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“Rethinking media age skews and the ability to reach younger consumers”

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Rethinking media age skews and the ability to reach younger consumers

Abstract

This research investigates the importance of newer and traditional media for advertisers when targeting younger category consumers. For the first time, this study analyzes eight media for over a decade to compare the user profiles and reach of websites and social media with television, radio, magazines, newspapers, cinema, and outdoor. The results provide valuable insights into how to reach younger category consumers, a vital segment for brand growth. Overall, age profiles of newer and traditional media are largely similar and although cinema skews younger and newspapers skew older, they provide less reach than the non-skewed media.

Management Slant

- Advertisers use different media to target specific audiences, such as younger category consumers.
- New and traditional media have similar age profiles but differ in their ability to reach age segments.
- Television remains the medium to reach all category consumers (regardless of age) both quickly and cheaply.

Introduction

Younger consumers are crucial for brand growth. Previous empirical investigations show that brand growth occurs as a result of increasing penetration amongst all category buyers (Dawes, 2016; Romaniuk, Dawes and Nenycz-Thiel, 2014a). However, a lack of category buying experience means that younger consumers are particularly susceptible to buying a new brand (Anderson and Sharp, 2010). As most brands have a pressing need to reach younger consumers, this is welcome news. In particular, brands that are interested in selling to younger consumers today are operating in categories such as universities, fashion, and music and have an explicit interest in advertising toward this group. Even brands that do not wish to sell to younger consumers today still need to consider this segment: they represent a future market of consumers (McNeal, 1992).

Reports that younger consumers are spending more time online than watching television (Weaver, 2013; Herbison, 2015; Soong and de Montigny, 2002; B&T Magazine, 2015; Holz and Leonard, 2010) means that marketers believe that they can no longer use television to reach younger consumers (Lovell, 2008) and wonder if they should be using social media instead (eMarketer, 2013). However, this may not necessarily be the case.

This study determines the validity of this belief by examining the audiences of eight Australia media. The authors compare traditional and new media audiences before ascertaining which media reaches more younger consumers, and; documenting if this changes over time. As a result, the study addresses the limitations of the majority of previous investigations which compared the user profiles within a single medium and for a single period (Winchester and Lees, 2016; Nelson-Field, Lees, Riebe and Sharp, 2005; Winchester and Lees, 2013; Barwise and Ehrenberg, 1988).

Relevant literature

The importance of younger consumers

Younger category consumers are a strategic group for many brands. New and growing brands skew slightly towards younger consumers while declining brands skew somewhat towards older consumers (Anderson and Sharp, 2010). Further, new category buyers are typically younger (than the category norm) and have larger repertoire sizes (Uncles and Ehrenberg, 1990; D'Amico, 2007), more extensive consideration sets (Maddox, Grønhaug, Homans and May, 1978), seek more information (Furse, Punj and Stewart, 1984; Burnet, 2002), and are generally less loyal in both consumer goods (Uncles and Lee, 2006) and durable markets (Lapersonne, Laurent and Le Goff, 1995). The lower levels of behavioral loyalty mean that younger consumers account for a disproportionately large number of light, new, and non-buyers. Although they are the lighter buyers,

they are vital for brand growth. In this study, younger is a relative term and classified in three ways. This is simply due to fact categories themselves appeal to different age segments.

The fundamental difference between bigger and smaller brands is not how often customers are purchasing them, but how many people are purchasing them (Ehrenberg, 1959; McPhee, 1963; Sharp, 2010). First, the top 20% of brand buyers have been shown to account for just over half of all sales (Anschuetz, 2002; Sharp and Romaniuk, 2007; Sharp, 2010; Romaniuk and Sharp, 2016). Second, bigger brands have much more customers who are only slightly more loyal (Singh, Dall'Olmo Riley, Hand and Maeda, 2012; Dawes, 2009; McPhee, 1963; Ehrenberg and Bound, 1999). These two findings suggest that brands need to reach their lightest buyers, and recruit new customers for both maintenance and growth, which as noted are often younger consumers.

Media user research and research questions

To date, the majority of user profile studies aimed to compare single medium audiences (Collins, Beal and Barwise, 2003; Beal, Hartnett and Collins, 2011; Nelson-Field and Riebe, 2011). The following section describes the existing research in television, radio, and print. Television research in the United Kingdom and the United States showed television channel audiences were often similarly aged (Collins et al., 2003). Replication studies of Australian television programs and channels found few had age differences (Nelson-Field and Riebe, 2011; Beal, 2011 #21692). When there were differences, they were due to specific content (e.g., sports versus kids cartoon shows) (Choong-Ryun, 2002; Beal, Barwise and Collins, 2004; Beal, 2002). The identified deviations make logical sense, yet, are surprisingly mild. Even children's television channels reach more adults than children.

Research has found that different radio stations appeal to different audiences, but again, these differences are not as substantial as advertisers might expect (Nelson-Field, Lees, Riebe and Sharp, 2007; Nelson-Field et al., 2005; Winchester and Lees, 2013; Nelson-Field and Riebe, 2011). In New Zealand and Australian markets, radio stations claiming to reach specific segments (including ages), reached the same audience as other stations playing the same genres of music (Nelson-Field et al., 2005, 2007; Nelson-Field and Riebe, 2011). Once again, the identified deviations are logical, listeners of talkback radio tended to be older, while listeners of music were younger (Winchester and Lees, 2013).

Printed media has had few investigations with just two studies having analyzed the user profiles of magazine readers (Nelson-Field and Riebe, 2011; Dickson, Tanusondjaja and Nguyen, 2016). In Australia, one in four of the 137 magazines analyzed had notable demographic differences (Nelson-

Field and Riebe, 2011). The comparison of the top ten Australian magazines found age differences between readers (Dickson et al., 2016). More often than not the users were similar (as was the case for both television and radio). However, in some instances, logical deviations were caused by content. For example, topics within Dolly Magazine overwhelmingly appeals to younger females (Dickson et al., 2016). Only a single academic study has compared the user profiles of newspapers. The analysis of eight Irish newspapers found only three had an audience disproportionately composed of a specific age segment (Winchester and Lees, 2016). However, as newspaper editors aim to create content with particular ages in mind, this figure seems low (Attaway-Fink, 2005).

One study determined that billboards (a component of ‘outdoor’ for this study) have similar reach across all ages (Southgate, 2017). To the best of the authors’ knowledge, there has been little research for the other media analyzed in this study (i.e., cinema, outdoor, websites and social media), and even fewer that compare between media. As much of the established empirical evidence described earlier focused on differences within media, the authors of this study aim to deploy the user profile analysis to compare audiences between media. That is, this study compares the audiences of television, radio, magazines, newspapers, outdoor, cinema, websites and social media.

Just one study directly compared the user profiles between media. When comparing 16 media, the authors found the largest skews were from younger consumers with websites and social media (Romaniuk, Beal and Uncles, 2013). While the study covered 23 datasets from nine different countries, there were two critical limitations. The data sets had small samples ranging from 200 to 500 respondents (meaning the sample may be too small to focus on younger consumers), and the data sets were for shorter periods of time over three years (indicating no comparison over time could be made). One study found that television and the internet video platforms shared over 55% of their audiences (Cha, 2013). This suggests that television may have similarly aged users as the internet. Another study compared online and offline media but made no mention of any similarities or differences in consumers demographic profiles (Voorveld, Smit, Neijens and Bronner, 2016). The first research question is, therefore:

RQ 1: Do younger age profiles differ between media?

To check for robustness of any finding/pattern, this is tested using different definitions of younger consumers, specifically, (a) 14-17yo, (b) 14-24yo, and (c) 14-34yo.

Interestingly, the data spans a time when access to technology and the internet widened. Between 2005 and 2010, the number of hours spent online rose from seven to 12 hours per week, that is

nearly two hours per day (Wells, Spence-Stone, Crawford, Moriarty and Mitchell, 2011; Macleod, 2006). Yet, there have been limited studies comparing user profiles over time. An investigation into the stability of brand user profiles, which analyzed almost 2,000 brands in 80 product categories, found that user profiles seldom changed over a three to six year period (Anesbury, Winchester and Kennedy, 2017b). Media profiles may be similarly as stable over time as brand profiles, therefore the second research question is:

RQ 2. Have media user profiles become more or less similar between 2004 and 2015?

By comparing the user profiles of traditional and new media over an 11-year period, this study makes a valuable contribution to the media user profile literature.

The value of reach

Once a marketer has selected a medium, the next step is to consider the frequency of reach. To date, the empirical evidence has shown that 1+ reach is the most effective media strategy (McDonald, 1970; Longman, 1997; Roberts, 1999; Jones, 1995, 2006; Taylor, Kennedy and Sharp, 2009; Wind and Sharp, 2009). More than five decades ago Reeves (1961) found a relationship between dispersed radio reach and increases in advertising recall. Additional research found that the reach of newspapers, magazines, and television affected brand sales (McDonald, 1970). Consumers who were exposed to media allocated more of their category sales to the advertised brand than consumers who were not exposed (Longman, 1997). But, importantly, there were diminishing returns with each additional exposure (Longman, 1997; Roberts, 1999). In a comprehensive single-source study linking buying behavior with television viewing, after the first exposure, there were diminishing returns (Jones, 1995, 2006). This led to the empirical generalization that advertising response functions are convex – the first exposure delivers the greatest marginal response; all subsequent cumulative exposures provide marginal increases (Taylor et al., 2009; Wind and Sharp, 2009). From a practical perspective, a brand manager should allocate their media budget to maximize 1+ reach amongst all category consumers every single period (i.e., week) (Ephron and Heath, 2001). Advertisers need to know; how can they maximize reach for younger category consumers. Therefore, the third research question is:

RQ 3: Which media provides the largest reach when defining younger consumers as, (a) 14-17yo, (b) 14-24yo, or (c) 14-34yo?

Data

This study contains the eight media consumption panel data for a cumulative sample of over 218,000 Australian respondents for four annual periods: October 2004 to September 2005; January 2006 to December 2006; January 2009 to December 2009; and, April 2014 to March 2015. Initial data collection occurs weekly during the Roy Morgan establishment surveys. In addition to the demographics, including age, the data contains self-reported cinema attendance, television viewing, radio listening and newspaper or magazine readership. Respondents continue to provide Roy Morgan with weekly diaries of website, television and radio consumption (Roy Morgan, 2016). Previous empirical investigations relating to media consumption have sourced either Roy Morgan data (Nelson-Field and Riebe, 2011; Dickson et al., 2016) or comparable audience measurement survey data (Nelson-Field et al., 2007, 2005; Winchester and Lees, 2013, 2016).

The research examines eight media: television, magazines, websites, newspapers, radio, outdoor, cinema, and social media. To create these variables the study combined all possible inputs with a reach greater than 1%. Previous consumer goods category studies also analyzed the largest brands (Anesbury et al., 2017b; Stocchi, Nenycz-Thiel and Driesener, 2011; Mansfield and Romaniuk, 2003; Pare, Dawes and Driesener, 2006) or those brands with a 1% or larger market share (Pare and Dawes, 2007). However, during the period covered by these data, the amount of commercial media has increased. For example, between 2009 and 2015, the number of television programs increased from 279 to 458. To accurately compare reach and user profiles over time, the authors needed to analyze the same number of inputs for each media (e.g., 198 television channels combining to equate as the 'television' variable). This study examines: television (198 television programs), magazines (98 magazines), websites (79 websites), newspapers (30 newspapers), radio (15 radio networks), Outdoor (10 outdoor, e.g., billboards, bus shelters), cinema (eight cinema genres, e.g., comedy, horror) and, social media (five social media sites).

Method and results

The authors demonstrate an example that combines the user profile and chi-square analyses. While Kennedy, Scriven and Nenycz-Thiel (2014) warn against using statistical testing on large sample sizes, the authors use both a multiple sets of data and a statistical analysis approach to provide additional confidence in the results. In line with the research questions, two variables are necessary: age (i.e., younger or older than 18, 25 or 35) and media (i.e., did or did not consume). The definition of younger and older is relative to each category and therefore the authors analyze three definitions.

The process begins with the user profile analysis to determine how similar or different media users are, as outlined using brands by Hammond, Ehrenberg and Goodhardt (1996). The authors first determine the composition of each of the eight media's users by dividing the members of each age segment by the total audience and multiplying by 100 (see Table 1). In this instance, 10% of cinema's audience is 14 to 17 and 90% 18+, 28% are 14 to 35 and 72% 25+ and 48% are 14 to 35 and 52% 35+. The process continues by calculating the deviations; the authors subtract each media's percentage values by the column's average percentage figure. Continuing, the deviation for cinema would be 4.5% (14 to 17), 10.4% (14 to 24) and 13.3% (14 to 34). The authors then calculate the average absolute error (AAE) by averaging the absolute deviations of each media. When younger consumers are 14 to 17, the average AAE is 1.3, when 14 to 24 the average AAE is 3.3 and when 14 to 34 the average AAE is 5.3. The authors continue with the chi-square analysis to determine if there is a statistically significant relationship between age and media consumption.

Table 1: Between media user profile and chi-square analysis (Australia, April 2014 to March 2015)

	RQ 1a (younger = 14-17)			RQ 1b (younger = 14-24)			RQ 1c (younger = 14-34)		
	% of audience			% of audience			% of audience		
	younger	18+	AAE	younger	24+	AAE	younger	35+	AAE
Cinema	10	90	4.5*	28	72	10.4*	48	52	13.3*
Newspapers	3	97	3.2*	9	91	8.6*	21	79	14.6*
Magazine	5	95	0.7*	15	85	2.5*	31	69	4.6*
Social Media	7	94	0.6*	20	80	2.1*	40	60	4.8*
Websites	6	94	0.2	18	82	0.8*	38	62	2.7*
Television	6	94	0.4*	17	83	1.0*	34	66	1.3*
Radio	5	95	0.5*	17	83	1.0*	35	65	0.6*
Outdoor	6	94	0.4	17	83	0.3	35	65	0.3
Average	6	94	1.3	18	82	3.3	35	65	5.3

AAE of ± 5 percentage points are shown in **bold**, * indicates a post hoc Bonferroni correction chi-square statistically significant relationship between age and media consumption (i.e., $p < 0.001$).

To test RQ 1a, the authors considered consumers aged 14 to 17 as younger, before conducting the user profile analysis. In this instance, none of the eight media are managerially significantly different (i.e., $AAE \geq 5.0$). The analysis continues using a chi-square statistical test. However, as the sample size is large, a conservative approach is required to find truly statistically significant relationships between age and media consumption. Therefore, the authors use the Bonferroni Correction (Rice, 1989). All media, besides outdoor ($X^2(1, N = 51882) = 6.24, p \geq 0.001$) and websites ($X^2(1, N = 51882) = 5.60, p \geq 0.001$), were found to be statistically significant. As a result, when younger consumers are defined as 14 to 17, between media age profiles seldom differ.

Testing RQ 1b and RQ 1c, the analysis continues defining younger consumers as 14 to 24 or 14-34. In both cases, cinema (skewing younger) and newspapers (skewing older) are managerially significant (i.e., AAE ≥ 5). Regardless of whether younger consumers were 14 to 24 ($X^2(1, N = 51882) = 0.29, p \geq 0.001$) or 14 to 34 ($X^2(1, N = 51882) = 0.42, p \geq 0.001$), outdoor was the only medium not to have a statistically significant relationship between age and media consumption. When media has the lowest AAE, there was no Bonferroni corrected chi-square test of a statistically significant relationship. Therefore, cinema skews towards younger consumers, and newspaper skews away from younger consumers. When younger consumers are defined as 14 to 24 or 14 to 34, between media age profiles infrequently differ.

To answer RQ 2 and determine if media user profiles have become more or less similar, the authors compare the average AAE from 2004, 2006, 2009 and 2015 (see Table 2). When younger consumers are defined as 14 to 17, the AAE declined from 5.2 in 2004 to 1.3 in 2015. In fact, the general pattern shows that media user profiles are becoming similar regardless of the definition of younger. There are two exceptions, however. Cinema and newspapers have become more dissimilar. Importantly, social media now appeals to a much broader base in 2015 compared to 2004, when it attracted younger consumers.

Table 2: Between media user profile AAE (Australia, October 2004 to March 2015)

	Younger = 14 to 17				Younger = 14 to 24				Younger = 14 to 34			
	2004	2006	2009	2015	2004	2006	2009	2015	2004	2006	2009	2015
Cinema	2.5	3.5	4.7	4.5	6.6	6.9	9.8	10.4	8.4	8.0	10.6	13.3
Magazine	2.9	2.3	1.3	0.7	6.0	5.2	3.5	2.5	7.4	6.4	5.4	4.6
Newspapers	4.5	4.2	3.2	3.2	8.8	8.3	7.0	8.6	10.8	10.4	10.7	14.6
Outdoor	-	2.3	0.7	0.4	-	4.4	1.3	0.3	-	4.6	2.3	0.3
Radio	7.7	3.2	1.2	0.5	7.6	7.3	2.8	1.0	8.5	8.4	3.7	0.6
Social Media	13.7	12.2	3.0	0.6	25.9	26.2	8.7	2.1	27.2	29.2	15.4	4.8
Television	3.5	2.7	1.4	0.4	7.3	6.2	3.7	1.0	8.9	7.7	5.4	1.3
Websites	1.5	1.0	0.0	0.2	2.8	1.8	0.1	0.8	0.1	0.2	1.5	2.7
Average	5.2	3.9	1.9	1.3	9.3	8.3	4.6	3.3	10.2	9.4	6.9	5.3

Deviations of ± 5 percentage points are shown in bold

Knowing that cinema is a youth-oriented medium is useful for any brand seeking to target younger consumers. But the effectiveness and efficiency also depend on how much reach (into the segment of young consumers) the medium delivers, e.g., cinema might skew young, but only be able to reach a few young consumers (e.g., if most rarely attend the cinema). Regardless of media profile similarities or differences, the single most important measure is the raw reach count. Therefore, the next analysis looks at the third research question, how the media vary in their ability to reach younger buyers within a year.

Table 3: Media estimated reach ('00,000) (Australia, April 2014 to March 2015)

	RQ 3a (younger = 14-17)		RQ 3b (younger = 14-24)		RQ 3c (younger = 14-34)	
	younger	18+	younger	25+	younger	35+
Television	10***	175***	31**	155***	63**	123***
Websites	10**	157**	31***	137**	63***	104**
Social Media	10	139	29	119	59	89
Outdoor	8	138	25	121	52	94
Magazine	7	125	20	112	40	92
Radio	6	113	20	99	41	78
Newspapers	2	72	7	67	15	59
Cinema	7	63	20	50	34	36

Highest reaching media shown in **bold** ***, second highest shown in **

Last, the answer to RQ 3a, 3b or 3c, is television and websites (see Table 3). When reflecting on the results of RQ 1a, the medium with the largest skew towards 14 to 17-year-olds was cinema (+4.45%). But, compared to television, cinema reaches over 830,000 fewer younger consumers in a year. The results of RQ 1c found that newspapers had the largest skew away from 14 to 34-year-olds (-14.6%). In this case, 480,000 fewer younger consumers were reached than television and websites. Furthermore, when a medium skew towards a specific age segment, it does not appear to result in higher raw reach figures, in fact, it tends to produce lower raw reach figures for the opposite age segment. That is, higher skews towards younger consumers mean lower reach for older consumers and vice versa. Overall, the results suggest that skewed media may not, in fact, be the best options when reaching younger audiences.

Discussion and Implications

The results of this study extend the previous research undertaken for a single media and period (Barwise and Ehrenberg, 1988; Beal, 2002; Beal et al., 2004; Beal et al., 2011; Collins et al., 2003; Dickson et al., 2016; Kennedy, 1998; Nelson-Field et al., 2005, 2007; Nelson-Field and Riebe, 2011; Winchester and Lees, 2013, 2016). The authors show that for three definitions of younger consumers, media age profiles infrequently differ, and have largely become more similar over the previous 11 years.

This study provides evidence that, with regards to audience composition, there are no managerially significant differences between television, magazines, outdoor, radio, social media or websites. However, cinema skews towards younger consumers, and newspapers skew towards older consumers. But, both media still reach far fewer members of those segments than the highest reaching media, television and websites.

Practical Implications

If a marketer only wished to reach younger consumers, then cinema initially appears a stand-out medium, the only one that skews appreciably young. This potentially offers the cost saving of not having to pay to reach older consumers (what is known in the industry as “wastage”). However, not only does the cost of cinemas have to be considered (which may wipe out any savings due to reduced wastage) but also the ability of cinema to reach all younger consumers. Our results show that cinema reaches less younger consumers than all other seven media.

Despite claims that television can no longer reach younger consumers (Lovell, 2008), this study has shown that television reaches the highest number of consumers, regardless of age. Besides, the research finds that over the previous decade, social media has become more reflective of all media users. Social media has effectively become more of a mass marketing medium, and less of a targeted one. The results bring into question the practice of targeting specific media for presumed media skews. Still, advertisers should treat all media identically and use the medium which delivers high 1+ reach for all category buyers. When aiming to reach younger consumers, 1+ reach is still the best approach; even when the medium does not skew towards younger consumers. For example, the authors show that while cinema skews towards younger consumers, the medium delivers lower younger consumer reach when compared to television, a medium that does not skew (730,000 vs. 1,036,000).

Limitations and Future Research

Despite the contributions of this study, there are a number of limitations that could be addressed by future research. The data are collected via industry standard self-completion surveys and diaries, meaning that the media consumption relies on memory. This may lead to under or over reporting of media consumption. Future research should replicate the analysis using observed behavioral data. The data are from one location, Australia. Future studies should aim to increase the geographic areas analyzed to include other developed nations and emerging economies where media consumption may differ to determine the generalizability of the results. Recently, consumer behavior patterns have been generalized to emerging economies (Romaniuk, Dawes and Nenycz-Thiel, 2014b; Tanusondjaja, Greenacre, Banelis, Truong and Andrews, 2015; Anesbury, Greenacre, Wilson and Huang, 2017a). The researchers for this study only had access to media reach data. Additional knowledge regarding the frequency of consumption or hours of exposure (Romaniuk, 2012; Enoch and Johnson, 2010), would add another rich dimension to any future analyses; as would any cost per reach information. Lastly, the data outline the reach for an entire year, which

does not allow the researchers to determine how quickly the reach is accumulated. Future research should aim to analyze time-stamped data to compare media reach accumulation speeds.

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