaki. Although it looks like something from the Armed Forces, I doubt it would have lasted long on the front line. It stopped working decades ago. But I still keep it as a memory of childhood and a reminder of my early obsession with radio. Songs I still cherish today were first heard through its tiny speaker and it's fair to say my ongoing interest in broadcasting started with this transistor. It's a radio cliché, but I used to sleep with it under my pillow; drifting off to the sounds of 3ZB and Radio Avon 1260, the AM stations which used to broadcast in Christchurch, New Zealand. My first (albeit limited) understanding of radio presenting, production and programming began with this radio and due to its influence, I've had at least one foot in the radio industry throughout my working life. As I grew older, and possibly more sentimental, I began to question the significance of this small green box and pondered why, amongst all the other paraphernalia of youth, this particular artefact has remained with me. The bond which can form between a listener and the medium of radio has been thoroughly explored in past studies. McLeish (2005) and Keith (2007) refer to the sense of friendship which exists between a radio presenter and their audience, while Lloyd (2015) describes the medium as a "compelling companion" (4). However, there are far fewer investigations which explore the connection an owner may feel towards their radio as a physical artefact. While Fickers (2012) focuses on the tuning dial as a mediating interface, this study considers nostalgic associations felt towards the object of a radio. Any affection for a collection of diodes and circuits will usually require, in the first instance, some form of emotional attachment to the medium itself. Nevertheless, I suggest a transference can take place between the affecting qualities of radio broadcasting and the artefact itself. It is the regard for the physical materiality of radio that I explore in the following three sections.

My methodology uses concepts of material culture to bring a new perspective to the field of radio studies. I explore the changing role of radio in contemporary culture and society by drawing together radio scholarship, design theory, and the study of consumer behaviour. In addition, I consider several design case studies and utilise aspects of autoethnographic investigation by using personal experience to better understand concepts of nostalgia and attachment. I begin by examining notions of intimacy that are shared between the listener and medium. This is necessary, as an initial connection to the medium itself can help in building a lasting attachment to the object of a radio. I draw on Tacchi's (1998, 25-26) ethnographic research, to show how the sound of radio can be an important part of a home's material culture, contributing to the creation of domestic environments and providing "a texture in which everyday life can take place". This section considers radio's ability to generate strong emotional responses; an attribute which is central in building lasting bonds between the medium and its listeners. Sound has the ability to create a psychological space for the listener which draws on memory and nostalgia (Lefebvre 2000). However, while the sounds generated by a radio can bring back certain nostalgic recollections, its physical form can equally inspire

connective memories with the past. The primary connection felt towards radio is auditory in nature, yet I suggest this bond can subsequently be extended towards the object of a radio. A radio may also serve as reminder of place or time, as a memento of a previous owner, or be held in regard solely for its aesthetic value, thereby holding meaning outside of its purpose as audio device. Nevertheless, this chapter is more focused on relationships which form over time between a functioning radio and its listener. I explore the relationship I have with my aforementioned childhood radio as a personal case study, and consider the Sony CRF-150 as an example of how listeners may forge deep connections with radio as a material object.

Section two discusses key moments in the design history of radio and shows how certain technical innovations have impacted on the domestic use of the medium. I explore how changes in radio's form have altered listener interactions with stations as well as the user's haptic relationship with radio. I then consider contemporary radio design by assessing manufacturers use of retro-styling to attract customers, while still offering the latest technologies. This approach aligns with Cattaneo and Guerini's (2012, 685) definition of retro products as being "a combination of old-fashioned forms with the most advanced functions".

Hilmes (2013, 43) states that contemporary radio has reached a "transformative new materiality" enabled by the advent of digital platforms which have increased accessibility and widened the scope of content to a global scale; "radio has not only survived but revived both as a creative medium and as a shared cultural experience". While this may be true for the medium, the materiality of radio as a physical object has not fared as well. I discuss whether the digital revolution has rendered the concept of a stand-alone radio all but redundant. I investigate how manufacturers have responded to the emergence of increasing sophisticated audio technologies by disguising innovation within the forms of earlier radio designs, and question whether this trend risks the materiality of radio becoming an anachronistic novelty. Finally, I conclude by looking ahead to the possible future of radio as a physical object. This section recognises the sentimentality of radio as an object, yet suggests that the ongoing development of radio as a medium may be leading to its obsolescence as a mass market device.

The intimacy of radio

This opening section considers the personal relationship that can form between the object of a radio and its owner. However, I begin by exploring the emotional connection which joins the listener to the medium itself. As indicated, the foundation of this attachment is intrinsically auditory. Once a radio has been switched on and the desired station and volume have been selected, the link between listener and the materiality of a radio is, for the most part, invisible. A listener may occasionally glance at their radio to check the time, confirm a frequency, or, in

the case of digital radio (DAB) check the song title or artist of the track being played. Yet, physical relationships with radio essentially take place inside the listener's head, in the delicate interaction of sound waves and vibrating eardrums. We hear a radio in the same way we hear any other sound and, if the signal is sufficiently good enough, the brain does not differentiate between a person speaking to us in the same room, or via a speaker. It is this "illusion of presence" which makes a voice on the radio "memorable and convincing" (Kuffert 2009, 306). While a physical radio may be a small and insignificant object, the sound and meaning it produces can literally fill a room. Miller (1998, 7) makes the important distinction between the materiality of a radio which is switched on, and one which is switched off. We tend to feel a connection to the sound an operational radio produces, not with the object of a radio. An unused radio is essentially a box, whereas a functioning radio "fills an area with volume and substance".

The affection felt towards radio may stem from its ability to offer companionship or a convenient diversion from day-to-day anxieties. Simply put, radio entertains us and helps us to relax (McLeish 2005). The medium also provides a very real sense of human connection, which subsequently creates a feeling of closeness. In CBC Chairman Davidson Dunton's 1946 address to listeners he likened radio to a close friend who "comes to talk to you, or play to you, in your living room" (Kuffert 2009, 306). This notion of intimacy is referred to by Orfanella (1998, 53) as radio's "special power… a one-to-one connection that no other medium can match". For this reason, when a station changes its format or a long-term presenter moves on, it can be especially traumatic for some listeners, who may miss the comfort of a familiar voice.

In the field of social psychology, intimacy is closely related to concepts of privacy (Luca, 2016). According to Betts (2004, 16) the radio was the "first electronic device to enter the intimate space of the individual", sitting proudly in the living room before assuming "a more discreet position on the bedroom table". One of radio's defining strengths is this ability to share our private spaces, an attribute which helps to build rapport with audiences. Until the rise of laptop and mobile phone technologies, radio's ability to follow the listener from room to room, and then beyond the home, was unparalleled by other electronic mediums. A memorable radio advert, produced by the UK's Radio Advertising Bureau in 1994, played on this virtue with a riddle-like conceit that teased listeners to imagine who was sharing their most intimate moments:

> You have a bath with them… You undress in front of them… You fall asleep next to them… You turn them on first thing in the morning… A lot of people make love to them... They're with you in your car, your office and your bedroom…
> People love listening to their radio's everywhere….[1]

---

[1] RAB radio advert, UK, 2004

The work of Stiernstedt (2014) showed how radio personalities often emphasise ordinariness and authenticity. This study found that styles of presentation were often informal and direct, while the subject matter they discussed, such as day-to-day trivialities and personal anecdotes, reflected the common banalities of everyday life. This approach is a deliberate technique to help radio's sonic presence blend into a family environment. As a result of this shared intimacy, listeners tend to place a great deal of trust in the medium (McLeish, 2005). While radio broadcasts have actively sought to fit seamlessly within domestic environments, the physical materiality of radio has been similarly discreet, or at times proudly obvious in its design, as I discuss further in the following section.

There can be many reasons why a certain radio might find its way into a home. It may have been a gift, or handed down through generations. If the owner purchased it, their decision could be based on purely aesthetic grounds, or maybe a particular model offered certain unique features? Perhaps it was a persuasive salesman or marketing campaign that influenced the choice. Regardless of how a radio may arrive, the materiality of its shape and sound can quickly establish itself within the day-to-day routines of a house. Tacchi (2003, 281) shows how radio integrates easily within everyday life, "forming an important part of domestic environments, or soundscapes". As Frith (200, 41) observes, radio altered the use of domestic spaces, "blurring the boundary between the public and the private, idealising the family hearth as the site of ease and entertainment, establishing the rhythm of everydayness". This can be seen in the way radio manufacturers would often advertise a new model as an additional member of the family, as if it was a participant in the day-to-day routine of a well-run, happy household, as illustrated in the figure below.

Figure @@@. Cover of Danish Philips radio catalogue, 1959. Royal Philips / Philips Company Archives

A key factor in radio's ability to connect with audiences stems from its use of emotion. Since its inception, broadcasters have exploited the medium's potential to create strong feelings in listeners, in the hope this will add to a station's TSL (time spent listening). This use of emotion can be heard in the good-natured humour of a Breakfast show, or in the exhilaration felt from hearing a favourite song at full volume. While 'Shock Jocks' may cause outrage and talkback / news stations might deliberately put argumentative callers to air, playing devil's advocate to prompt a reaction, most broadcasters seek to build a friendly rapport with their audiences. The industry has traditionally been entertainment driven and keen not to unduly offend, for fear of 'tune out' (or possibly litigation). Generations of radio programmers have sought to hold audiences by "eliminating or minimizing objectionable elements" (MacFarland 2011, 13). Listeners tend to agree with the views of the presenters they let into their homes, valuing the judgement and taste they express.

Radio is closely interwoven within the history of popular music and has been an important method to disseminate the work of musicians (Brabazon 2012). Music formatted stations are able to harness the strong feelings a listener may have for certain songs or musical genres. Bicknell (2009, 45) refers to music's ability trigger emotions within a listener, leaving them "overwhelmed or overpowered by music, reduced to tears, and experiencing

chills or shivers and other bodily sensations". It is, therefore, unsurprising that a listener may form a bond with the station that provides a convenient gateway to the music they love. Tacchi's (2003) study of nostalgia in the consumption of radio explores the regard a listener may have for certain radio stations and formats. In one particular case study a listener's connection to the station 'Classic Gold' is described as being nostalgic, "reaching back across time and across memories, bringing something into the present, to take her into the future" (283). While this revealing study considered the materiality and presence of radio's sound, the physicality of radio as an object is not addressed. It is the connection between a listener and their radio as a tangible artefact which underpins this chapter. I maintain it is possible for a relationship to form with the materiality of a particular radio, which is distinct from the regard which may be felt toward the programming it transmits.

Baxter et al. (2015) discuss the range of relationships which may develop between a person and an object, such as the sense of psychological ownership held over a particular item. Individuals can often develop intimate relationships with objects which surround them and may feel that the target of this ownership is 'theirs' (Pierce et al., 2001). This is certainly true in the instance of my childhood radio and helps explain my ongoing attachment to it. It was the first radio I ever owned and one of my first possessions that was not a toy. In some instances, the emotional connection felt towards the medium may become so profound that it becomes imbued within the object of a radio. Personal associations with the medium, or past owners, can be projected into a radio. It then becomes a totem for memory, regardless of whether the radio is operational or not. This is certainly the case with my own radio, which stopped working decades ago.

While carrying out early research for this chapter I became curious about the origins of my old radio and wondered whether it could be repaired. The years had almost worn away its brand name, but I still could barely detect the words 'Eastronic' on a shiny silver label in the top left corner. This company began 1955 and still exists today as "the largest hi-tech distributor in Israel"[2]. However, the business never actually manufactured radios. I spoke to a company representative in Tel Aviv, who explained how they would commission the design and assembly of electronics from Chinese manufacturers, which were then sold under the Eastronic brand. I then visited 'Audio Technical Services', a small family company in Erdington, North Birmingham, which incidentally started trading around the same time my radio was built. The company often repair old valve and transistor radios of sentimental value, so they were not especially surprised by my enquiry, although the technician was somewhat surprised at how small the radio was. He explained the radio's origins and confirmed its economical production in Hong Kong. The configuration of the electronics followed the

---

[2] https://www.easx.co.il/pages_e/221.aspx

standard Chinese layout from the late-Sixties to mid-Seventies, with 6 germanium PNP and silicon NPN transistors and an 8-ohm, 0.25-watt speaker. This model was originally designed for the British market, as the tuner was set to the British Medium Wave bandwidth, ranging from 1600 hertz to 500 hertz (which was also compatible in my home country of New Zealand). The initial diagnoses noted several possible failings; the ferrite rod aerial could have broken coils, the tuning of the trim pots might be permanently damaged, it may need a new transformer, or most likely, the problem was with the battery terminals. I asked whether it was likely it would ever work again and although the technician was non-committal ("it's a bit of a fiddle"), he seemed optimistic. While I was there, I took the opportunity to ask whether customers ever discussed their relationship to the radios they bought in for repairs.

> "(With) most of the old stuff there's always a story. It was given to them from their parents who have now died, so they want some connection. A lot of people mention that it was the first thing they brought with their first wage package. That's happened a surprising amount of time… The amount of times people will tell you the story behind the unit, and I'm standing there for ten minutes and I'm saying "Could you actually tell me why you came in?". While it's very interesting – I don't really care – I just want to know what's wrong with it. And it happens a lot."[3]

Lester Tandy, an electronics repair man for the company, specifically mentioned Sony 'World Radios', such as the Sony CRF-150, as an example of the types of radios which were often brought in for repairs.

> "They were hard to repair. But people were always willing to spend the money to get them repaired. (They were) like a member of the family (and) they always seemed to be really, really happy to have them fixed. When you couldn't repair them, they were visibly upset really – which is quite strange".

These radios tended to be owned by "elderly ex-service men or people working aboard in foreign countries" and seemed to hold an especially deep significance for the owners, which went beyond their basic functionality. The CRF-150, now discontinued, was a 13-band receiver that covered longwave (150-400 kHz), medium wave and ten shortwave bands. These units were, therefore, able to receive transcontinental broadcasts and were ideal for receiving the BBC World Service, which Tandy referred to as "a British voice you could get anywhere in the world… It's what got them through".

---

[3] Interview with Lester Tandy, 27th August 2020

The Sony CRF-150, Surplus Tech Mart

It is easy to imagine the importance of a radio like this to someone a long way from home, in exotic or even dangerous surroundings. The radio provided a portal back to familiar voices and sounds. Radio reassures and comforts through the medium's ability to provide companionship (Lloyd, 2015). While listening to a favoured station, the displaced owner is once again part of the community they left behind. The protective front cover of the Sony CRF-150 and CRF-160 even came with a built-in world map and a time zone conversion wheel to help the listener orientate themself. Although these broken radios no longer functioned, and it would have been cheaper and more convenient to simply purchase a new one, the owners felt compelled to have the radio repaired and returned to working condition. Helping, in a sense, with the convalescence of an old friend. The work of Baxter et al. (2015, 11) describe how the investment of time and money required to maintain objects can increase a sense of ownership. By 'caring' for a radio (i.e. fixing it, rather than replacing it) this bond is strengthened. In my own case, I was not particularly concerned about the functionality of my Eastronic radio, or whether it could be repaired. Its material presence was enough, as it served its purpose as a tangible reminder of the past, and not as a working radio.

Having discussed the emotional connection a listener may feel towards both the medium and the physical materiality of radio, I now begin to focus on the evolution of radio's actual form. The following two sections discuss the changing shape of radio through the years and consider the impact of technical innovation on radio's usage.

Radio design history

Silverstone and Haddon (1996) point to the mutual relationship which exists between technical and aesthetic innovation in radio design. Similarly, there is symbiotic connection between the changing shape of radio and listeners use of the medium. This section historicises key stages in radio design and reflects on how these changes have ultimately altered interactions with the medium. The Bauhaus priority of technical functionality (Leitner, 2011) comes to mind when considering the aesthetics of radio design, which tend to obey the famous dictum *form follows function*. In many instances, a radio's form does little more than present the essentials; a housing for components and a power source, aerial, tuning dial, speaker, volume control and an on/off switch (and possibly a headphone socket). While decorative elements may vary, radio's core components have been reconstituted and repackaged by manufacturers for well over a century. Yet, despite the relative simplicity of its appearance and functionality, radio has attributes which belie its visible materiality. As Geller (2012, 3) notes, the outward form of a typical radio does not convey the true strength of the medium; "sitting on a shelf, in your bag or in a car dashboard, it's merely a box full of wires and silicon chips". It may have a modest appearance but, in Geller's opinion, radio is "clearly one of the most ingenious devices ever created".

Forty's (1986) *Objects of Desire*, which interrogates the relationship between society and product design, features a section on radio design as a specific case study. Forty identifies three distinct periods in the history of radio design, beginning with the classification of the wireless as a technical object. During this early-stage manufacturers and consumers were more interested in the scientific properties of radio and had little concern with its outward appearance. The magic which powered this new technology was not concealed; wires, diodes, capacitors and resistors et al. were all clearly visible. However, the shape of radio became more self-conscious as it reached adolescence.

As Fickers (2012) points out, the introduction of the tuning dial was vital in radio's transformation from an electrical device to becoming an item of domestic furniture and was a crucial moment in human-machine interaction. The ease of turning a dial freed radio from being the preserve of "tinkerers or hobbyists" and finally enabled it to become a truly mass medium (411). Yet the pace of technological innovation in radio design began to slow around the same time as the medium became more accessible to the public (Silverstone and Haddon 1996). As a result, manufacturers in the late 20s had fewer innovations to offer potential customers and it became increasingly difficult to differentiate their products from the competition. Appearance began to take on a far greater significance, and radio entered its second design stage. According to Silverstone and Haddon (1996, 47), when new

technologies reach the stage of mass consumption, they need to be designed as domestic objects, in order to mediate the "the tension between the familiar and the strange, desire and unease, which all new technologies respectively embody and stimulate". Manufacturers addressed this tension by producing radios with a more subdued, harmonious appearance, to better fit within the décor of a home. Radio no longer drew attention to itself and became a hidden medium. Concealing radio within cabinets helped the medium's integration into domestic settings. As Lacey (2000, 285) notes, loudspeakers were often designed to blend with the fabric and furnishings of a home to give "the illusion of an equipment-free reproduction of reality". By taking on the forms of furniture this "unfamiliar medium" was assimilated into everyday life (Forty 1986, 202).

Radio's final design stage emerged when the medium was finally accepted as a familiar technology. According to Forty (1986), the UK company Ekco was responsible for ushering in a new era of technological futurism, with the production of the *AD65* in 1934. This model, manufactured from Bakelite, represented a radical departure from radio as furniture with its combination of "technical sophistication" and "futurist imagery" (205). Ekco were quick to recognise the potential of Bakelite and employed leading architectural designers to exploit this new material (Geddes, Bussey 1991). Other manufacturers soon followed and during the 30s, the materials used to house radios began to favour new synthetic materials, eschewing decorative woods like walnut, mahogany, and oak. With the emergence of industrial plastics such as Plaskon and Catalin, manufacturers were able to introduce a range of models in bold new colours. Now radios were designed to stand out, rather than merge into their domestic surroundings. By adopting a futuristic approach to materials and design, radio had, once again, become a conspicuous object of modern technology. Tuning dials became more prominent and design aesthetics took on cleaner, more progressive forms. In Stone's (2016) assessment of aesthetic pleasure an object's form can bring enjoyment for its own sake, regardless of practical considerations. As collectors will attest, this is especially true for the Art Deco styled radios of the 30s, which remain beautiful objects in their own right, regardless of their functionality. According to Gazi and Bonini, (2018, 116) radios had become status symbols, with the manufacturing of new designs "refined enough to occupy the central stage in the kitchens and the living rooms of the houses of the middle class". The creation of the transistor in the late 40s marked another important turning point in radio design. Manufacturers were now able to shrink receivers down to a size which could fit more discreetly within the home as well as allowing for greater mobility (Keith, 2007). The medium was suddenly freed from living rooms and kitchens, allowing radio listening to become a far more personal, individual experience during the 50s.

It is worth noting that Forty's (1986) history of radio design was written in the mid 80s and does not consider the dramatic innovations brought on by the digital revolution. Amongst these changes was the transformation of haptic connections which take place when operating a radio. There has always been some form of haptic relationship between the listener and the transmissions of radio stations. Buttons are pressed on and off, and volume sliders and dials are turned up and down. An aerial may need to be moved around, or a tuning knob adjusted, sometimes with delicate precision, to find a strong and clear reception on a radio's bandwidth. However, the advent of online radio, instantly accessible by an array of technological devices, has all but done away with the need for these types of physical interactions. Today, a swipe or tap is a far more common form of user interface. Hilmes (2013, 44) refers to contemporary radio as being a "screen medium", accessed through mobile and static screens, which relies on tactile "visual and textual" interfaces. The work of Gazi and Bonini (2018) develop this idea further, stating that mobile devices connected to the Internet have essentially re-mediated the materiality of radio listening. Early radio's inability to interact with audiences and receive instant feedback was once seen as a weakness of the medium. While Shingler and Wieringa (1998) referred to radio as a one-way system communication, Ingram and Barber (2005, 161) note how the medium has often sought participation from listeners in the form of competitions, promotions, phone-ins, dedications and helplines, claiming, "rarely an hour goes by without the presenter inviting the listener to phone, text, e-mail their thoughts on a particular topic of conversation, or to enter a competition". These forms of interactions can be useful as a means of reflecting the audience back at itself, thereby creating a stronger sense of community and ultimately strengthening the listener's bond to the station. Although Priestman (2002, 8) believes that some radio listeners may feel compelled to complain "or, even more rarely, praise" something they have heard, he believes that many solicited audience interactions are of little real value. However, since the arrival of digital listening, audience interactions with radio presenters and stations have become more immediate and even monetisable. As Gazi and Bonini (2018, 117) point out, listening to radio via smartphones and tablets, and communicating with stations through text messages, Twitter, Whatsapp, Facebook etc. are "forms of interaction with radio personalities and radio content" which have become largely mediated by screen technologies.

Though technical innovation has not done away with radio, the concept of owning a radio to only receive radio broadcasts is becoming increasingly obsolete. In 2018, the UK reached the milestone of having over 50% of all radio listening taking place on digital platforms[4]. This was the continuation of a trend which had been rapidly growing since 2011, and continues to grow.

---

[4] https://www.rajar.co.uk/docs/news/RAJAR_DataRelease_InfographicQ12018.pdf

The UK's 'Q1' 2020 figure for digital listening share stood at 58.6%[5]. DAB, DAB+ and HD radio have all valiantly tried to move linear radio forward into a new era and succeeded in convincing many consumers to upgrade their old analogue radio's. However, many academics and industry experts were sceptical about the long-term viability of these technologies (Goddard, 2010). Ala-Fossi (2010), labelled DAB as outdated and inefficient, while Starkey (2008) similarly saw the platform as an old remnant from the previous century, which has been superseded. There is also the issue of DAB not being globally accepted, with Japan and America notably not adopting the technology[6].

While audiences may still enjoy traditional radio and loyally tune into their favourite station, they no longer need a radio to do so. The ownership of a radio has increasingly become an act of nostalgia; the possession of a retro 'objet d'art' that primarily reflects the owner's sense of style, rather than serving as an audio device. Manufacturers would appear to be responding to customer demand from a demographic that seeks comfort in shapes they may recall from their past, either in the form of radios they once owned, or were seen in the homes of older relatives. I explore this concept further in the following section, which considers the trend towards retro-styled designs in the manufacturing of contemporary radio. I show how the design aesthetics of the past have been used as a veneer to disguise new radio and audio technology, such as Bluetooth streaming, DAB and smart speaker functionality, amongst other innovations.

Retro-futurism

Having discussed various stages in radio's design history I now focus on how manufacturers have responded to the arrival of new audio technologies by integrating them within radio's form. I am particularly interested in what Fort-Rioche and Ackermann (2013, 495) call the retro-phenomenon in design, otherwise referred to as "retro-revival", "vintage-revival", or "retro-boom". This section presents four case studies as examples of contemporary models which intentionally reference the supposed Golden Age of radio for design inspiration.

As highlighted earlier, radio has always been an earlier adopter of new audio technologies. Manufacturers have excelled at integrating the latest innovations within new models, often creating new forms of listening in the process. Clock radios are a good example of how seemingly disparate technologies can be combined to offer additional functionality within the shell of a radio. The cabinets described in the previous section often housed both a radio and

---

[5] https://www.rajar.co.uk/content.php?page=news
[6] https://www.worlddab.org/public_document/file/1048/Global_Summary_24.09.18.pdf

a turntable side by side, sharing amplification and speaker system. Placing these two technologies within a single unit, known as a radiogram, was technically simple to achieve. Yet, Geddes and Bussey (1991, 109), saw the merging as being "commercially and socially significant", with radiograms becoming important status symbols in the 1930s. Years later, three-in-one systems also become popular, by adding the audio cassette to the more established combination of turntable and radio. This process of integration reduced radio's prominence yet allowed it to interact more easily with new technologies.

One of the greatest examples of 'technology-mashing' came in 1966, when Philips unveiled the Radiorecorder RQ-231. It was the first portable radio to incorporate both an FM/AM radio and a cassette recorder. This innovation gave the world an entirely new form of portable music player and allowed radio broadcasts to be easily and affordably captured via one domestic product. In doing so, it offered an early form of time-shift / on-demand radio. The medium could be conveniently captured and reheard at the listener's discretion. Readers of a certain age may recall patiently listening to a chart countdown, waiting to 'download' a favourite song by releasing the pause function on a similar model of radio cassette player. This represented a big step forward for the medium, as a potential competitor had been co-opted and successfully integrated within radio's traditional form. As these radiorecorders grew in size and loudness, they eventually became the boomboxes or ghetto blasters, which found international popularity as "one of the great consumer products of the 1970s and 1980s" (Millard 2000, 451). Conversely, the audio cassette had its revenge in 1981, when radio was incorporated within the Akai PM-01, to become the first 'Walkman' style cassette player to include an FM receiver.

Philips Radiorecorder, 1966, Royal Philips / Philips Company Archives

Although audio cassettes and subsequently CD's could happily co-exist alongside traditional radio, the advent of the Internet posed a more existential challenge to the materiality of radio as a physical object. The Internet itself was not the problem. In fact, radio responded well to the challenge. As McEwan (2010, 7) noted, the arrival of Internet radio succeeded in joining two separate technologies together "with such intimacy that they appear inseparable". The medium was well suited to adapt to new online technologies and, as a result, listeners were able to access a world of content at convenient times that best suited their lifestyle. Mark Barber, a Planning Director of the UK's Radio Advertising Bureau (RAB), observed how radio had become part of a much wider audio ecology, which included on-demand audio and streamed music. This meant audiences had more options than ever: "You can get almost anything, anywhere, at any time" (RAB 2015, 2).

Now, the medium could be heard via laptops and tablets, mobile phones, Freeview and satellite receivers, and such like. Radio no longer required a radio. Not only were programmes more accessible thanks to a range of new platforms, but, according to Hilme (2013, 44), listeners had the added benefit of being able to access radio archives which reached as "far back as the first golden age of network broadcasting". Content itself was also

evolving into new forms of audio. While some might argue that podcasting is wholly distinct from radio, I tend to agree with Chignell's (2009) belief that creating distinctions between them is splitting hairs. As he explains, "no medium can be defined by the technology of its delivery: a podcast remains radio because of the way it is produced (Chignell 2009, 2). Similarly, I suggest that contemporary radios, which may feature Bluetooth technology, DAB, iPhone inputs, ports for memory sticks et al. are still, intrinsically, radios. Nevertheless, the need for a traditional radio as a specific household object risked being superseded by ubiquitous WIFI and Bluetooth speakers, which can connect to a range of audio platforms and possibilities. At this point in radio's design history, manufacturers responded by creating stand-alone radios which provided AM/FM functionality alongside other new audio technologies.

As Forty (1986, 205) observed, manufacturers from the 1950s onwards constantly tried to make radios which looked like "they were breaking the frontiers of science". Yet, once audio technologies had indeed reached new levels of hi-tech sophistication, many manufacturers retreated to the designs of yesteryear for inspiration. Fort-Rioche and Ackermann (2013) cite the Roberts Radio company as an example of repetition in retro-product design; the reproduction of a product from the past, but which incorporates new technology. A 1950s style Roberts DAB radio may feature new audio innovations, but its design "is nothing more than the replication of the design of the original portable transistor radio *Roberts R200*" (497). The new model merely imitates the form of an anterior version, rather than improving on it. They refer to this retro-marketing as an example of playing the heritage card. For newer manufacturers, without an established track-record of models to draw direct inspiration from, their models take on more notional concepts of early radio design.

Greadio, a company whose motto is 'unique and retro design', had its trademark registered in 2018. This business, owned by the Zhuhai Ge Ge Lan Technology Co., has little design heritage to draw on, and therefore their range of radios feature generic concepts of what a vintage radio might supposedly look like. The *Greadio GR919C* advertises "retro classic aesthetics"[7] which combine new digital audio technologies with a "1950s retro vibe… We can feel like back into the golden age of music in 1950s, enjoying a soothing moment in today's busy life". There is no direct design parallel for this model, yet it arguably succeeds in looking suitably retro in its styling. Fort-Rioche and Ackermann (2013) classify this type of product as belonging to the neo-retro category of retro-products, which offer the consumer newness, but does not mislead them. The product, which incorporates the latest technologies, is "inspired from past visual codes" and then reinterprets them (498).

---

[7] https://www.amazon.co.uk/Bluetooth-Greadio-Fashioned-Enhancement-Connection-Walnut/dp/B07R3J2KVH

The Steepletone company has a longer radio design history, which dates to the early 1970s, and stresses its motivation is "innovation and not imitation"[8] by offering a "modern twist on old classics". The marketing of its *NR880 LXA* radio does not attempt to convince younger consumers of its benefits. Instead, it is promoted as a gateway device for older generations who might be intimidated by new technologies; "if you know someone who might find futuristic tech a little scary, then just disguise it in the old style!"[9]. This radio has a "vintage feel" which features a "handmade Classic Wooden case finished in an Oak veneer in the style of a war time radio". The Steepletone is noteworthy for the inclusion of Amazon Alexa Dot Gen3 functionality, allowing users to access content using voice control technology. This product is clearly targeted at an older demographic, as it purports to be "the perfect gift for Mum, Dad, Granny or Grandad or that special Anniversary or retirement gift".

The *Auna Belle Epoque 1906* provides another useful example of neo-retro-product design. Auna, a German company founded in 2007, markets this radio as a "a musical bridge between the past and the future"[10]. Within the unit's retro-styled housing is a multitude of new audio technologies. Along with an analogue frequency band (with manual station search), it offers a DAB+ receiver, a CD drive that also reads MP3s, Bluetooth functionality, and a USB interface which allows for recording. Aside from its discreet digital screen, you could be mistaken for thinking the *Belle Epoque 1906* was a well-preserved model from the 1920s. The product description notes how its design follows the "visual tradition of its older brothers from the past… The shapely curved case emphasises the charming nostalgic approach, as do the authentic details such as the fabric speaker cover".

---

[8] https://www.steepletone.co.uk/about-us
[9] https://www.steepletone.co.uk/radios
[10] https://www.auna-multimedia.co.uk/Home-Audio/Stereo-Systems-Mini-HiFi-Systems/Stereo-System-with-CD-Players/Belle-Epoque-1906-DAB-Retro-Stereo-System-Bluetooth-CD-USB-MP3-FM-CD-Player-Bluetooth-DAB-Radio.html?gclid=CjwKCAjwqIiFBhAHEiwANg9szloEYnKzpzDdeFNwM97BE0LN7VDOLyl_v0KLk_UM7HpzxRJqq-T1OBoC9bQQAvD_BwE

'Belle Epoque 1906' DAB Retro Stereo System, Auna, Berlin Brands Group

Although a tangible product is essentially the same for everyone, its intangible qualities and meanings are different for the individual (Hirschman 1980). In the instance of radio, a listener's personal memories and associations will inform their preference for a certain period of design, be it Art Deco, Sixties Mod-Revival or Retro-Eighties etc. The case studies provided here demonstrate how manufacturers have drawn on various nostalgic associations of the past to market new audio technologies alongside traditional radio. Each of these units provide a sonic gateway to endless hours of audio content yet could conceivably never be used to listen to an actual radio broadcast.

According to Forty (1986, 200) customers once saw radio as holding the promise of an optimistic future, and as a symbol of scientific progress "putting them in touch with changes that they were told that technology would bring in all areas of life". Technological futurism in radio design moved the listener's attention away from the difficulties they might face in everyday life, offering instead the promise of a better, uncomplicated future (Silverstone and Haddon 1996). It could be argued that present-day radio consumers may be influenced by a sense of techno-pessimism, which has replaced these earlier hopes for the future. A global sense of dissatisfaction was noted in a 2019 study from the Pew Research Centre, which identified a general feeling of pessimism towards income inequality, governance and job opportunities across the 34 countries surveyed[11]. As Cattaneo, and Guerini (2012, 683) state, consumer "anxiety for the future and the pace of innovation" is a key reason why consumers yearn for the stability and security of the past. A sense of disillusionment with the present state

---

[11] https://www.pewresearch.org/fact-tank/2020/08/06/many-around-the-world-were-pessimistic-about-inequality-even-before-pandemic/

of the world could conceivably be a factor for those who find reassurance in objects which represent the imagined safety of yesteryear.

Andy Gutowski (2006), the creative director of a US marketing and design firm, calls retro-branding "one of the most effective and lucrative marketing strategies of the past 10 years", as companies are able to "cut through the clutter of modern life and transport consumers back to a simpler time"[12]. Appealing to customers who yearn for the good old days would seem to be a key motivator in manufacturers adoption of retro-designs. Or, perhaps, in the absence of creativity and innovation, a company simply falls back on designs from the past because they look like a radio is supposed look. The trend to recycle earlier forms suggests that radio manufacturing is at risk of becoming a sentimental cul-de-sac. Nevertheless, harnessing nostalgia, often viewed as a consumer's preference for goods and experiences from the past (Holbrook 1993), would appear to be good for business. Cattaneo, and Guerini's (2012) research shows how customers are inclined to purchase retro brands over newer options. Yet, while there is an inclination towards brands with nostalgic associations, purchasers still have a desire for updated product features. Similarly, Baker and Kennedy (1994) refer to consumers having a sentimental yearning for products of the past and suggest that nostalgia is a useful selling tool, especially in hard economic times.

Radio is hardly a new technology. As it continues to age there is perhaps an opportunity to add an additional category to Forty's three radio design classifications. This fourth stage could move beyond technological futurism to reflect manufacturers referencing of past radio designs, while still offering the latest innovations. I suggest the term retrofuturism can be applied to this new era of radio design. Sharp (2011, 25) refers to this movement as a "distanced interest in past visions of the future", which draws on early representations of technical progress to form a sense of nostalgia for an idealised future that never arrived.

By celebrating the heyday of radio, manufacturers remind users of the medium's innate strengths, at a time when traditional radio arguably faces its biggest challenges. The rise of streaming music services, podcasting and the attraction of social media, along with a myriad of other portable online activities, now vie for the listener's attention and have eroded radio's status as the pre-eminent electronic medium. Radio has a long design history to draw from, and manufacturers seem only too willing to exploit this heritage to maintain relevance and sales figures.

Conclusions

---

[12] https://www.packagingstrategies.com/articles/92333-finding-comfort-in-the-past

Over the course of this chapter, I have considered tensions which exist between radio as a seemingly ephemeral concept, and radio as a concrete, material artefact. I have shown how the shape and function of radio has constantly evolved, instep with the pace of technical innovation and the changing habits of radio listeners. However, while the form of radio as an object has transformed, the medium itself is largely unchanged. It remains a sound heard by an audience. Viewers are required to look at a television, focusing their attention on the object as they consume its content, yet this is clearly not the case with radio. The nostalgic concept of a family sitting round the radio listening to shows together is fast reaching the end of living memory. A radio's physical purpose is to exist as a conduit. Aside from the merits of fidelity and ease of use etc. a radio has little bearing on the owners' enjoyment of content. This is perhaps just as well. As a teacher of radio production skills, I note that many students have never actually owned a traditional, stand-alone radio; their listening is wholly digital. For me, it is somewhat sobering to think that many young people have never even touched a radio and fail to recognise what one is. I am required to pass around my old Eastronic, as a relic of radio's once physical form. Indeed, many people today have never actively heard the medium, except as a secondary experience through visits to Grandparents, standing in supermarket aisles, or being stuck in a car with aging parents. This may seem pessimistic, but it is the reality of radio's changing status an electronic medium.

Readers will no doubt be anxious to learn whether my precious Eastronic was able to be resurrected. I can report that the problem was identified, the required parts were ordered and the necessary repairs carried out. It was a strange moment to switch it on again, after decades of silence. There was wash of static noise as I turned the tuning dial in search of a signal. Ultimately, I could only find 4 AM stations and the reception was poor, to say the least. However, the fact that this technology was still able to function after almost half a century struck me as impressive. While I have attempted to explain sentimental attachment to objects of the past and specifically the bond that may exist between a listener and their radio set, I recognise that these forms of connection are ultimately a trick of nostalgia. Radio does not exist in the wire coils and magnets which produce pressure waves, it exists inside our heads when these signals are converted into meaning.

Forty (1986, 203) questioned the housing of radio within cabinets, calling it a convenient design decision but "not true to its nature". But what exactly is the true form of radio's nature? As an auditory medium, does the future of radio even require a physical artefact? With the arrival of voice assisted 'smart speakers', such as Siri, Google Assistant and Amazon's Alexa, a user can now control all of radio's functionality through spoken word commands. Perhaps this is the future of radio's materiality; to be absorbed into the convenience of wireless speaker systems, which provide an output for multitudes of audio technologies and platforms. Gazi and Bonini (2018) describe radio listening as an "intangible

and unworldly practice" (109-110). It would seem appropriate if the medium finally transcended the need for any physical form and became a truly invisible medium, as Lewis and Booth once described it (1989). The 'wireless' may yet become 'radioless'.

Bibliography

Ala-Fossi, Marko (2010) 'The Technological Landscape of Radio' in B. O'Neill, M. Ala-Fossi, P. Jauert, S. Lax, L. Nyre and H. Shaw, (eds), *Digital Radio in Europe: Technologies, Industries and Cultures,* Bristol: Intellect, pp. 43-65.

Baker, Stacey Menzel, Kennedy, Patricia (1994) 'Death by nostalgia: A diagnosis of context-specific cases' in C. Allen, D. Roedder, J. Provo, (eds), *Advances in Consumer Research*, vol. 21, Ann Abor: Association for Consumer Research, pp. 169-174.

Baxter, Weston, Aurisicchio, Marco, Childs, Peter (2015) 'A Psychological Ownership Approach to Designing Object Attachment', in *Journal of Engineering Design*, vol. 26:4-6, pp. 140-156.

Betts, Raymond (2004), *A History of Pop Culture*, New York, London: Routledge.

Bicknell, Jeanette (2009) *Why Music Moves Us*, London: Palgrave Macmillan.

Brabazon, Tara (2012) *Popular Music: Topics, Trends and Trajectories*, London: Sage.

Cattaneo, Elenora, Guerini, Carolina (2012) 'Assessing the revival potential of brands from the past: How relevant is nostalgia in retro branding strategies?', in *Journal of Brand Management*, vol. 19, London: Palgrave Macmillan, pp. 680-687.

Chignell, Hugh (2009) *Key Concepts in Radio Studies*, Los Angeles, London: Sage.

Fickers, A. (2012). 'Visibly audible. The radio dial as mediating interface', in Pinch, T. Bijsterveld, K. (eds), *The Oxford Handbook of Sound Studies*, Oxford: Oxford University Press, pp. 411-439.

Fort-Rioche, Laurence, Ackermann, Claire-Lise (2013) 'Consumer innovativeness, perceived innovation and attitude towards "neo-retro"-product design', in *European Journal of Innovation* Management, vol. 16:4, pp. 495-516.

Frith, Simon (2002) 'Music and Everyday Life', in MacCabe, C. (ed), *Critical Quarterly*, vol. 44:1, pp.35-48.

Gazi, Angeliki, Bonini, Tiziano (2018) '"Haptically Mediated" Radio Listening and its Commodification: The Remediation of Radio through Digital Mobile Devices', in *Journal of Radio & Audio Media*, vol. 25:1, pp. 109-125.

Geddes, Keith, Bussey, Gordon (1991) *The Setmakers: A History of the Radio and Television Industry*, London: Brema.

Geller, Valerie (2012) *Beyond Powerful Radio: A Communicator's Guide to The Internet Age. News, Talk, Information and Personality*, Burlington: Focal Press.

Goddard, Grant (2010) *DAB Digital Radio: Licensed to Fail*, London: Radio Books.

Guffey, Elizabeth (2006) *Retro: The Culture of Revival,* London: Reaktion Books.

Hilmes, Michele (2013) 'The New Materiality of Radio: Sound on Screens', in M. Hilmes, J. Loviglio (eds) *Radio's New Wave*, New York: Routledge, pp. 43-61.

Hirsch, Alan R. (1992) 'Nostalgia: A Neuropsychiatric Understanding'', in J. F. Sherry, Jr. and B. Sternthal (eds) *Advances in Consumer Research*, vol. 19, Association for Consumer Research, pp. 390-395.

Holbrook, Morris B. (1993) 'On the new nostalgia: ' These foolish things ' and echoes of the dear departed past', in R.B. Browne and R. Ambrosetti (eds) *Continuities in Popular Culture: The Present in the Past and the Past in the Present and Future,* Bowling Green: Bowling Green State University Press, pp. 74-120.

Jameson, Frederic (1991) *Postmodernism, or, The Cultural Logic of Late Capitalism*, Durham: Duke University Press.Keith, Michael (2007) *The Radio Station*, London: Focal Press.

Kuffert, Len (2009) 'WHAT DO YOU EXPECT OF THIS FRIEND?', in *Media History*, vol. 15:3, pp.303-319.

Lacey, Kate (2000) 'Towards a periodization of listening: Radio and modern life', in A. Hopkins, J. Tacchi,(eds) *International Journal of Cultural Studies*, vol 3: 2, London: Sage, pp. 279-288.

Lefebvre, Henri (2000) *La Production de L'espace*, 4th ed, Paris: Editions Anthropos.

Leitner, Birgit (2011) 'Ernst Cassirer and (?) the Bauhaus: The Question of Functional Aesthetics', in F. Dorsch, J. Stejskal, J. Zeimbekis (eds) *European Society for Aesthetics*, vol. 3., pp. 167-209.

Lewis, Peter M., Booth, Jerry (1989) *The Invisible Medium*, London: Macmillan.

Lloyd, David (2015) *How to Make Great Radio; Techniques and Tips for Today's Broadcasters and Producers*, London: Biteback Publishing.

Luca, Cecilia (2015) 'Affordances of intimacy: the extended self in human-environment interaction', in *Shapes Third Interdisciplinary Workshop SHAPES 3.0 - The Shape of Things 2015,* co-located with *CONTEXT 2015, Larnaca, Cyprus, November 2* ,vol. 1616, pp.67-73.

MacFarland, David (1997) *Future Radio Programming Strategies: Cultivating Listenership in the Digital Age*, Mahwah, New Jersey: Lawrence Erlbaum Associates.

McEwan, Rufus (2010) 'Radio on the Internet, Opportunities for New Public Spheres', in M. Mollgaard (ed) *Communication Journal of New Zealand,* vol. 11:1. Auckland: Auckland University of Technology, pp. 24-38.

McLeish, Robert (2005) *Radio Production*, London: Focal Press.

Millard, Andre (2000) 'Cassette Tape', in T. Pendergast, S. Pendergast, S. (eds) *St. James Encyclopedia of Popular Culture*, vol. 1, Detroit: St. James Press, pp.451-452.

Miller, Daniel (1998) 'Material Cultures', in D. Miller (ed), *Material Cultures. Why Some Things Matter*, London: UCL Press. pp. 3-21.

Orfanella, Lou (1998) 'Radio: The Intimate Medium', in *The English Journal*, vol. 87:1, pp. 53-55, JSTOR, www.jstor.org/stable/822022. Accessed 15 March. 2021.

Pierce, Jon, Kostova, Tatiana. Dirks, Kurt (2001) 'Toward a Theory of Psychological Ownership in Organizations', in S. Thatcher (ed) *Academy of Management Review*, vol. 26:2 pp. 298–310.

Radio Advertising Bureau (2015) *Audio Now; How a New Era of Listening is Helping the Advertiser Be Heard*, Industry Publication, London: RAB.

Sharp, Sharon (2011) 'Nostalgia for the future: Retrofuturism in Enterprise' in *Science Fiction Film and Television*', vol.4:1, Liverpool: Liverpool University Press, pp. 25-40

Silverstone, Roger, Haddon, Leslie (1996) 'Design and the Domestication of Information and Communication Technologies: Technical Change and Everyday Life', in R. Silverstone, R. Mansell (eds), *Communication by Design: The Politics of Information and Communication Technologies*, Oxford: Oxford University Press, pp. 44-74.Starkey, Guy (2008) 'The Quiet Revolution: DAB and the Switchover to Digital Radio in the United Kingdom', in *Zer*, vol. 13:25, pp. 163-178.

Stiernstedt, Fredrik (2014) 'The Political Economy of the Radio Personality', in *Journal of Radio & Audio Media*, vol. 21:2, pp. 290-306.

Stone, Alison (2016) *The Value of Popular Music: An Approach from Post-Kantian Aesthetics*, London: Palgrave Macmillan.

Tacchi, Jo (1998) 'Radio Texture: Between Self and Others', in D. Miller (ed) *Material Cultures. Why Some Things Matter*, Chicago: University of Chicago Press, pp. 25–46.

Tacchi, J. (2003) 'Nostalgia and Radio Sound', in M. Bull, L. Back (eds) *The Auditory Culture Reader*, Oxford: Berg, pp. 281- 295.