

Beamer¹, Benz, or Bentley: Mentions of products in hip hop and R&B music

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Abstract

Mentions of commercial products are common in hip hop and R&B lyrics, relative to other genres of popular music, although the potential impacts of this are not well-understood. Since these songs reach millions of people daily, it is pertinent to study the nature of these product mentions – in turn facilitating further research on their effects. In order to provide an overview of the product mentions that are present in hip hop and R&B lyrics between 1990 and 2017, we undertook a large-scale content analysis (N = 2,650 song lyrics). Mentions of products were frequent, and the types of products being mentioned remained mostly consistent (predominantly cars, fashion and alcohol), although the rate increased dramatically over time. Most mentions were of high-end brands and were framed neutrally. Overall, lyrics mentioning products contained more diverse vocabulary and were much more likely to mention money. These findings are interpreted in relation to prior research and the music business in general.

Keywords: Popular music, lyrics, product placements, advertising, content analysis

1 Introduction

The nature and effectiveness of product placements is well documented (Karrh, McKee & Pardun 2003). Product placements can occur in all media types (Storm & Stoller 2015) and achieve their effect via a brand or product appearing repeatedly within a particular positive context, thereby encouraging an implicit association between the context and

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the product itself. There are various theoretical explanations for this effect, like conditional learning (Schemer et al. 2008) or the mere exposure effect (Matthes et al. 2012). Evidence also suggests that product placements significantly improve recipients' recall of the advertised objects (Gupta & Lord 1998). Product placements provide excellent value for money – requiring a one-time payment for a movie, series, or game, that may be consumed over many years (Jusufovic Karisik 2014). Additionally, they may be more intimate or engaging than regular advertisements – since they are less disruptive to the audience's experience (Craig et al. 2017) – while subconsciously leading to increased purchase behaviour (Johnson & Lehmann 1997). Conversely, however, studies have shown that product placements can lead to adverse reactions if implemented too conspicuously (e.g., Brennan, Dubas & Babin 1999). Indeed, myriad aspects influence the effectiveness of product placements, including modality (Law & Braun 2000), frequency of exposure (Schemer, Matthes & Wirth 2007) and plot integration (Russel 2002).

Much of the discourse surrounding product placements has tended to focus on film, television and music videos, while far less is known about product placements in song lyrics (Ferguson & Burkhalter 2014). However, listening to popular music is an enormously common everyday activity (North, Hargreaves & Hargreaves 2004), especially among adolescents and young adults (North, Hargreaves & O'Neill 2000), for whom it is thought to be particularly important in fulfilling both social and emotional needs (Tarrant, North & Hargreaves 2000; Randall & Rickard 2017). In fact, the formation of identity during adolescence is thought to be influenced by (among other factors) interactions with both popular music (North & Hargreaves 2008) and with brands (Elliott & Wattanasuwan 1998). Adolescents are therefore a major target group for many marketers, and tend to listen to music (primarily popular music) for an average of almost eighteen hours per week and up to an average of four hours per day (IFPI 2018; Williams, Geringer & Brittin 2019).

In recent years, companies have begun to invest in reaching potential customers via this medium (Craig, Flynn & Holody 2017). Simultaneously, the music industry has struggled to stabilize its revenue since the

advent of digital streaming (Ruth 2019a; Wlömert & Papies 2016), compounded by losses resulting from the file-sharing era (Oberholzer-Gee & Strumpf 2016). In response to this, both management companies and musicians themselves have begun to explore novel strategies to increase their revenue (Gloor 2014; Haynes & Marshall 2018). Since it is common practice to use musicians as testimonials (Klein 2009) or to place products and brands in music videos (Burkhalter & Thornton 2012), one might reasonably expect to find paid product placements in song lyrics (Abrams 2018; Nicholson 2015).

However, while there is evidence that companies pay for brand or product placements in songs (Allan 2008; van Buskirk 2008), these are difficult to distinguish from voluntary, unpaid mentions that occur without any advertising deal (Kaufman 2003). Indeed, mentioning specific products may serve many different purposes, for example providing descriptive detail, or indicating membership of a particular demographic group. For this reason, the term "product mention" is hereafter preferred, instead of "product placement", wherever there is ambiguity regarding a songwriters' motivations.

Aside from their literal meaning, song lyrics in popular music serve many potential purposes including expressing social, economic, and political narratives (Friedman 1986; Frith 1986), and evoking emotions in the listener (Ransom 2015). Within an advertising context, lyrics may also be important in fostering favorable attitudes towards brands (Chou & Lien 2010). Most investigations of popular music lyrics have relied upon some form of content analysis, in order to identify and characterise themes or subjects in lyrics (e.g. Henard & Rossetti 2014; Ruth 2019b). Various studies have also examined more specific, topical themes, particularly those related to antisocial behavior, such as drug use (Inkster & Sule 2015), sexualization (Cougar Hall, West & Hill 2012), and violence (Primack, Gold, Schwarz & Dalton 2008).

Although several studies have investigated the interaction between music and the advertising industry (for an overview, see Ruth & Spangardt 2017), only a few studies thus far have focussed specifically on products and brands mentioned in song lyrics. For example, Craig &

Bichard (2014) examined lyrical product placements cross-culturally, reporting much greater prevalence in popular music in the USA, relative to both Europe and Japan. More recently, Craig, Flynn & Holody (2017) investigated the frequencies with which both products and celebrities were mentioned in US top 20 Rap, Country, Hip Hop/R&B, Adult Contemporary, Rock, and Pop songs between 2009 and 2013. Product mentions were present in over 50% of the songs. Importantly, compared to the other genres included, many more product mentions were found in rap lyrics (73% of songs analysed contained at least one mention) and hip hop/R&B lyrics (52%). Interestingly, hip hop and R&B fans – particularly those identifying strongly with hip hop culture – appear to be generally accepting of brands and products as cultural goods, where these are perceived as congruous with the song (Ferguson & Burkhalter 2014). In any case, the relative prevalence of product mentions in this genre makes it particularly suitable for the further investigation thereof, which was the primary motivation for the current study's focus on hip hop lyrics.

A second motivation for focussing on hip hop lyrics was the sheer popularity of this genre in recent years. Hip hop and R&B music is a multi-billion-dollar industry (Burkhalter 2012) – in 2018, "hip hop & R&B", accounted for 25.6% of US music consumption, making it the single most popular musical genre (Nielsen 2018). In fact, of the four songs to surpass one billion digital streams in 2018, all four were performed by hip hop artists. Since these songs reach millions of people every day through radio, music streaming and personal music collections (Krause & North 2016), it may be useful to better understand product mentions in hip hop and R&B lyrics, thereby facilitating future research into their effects. The primary aim of the current study was to identify how often products are mentioned in hip hop and R&B lyrics, and to characterise the nature of these mentions. The study examined how products were framed (i.e. in terms of valence) along with which product categories were prevalent and how the frequency of product mentions changed over time. By using an automated approach for the collection and processing of song lyric data, the current project expanded the scope of previous studies

considerably, by analysing a much larger corpus of lyrics, spanning a longer period of time.

2 Hypotheses

Research indicates that product mentions and/or placements are accepted in hip hop and R&B music because its audience is highly brand-aware and because branded products are viewed as cultural signifiers (Ferguson & Burkhalter 2014). Since hip hop and R&B (and by association hip hop culture) has exploded in popularity in recent years – leading to the emergence of new subcultures – it is reasonable to assume that cultural signifiers are both increasingly relevant and increasingly well-understood. Additionally, product mentions may help to establish a sense of the songwriter's identity, helping them to stand out, which is important given the increasing number of active hip hop artists. Indeed, in a longitudinal study of product mentions, de Gregorio & Sung (2009) found evidence of a large increase in their frequency over time, particularly from the mid-1990s onwards. For these reasons, it was hypothesized that, in the current sample, the frequency of product mentions would be positively correlated with year of release.

Considering the types of branded products being mentioned, Craig & Bichard (2014) found that the most frequent category was clothing, followed by vehicles, food and alcoholic beverages. Similarly, Craig et al. (2017) reported clothing as the most mentioned product category, followed by vehicles and then media. By contrast, with a less recent sample of lyrics (largely from 1995-2002) de Gregorio & Sung (2009) showed that vehicles were the most frequent category. In accordance with this, Mohammed-Baksh & Callison (2014) found that between 2008-2011, the most prevalent categories were vehicles, alcohol, fashion and entertainment.

In light of the above, it was hypothesized that the most commonly mentioned product categories in the sample of lyrics studied would be cars, fashion and alcohol. However, given the time period examined in the current study it was hypothesized that the popularity of these cate-

gories would have fluctuated over time, reflecting both cultural and socioeconomic changes, as well as the shifting thematic concerns of hip hop and R&B artists.

Although the valence with which products are mentioned can affect listeners' appraisal and recall thereof (Delattre & Colovic 2009), research has yet to elucidate how product mentions tend to be framed. Considering product mentions as cultural signifiers (Ferguson & Burkhalter 2014), their purpose is essentially descriptive, and therefore there is little reason to assume that they should be strongly valenced. Accordingly, it was hypothesized that the majority of product mentions would be framed neutrally. By contrast, it could be expected that paid placements would be almost exclusively positive (this is strictly an assumption, however, owing to difficulty in differentiating between product mentions and paid placements).

Lastly, it was hypothesized that the content of lyrics mentioning products versus those not mentioning products might differ in other important ways. Again, assuming that product mentions fulfil a descriptive function (Ferguson & Burkhalter 2014), it was predicted that the overall diversity of vocabulary may be greater for lyrics featuring product mentions (reflecting more descriptive language in general). Considering the potential role of product mentions as signifiers of social status, it was additionally expected that lyrics containing mentions would be more concerned with the self, and would be more likely to use language related to money.

4 Method

To capture a representative sample of popular hip hop and R&B music, Billboard year-end data were used, consisting of the one hundred best-selling singles for each calendar year. Metadata about all the songs featured in Billboard's "Hot R&B/ Hip-hop" year-end charts between 1990-2017 (N = 2,650) were retrieved from billboard.com, using Python. For each song, the title, artist(s), year of release and chart position was recorded. Using these data, a second Python script was written to down-

load the lyrics for each of these songs from genius.com. All lyrics ($N = 2,647$, since three were unavailable) were processed to remove any meta-lyrical information (e.g. section tags such as "verse" and "chorus"). In total, these data comprised lyrics from 2,314 unique songs (excluding duplicates, appearing in multiple years' charts) by 939 unique lead artists³. Billboard makes no genre distinction between hip hop and R&B for individual songs, although 49.65% of those studied contained at least one rapped verse (verified manually via listening to each song).

Lyrics for each song were analyzed manually, independently by the two researchers. A product mention was considered to be any mention of, or unambiguous allusion to, a branded, commercially available product. References to generic types of products (e.g. "car", "shoes"), or instances where the exact product was otherwise ambiguous, were ignored. Every product mention fulfilling these criteria was recorded, along with information about product type (the broad class of goods/services to which the product belongs) and valence (whether the product was referred to positively, negatively or neutrally). In order for a mention to be categorized as positive or negative, the framing had to be explicit (i.e. the artist clearly states that they like the product, or asserts that it possesses some desirable quality). For example, the following product mention (Levi's) was coded as positive:

"501s on, gangsta lookin' good" (Snoop Dogg 2009)

Interrater reliability between the two researchers' ratings was high. The year 1998 was chosen at random as a subset of the full data set, and all lyrics from this year ($n = 100$) were analyzed by both researchers. Agreement was 92.45% for the product placements recorded, and 98.11% for the valences thereof.

Product mentions were coded as "paid placements" where it could be definitively established that a contract or endorsement deal existed between artist and brand (e.g. via <https://celebrityendorsers.com>), or

³ In deriving this total, for the sake of simplicity, only 'lead artists' (including multiple lead artists) were considered - 'featured artists' were ignored.

where the artist was known to own the brand in question (e.g. Jay-Z and Rocawear).

5 Results

Quantitative analyses and exploratory semantic analyses were performed with R (R Core Team 2019), and the `ppcor` package (Kim 2015); all figures were generated using `ggplot2` (Wickham 2016). In total, there were 2,833 total product mentions – a mean of 1.07 mentions per song. Considering only lyrics which mentioned at least one product, the mean was 3.16 per song.

There was a strong, positive, significant correlation between songs' year of release and number of product mentions, $r(24) = .95, p < .001$ (figure 1). Controlling for the percentage of songs per year featuring at least one rapped verse, which increased roughly linearly over time, the aforementioned correlation was weaker, but remained significant, $r(23) = .53, p = .006$.

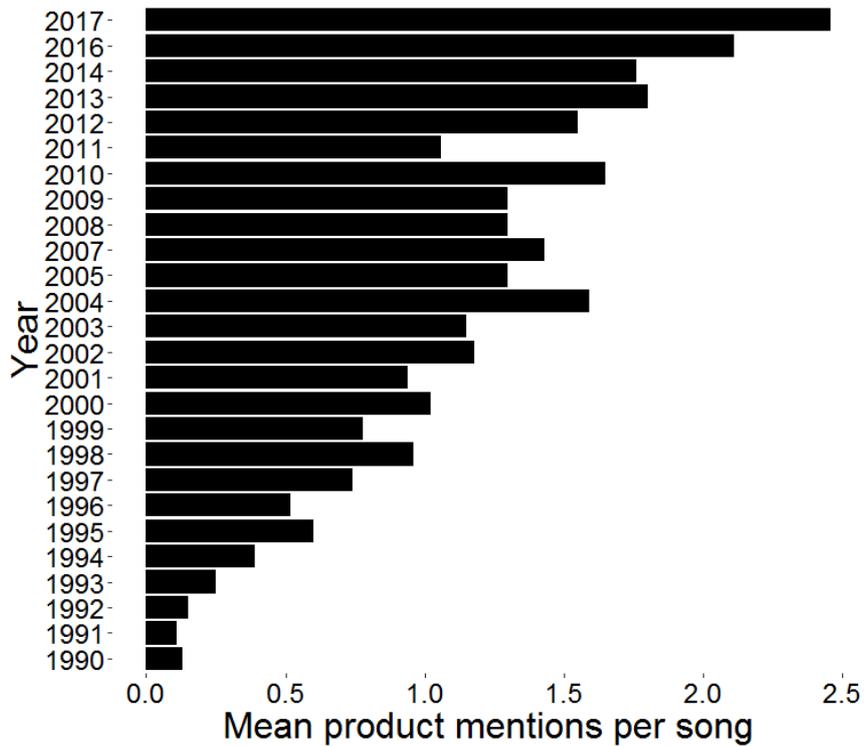


Figure 1: Bar plot depicting the number of product mentions for each release year studied (note that 2006 and 2015 are omitted due to a lack of data).

The types of products being mentioned remained very consistent over time. Cars, and more recently Fashion, were reliably the most-mentioned product categories – in fact, of the twenty-six years covered in the current study, Cars or Fashion were the most frequently mentioned categories in all but two (see table 1).

Considering the specific products being mentioned, a clear trend towards "luxury" products was evident. Of the ten most commonly mentioned brands, eight are renowned predominantly for their luxury products (e.g. Mercedes, Gucci, Rolls-Royce, see table 2).

Year	Category	Mentions	Percentage of (yearly) total mentions
2017	Cars	66	26.83
2016	Cars	62	29.25
2014	Fashion	54	30.68
2013	Fashion	55	30.56
2012	Fashion	57	36.77
2011	Cars	28	26.42
2010	Cars	45	27.27
2009	Fashion	37	28.46
2008	Cars	44	33.85
2007	Cars	63	44.06
2005	Cars	56	43.08
2004	Cars	64	40.25
2003	Fashion	42	37.50
2002	Cars	42	35.29
2001	Cars	34	36.17
2000	Cars	43	42.16
1999	Cars	29	37.18
1998	Cars	40	40.82
1997	Cars	24	32.43
1996	Cars	17	32.08
1995	Cars	19	31.67
1994	Alcohol	8	20.51
1993	Cars	7	28.00
1992	Food and drink	8	53.33
1991	Cars	5	45.45
1990	Cars	6	46.15

Table 1: Summary table illustrating the most commonly mentioned product category for each year studied.

The vast majority of product mentions (91.63%) were framed neutrally – i.e. the artist expressed no clear and obvious opinion about the product in question – while 6.64% were positive (figure 2). Only 1.34% of the lyrics studied could be verified as containing a paid product placement (e.g. where an ambassadorial relationship between brand and artist was public knowledge). Of this subset ($n = 38$), 72.73% were framed neutrally and 27.27% positively.

Brand	Product type	Mentions	Percentage of all mentions
Mercedes	Cars	188	6.64
Gucci	Fashion	76	2.68
Chevrolet	Cars	71	2.51
Rolls-Royce	Cars	71	2.51
Hennessy	Alcohol	69	2.44
Cadillac	Cars	65	2.29
Louis Vuitton	Fashion	61	2.15
Bentley	Cars	60	2.12
Rolex	Watches/ jewellery	58	2.05
Glock	Firearms	57	2.01

Table 2: Summary of product mentions by brand and product type, in descending order of frequency.

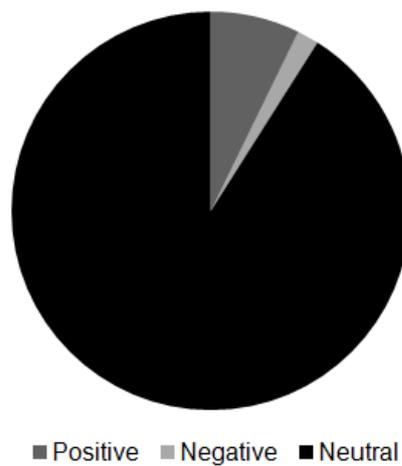


Figure 2: Pie chart illustrating the ways that product mentions were framed, by proportion.

The overall lyrical content of the songs that mentioned at least one product ($n = 1,694$) was compared to those that did not ($n = 952$). Firstly, type-token ratios (TTRs) – an indicator of lexical diversity, derived by dividing the total number of unique words by the total number of words overall – were calculated for the two sets of lyrics. It was found that, on average, songs containing product mentions had a greater proportion of unique words (figure 3).

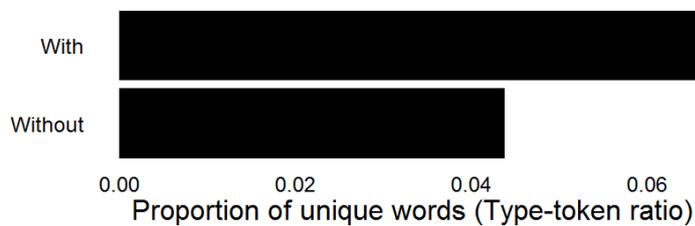


Figure 3: Bar plot depicting vocabulary diversity (proportion of unique words) in lyrics with product mentions and lyrics without.

The two sets of song lyrics were also examined in terms of their focus on the self, with the number of first-person pronouns – as a proportion of overall words used – measured as an approximation thereof. Overall, the subset of song lyrics that contained product mentions were slightly less self-focused (figure 4).

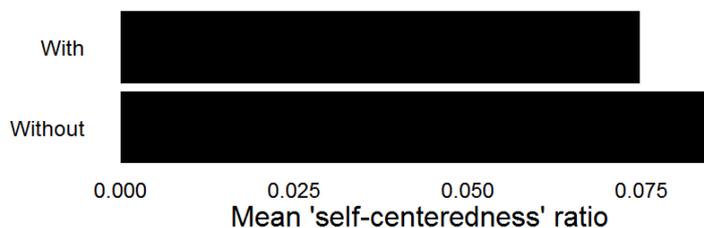


Figure 4: Bar plot depicting "self-centeredness" (proportion of personal pronouns) in lyrics with product mentions and lyrics without.

Lastly, the same approach was used to obtain an approximation of how money-focused the two subsets of lyrics were. This was achieved by calculating the frequency of a set of money-related words (adapted from Money Vocabulary Word Bank 2009) as a proportion of overall words. These words occurred approximately three times as often in the set of lyrics that mentioned products (figure 5).

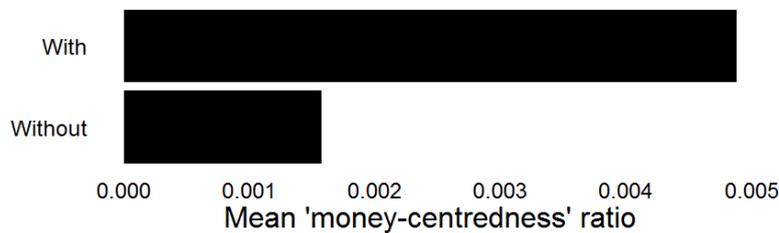


Figure 5: Bar plot depicting "money-centeredness" (proportion of money-related words) in lyrics with product mentions and lyrics without.

6 Discussion

Product mentions were highly prevalent in the lyrics studied, consistent with prior research (Craig, Flynn & Holody 2017). As hypothesized, product mentions increased drastically over time, even when adjusting for the accompanying increase in the frequency of rapped verses. That is, although hip hop lyrics tended to feature more product mentions than R&B lyrics, and the popularity of hip hop relative to R&B increased over time, there was an overall increase in the frequency of product mentions that could not be attributed to this alone. This finding mirrors the observation of de Gregorio & Sung (2009), whose research indicated that, up until 2002, the prevalence of product mentions had been increasing. The current study shows that this trend has continued in the fifteen years – in fact, by 2017 product mentions were roughly twice as common as in 2002. One could argue that this increase, at least in part, denotes the business model of using product mentions having received increased

attention by artists, producers or music companies. Although very few product mentions were identified as paid placements, artists and music companies might plausibly use mentions to more implicitly signal interest to relevant companies. With this said, however, the majority of mentions most likely arise due to close, existing relationships between hip hop and R&B culture and the products in question.

The types of products being mentioned generally remained quite constant, with small fluctuations year-on-year. Mentions of cars, fashion and (to a lesser extent) alcohol predominated. This is largely consistent with previous research (Craig & Bichard 2017; Mohammed-Baksh & Callison 2014). Craig & Bichard (2017) found that mentions of fashion brands were most common between 2009-2013, which is corroborated by the data reported here. However, considering the entire sample, cars emerged as the most popular overall category. By including lyrics from a much wider time-period than in previous research, the current study therefore provides a more comprehensive history of product mentions in hip hop lyrics, and avoids being a "snapshot" of any particular point in time.

In general, the relative stability of the main product categories indicates that, although specific cultural signifiers in hip hop and R&B music may have changed over time, the types of products used for this purpose have not. For example, fashion brands have remained integral to self-expression and establishment of cultural identity in hip hop and R&B, although the specific brands being mentioned reflect a transition away from the "streetwear" brands popular in the nineties, towards high fashion (Berlinger 2018). Alluding to this trend, rapper Questlove (2014) postulated succinctly that:

"Hip-hop is about having things to prove you're not a have-not"

Questlove argued however that the distinction between so-called "haves" and "have-nots" has shifted dramatically over hip hop's lifespan, leading artists to increasingly mention signifiers of luxury perceived as unattainable for most listeners.

As hypothesized, the majority of product mentions were framed neutrally. This supports Ferguson & Burkhalter's (2014) characterization of product mentions as cultural signifiers – describing, setting a scene, expressing identity or signaling sub-cultural belonging, as opposed to deliberately endorsing a product. Even where luxury brands are mentioned by name, there is a tendency to present them prosaically, as a part of everyday life. For example, in "Peso", ASAP Rocky (2011) raps:

"Raf Simons, Rick Owens, usually what I'm dressed in"

This lyric is typical in that, though it makes reference to high-status fashion designers, it is presented as a simple matter of fact, thereby juxtaposing notions of luxury and the everyday. Thus, even where the purpose of a product mention appears to be braggadocio, the framing thereof avoids being explicitly positive, relying instead on the listener's knowledge of the brands mentioned. This is an important difference, relative to some more traditional product placements, but also highlights that valence alone is insufficient to make conclusive inferences about a songwriter's intent. Even so, the few product mentions verified as "paid endorsements" did tend to be framed more positively, as predicted. Evidently, there exists at least some motivation to present paid-for placements in a more positive light.

Overall diversity of vocabulary was greater for songs mentioning products, as predicted. This finding is consistent with the notion of product names providing a heightened sense of realism, or helping to portray a scene in greater detail, though may have been confounded to an extent by the number of rapped verses. That is, songs featuring at least one rapped verse were more likely to mention products, and such songs tend to have larger vocabularies generally (Jewalikar & Verma 2015). Lyrics mentioning products also contained many more words pertaining to money, implying that at least some product mentions were intended as signifiers of socioeconomic status. Supporting this interpretation, there was a clear bias towards luxury products, in terms of the specific brands mentioned (e.g. sports car manufacturers, high-end fashion designers). This corroborates the broad characterization of hip hop

and R&B as aspirational (Smith 2003), and mainstream hip hop in particular as conveying a strongly capitalist ideology (Newman 2007). The role of product mentions in particular, within this context, is epitomized in the following interaction, from the documentary film "Something From Nothing: The Art of Rap" (Ice-T, Baybutt & Toogood 2012):

Ice-T: When I do "Six in the Morning" [...] if I had've said "fresh sneakers", it wasn't as dope, as saying "fresh Adidas".

DJ Premier: It made you go "yo, I gotta get me a new pair. For real, like you really had to get a new pair, 'cos he got 'em".

7 Limitation

A potential limitation of the current study is that all product mentions were identified via manual, human coding, as opposed to an automated method. This approach was chosen for two main reasons. Firstly, there are many thousands of potential products that could be mentioned, and therefore compiling an exhaustive search list would be unfeasible. Secondly, because of the myriad different (sometimes context-dependent) slang terms by which specific products may be identified, writing software to detect these would be a highly complex undertaking. For example, a previous study reported the use of fourteen different terms for Mercedes (Miszczynski & Tomaszewski 2014). Nonetheless, it must be acknowledged that some product mentions were potentially omitted because of unknown slang terms.

Additionally, it is difficult to tell with certainty whether product mentions constitute paid placements. In a limited number of cases, paid placements could be reasonably inferred on the basis that, for example, the company mentioned was owned by the artist, or the artist was known to be a brand ambassador. However, it is likely that some paid endorsements were not coded as such, because of an absence of concrete evidence of any relationship or deal between the two parties.

Lastly, the few semantic analyses carried out here took a rather broad-brush approach – simple keyword frequency counts are not con-

ductive to making confident assertions about specific songwriters' intentions when mentioning products. The analyses reported are therefore intended primarily as a starting point for further, more in-depth investigation, rather than an endpoint.

8 Conclusions

For much of hip hop and R&B's history, product mentions appear to have formed an integral part of its lyrical content. In recent years, their prevalence has increased dramatically. This trend seemed to begin in the mid-1990s, and has shown no sign of slowing down since. Generally speaking, there are a limited set of products mentioned, which reflect important aspects of hip hop and R&B culture. However, there is also a small degree to which the hierarchy of these fluctuates. These observations may reflect wider cultural shifts, and surely have increasing relevance as hip hop in particular become more and more integrated into the mainstream. There is likely no single motivation or set of motivations for mentioning products, although the notions of serving a descriptive purpose and providing cultural signifiers both receive support here. So too does the idea of braggadocio and/or signaling wealth or membership of a particular socioeconomic class. In general, lyrics mentioning products have both qualitative and quantifiable differences, in terms of their general topics and perspectives. That is, there appear to be some types of songs that are inherently more likely to feature product mentions, compared to others. To uncover songwriters' intentions in greater detail, however, a closer textual analysis (following, for example, Christensen et al. 2018 or North et al. 2018) is warranted. Nonetheless, the current study was successful in providing perhaps the most comprehensive overview to date of product mentions in hip hop lyrics – covering a greater number of songs and spanning a longer period of time than previous studies – hopefully providing a fruitful platform for further inquiry.

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