As the record spins: materialising connections

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As the record spins: materialising connections

Purpose – This paper examines how the material nature of legacy technology makes its users passionately prefer it over its digital alternatives.

Methodology – This ethnographic study utilises data from 26 in-depth interviews with vinyl collectors, augmented with longitudinal participant–observation of vinyl collecting and music store events.

Findings – The findings reveal how the physicality of vinyl facilitates the passionate relationships (with music, the vinyl as performative object and other people) that make vinyl so significant in vinyl users’ lives.

Research limitations/implications – Since this study examines a single research context (vinyl) from the perspective of participants from three developed, Anglophone nations, its key theoretical contributions should be examined in other technological contexts and other cultures.

Practical implications – The findings imply that miniaturisation and automation have lower limits for some products, material attributes should be added to digitised products, and that legacy technology products could usefully be reframed as tools of authentic self-expression.

Originality/value – This research explains what can happen beyond the top of the ‘S’ curve in the Technology Acceptance Model, furthering our understanding of consumers’ reactions to the proliferation of digital technology in their lives.

Keywords - legacy technology; music, vinyl; materiality; connection

Article Classification - Research paper
Technology, the idea of scientific and mechanistic precision built into products, is widely viewed as the pathway towards societal, economic and personal fulfilment (Kozinets, 2008). Consequently, it is assumed that the “new” is passionately desired (Kozinets et al., 2016) because it is technologically superior (Ram and Sheth, 1989). Consequently, Belk (2013; 2014) predicted that people would wholly embrace the new forms of digital possessions made available by the digital revolution. Yet, as Hietanen and Rokka (2015) demonstrate, there are thriving markets based around consuming entertainment in pre-digital, analogue form (e.g. vinyl records, print books and dvd movies).

The most ubiquitous model of how people accept and use technology is the Technology Acceptance Model or TAM (Davis, 1989). TAM describes how technological innovations are adopted by and diffused among people. Because TAM research focuses on new technology, it has not had to explain why people re-adopt what we term legacy technology (which we define as a displaced dominant design). Moreover, since TAM is an extension of Ajzen and Fishbein’s (1975) Theory of Reasoned Action, it is not surprising this model has not emphasized the more emotional aspects of human relationships with technology. These limitations extend to related technology lifecycle models (Christensen, 1997) which fail to account for the potential resurgence of interest in disrupted technological platforms (Nokelainen and Dedehayir, 2015). Consequently, we do not yet understand why some people are so passionately devoted to legacy technology products.

Given the opportunities for original contributions that lie in using qualitative research in non-organisational contexts (Williams et al., 2009), we seek to overcome the limitations of prior work by utilising ethnographic methods to understand how the material aspects of legacy technology make its users passionately prefer vinyl over its digital alternatives. (We deliberately
use the term “users” rather than “consumers” or “buyers” because, as we shall demonstrate, a key driver of this preference is the active user participation that vinyl requires.) Specifically, this paper seeks to answer three research questions. First, how does materiality differentiate legacy technology from its digital alternatives? Second, how does materiality facilitate users’ passionate, intimate connections to, and via, their legacy technology products? Third, how do legacy technology users cope with the tensions inherent in being analogue users in a world where digital technology has proliferated? Thus, our work contributes by addressing the important issue of consumers’ reactions to the proliferation of digital technology in their lives (Lowe et al., 2018). Next, this paper presents a review of the relevant literature, focusing in particular on the work that led to these specific research questions being asked.

**Conceptual Background**

*Legacy Technology*

The term ‘legacy technology’ (a displaced dominant design) appears to have originated in the computing industry in the 1980s when computer specialists who encountered organisational resistance to upgrading to newer operating systems referred to the existing operating system as legacy technology. In marketing, McNaughton et al. (2010) used the term legacy technology in passing but without definition. In the organisational studies literature, legacy technology has been called “old” (Adner and Snow 2010) or “re-emergent” (Raffaelli, 2014) technology while in popular culture, it has been referred to as “regressive” technology (Hayes, 2006). Examples of legacy technologies (and the newer technologies that have attempted to supersede them) are vinyl records (cassettes, compact discs, MP3s, music streaming), mechanical watches (digital watches), physical books (e-books), fountain pens (ball-point pens), film cameras (digital
cameras) and steam train engines (diesel, electric). Consequently, it is clear that not only have there been multiple instances of legacy technologies, there has also been some interest and acknowledgement in the literature regarding their resurgence.

Yet, the extant literature on technology consumption does not fully explain the allure of legacy technology in an era of technological proliferation. The widely-cited TAM (Davis, 1989) does not explain the resurgence of “old” technology i.e. what happens beyond the top of the “S” curve (Nokelainen and Dedehayir, 2015). More recently, Kozinets (2008) pointed out that the prior dichotomisation of consumer technology ideologies (whereby consumers are either technophobes or technophiles) was problematic. He identified four ideologies that govern the consumption of technology, noting that since these ideologies are not mutually exclusive, people could express elements of both. His category of Green Luddites, who “view technological development as destructive of nature and authentic ways of life” (Kozinets, 2008, p.870) could certainly apply to users who stick with legacy technology due to nostalgia. His category of Techspressives, who embrace technological innovation such as video gaming as “the supreme fulfilment of pleasure” (Kozinets, 2008 p.870) would clearly include (the often younger) people who embrace technological innovations whole-heartedly. However, the case of digital natives who strongly prefer a legacy technology over its digital counterpart(s) does not fit neatly into any of these ideologies. This is not an insignificant group – for example, 50% of vinyl buyers are aged under 35 (Hassan, 2016). This suggests that legacy technology use, especially among digital natives, is worthy of study in its own right.

Although the Apple Newton™ was not technically a legacy technology (since it had never been a dominant technology before it was discontinued), Muñiz and Schau (2005)’s study of that abandoned brand community demonstrates the intense passionate relationships that
people can develop with technological products. They suggested that it is the meaningfulness of material things makes them so fundamental to human existence. This prompts the question of if, and how, experiences with legacy technology products create meaning and emotional attachment. Belk suggests that digital possessions are “almost, but not quite” [emphasis added], the singular objects of attachment that their physical counterparts are, especially among those not “born digital” (Belk, 2013, p.15). Given the resurgence in legacy technology even among those born after those technologies were no longer dominant, it is worth asking what these differences are, that make digital possessions “not quite” the same as their physical counterparts? The key to unlocking this puzzle may lie in Belk’s conceptualisation of material things” as “objects in the noun categories” (Belk, 2013, p.478) and his later comment that our “physical bodies and tangible possessions… continue to play a critical role in our sense of self” (Belk, 2014, p.1102). Thus, we surmise that it may be the material, physical nature of legacy technology products that facilitates the greater attachments that their users have to them.

Taken together, these unanswered questions regarding legacy technology in the extant literature motivate our overall research purpose, which is to understand how the material nature of legacy technology makes some users passionately prefer it over its digital alternatives. We now explicate how other relevant literature has motived our three specific research questions that address our overall purpose.

Vinyl

The only legacy technology that has been examined from a consumer perspective appears to be vinyl. Prior research on vinyl has uncovered a number of motives for preferring vinyl, all of which are likely to be transferrable to other legacy technologies. For example, people have
justified their preference for vinyl for functional reasons such as rarity (Hietanen and Rokka, 2015) and perceived technological superiority (Wallach, 2003). Research on organisational resistance to technological innovation also cites functional reasons for resistance to technological innovations including financial (Adner and Snow, 2010) and learning (Ram and Sheth, 1989) costs. Prior research (e.g. Bartmanski and Woodward, 2015; Hayes, 2006; Magaudda, 2011; Yochim and Biddinger, 2008) has also established that perceived authenticity (as opposed to the perceived inauthenticity of digital music formats) drives preferences for vinyl. Authenticity, that which is real, genuine and true, is sought because it is critical to consumer identity projects (Beverland and Farrelly, 2010) and person-possession attachments (Fernandez and Lastovicka, 2011).

A primary determinant of perceived authenticity is heritage or history (Beverland, 2006). Thus it is not surprising that another common justification for preferring vinyl is personal nostalgia, based on a personal lived history that includes experience of that legacy technology (Plasketes, 1992; Shankar, Elliott and Fitchett, 2009) as well as prior admiration for the artists/music that was encountered via that product form (Bartmanski and Woodward, 2015). Thus personal nostalgia is a common reason for preferring vinyl especially among older people who have personal lived experiences of that technology in its heyday. However, the passion for vinyl cannot just arise from personal nostalgia (Nokelainen and Dedehayir, 2015), since some consumers who were born after vinyl was superseded also prefer vinyl (Hassan, 2016).

The passion for legacy technology displayed by the music producers, DJs and promoters interviewed by Hietenan and Rokka (2015) is consistent with the TAM premise that legacy technology often persists in specialist niches even though mainstream consumers move on to the next dominant technology relatively easily. However, because Hietenan and Rokka (2015)
intentionally set out to understand the emergence of countercultural markets from the perspectives of these key market actors, their research did not focus on the lived experiences of ordinary users of vinyl. Therefore, we do not yet know how the actual experiences of vinyl makes ordinary, non-music-industry users of vinyl so passionate about this physical product form despite its limitations (e.g. its lack of portability). Consequently, the first specific research question asked in this paper is: how does materiality differentiate legacy technology from its digital alternatives?

**Materiality and Intimacy**

To understand how materiality differentiates legacy technology from its digital counterparts, we must first examine what materiality means. Despite Borgerson’s (2005; 2013) repeated calls for researchers to clearly explicate their view of materiality, the terms “material” and/or “materiality” have often been used without clarification in prior research. However, most often, it appears to be used to mean the *physicality* of something. For example, prior work has referred to material objects as tangible (Miller 2008) or visible (Belk 2013) things (Muñiz and Schau, 2005). Although the default meaning of materiality appears to be physicality, Orlikowski (2000, p.20) suggests that materiality can also mean a concretisation of an abstract idea or concept (e.g. when a thought - “I want to leave”- is materialised by way of an action - leaving the room). This second meaning of materiality is evident in Hietanen and Rokka’s description of how disc jockeys (“DJs”) “performatively display [their musical] taste” by playing rare and novel tunes (2015, p.1573). Thus, this meaning of materiality is designated *performativity* to distinguish it from the first meaning of *physicality*. The meaning of performativity is contested (Gond *et al.*, 2016) with ongoing debate as to whether performativity originates from, and
reflects identity (Vigo, 2010) or whether it creates and maintains identity (Butler, 2011).

Although a full discussion of the current debates on performativity lies outside the scope of this paper, what is germane to our work is not contested – the notion that performativity is repetitive. This is because it is the repetitive, ritualistic physical interactions between possessor and possession that bind them together. Prior research explains how repeated physical interactions with a material object create strong, intimate connections between the object and a person (Fernandez and Lastovicka, 2011). This notion of interaction is also central to Janet Borgerson’s characterisation of materiality as the co-creations, interactions and relations between selves and not-selves (2005; 2013). Finally, Leonardi (2010) suggests a third meaning of materiality – that of making a difference in the phenomenon of interest i.e. significance. Since most other empirical work has not defined materiality, it is not surprising that this prior work has not yet explored the relationships between these three different perspectives of materiality. Therefore, the second specific research question asked is: how do the different perspectives of materiality facilitate users’ passionate, intimate connections to, and via, their legacy technology products?

Coping in a Digital World

Kozinets (2008) noted that although the four technology ideologies identified are not mutually exclusive and hence can be straddled, this causes tensions that have to be negotiated. Moreover, he concluded that “there seems [to be] very little ideological space left for consumers to construct an oppositional viewpoint” to technology consumption as the path to social progress, economic growth and personal pleasure (Kozinets 2008, p.879). Yet, Hietenan and Rokka (2015) demonstrated that vinyl-playing dubstep DJs may both resist and utilise digital technology to
achieve their aims. This suggests that music is a fruitful context with which to examine the
tensions of being analogue music users in a digital world. Prior research demonstrates that digital
products are ubiquitous and extremely difficult to avoid, particularly in the workplace (Kozinets,
2008) or when performing professionally (Hietanen and Rokka, 2015). For example, Muñiz and
Schau (2005) demonstrated that consumers struggle to maintain their relationship with
abandoned brands due to a lack of parts and eventual lack of compatibility. Consequently, our
third specific research question asks: how do legacy technology users cope with the tensions
inherent in being analogue users in a world where digital technology has proliferated?

Having reviewed the conceptual foundations of this research, this paper now describes
the research context, method and activity undertaken.

**Empirical Activity**

**Research Context**

Bartmanski and Woodward (2015) describe how the vinyl disc, patented by Emil Berliner
in 1888, was introduced to the USA in 1948. Vinyl discs, commonly referred to as records, or
simply, “vinyl” became the dominant music format in the fifties and sixties. Then, vinyl was
superseded - first in the eighties by cassettes and then in the nineties by compact discs (CDs).
Styvén (2010) explains that vinyl rebounded in 2005, right around the time that commercial
digital platforms such as Apple’s iTunes™ began to penetrate the mass market. Not only is vinyl
the only non-digital music format that has increased in sales since then (Nokelainen and
Dedehayir, 2015), it was the fastest growing music format from 2010 to 2015 (Bartmanski and
Woodward, 2015), capping off ten consecutive years of increasing sales (Nielsen, 2016).

Vinyl is played on a turntable using a stylus (needle) to create sound from the grooves in
the record. The common view of vinyl buyers is consistent with TAM and technology lifecycle
predictions i.e. that buyers are either (i) laggards resistant to change or motivated by nostalgia 
(Plasketes, 1992) or (ii) those within specialist niches where the technology still retains
advantages (Hietanen and Rokka, 2015). However, recent research and market data suggest a
different picture, with industry reports differing on who is driving the resurgence in vinyl sales.
In the UK, YouGov identifies them as older men (aged 45-54) who consume music alone
(Gibson, 2016). On the other hand, an ICM study of Record Store Day attendees identifies the
demographic as younger, aged between 18-35 (Hassan, 2016), and as buying vinyl for the first
time (as opposed to older consumers who either continued to buy vinyl or were starting to rebuy
vinyl as new releases became available). A large scale academic sentiment analysis of online
discourses of vinyl buyers suggests they are rarely motivated by nostalgia, sound superiority,
opposition to technological progress, or availability, but rather the nature of the product allowing
users to actively participate in the listening experience (Nokelainen and Dedehayir, 2015).
Critically, the various prior explanations of preferences for vinyl consumption all relate to
materiality in some way.

Research Method

Our study is contained within a larger, ethnographic examination of legacy technologies
in music consumption and production, photography and film making, and game playing.
Ethnographic methods were chosen for four reasons. First, initial exploratory research into this
area suggested that the experience of the technology was critical to its value. Second, although
both researchers were avid music fans, the first had no history with the format whatsoever, while
the other made the transition to novice enthusiast during the course of the project. Third, the
divergent findings and popular explanations for using legacy technology led us to believe that
immersion in the use of vinyl and engagement with the collector and user communities in which
it was embedded would be critical to unpacking consumer motivations, understandings, and practices. Finally, and related to the second point, many commercial providers of legacy technology stressed use and also held a range of events to drive engagement including in-store events such as Record Store Day (started in 2007 and held each year on a Saturday in April), and sponsored vinyl evenings in social venues such as pubs, stores, clubs, and fairs.

The second author’s engagement with vinyl as a medium began in 2011 with the purchase of a small turntable and a handful of records. From there on, his collection quickly grew to several hundred records and a much more sophisticated system. Engagement with users began on fan and collector sites, and also involved participant observation at two market stalls in a large English town, one dedicated to rare, high priced collectors’ items, and the other, dealing in a broader range of releases at reasonable prices. Engagement with users also deepened, as the author became part of a social group of vinyl enthusiasts in the UK, sharing tips, listening to music, discussing genres, and the music industry more generally. Throughout this time, overseas trips involved pairing up with similarly minded collectors and visiting a range of local stores, often spending several hours at each, going through records. When the second author relocated to Australasia, ethnographic data collection continued, with twice-weekly visits to a group of seven stores, ongoing engagement with users and events, and discussions with members of the recording industry on vinyl. The first author came to vinyl much later than the second, engaging in three years of longitudinal observations and interactions with her local independent record store which included observations of multiple record store events. Prior to this, she had spent over a decade actively engaged with research within the music industry context, but un-related to vinyl. She has only very recently purchased her first vinyl record. The authors’ combined ethnographic observations and in situ conversations specifically dedicated to vinyl amounted to
325 handwritten A4 pages of fieldnotes and 120 photographs (of collections, Record Store Day gatherings, markets, dedicated spaces for collections and listening, and copies of historic originals of important events that shaped people’s engagement with vinyl).

The data also include semi-structured depth interviews with 26 vinyl collectors in nations at the forefront of the so-called vinyl revival: the United Kingdom (12), New Zealand (11), and the United States (3). Fortuitously, four of these collectors were also owner-managers of independent “record” stores dedicated to vinyl and were useful in providing broader insights about trends. Both authors and a research assistant initially utilised their interpersonal networks to locate participants and then snowball sampling led to additional participants. After obtaining informed consent in writing, we asked questions to elicit participants’ vinyl back stories, including their first purchase and the reason for it, the first time they were aware of vinyl, and where they purchased it from. We then asked about their collections, the driving motivation for it, how it was structured, the role of particular types of cues (such as pressings), decisions to add or reduce, where and how it was stored, and collection size. From there we discussed the why and how of consumers’ vinyl consumption. Based on previous answers we probed into the role of music in participants’ lives, the role of vinyl and other formats within it, purchasing behaviour and practices, and engagement and listening practices. In each case we began with grand tour questions (“tell me about your collection?”) and used floating prompts (“why do you want first pressings?”) to follow up interesting lines of inquiry.

---Insert Table 1 about here---

As Table 1 shows, our participants ranged in age from 25 to 60. Twenty-two of them were male, consistent with the overwhelmingly male demographic of the group termed “core” collectors by record store retailers. Two of the three female collectors interviewed began
collecting in their own right because their long-term (male) partners were already keen collectors when they first met, while the third began collecting with her husband when he inherited his late parents’ vinyl collection. Twenty-two of the participants were of European descent, with the remaining three being of African American, Hispanic, and Arab origins respectively. Participants were chosen based on a number of criteria (although, as per theoretical sampling, additional considerations were added as a result of our emergent insights). These include current engagement with vinyl (users had to be current consumers of the format), different pathways to vinyl consumption (including those who never gave up the format entirely even if they may have also used other formats at times; those who had come back to vinyl, first time users), different levels of engagement (collectors, fans for whom music was a core defining life theme, and those more casually involved with music but nonetheless who preferred vinyl over other formats), and differences in exposure to vinyl while growing up (since industry data and research challenged the importance of nostalgia as a key motivation for first time adoption.)

Analysis

Interviews were transcribed verbatim, resulting in 387 pages of single-spaced transcripts. As explained earlier, both authors’ differing levels of field engagement and previous involvement with vinyl brought different perspectives to their collection and analysis of the data. Thus they initially independently manually engaged in open and axial coding of the data (Spiggle, 1994). Subsequently, they shared their codes, themes and insights, before collaboratively engaging in the final stage of more focused, selective coding. The process was iterative, with the researchers continually tacking between the open codes, axial codes, fieldnotes and the relevant literature.
Throughout, emerging insights were shared with participants and groups the authors were involved with and more generally with other users of vinyl, lapsed users, music industry insiders, media releases and extended talkback on radio. This population checking had a number of benefits. First, it enabled the researchers and participants to reflect on their practice and motivations, often triggering discussions that began with strong views such as “real music lovers prefer vinyl because it sounds better” but which then progressed to reveal deeper reflections about self-authentication, identity, and the role of different types of music media in everyday situations. Second, population checking began with statements along the lines of “nostalgia has a lot to do with it” to discussions about growing up with vinyl and music, the role of music in one’s life, and why the vinyl revival was driven by consumers with no formative experience of the technology. Third, discussions about the limitations of vinyl were also frequently brought up by lapsed users and also, more reluctantly, by current users, resulting in a broader engagement about the format, music, and technological change that helped inform the results.

**Empirical Findings**

Having explained how we conducted our empirical activity, we now report on our analysis of our data. During our analysis, the ability of the vinyl to facilitate connections between self and personal history, music and community because of its physical nature became evident. Thus, materiality (physicality and performativity) and connection are unifying themes throughout the different sub-sections of our findings. We first report on how the physicality of vinyl facilitates intimate connections between user and object before describing how performativity facilitates users’ connections with their personal history and identity. Then, we explicate how physicality and performativity work together to facilitate users; connections with
others, before concluding with a discussion of how users cope with being analogue music users in a world where digital technology is proliferating.

**Physicality facilitating intimate connections with the object**

Participants’ comments revealed the sheer significance of vinyl in their lives and to their identities. When asked if he would continue to buy vinyl, Aaron [WM24] declared “Yes of course, it’s a given! [If] I’m breathing and I can walk, I’m buying records!” In fact, Aaron and several other participants reported planning domestic and international trips around buying vinyl. Colin [WM60] even persuaded his bride to include a promise to tolerate his vinyl collecting habit in her wedding vows. (Observations at another vinyl collector’s wedding also noted how two of his groomsmen’s speeches lauded the bride for her tolerance of the groom’s vinyl collecting).

David [WM28] summed up the importance of vinyl to many participants when he said that his records are “my most precious possessions”. Vinyl often held a sacred, never-sell status (Belk *et al.*, 1989) for participants. For example, even when experiencing financial ruin in the wake of the bankruptcy of his independent record store, Phil [WM44] declared, “I’d never trade them [my vinyl]. I’m hoping to be buried with them… It’s who I am. It’s who I represent”. When asked if and how they would dispose of any records, they usually responded that only space limitations would lead to record disposal, and that disposal would usually only involve selling or trading them at a second-hand vinyl store. On the other hand, they reported no problem throwing away CDs or deleting digital music. This suggests that users are more emotionally attached to vinyl than to other music formats.

Prior work that has examined emotional attachment to (Belk, 1988) and even passionate love for (Lastovicka and Sirianni, 2011) possessions has noted a virtuous circle - people like to
physically touch the objects they are attached to, and that touching then leads to an exchange of essences, bonding the person to the object even further (Fernandez and Lastovicka, 2011). The data revealed the importance of physicality in intertwining vinyl and music. Littel and Orth (2013) made the important observation that although people usually perceive products via multiple senses, most prior work on tangibility has studied a single type of sense in isolation. Thus we conceptualise physicality as having the potential to facilitate multiple modes of interaction between a person and a thing. The ability of vinyl to engage multiple senses (as opposed to digital music forms only engaging the one sense – hearing), is a key factor in its desirability. For example, John [WM35] declared that “music is not just about the music; music is about the vision as well and I’m not talking about video clips… I’m talking about music as in a vinyl – about an object that you pick up. I mean the music is sitting inside here [the vinyl record] but it’s actually the cover artwork that you could look at… you can really look at this thing as a work of art”. John’s acknowledgement of the importance of visual manifestations of music resonates with Wallach’s (2003) observation that visual stimuli are more involving than sonic stimuli, enabling the audience to be drawn into the experience of that stimuli. However, what is interesting is that John rejects the current music industry practice of adding visual stimuli to music via the creation of a music video. Instead he prefers more traditional visual stimuli in the form of static cover art on the protective cardboard sleeves that vinyl records come with. His preference for cover art is not unique, as evidenced by the increasing popularity of cover art as collectibles in their own right (Bartmanski and Woodward, 2015; Yochim and Biddinger, 2008).

The visual or aesthetic quality of vinyl can often extend to the actual visual nature of the vinyl record itself, as well as the cover art on the accompanying cardboard sleeve packaging. When asked why he believed vinyl was increasing in popularity, Ben [WM36] replied that he
believed “it is the combination of a desire for a tangible product and with the rise of MP3s, I think people who really love music as the art form, they want something for their money, they want to buy into the sort of piece of art that it is.” He further elaborated that besides the vinyl record itself being visually perceptible and having aesthetic beauty, the ability to touch, feel and hold the product form gives it value (“it is a weighty item, you feel like it is worth the £20, £30, or more that you paid for it”) which is augmented further by the visual pleasure provided by the record sleeve. In his view, the record’s weight and value is augmented by the packaging in a way that connects him to the artist and the artist’s music. He explained,

“it looks great when you open it [the sleeve] up, you look through it, you look at all the, all the liner notes and then you pull the record out and yeah, often it is some sort of beautifully coloured piece of shellac and yeah it is just a great, it is a whole, then you listen to it and it is yeah you just can’t get that with MP3s or CDs, it is just not the same… all you really see [with MP3s and CDs], is you just hear it …it is just, you don’t get the same connection with the artist and the record as a whole.”

To Ben, the ability to physically experience and interact with vinyl using multiple senses allows the vinyl to facilitate a greater connection for him with the artist(s) and the music it embodies.

Similarly, Colin [WM60] believed the importance of the cover art on the vinyl sleeve should not be underestimated because participants use its larger size as a common justification for preferring vinyl over compact disks (“you can get that [cover art] with a CD, but it’s not quite the same “it’s shrunk down and less thought goes into it”). We note that even though the cover on a compact disk might be identical to the original cover of the vinyl record, Colin views the CD cover as less meaningful. The information provided by the vinyl sleeve is even greater with albums known as gate-folds, a type of sleeve which opens up to be twice the size of an ordinary
album sleeve and permits additional information such as photographs and information about the songs to be presented. As Tony [WM50] explained, “You pick up the record and you can see the grooves and you can see the songs and the tracks and where they start and where they end and how long they are going to go for. And then you put it on the thing [record player] and you watch…and you put the needle on and you watch the record spin. It spins…its very visual. It’s this visual aspect that’s really cool”. Tony’s comments indicated he is a highly involved music collector who values the physicality of vinyl because of the extra information it offers.

However, the visual aspects of vinyl do more than convey information, they create a perception that the artist is physically embodied in the record. Fieldnotes made after the interview with Steve [WM43] note: “he loves his vinyl. During the interview (at Steve’s parents’ home, where his collection is stored), he showed me his extensive collection, joyfully running his fingers along the arranged spines of the records, all of which were aligned perfectly with one another and in alphabetical order”. Steve explained he is passionately devoted to his vinyl because

“gate-fold [albums] with inserts from 1974… there should be museums to those things – they’re some of the most beloved objects in the world… they’re effing amazing… fantastic – yeah absolutely. I mean the covers… you’re talking about artists that you have almost unbridled love and admiration for and then you have the physical embodiment of that with an authentic object of the time that physically represents the accomplishment that lies therein, with inserts and a big gate-fold – they’re my favourite objects in the world… it is its own work of art and the way it just drips and bleeds authenticity. This is what the band put out. This is what they gave to the world. This is the – it’s like holding the pen that Charles Dickens wrote with or something, I mean this is the album. It’s so
democratic, you can have something that is blessed in that way and there are millions of
them in some cases” Steve [WM43].

Despite Walter Benjamin’s lament that mass-production would lead to the loss of the original’s
aura in the copy (1936/1968), it is clear that Steve still perceives his copy of a mass-produced
vinyl record as being factually linked to the artist and hence containing the artist’s essence.
Given the difficulty of perceiving an absent person as embodied in a trace that they have created
(Belk 2014), the visual nature of the cover art on the album cover appears to play a critical role
in augmenting the music contained in the record that is sensed aurally, allowing the record to
become a “physical embodiment” of the artist. Moreover, the cover art visually signifies the era
from which the record and the recording artist originated. Thus cover art makes the vinyl record
what Steve characterises as “an authentic object of its time”. Not only that, his statement that it
“drips and bleeds authenticity” reveals his view that the authentic essence or aura of the artist
contained in the vinyl can be transmitted by the vinyl. This aura makes the vinyl record authentic
(Alexander, 2007), and gives it the capacity to carry and transfer (“you can have something that
is blessed”) the contagious magic (Fernandez and Lastovicka, 2011) of the original, sacred
artist(s).

The ability of vinyl to interact with the visual and sonic senses of its users can be
augmented by its interactions with other senses also. For example, John [WM35] noted the
additional importance of the feeling and smell of vinyl when he said “this is the thing that we’ve
lost with the digital medium, music is not just the aural [sonic] experience, it’s also the tactile
[and] visual experience which you get. Like anybody who’s ever collected records knows what
I’m talking about is when you pull out that record from the sleeve you actually squeeze that
sleeve open a little bit and you have a smell of the inside, right? You smell the inside of that
paper cardboard and you smell the vinyl, you know.” We interpret John’s comments to infer that being able to touch and smell the vinyl augments the ability to see and listen to the vinyl. This was reinforced through participant observation while accompanying John and his wife on a ‘picking’ trip (picking is the emic term for a “lucky dip” type hunt where one “picks” through unorganised piles of records, hoping to unearth something interesting). Fieldnotes record how “we enter a large store where records are stacked in boxes in no particular order (there’s barely room to move between the makeshift rows), we are told that there are just two hours left before closing time (a warning that was fortuitous), so John and his wife quickly part ways, picking through boxes in different rows, calling out to one another if they find something of mutual interest, calling me over when they find something they think I may like. In two hours, they find three low priced records. My fingers tire of flicking sleeves but I continue nonetheless, while the smell of old sleeves and vinyl is intense, and I’m almost thankful after two hours for fresh air” [Fieldnotes 8/6/2016]

As David [WM28] rationalised that the desire for being able to physically interact with objects is “only natural. As humans you want to be able to touch something and feel something, and have that feeling of more of a relationship with the physical object.” The preceding discussion of how the physical nature of vinyl allows people to interact with it using multiple (as many as four out of the five) senses is critical to users developing intimate, passionate connections with vinyl since they can interact and hence be contaminated by it via multiple modes, allowing them to have “more of a relationship” with it.
Performativity facilitating connections with identity

The physicality of vinyl goes beyond imbuing this physical product form with greater value than its digital counterpart, to also facilitating the performativity of vinyl because vinyl can make abstract phenomena concrete. For example, David [WM28] alluded to the performativity of vinyl when he said, “The song is not just a song. It’s the grooves that you’re playing.” His comment suggests that the physicality of vinyl allows the vinyl to performatively translate a song into something concrete that can be seen as well as being heard. Moreover, the vinyl is able to translate musical tastes into something visible that the owner and others can also comprehend.

Another type of performativity was alluded to by Kayla [WF27] when she said that “vinyl is ‘more of a ‘collection’ when there are tangible items sitting in your house rather than random electronic items sitting in your iTunes™.’” This is consistent with Hietenan and Rokka’s (2015) finding that when DJs perform by playing vinyl, they go beyond expressing themselves to sharing their cultural expertise with their audience. Thus, a vinyl collection can be a physical manifestation of the owner’s abstract taste in music (Brown and Sellen, 2006), performatively reflecting one’s identity to oneself and to others. Despite predictions that digital possessions would supersede physical ones (Belk 2013), the collectors interviewed appeared to find it hard to let go of the latter. For example Mike [WM45], who despite being married with two children and living in his own home, stores “six foot [2 metres] worth” of vinyl at his mother’s home because “If there’s a physical artefact I can build a whole set of memories and recollections. If it’s a digital thing I don’t have those same – but then I’m not a Facebook guy so I don’t have that digital environment to allow me to remember that stuff.”

Mike’s acknowledgement that he is “not a Facebook guy” is consistent with Belk’s (2013) speculation that generational differences could exist, with digital natives placing less
importance on having physical (rather than digital) items in their music collections. However, as a whole, our data indicates that the desire for physical collections that performatively display one’s musical tastes transcends generations. For example, Tom [WM25] made a clear distinction between vinyl and its digital counterpart, the MP3s, when he explained how “when I bought my first record, I already had the mp3s but I wanted to own a piece of music. I just didn’t want to just have the song. [Int: Is this how you feel about MP3s? That you just have the song but not own a piece of music?] Yes exactly...digital music doesn’t really exist. It’s just there.” Being able to experience something physically appears to be critical to something being perceived as becoming physically substantive. Moreover, physicality was fundamental in creating feelings of ownership, even among digital natives. Kayla [WF27], was insistent that “tangibility is quite important… feel and touch… you can see it and feel it and it becomes more of an experience, more of a social occasion… at the same time you can see [emphasis present] it play… that’s quite special and people often forget that you can see music happen… toddlers are quite interested, because it’s quite cause and effect because when you put the needle down it plays a tune, whereas you don’t get that when you’re hitting play on the remote control.” Kayla’s comments reveal two ideas that were commonly found throughout the data. First, many participants reflected the importance of touch because it permits the transfer of essences between the toucher and the touched object, connecting the two (Belk, 1988; Fernandez and Lastovicka, 2011). Second, being able to visualise and physically participate in the act of playing bolsters her perception of being able to influence events. Other participants also commented on the satisfaction gained from being able to actively participate in the playing experience. For example, Sam [Arab M35] told the interviewer:
“I do like the crackly sound as well … it’s nice that that’s there, that kind of
reassurance noise really… then the music takes over and it’s quite a nice kind of way
to start just getting that needle on the record and feeling like the electricity is flowing
through it …. I just feel like you’re sort of doing something … like reinventing the
wheel a bit, you just feel that you’re actually doing something with some physical
objects … It just feels all encompassing, you’re within the music more and that’s what’s
important for people who are really big into music I think, to feel a part of it… its
something tactile, moving the needle…it’s a whole process, you really feel like you’re
engaging with the music somehow more than if you go put it on the tray and click play…

Our interpretation of Sam’s comments goes beyond Styvén’s (2010) finding that people with
higher music involvement seek tangibility, to reveal how those more highly involved people also
want to interact with the music, in terms of participating in the playing experience. His comment
about the “crackly sound” that is a “reassurance noise” also hints at how vinyl provides sonic
feedback, facilitating the two-way nature of this interaction. This feedback from the vinyl record,
coupled with other comments that the warmer and richer sound from vinyl (Wallach, 2003) is
more human-like (Yochim and Biddinger, 2008) is important. Anthropomorphism, the innate
human tendency to attribute human or human-like characteristics to non-humans (Triantos et al.,
2016), allows the person-object relationship to more closely resemble that a relationship between
humans (“records are people too” – David WM28). The fundamental human need to connect to
others can be fulfilled by anthropomorphised objects (Lastovicka and Sirianni, 2011). However,
as the next section will explain, vinyl can also fill this need by facilitating connections between
its user and a larger community of individuals implicated in the trajectories of vinyl collectors’
experiences with their vinyl.
Physicality and Performativity facilitating connections with others

Vinyl collectors explained how the playing requirements of the vinyl format required that the listening experience be more mindful. Unlike other music formats, playing vinyl requires the active participation of at least one listener (hence our characterisation of vinyl collectors as “users”). As Ben [WM36] explained that “the benefit of… listening to music on my turntable as opposed to just … iTunes… is that I am much more engaged with that record… If I have got a record on the turntable, chances are I am not going to leave it for a long period of time because I know I have got to turn it over so it… will have more of my attention”. Paul [WM44] corroborated Ben’s view, describing as vinyl having more “weight”. He explained how “something about the ritual and ceremony… gives it [vinyl] a greater weight and it gives it greater attention and I get greater relaxation out of it and more enjoyment. The going and turning it over and the – taking things out of the sleeves, listening whilst reading the lyrics and things like that. That – it just works perfectly with how I want to consume good quality music. Um… and that ritual I think has been amplified … by friends. When you find that in common … again amplifies the ritual of it.”

As Paul’s comments illustrate, the physicality of vinyl is augmented by the ritualistic experiences involved in acquiring, playing and listening to it. Vinyl does more than allow users to interact with the vinyl object during the listening experience. Physicality augmented with ritualistic experiences also (regularly or occasionally) facilitates players’ interactions with other listeners. Kayla [WF27], who got involved in collecting vinyl in her own right because her partner Tom, a part-time DJ [WM25] was a keen collector, pointed out how “putting on a record becomes more of a social experience rather than MP3s or your iTunes™ and iPod™, which are
all quite solo”. The communality of this listening experience was also noted by John [WM35] who said “when I go to Mike and Nicole’s place, we’ll take turns in picking records and putting something on and we’ll surprise each other with what we chose and you really – it almost becomes a communal shared experience when we each take turns putting on a record, you know?” The physical vinyl record acts an anchor for the communal listening experience and even, may create an instant bond (Brown and Sellen 2006). This bond arises from the shared appreciation for the same music, in the same format and often results in a listening community. Shared self is created when people recognise commonalities (Lastovicka and Fernandez, 2005) that make them members of the same small world (Gainer, 1995). So the repetitive physical interactions of the listener with the vinyl and the resultant performativity shared with other listeners makes vinyl more than a just physical object that performatively demonstrates shared musical tastes. As the listeners focus their attention on a common object, vinyl also acts as a nexus that connects the listeners via their shared interests, musical tastes and listening experiences. On one hand, the vinyl performatively demonstrates the musical tastes of the user who selected it. On the other hand, the music thus performed may influence other listeners’ tastes. Thus the communal listening experience builds connections between listeners on multiple levels as shown in this fieldnote:

“...the host, her husband, and two of the other guests are avid vinyl collectors. After dinner, we move into the living area to listen to vinyl. The collection takes centre stage in the room, on shelves lining a whole wall. We carefully look at the spines, commenting on records we love, and discussing shared experiences of ownership, when we first heard the record, seeing the band live, and most loved songs. The host brings out boxes of singles (45’s) organised by decades (60s to 90s) and suggests we each take turns to pick and play.
The room falls silent as we each start picking through a box, selecting a few tracks. The first record goes on and everyone waits in anticipation before smiling in recognition at the opening bars or exclaiming “I know this!” The engagement with the music is intense, bordering on reverence, and the conversation is muted, becoming more lively between tracks as people reminisce about the original of the artist, or the motivations for choice. Each guest is eager for their turn to come around again, and changes between records become quicker as excitement builds throughout the evening…. Four hours pass unnoticed before we realise the last trains have ceased running.” [Fieldnotes 7/4/17]

As preceding observation describes, listeners immersed within the liminal space generated by the music (Boyce-Tillman 2009) develop a sense of communitas that produces collective joy (Turner 2012). This joy can begin long before the vinyl is played in the company of friends. Participants recounted the pleasure of their interactions with like-minded sellers of vinyl and other buyers in the shopping experience. For example, Phil [WM44] noted that “unless you shop at [a major international music retail chain] which is a disaster… the shopping experience is quite an important part of the whole process and adds [to it because] … you’re basically interacting with people on a similar wavelength.” Phil’s comment is consistent with the second author’s experience of the picking session described earlier, which also involved forms of communitas as the clerk commented positively on their finds, while those in line smiled at one another and showed off their finds, generating further discussion. Although Phil’s views could have been influenced by his role as an independent record store owner in New Zealand, Ivor [WM40] from the United Kingdom corroborated this from a shopper’s perspective. Ivor explained why he enjoyed shopping for vinyl in stores as opposed to shopping for it online. He explained how
when he was younger and shopped at a major international music retail chain [incidentally the same chain mentioned by Phil],

“you’d just go in – asking for some information, you probably just buy your record and that’s it and you bring it home and that’s where your relationship – your story starts. But [with] the specialist stores… there’ll actually be conversations going on around the counter. You get to know people there and over the period you were in there you’d make your decisions on which records to buy. But I can still remember conversations that I had at certain times when I pull a record out now that – [I bought] 20 years ago – I remember who I was speaking to and what it was obviously that created your need or desire to have that record. You benefit from going to a store … that experience is all part of the joy of buying…music”.

Ivor’s comments are consistent with other participants’ comments as well as the second author’s fieldnotes that record how he would buy records at the market each Saturday, engaging in “discussing various periods of music” with the vendor, leading him to move “beyond buying records of CDs that were not mastered properly, or records of bands I know, to new-to-me genres, surprising myself by buying heavily from the pre-punk period (something which I had rarely done)... Up until now I’d primarily brought funk records, so the purchase surprised Dave, but he notes he’ll dig around at home to find some more, warning me that many of the records are more than the usual £35 I like to spend. I can’t wait for next Saturday to see what he has”.

Thus Ivor’s quote and the second author’s described experience are both evidence of three important ideas that were also articulated by other participants. First, the buyer has a shared story with a record that can start when it is unwrapped in the privacy of his home, or even beforehand, during the purchase experience. Second, before even being played, the physical record can act as
a cue to the repository of associated memories even decades later. The memories of the buying and playing experience augment the vinyl as corroborated by Aaron’s [WM24] belief that “if you’ve gone out and physically hunted a record and sourced it yourself, you value it. You’ve got a story behind buying it, and you remember the first time you played it.” Third, Ivor’s comments allude to the joy that arises from the interactions with one or more shared selves during the purchasing experience. This shared joy persists and grows when listening to the records alone or with friends because it accumulates onto, or “gives weight” (Paul, WM44) to the physical record, leading Aaron to exclaim “you have no idea [of] the amount of joy you get from a good bunch of records. You get a warm glow.”

The first author’s prolonged engagement with an independent, neighbourhood record store over five years demonstrated how communities can coalesce around the vinyl listening experience. When the store was in the main street of its suburban shopping centre, it was frequented by two groups during the day, who also attended the occasional weekend and night time vinyl DJ music events held at the store. As the first author’s fieldnotes made after observing one such evening event describe:

“It’s a bit incongruous seeing the group of middle-aged males (mostly dressed in lived-in boot-cut jeans and faded concert t-shirts featuring classic bands like Pink Floyd) crushed together in the tiny store with the group of teenagers of both sexes (in their skinny jeans and brand new t-shirts featuring “emo-pop” bands such as Fall Out Boy and Panic at the Disco.) A few parents waiting for their teens told me they were initially disconcerted to see the older men there till their teens assured them that these guys were “alright” and would watch out for them if “outsiders” hassled them.” [Fieldnotes 12/08/14]
Neither group had much money to spend at the store and it eventually folded. It was resurrected in a rented garage on the outskirts of town, and furnished with old couches that were often filled with both groups of vinyl fans who addressed each other by first names, demonstrating how shared interest in vinyl and shared listening experiences at the store had bonded them into a community of listeners.

The shared appreciation for vinyl not only creates and extends one’s interpersonal network as above, but also extends to people outside that network. For instance, David [WM28] an Australasian DJ often went overseas to play at “gigs” and purchase new music. David reported a number of instances where fellow vinyl collectors had asked international vinyl retailers to put aside special records for him. For example, he recounted how “I played Seattle this year and when I went to the local record store there, they had heard I was coming and left some [records] aside for me… when people know you for your record taste[s], the records really find you.” Prior work on shared self (Lastovicka and Fernandez, 2005) found that when a dyad shares a common identity and developed a sense of shared self, one party may grant the other party a concession or favour. Our research demonstrates how the power of shared self can also have a multiplicative effect throughout a network with mediating people facilitating favours between two otherwise unrelated parties. Not only that, David’s comment that the “records find you” also underscores the insight that once a product is anthropomorphised, it can potentially be viewed as a human partner that seeks a shared self (i.e. the collector-user).

Coping with being vinyl users in a digital world

The preceding discussion has established that the repetitious, ritualistic playing and listening to vinyl facilitates interactions via multiple senses that create passionate, intimate
relationships with, and via the vinyl. All the users we interviewed were clear that vinyl was their strongly preferred medium with which to listen to music. However, they also acknowledged the limitations and inconveniences associated with the material aspects of vinyl – the same material aspects that made them so passionate about it in the first place. For example, a few of our participants who were DJs reported being reluctantly forced to play digital music when faced with the difficulty of transporting a large vinyl collection to gigs. Thus the DJs we talked to corroborated the difficulties faced by the dubstep DJs interviewed by Heitenan and Rokka (2015). Moreover, this lack of portability does not just arise from the material nature of the vinyl itself but can stem from the shortcomings of the actual legacy technology player associated with the product. For example, Martin [WM52] commented that “You’d need a damn good turntable to play an LP [long playing vinyl record] in the car!”

Our participants mentioned three situations where they found it difficult to play vinyl – the workplace, when exercising outside the home, and when in the car. At their workplaces, participants reported that they accepted they had no choice but to listen to music on the radio or music that was being streamed by their employer. When exercising outside the home, most participants appeared to prefer the portability and choice of digital music such as MP3s. However, the car presents a unique situation where participants had the choice of using other physical music formats (like CDs or cassettes), or going digital (MP3s or streaming).

Two participants coped using a strategy of separation from digital music. For example, Alan, preferred not to listen to music at all, if he could not listen to it on vinyl (“What other medium? I have no other medium!”) while Tonya would use an iPod™ when running – but rather than listen to music on it, she would only listen to non-music podcasts. Thus Tonya, although not separating herself from digital technology, was practising separation from digital
music. Other more pragmatic participants avoided digital music wherever possible but were happy to utilise digital technologies like the internet to seek and purchase their vinyl. Thus it is clear that these vinyl users overcome the difficulty of constructing a technology ideology that opposes technology altogether (Kozinets, 2008) by choosing to view music technology as a separate sub-category of technology and constraining their opposition to technology to the sub-category of music. For example, when Adam [WM36] was asked why he thought vinyl had become a bit more popular, he replied, “I reckon maybe… people [are] disillusioned a bit by all the technology, like you have with your – literally with your phone, your smartphone and your laptop and your computer at work, you’re literally on computers all the time and like it’s just quite nice to get away from that for a bit. Thus, Adam resembles the participants in Kozinets’ (2008) study who retreated from technology and the efficiency it requires. Like immigrants who retreat home to take a break from having to continuously interact with the relatively unfamiliar dominant host country culture (Mehta and Belk 1991), these “retreaters” cope with the demands of current technology in the outside world, by creating a mindful space and time to listen to analogue music. This puts them in a situation where they can slow time down and literally and figuratively tune out the efficient, modern technological world.

Our participants expressed different degrees of comfort with situationally-induced needs to switch music formats. At one extreme, some participants had a “switching” (within the product category) coping strategy. They rejected digital music e.g. MP3s and streaming altogether and resorted to using other analogue technology when vinyl was not possible e.g. CDs in the car or in a portable CD player while walking. At the other extreme, participants like Tom [WM25] did not need coping strategies because they saw “no problem listening to MP3s”. When asked if he saw any strangeness in blending old and new technology, he explained, “Most of the
vinyl music I have are of stuff that I had MP3s to start with or have listened to online. Digital music is usually my first [purchase of a new song]. I have two very important collections. My MP3s and my records. They are sort of the same. When I have something on record I need it on MP3 as well. It’s good now because if you buy new records they come with downloader codes for the MP3 as well.” However, even those who were willing to use digital music when vinyl was not appropriate made clear distinctions regarding their feelings towards both types of music formats. For example, Tony said,

“MP3s are cool for a few reasons…. You can listen to them while you’re out walking around… or in your car…. they are easy and cheap. The thing that I find with Mp3s are, I don’t care about them... they don’t hold any… um…they are like here today…gone tomorrow kind of thing.” [Int: Why is that?] You can have something happen to your hard drive and you can lose a whole bunch of Mp3 files…but you can just look it up online and get them again easily enough. Or you can get some from your mates. But if you lose records or something, they are gone! And you can’t get them back or it will take you a very long time to find them again.”

So, the relatively greater effort to seek, obtain, use, and replace vinyl makes it comparatively more valuable to users than digital music. As Nokelainen and Dedehayir explained, users “are enjoying the struggle” (2015, p.72). Not only that, those who used digital music when the situation required it, pointed out the drawbacks of digital music. For example, Kayla [WF27] told us how she and her partner Tom [WM25] reluctantly listened to Spotify’s streaming service at work. She explained that their reluctance was because they liked to listen to albums in their entirety and “Spotify has the tendency to have bits and bobs and so do other music service providers… some of the albums are kind of incomplete. It’s usually got different publishers and
stuff, and some of them have given the consent to use them. It’s not every album, but it’s usually the case with the older albums that I like… But the unreliability of streaming means that it can get cut out from time to time and that’s frustrating.” So Kayla acknowledged the content and technological limitations of streaming even though she switched between using legacy music technology at home and digital music technology at work.

Another common coping strategy for switchers like Kayla and Tom was to segregate listening situations into focused and background listening. So, when wanting to deliberately and meditatively focus on the music, these participants play vinyl. But, when they just want music as the background for some other activity, they play CDs or digital music. As Ben [WM36] explained, “I am much more engaged with that record… I think I listen to it in more detail… I think I spend, I pay more attention to the records if I am listening to them on vinyl, as opposed to if I tend to ever listen to it digitally it just tends to be, ease is the reason I am doing that and it tends to be in the background so it will just flip between things, whereas if I have got a record on the turntable… I know I have got to turn it over so it… will have more of my attention.”

Taken together, the findings in this section reveal that vinyl users cope in a digital world by separating music technology from other technology. Since digital technology cannot be avoided, they seek to materialise authenticity in a constrained area of their lives – in this case, vinyl music.

**Discussion**

Nokelainen and Dedehayir (2015) believe that the popularity of legacy technology cannot simply be explained by nostalgia. Thus we deliberately sought some informants who were too young to have been previous adoptees of vinyl to understand what else might explain this
resurgence. We found that it is the material nature of legacy technology makes some users passionately prefer it over its digital alternatives. Our explication of how materiality is critical in creating the intimacy that facilitates users’ need for connections helps explain why users have such passionate preferences for the legacy technology of vinyl. Thus, our research shows why the disconnect between consumers and digital products that do not have this materiality exists, exacerbating the disconnect between firm and consumer that has contributed to new product failures (Lowe and Alpert, 2015).

Theoretical contributions

In answering our three specific research questions, several important theoretical contributions were made. First, we asked how materiality differentiates legacy technology from its digital alternatives. In answer, we unpacked the different perspectives of materiality. We moved the field forward by showing how physicality and performativity work together to differentiate legacy technology products from their digital alternatives in a manner that makes these products significant in users’ lives. In answering our first specific research question, our work underscored the importance to future research of clearly articulating the perspective of materiality being used.

Our second specific research question asked how materiality facilitates users’ passionate, intimate connections to, and via, their legacy technology products. Our discussion of how users’ physical interactions with vinyl create greater intimacy contributes to prior research on person-possession attachments. Not only does physical interaction create person-possession intimacy, shared, intimate interactions with the possession create a meaningful object that facilitates connections between persons. According to Belk (1988), contamination is the perception that
physical qualities have been transferred between two entities because of the perception that actual contact between the two had occurred. His definition does not constrain contamination as only referring to contamination by touch. However, prior empirical investigation of contamination (e.g. Fernandez and Lastovicka, 2011) has only reported on contamination via touching. Hence we contribute theoretically by demonstrating how multiple modes of interaction can facilitate multiple forms of contamination, building stronger, more passionate person-object(-person) relationships.

Our third specific research question asked how legacy technology users cope with the tensions inherent in being analogue users in a world where digital technology has proliferated. In demonstrating how users of vinyl compartmentalise their focused music listening, we theoretically extend Kozinets’ (2008) work on technology ideologies. He noted the difficulty of creating an ideology that resisted technology as the source of societal, economic and personal progress. He also revealed that some people retreat home to get away from the contemporary technology that they cannot avoid elsewhere. We extend his work by showing how vinyl users compartmentalise “focused music listening” to separate it from the other areas of their lives. Thus, they are able to create a smaller space within which to enact their Green Luddite ideologies, while partaking in the convenience afforded by digital technology elsewhere.

Having discussed our theoretical contributions, we now turn to a discussion of the managerial implications of our work.

Managerial implications

Our theoretical findings regarding the importance of materiality, physical interactivity, performativity and user-product intimacy also have important implications for technology
marketers in a range of contexts. These include technology marketers facing “the innovators
dilemma” (Christensen, 1997; Christensen and Raynor, 1997), those seeking to revive interest in,
or seeking to benefit from renewed interest in legacy technology, and those seeking to build
more engagement with digital systems. For example, marketers of products affected by recent
trends towards digitisation, miniaturisation and automation should note the importance of
physicality in facilitating possession attachments. Prior research (Magaudda, 2011) has shown
that when using digital music, people developed attachments to the material product associated
with that digital music i.e. iPods™ or hard drives. Thus we call for experimental research to
examine the lower limits of miniaturisation of technological products, beyond which the product
becomes too small to become a physical object of attachment.

It is no coincidence that marketers of digital products have produced legacy-type
applications that add material aspects to digital products, sometimes even in virtual form. These
include adding vinyl “crackles” to digital music (e.g. the Vinylage Music Player), license film
and lens styles to provide more creative options when taking photographs (e.g. Instamatic and
Instagram), and analogue sounds effects for aspiring musicians (e.g. programs such as Arturia’s
V Collection of classic synthesizer sounds). Also of little surprise is the use of communal
branding strategies by legacy technology marketers (often through leveraging pre-existing
communities). Our findings reinforce these shifts, identifying that the addition of materialising
attributes to digital products may help increase the connection between the user and the
technology, while also providing a means to overcome some of the acknowledged contextually
driven limitations of legacy technology. Furthermore, the findings demonstrate how users create
a form of imagined community around vinyl, identifying the potential for brand community in
maintaining support for legacy platforms while also providing the basis for user-centred innovation.

Strategically, our findings suggest that Holt and Cameron’s (2010) approach to cultural innovation may offer useful insights for managers facing disruption. We suggest that former dominant designs can be reframed in identity terms as tools of authentic self-expression. Cultural branding involves the creation of identity myths that draw their power from subcultures, a process we believe could provide another ‘innovator’s solution’ (Christensen and Raynor, 2003). Although music marketers were active in driving vinyl’s initial decline (out of a desire to stimulate the adoption of CDs), consumer dissatisfaction with the hollowness of digital sound quality emerged early on (Plasketes, 1992). This occurred just as tastes were also shifting towards seemingly less packaged, more authentic genres where vinyl still remained popular (e.g. grunge, hip hop, indie, electronica and trip-hop). Leveraging these cultural associations could have provided a powerful buffer against an emerging digital narrative focused on convenience and portability. Innovators in other legacy categories, such as camera film communal brand Lomography, have engaged in similar strategies, suggesting that leveraging materiality narratives through a cultural strategy may offer an alternative strategy to overcome or moderate the effects of the ‘innovators dilemma’ (Christensen, 1997).

Limitations and directions for future research

We acknowledge that our empirical work was limited to one context (vinyl). However, there has been a return in a number of disrupted products (e.g. camera film, super 8 movies, board games, table top strategy and fantasy games) and practices (e.g. letter writing, craft production, colouring in books). Consequently, we call for future research to examine other
categories of legacy technology and legacy practices. All of these have some attributes similar to our context of vinyl, but some also have interesting differences. For example, future research could examine people’s consumption of objects such as videocassettes, which are no longer available commercially and so can be classified as collectibles. Videocassettes resemble vinyl in also being able to be enjoyed communally while being played, but differ from vinyl because significant user involvement is not required to play them.

We also acknowledge that our participants were all living in Anglophone, developed countries and were mostly of European heritage. Given the importance of culture to conceptions of materiality, we call for future research to examine materiality in other cultures. We call for future research to examine why males are more likely to collect vinyl, given that prior research on technology acceptance has shown that males have a higher propensity to accept new technologies than females (Venkatesh et al., 2000). We also acknowledge that since our participants were largely male, we were not able to determine if gender differences exist in how physicality influences how and why music is made material. Consequently, we also call for future research to examine females in particular, and also to compare both male and females to find out if gender differences exist, and how these differences might influence preferences for legacy technology. Such research could examine categories that have been historically gendered (knitting and shop-craft for example) with those that not so gendered to tease out gender differences as well as identify based motives (e.g., shop-craft could be a way in which males in service dominant economies reassert traditional identity roles).

Building upon participants’ accounts of having to slow down and actively engage with vinyl recordings, research could investigate others ways in which such features may create deeper engagement with products and possibly flow type experiences (such as fixed gear cycling...
and the resurgence in board games). Furthermore, research into other less-immersive legacy technologies such as film photography (with its feedback delays) may identify whether features demanding consumer work and imagination may also trigger new forms of value. With film, users do not get instant feedback, but must wait for the result. Research to tease out the differences between getting film developed professionally compared to developing film oneself may shed additional light on the importance of user-involvement, in creating connection.

Extending these lines of inquiry, deeper engagement with legacy platforms that may intersect with other ideological fields identified by Kozinets (2008) offer much potential in furthering our understanding of consumer relationships with technology. Examples include the re-emergence of analogue photo-booths that represent a more communal, enjoyable form of techspressive-ness, and the popularity of writing instruments and paper notebooks among many executive mindfulness programs aimed at encouraging better leadership and creativity (reflective of aspects of work machine and techspressive ideologies).

Future research could also examine the managerial implications of a re-engagement with materiality. Dominant models of innovation, such as the S-curve (Mahajan et al., 1995) and Clayton Christensen’s work on the innovator’s dilemma (Christenson, 1997; Christensen and Raynor, 2003) identify disruption as the end point for technological evolutions. However, legacy technology such as vinyl, film photography, mechanical watches, fountain pens and so on have not been relegated to narrow, highly specialised niches as predicted (Tushman and O’Reilly, 1996). Instead, they have been reinvented by consumers and marketers alike. Since many legacy products eventually earn higher margins than their digital counterparts, investigations into the branding and advertising, innovation, and co-creation strategies should add to our understanding of technological evolution and re-adoption. One related line of inquiry could involve
experimental research examining how the value of materiality could be effectively reframed as a cultural innovation and communicated to consumers in a way that could counter the performance advantage claims of disrupters.

Conclusion

We conclude by pointing out that our research has extended prior research on technology life cycle models by deconstructing how the materiality of an analogue product makes it significant to its users. Far from being a fading remnant of a nostalgic sub-culture, the legacy technology products can serve as anchors that create new communities who collectively generate new memories. While music has been a universal accompaniment to human lives since time immemorial, its value appears to accrue in relation to the effort required to acquire and experience it. Digital music cannot completely mimic the record, because physicality is inextricably linked to performativity and both are critical to its significance. Lydon (1992, p.43) asked “Can music be tactile, be stuff?” We would reply that, at least in the case of vinyl, “music is not only stuff – it is stuff that matters”.

References


Table 1. Vinyl Collector Details

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Age</th>
<th>Sex</th>
<th>Details</th>
<th>Interviewed In</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron</td>
<td>24</td>
<td>M</td>
<td>Salesperson, single, no children</td>
<td>UK</td>
</tr>
<tr>
<td>Tom</td>
<td>25</td>
<td>M</td>
<td>part time DJ, Debbie’s partner, 500 records</td>
<td>ANZ</td>
</tr>
<tr>
<td>Debbie</td>
<td>27</td>
<td>F</td>
<td>No children, Tom’s partner</td>
<td>ANZ</td>
</tr>
<tr>
<td>David</td>
<td>28</td>
<td>M</td>
<td>Single, no children, 10,000 records</td>
<td>ANZ</td>
</tr>
<tr>
<td>Carmen</td>
<td>29</td>
<td>F</td>
<td>Graduate student, married with 2 step-children</td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Partner also collects vinyl</td>
<td></td>
</tr>
<tr>
<td>Tonya</td>
<td>30</td>
<td>F</td>
<td>No children, Partner also collects vinyl</td>
<td>ANZ</td>
</tr>
<tr>
<td>John</td>
<td>35</td>
<td>M</td>
<td>Professional Musician and Producer</td>
<td>UK</td>
</tr>
<tr>
<td>Peter</td>
<td>35</td>
<td>M</td>
<td>Manager, married with 1 child</td>
<td>UK</td>
</tr>
<tr>
<td>Rob</td>
<td>35</td>
<td>M</td>
<td>Web developer, runs music fan site</td>
<td>UK</td>
</tr>
<tr>
<td>Sam</td>
<td>35</td>
<td>M</td>
<td>Divorced, one child</td>
<td>ANZ</td>
</tr>
<tr>
<td>Adam</td>
<td>36</td>
<td>M</td>
<td>PT DJ (full time accountant)</td>
<td>UK</td>
</tr>
<tr>
<td>Ben</td>
<td>36</td>
<td>M</td>
<td>Banker, married, no children</td>
<td>UK</td>
</tr>
<tr>
<td>Nick</td>
<td>37</td>
<td>M</td>
<td>Photographer, married, one child</td>
<td>UK</td>
</tr>
<tr>
<td>Jared</td>
<td>39</td>
<td>M</td>
<td>Record Store Owner-Manager</td>
<td>USA</td>
</tr>
<tr>
<td>Ivor</td>
<td>40</td>
<td>M</td>
<td>Television Sound Engineer</td>
<td>UK</td>
</tr>
<tr>
<td>Paul</td>
<td>40</td>
<td>M</td>
<td>Stock-broker</td>
<td>UK</td>
</tr>
<tr>
<td>Steve</td>
<td>43</td>
<td>M</td>
<td>Educator, married with children</td>
<td>UK</td>
</tr>
<tr>
<td>Phil</td>
<td>44</td>
<td>M</td>
<td>Record Store Owner-Manager from UK</td>
<td>ANZ</td>
</tr>
<tr>
<td>Mike</td>
<td>45</td>
<td>M</td>
<td>Educator, married with 2 children, “6-foot long collections of records”</td>
<td>UK</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>at mother’s house</td>
<td></td>
</tr>
<tr>
<td>Mark</td>
<td>48</td>
<td>M</td>
<td>Entrepreneur, married</td>
<td>UK</td>
</tr>
<tr>
<td>Carl</td>
<td>50</td>
<td>M</td>
<td>Record Store Owner-Manager</td>
<td>ANZ</td>
</tr>
<tr>
<td>Kelsey</td>
<td>50</td>
<td>M</td>
<td>Married, 2 children</td>
<td>ANZ</td>
</tr>
<tr>
<td>Martin</td>
<td>52</td>
<td>M</td>
<td>Tradesman, married with 2 children</td>
<td>ANZ</td>
</tr>
<tr>
<td>Kris</td>
<td>55</td>
<td>M</td>
<td>Internationally known full-time DJ</td>
<td>ANZ</td>
</tr>
<tr>
<td>Colin</td>
<td>60</td>
<td>M</td>
<td>Married, 2 children</td>
<td>ANZ</td>
</tr>
<tr>
<td>Ken</td>
<td>60</td>
<td>M</td>
<td>Record Store Owner-Manager</td>
<td>USA</td>
</tr>
</tbody>
</table>

Note: All of European heritage except Carmen (African-American), Ken (Hispanic) and Sam (Arab). ANZ = Australia or New Zealand