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“The relative influence of advertising and word-of-mouth on viewing new season television programs”

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Abstract

Purpose – To investigate the relative influence of advertising and word of mouth (WOM) for new season TV programs, both new and returning.

Design/methodology/approach – The study’s longitudinal research design tracks individuals before and after possible exposure to advertising and/or positive WOM (PWOM) in order to model the effects of both paid versus earned media on behaviour.

Findings – This study provides contrary evidence to previous research that suggests WOM has more influence on consumers than advertising. By controlling for viewers’ benchmark probabilities of viewing the TV program, the effect of receiving PWOM becomes insignificant, whereas the effect of TV advertising remains unchanged. Because WOM is commonly exchanged between people with shared interests, it reaches an audience that is already highly disposed to view the TV program.

Research limitations/implications – The findings implicate that we need to reinvestigate the power of WOM to avoid misattribution of effects. Ours is only one study in one category, which means replication and extension to more categories is needed. Limitations of the study include the inability to control for creative differences in the execution of program promotions or examine possible cross-media synergies for multi-media campaigns.

Practical implications – Findings have implications for how much to invest in WOM generating activities. Findings also have wider implications for cross-media research and media mix models, as different media may reach audiences with differing predispositions to act.

Originality/value – This is one of the rare individual-level, longitudinal studies that investigate the influence of WOM in comparison to advertising.

Key words – Advertising, word-of-mouth, longitudinal research, television, program promotions

Paper type – Research paper

Introduction

Word of mouth (WOM) refers to conversations between consumers about a product, service or brand (Arndt, 1967; East, Hammond, & Lomax, 2008) and reportedly delivers up to 3.3 billion brand impressions each and every day in the United States alone (Keller & Libai, 2009). Total volume of WOM is likely to increase in the future as evolving digital and mobile platforms provide consumers with more opportunities to interact. In step, marketers have become more interested in WOM and are spending more on activities to encourage consumers to talk about their brands (PQ Media, 2009). Often, dollars spent on WOM initiatives are redirected from funds normally allocated to other communication channels, such as traditional advertising. To make effective trade-offs with limited budgets, marketers need to understand the potential relative impact of a dollar spent in different media.

One important difference between WOM and advertising that is central to our research proposition is their origin. Someone must *give* WOM, which makes the giver's motives relevant. Common antecedents for giving WOM are satisfaction, to be helpful, and coincidental conversation (Mangold, Miller, & Brockway, 1999). Each requires the giver to have prior experience and/or perceive some interest on behalf of the recipient to insert the brand into a conversation. Given that consumers' give/receive most WOM to/from others within their social groups (Eubank & Fay, 2008), which tend to consist of similar individuals (McPherson, Smith-Lovin, & Cook, 2001), it is logical that WOM given interpersonally is often about categories and brands already well known to the recipient. Advertising, on the other hand, does not suffer the same constraints and can reach people with little to no knowledge of categories or brands. It is therefore possible that recipients of WOM have an over-representation of people already positively predisposed to the brands that are discussed compared to advertising.

WOM as an earned media is accepted by some as the most powerful form of brand communications (e.g. Keller, 2007), more powerful than paid advertising. Current theoretical models of relative media influence, including paid versus earned media, however, do not factor in the possible differences of the audiences reached by each. The question then is how much of the

reported influence of WOM is due to the possible biased audience it reaches, rather than the inherent disproportionate power of WOM? The relative effects of any marketing activity, paid or earned, are a balance of reach (how many people see the activity) and influence (the effect size on each individual reached). Paid advertising has a long-standing advantage over WOM in achieving high reach (Rubinson, 2009) but WOM is believed to be more influential on individuals, largely due to its interpersonal, non-commercial nature. Influence can be conceived and calculated as the difference between the pre- and post-probabilities of acting (East et al., 2008). East, Hammond and Lomax (2008) demonstrated the importance of incorporating benchmark probabilities to compare the relative effects of different stimuli (positive versus negative WOM in their study). We use benchmark probabilities to compare paid and earned marketing activities. If indeed the effect size of WOM is lower than previously thought because of the misattribution of effects, this calls for a substantive revision of marketing theory.

To fully understand the place for WOM in marketing theory, it is important to test the relative effects of earned and paid media across a wide range of contexts. One context where WOM research is particularly lacking is for new brands in low-involvement categories. Entertainment, including television (TV) programs and movies, is one of the most talked about categories (Keller & Libai, 2009) and represents an industry where substantive funds have been redirected from traditional advertising to activities promoting WOM (Godes & Mayzlin, 2004, 2009; Liu, 2006; Romaniuk, 2007). Networks are under considerable pressure to gain audiences quickly for new programs given fragmented media environments and the proliferation of channels. New shows are often cancelled after only a few episodes if they fail to deliver. Promotion is a large part of gaining audiences for a new show. As Network Seven CEO David Leckie said somewhat crudely; “Cougar Town is a s*** show but we promote it and get nearly 1.4 million watching it” (Rothfield, 2010). Both WOM and advertising are now part of this promotional mix. Network program promos (the common name for advertising TV programs) do not incur media costs but they do represent foregone advertising revenue for networks. It may be more cost effective for networks to air fewer promos and divert more resources to building WOM to bring in

audiences. More evidence of the relative, superior influence of WOM over advertising is needed, with new brands in low-involvement categories presenting a relevant context for our investigation.

This study draws on an individual-level longitudinal research design, where the same people are interviewed at two different points in time. Our context is *new season* TV programs, which are conducive to testing the relative effects of WOM and advertising for several reasons. The category is extensively advertised (Eastman, Ferguson, & Klein, 2006) and generates much WOM (Keller & Libai, 2009). Despite being a low-involvement category there is evidence that WOM is linked to TV viewing behaviour (Godes & Mayzlin, 2004; Romaniuk, 2007). Moreover, distribution and pricing effects are absent and cannot confound the relationship between exposure and behaviour.

In this paper, we present evidence that WOM reaches an audience that is more positively pre-disposed to act than advertising. We examine the consequence of this difference on the effects of WOM relative to advertising, showing that the inclusion of pre-disposition to act mediates the effect of receiving WOM, but not of advertising exposure. The implications of these findings are discussed for marketing theory, media mix modelling, and marketing practice.

Theoretical background

Prior evidence of the relative influence of advertising versus positive WOM

There are separate studies that attest to the positive influence of advertising and WOM on consumer behaviour. However, we have limited our discussion to studies that directly compare the two sources of influence, which are receiving positive WOM (PWOM) and exposure to advertising.

In their seminal research, Katz and Lazarsfeld (1955) found PWOM was twice as effective as radio advertising and seven times more effective than print advertising to acquire new customers. Day (1971) later found PWOM was twice as effective as advertising to raise awareness for new brands and twice as effective as advertising to help consumers form a positive attitude for both new and existing brands. Sheth (1971) also found PWOM was more effective than

advertising to raise awareness and stimulate product trial for new innovations. All of these studies were conducted over 40 years ago, which means the findings are contextualised by a very different media environment. More recent evidence, however, generally continues to favour the superiority of WOM. Villanueva, Yoo and Hanssens (2008) found people recruited via WOM were two to three times more valuable to a web hosting company than people recruited through traditional marketing. Modelling longer-term effects, Trusov et al. (2009) found carry-over effects lasted longer for WOM than advertising to recruit members to a social media site. In more traditional categories, such as telecommunications, restaurants, and insurance, East, et al. (2005) reported about twice as many customers cite WOM as their main source of information compared to advertising (31% v 14%, averaged across 23 categories). Their study, however, predominantly focused on services, which are perhaps more conducive to WOM influence. They also noted considerable variation across categories. For TV programs specifically, Hartnett and Romaniuk (2008) found people exposed to WOM were twice as likely to watch a TV program compared to those exposed to advertising. The only evidence in favour of advertising to date is Van den Bulte and Lilien (2001), where they found the effect of WOM on the uptake of new drugs (antibiotics) disappeared when traditional marketing was included in their model.

Based on the predominant findings in the literature, we present three initial hypotheses. We focus on PWOM specifically, because negative WOM (NWOM) for new TV programs is rare (Romaniuk, 2007). The first two hypotheses test the independent effects of PWOM and advertising on watching new TV programs. These hypotheses are a necessary precondition for the remainder of the research. The third hypothesis tests whether our research context of new TV programs reflects past research vis-à-vis the relative effects of PWOM and advertising.

H1a: Viewers exposed to PWOM about a new TV program will be more likely to watch that new TV program than those not exposed to PWOM.

H1b: Viewers exposed to advertising about a new TV program will be more likely to watch that new TV program than those not exposed to advertising.

H1c: Exposure to PWOM about a new TV program will have a stronger influence on future viewing behaviour than exposure to advertising.

The relevance of audience pre-disposition to act

Prior research has attributed the greater individual-level influence of WOM to a range of qualities that differentiate WOM from advertising. These qualities include the strength of the interpersonal relationship, the credibility and expertise of the giver, and the fact that receivers do, on occasion, request specific advice (Zhao & Xie, 2011).

As it is the giver who decides when and to whom to give WOM, their motives are important. The two most common motives for giving WOM are a desire to help the receiver and coincidental conversation (Mangold et al., 1999; Mazarol, Sweeney, & Soutar, 2007). These motives speak to the strength of the relationship between the giver and receiver. Indeed, Eubank and Fay (2008) report the majority of WOM is given and received by people with strong ties (e.g. partner, family, close friends, and colleagues). Recent theoretical developments on the interpersonal factors related to transmitting WOM discuss the concept of homophily. Homophily identifies that people's social groups are highly similar in regards to socio-demographic, behavioural, and intrapersonal characteristics (McPherson et al., 2001), which in part can explain the strong influence of WOM (e.g. Godes & Mayzlin, 2009; Sweeney, Soutar, & Mazarol, 2014).

The similarity between giver and receiver further suggests conversations are less coincidental and more circumstantial. Givers may (subconsciously) preselect people who are more positively disposed to act on WOM because of their mutual interest and/or because they perceive these people will benefit more from the information than others. As an illustrative example, if the PWOM giver knows their friend David enjoys Sci-Fi movies and their other friend Sally does not, he/she is more likely to recommend a Sci-Fi movie to David than make the same recommendation to Sally. Because of David's existing interest and experience with Sci-Fi movies, David is also primed to notice or seek out information relevant to his interest. Consequently David is likely to already have some chance of watching the recommended Sci-Fi movie prior to receiving WOM, and importantly, more chance of doing so than Sally. Hence, David is not only more likely to

receive WOM about Sci-Fi movies than Sally; he is also more likely to watch Sci-Fi movies *irrespective* of receiving WOM than Sally. It is easy to misattribute David's watching the recommended Sci-Fi movie to the influence WOM unless one controls for his initial benchmark probability to act.

Another relevant factor to consider is that a receiver can seek out WOM (Buttle, 1998). Receivers that seek out WOM may also be more primed to act and may even seek advice to merely confirm a decision already almost made (East et al., 2008). These factors together suggest that the sub-sample reached by WOM may be more positively pre-disposed to act towards the brand, regardless of the WOM they receive.

Advertising, particularly on TV, does not suffer the same constraints as WOM because the advertiser can determine a schedule to reach all potential customers. However, the proliferation of TV channels (as described by Sharp, Beal, & Collins, 2009) may create a selection effect similar to WOM. Returning to the example of David and Sally, if the advertiser chooses to schedule spots only on Syfy (a dedicated Sci-Fi channel), then people such as Sally who are very light or non-consumers of the genre might not be reached. As such, the movie's TV advertising audience might also be positively biased to those pre-disposed to act. However, given the much-lamented lack of precision in targeting via TV advertising, WOM is likely to have a stronger bias, leading to the following hypothesis:

H2: The audience reached by PWOM will have a more positive pre-disposition to act than the audience reached by advertising.

Past studies comparing the relative effects of advertising and WOM have ignored the possible differences in the predisposition to act of those reached by advertising or WOM. To address this gap, an individual-level longitudinal method is the best way to assess the capacity of benchmark probabilities to mediate the effects of PWOM and advertising on behaviour. Respondents must be contacted twice, first to measure the probability to act (i.e. how likely it is they will watch a new TV program) and then again to determine whether the un/intended behaviour actually occurs. Advertising exposure and receipt of PWOM can happen both before

and/or after the benchmark probability to act is collected. Therefore, both the longer-term (prior to probability benchmark) and week-of-airing effects (after collecting the benchmark, but before acting) of advertising and PWOM must be included and examined. This line of reasoning leads to the following research questions:

RQ1a: Are the longer-term effects of advertising and PWOM exposure (collected in the initial interview) fully mediated by people's benchmark probabilities to act?

RQ1b: Are the week-of-airing effects of advertising and PWOM exposure (collected in the second interview) still significant once benchmark probabilities are accounted for?

New versus existing brands

As per Day (1971) and Sheth (1971), PWOM may be more influential when the brand is totally new, and less so when the brand is more established. Diminishing influence could be an issue for new season TV programs because series can be new launches or returning shows that viewers are familiar with. As discussed previously, personal relationships between givers and receivers mean that givers of PWOM are more likely to know if someone is interested in or has experience with a returning show, as opposed to an entirely new program. If givers direct their PWOM to those more likely to act, then the audience for returning programs should be more positively pre-disposed to act than the audience for new programs. In turn, this should see PWOM more influential for entirely new TV programs than for returning seasons of existing programs, leading to the final hypothesis:

H3: PWOM will have a greater influence on viewing behaviour for new TV programs than for returning TV programs.

Research method

TV program context

The context of this research is potential viewers of new season TV programs. There are several factors that make it useful to this study. As mentioned earlier, TV programs generate a great deal of WOM (Keller, 2008; Romaniuk, 2007) and networks extensively advertise new and

returning programs (Eastman & Bolls, 2000). Each year, large numbers of new brands (programs) are introduced, which reduces the need to control for recent past experience. Because people generally pay for access to a viewing package rather than a specific program, there is typically no price or distribution differential between brands to confound the relationship between exposure and subsequent behaviour. Frequency of viewing television also presents an advantage over most categories, where many consumers who are reached by WOM or advertising are not in the market for the product at the time of the research. These characteristics enhance the capacity to model exposure to WOM or advertising and subsequent effects on behaviour. Finally, TV viewing has the same underlying choice distributions and consumer behaviour patterns as many other repeat-choice markets (Barwise & Ehrenberg, 1988; Sharp et al., 2009). From a low-involvement consumer behaviour perspective, it is a more typical study than some others, such as investigating B2B web hosting, which enhances the potential generalizability of the results. These advantages combined with the limitations of past research are why this study is conducted as a differentiated extension of past research, rather than a closer replication of any one previous study.

Data collection process

Two conditions influenced the structure and timing of data collection. First, new program releases are staggered over time, which limits the program sample size at any specific point in time. Second, the research method incorporates an individual-level longitudinal design, where the same people were surveyed twice, with one week between interviews. This limits each wave's sample size to the number of surveys that could be collected over a weekend. To achieve sufficient overall sample size across programs and people, the research spans five data collections, which took place over a period of two years.

Survey structure and sampling characteristics

Each data collection followed a similar format. Two waves of interviews were scheduled one week apart (two weekends, before and after the new program was launched). Respondents were randomly recruited from the general public via telephone and interviewed by trained market researchers using a computer-aided telephone interviewing system.

Respondents were screened in the initial interview to ensure they had watched commercial TV in the past week and were in the key TV viewing age demographic of 16 to 54 years. All respondents were drawn from a single Australian capital city so they were exposed to the similar programming and advertising. Respondents were questioned about up to nine new and returning programs, depending if they were aware of the programs about to be launched. All programs were aired on broadcast free-to-air TV and so were accessible to all respondents. Program lists were randomly rotated. At the end of the first interview, respondents were asked if they could be recontacted for a follow-up interview, to which over 85% gave permission each data collection. The average recontact rate was 77%. Tests for non-response bias based on consumer characteristics were insignificant. Across five data collections 1,159 respondents completed both interviews. These respondents provided 2,639 program-level observations (M=2.3 per person) and the final dataset includes 42 programs.

Key measures

Received PWOM: Respondents were asked if they had heard *anyone they know* talking about each program chosen in the study and if they had, how many times they had heard WOM. The rationale for *anyone they know* was to capture the interpersonal aspect of WOM and separate it from publicity. As found in previous research (Romaniuk, 2007), WOM for TV programs is overwhelmingly positive. Respondents were asked in the first interview about receiving PWOM about programs prior to the interview (i.e. called longer-term PWOM) and then in the second interview respondents were asked about PWOM received in the interim between interviews (i.e. called week-of-airing PWOM). It is possible that PWOM (or advertising) could have been received in the days after the program aired due to the timing of interviews, which is why both longer-term (prior to the first interview) and week-of-airing (between first and second interview) exposures are examined.

Advertising exposure: Respondents were asked if they had seen or heard advertising for each program and if they had, how many times they had seen advertising from different media. Specific probes were provided for TV, radio, print, outdoor, and online advertising. Respondents

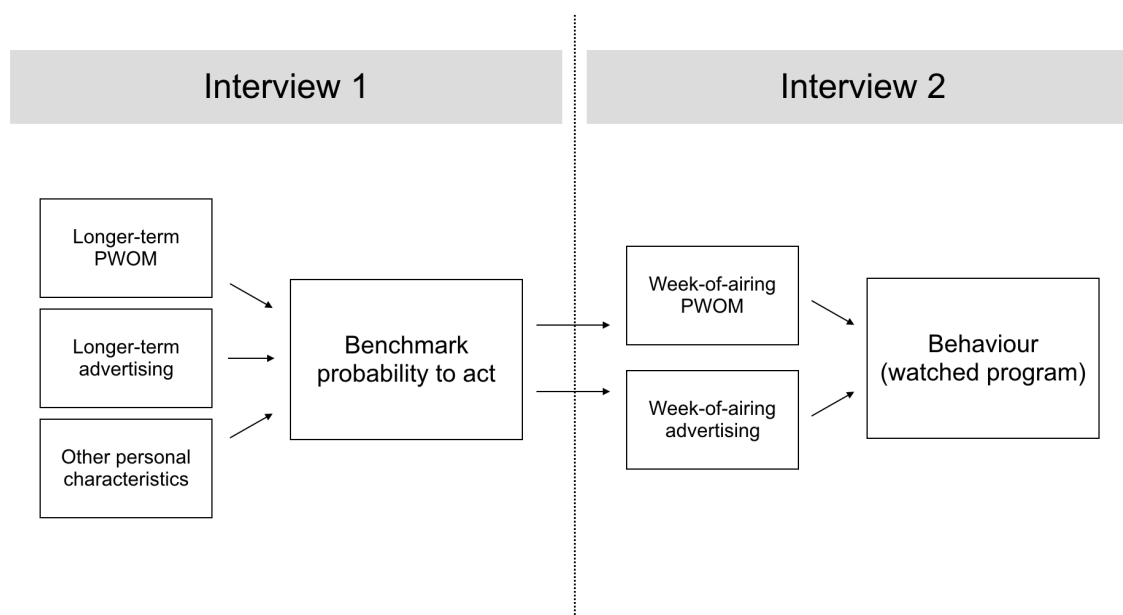
were prompted for both the type of media and the TV program in order to reduce recall bias (Romaniuk & Wight, 2009). They were also prompted to recall any public relations (PR) activity they may have seen or heard to capture other activities that might be influential. As with questions about received PWOM, respondents were asked in the first interview about any previous exposure to advertising for the program, whilst the second interview concentrated on advertising exposure in the interim between interviews.

Probability of viewing the TV program: Respondents were asked in the first interview about their probability of viewing the TV program in the upcoming week using the Verbal Probability Scale (VPS), which is a version of the Juster Scale adapted for implementation over the telephone (Brennan, Esslemont, & Hini, 1995; Juster, 1960), also used by East, et al. (2008). The VPS is an 11-point scale that allows respondents to self-predict the chance they will undertake future behaviours. Although traditionally used for durable products, other research into the Juster/VPS has examined intangible offerings such as movies (Clawson, 1971), lottery tickets (Faulkner & Corkindale, 2004), newspapers, and credit cards (Uncles & Lee, 2006).

Viewing of the TV program: Respondents were asked in the second interview whether or not they had viewed the program that week (yes or no), which formed the dependent variable. It was not stipulated that the viewing had to be at the specified time slot, it could have been time-shifted viewing within that week.

Questions regarding demographics and general TV viewing levels were also included. See Figure 1 for full details on which measures were collected when across interviews.

Figure 1: Data collection and key measures outlined



Data quality checks

As the data is based on respondent recall and re-interviews, checks were made to ensure the integrity and accuracy of the data. This section details these results.

Accuracy of program promotions viewing frequency: While much frequency recall research points to its accuracy (e.g., Hasher & Zacks, 1984), in order to provide further validation, ANOVAs were conducted to compare advertising exposure frequencies against respondents claimed TV viewing weight. The results confirm the expected positive relationship between frequency of seeing program advertising and hours of TV viewing (first interview $p < 0.001$, $F 19.6$; second interview $p < 0.001$, $F 15.9$) (see Table 1). It appears respondents were giving realistic figures for their advertising exposure frequency levels.

Table 1: Relationship between television viewing weight and frequency of program advertising exposure

	Average program advertising exposure frequency	
	First interview	Second interview
< 3 hours	0.6	0.9
3 to 5 hours	1.9	1.4
6 to 10 hours	2.4	1.6
11 to 15 hours	2.2	1.7
16 to 20 hours	2.6	2.1
20 to 30 hours	3.4	2.4
30+ hours	3.5	3.1
Total	2.4	1.9

Telescoping: Telescoping is when respondents’ miscalculate the time frame (Cook, 1987).

For example, when asked about instances of buying in the last three months, a respondent may unintentionally include purchases from the last six months because they forget the precise timing of events. This issue is also relevant here, given all respondents were asked about their exposure to advertising and PWOM at two separate points in time. The first interview aimed to capture exposure anytime before the first interview, whereas the second interview captured exposures in the time period just days before the program aired. There is a risk that respondents were telescoping and reported the same advertising and/or PWOM exposures in both interviews. To check for this, the correlation between advertising and PWOM frequency between interviews was calculated. The results for both variables suggest that telescoping is not a major concern. There was a low, significant association for PWOM across waves (Pearson’s correlation coefficient: 0.10, $p < 0.001$), and a medium, significant association for TV advertising (Pearson’s correlation coefficient: 0.41, $p < 0.001$). Though the correlation coefficient is higher for TV advertising than for PWOM, some non-telescoping related correlation between the two TV advertising variables is expected because advertising exposure is correlated with TV viewing weight. When this factor is deducted from the correlation coefficient, the association between the TV advertising frequency variables is low.

Colinearity between independent variables: Pearson’s correlations across the combinations of independent variables within each interview wave were generally low. There was

only one instance of an r higher than 0.50, which was print and radio advertising frequency in the second survey (0.62, $p < 0.01$, see Table 2). Therefore, there is low colinearity of the independent variables.

Table 2: Pearson's correlation coefficients between independent variables within each wave of interviewing

First interview	TV	Print	Radio	Outdoor	Online	PR	WOM
TV ads		0.11**	0.14**	0.11**	0.06**	0.12**	0.08**
Print ads			0.12**	0.15**	0.03	0.12**	0.03
Radio ads				0.24**	0.05*	0.04	0.04
Outdoor ads					0.07**	0.06**	-0.01
Online ads						0.09**	0.07**
Public relations							0.09**
WOM received							
Second interview	TV	Print	Radio	Outdoor	Online	PR	WOM
TV ads		0.10**	0.14**	0.04	0.00	0.06**	0.07**
Print ads			0.62**	0.07**	0.01	0.06**	0.01
Radio ads				0.00	0.01	0.04	0.02
Outdoor ads					0.05*	0.00	0.03
Online ads						-0.01	0.02
Public relations							0.03
WOM received							

** $p < 0.01$, * $p < 0.05$

Results

Logistic regression is used to examine the univariate relationships between PWOM and advertising exposure and viewing behaviour, addressing H1a and H1b. Viewing the program is the dependent variable and viewer's week-of-airing exposure to PWOM (H1a) or advertising (H1b) (i.e. occurring after the first interview, captured in the second interview) are the respective independent variables. Advertising in each media (TV, radio, print, online and PR) was also analysed separately.

The results show support for H1a, with receiving PWOM significantly related to future viewing of TV programs (see results in Table 3). There is evidence for partial support of H1b, as advertising via TV, outdoor, and PR activities are significantly linked to future viewing. However, exposure to advertising on radio, print, and online is insignificant. Comparing the odds ratios and respective confidence intervals (CI), there is evidence to support H1c. PWOM ($\text{Exp}(b)=2.7$, $\text{CI}=1.6-4.7$) has a stronger influence than TV advertising ($\text{Exp}(b)=1.2$ $\text{CI}=1.2-1.3$). However, TV

advertising has much higher explanatory power (Nagelkerke $R^2=9\%$, versus 1% for PWOM) due to its greater reach.

The same regressions were run using the longer-term PWOM and advertising exposure frequencies (captured in the first interview) as a further validation of the findings relating to week-of-airing effects. The results are similar for PWOM and TV advertising, again, confirming support for H1a and partial support for H1b. The odds ratios and respective CIs confirm that PWOM has a stronger effect than advertising and that TV advertising, specifically, has a slightly lower contribution than PWOM (also see Table 3). Thus, the results support previous research findings that PWOM has a greater individual effect than advertising.

Table 3: Single-variable logistic regression results

Week-of-airing effects	Nagelkerke R^2	Exp (b)	CI (95%)		Sig. tests
			Lower	Upper	
PWOM freq.	1%	2.7	1.6	4.7	p<0.001
TV Ads freq.	9%	1.2	1.18	1.3	p<0.001
Outdoor ads freq.	0.4%	1.8	1.1	2.8	p=0.02
PR freq.	0.3%	1.4	1.01	1.9	p=0.04
Print ads freq.	ns				p=0.18
Radio ads freq.	ns				p=0.40
Online ads freq.	ns				p=0.11
Longer-term effects	Nagelkerke R^2	Exp (b)	CI (95%)		Sig. tests
			Lower	Upper	
PWOM freq.	3%	1.5	1.17	1.32	p<0.001
TV Ads freq.	4%	1.1	1.09	1.16	p<0.001
Outdoor ads freq.	ns				p=0.09
PR freq.	ns				p=0.14
Print ads freq.	ns				p=0.71
Radio ads freq.	ns				p=0.22
Online ads freq.	ns				p=0.38

IV = frequency of exposure (0 to max), DV = viewed the program (yes/no)

To address H2, the distribution of probability of viewing for respondents exposed to advertising and respondents who received PWOM was compared with the total sample distribution of viewing probabilities. The advertising exposure variables (week-of-airing and longer-term) are now narrowed to only include TV advertising, as other advertising and PR exposures were either insignificant or had reached too few people in the second interview (e.g. PR with n=19) to be reliably analysed. As the variables of interest are 11-point probability scales, and

there is a desire to see the differences at all levels of the scale, chi-squared tests are conducted on each of the different scale points to determine if the distribution of those exposed to advertising or PWOM differs significantly from the overall sample.

The results of the chi-squared tests of significance (see Table 4) show that for both the week-of-airing and longer-term, receivers of PWOM are less likely to have a zero probability of viewing the TV program compared to the total sample (week-of-airing=13% versus 46% overall, $p<0.01$; longer-term=22% versus 46%, $p<0.01$). Receivers of PWOM are also more likely to have had an initial viewing propensity of eight or above than the overall sample (week-of-airing=40% versus 16%, $p<0.01$; longer-term=51% versus 16%, $p<0.01$). As an additional check, the analysis was conducted with a sub-sample of those who reported only receiving PWOM in the week-of-airing, excluding those who reported receiving longer-term PWOM in the first interview. The finding that receivers of PWOM are more positively predisposed to watch the program still holds. The audience reached by TV advertising is also slightly biased, with the percentage of respondents with a zero probability of watching the show lower than the total sample (week-of-airing=39% versus 46%, $p<0.001$; longer-term=41% versus 46%, $p<0.01$). However, these skews are much lower than for PWOM. The results support H2, in that the audience that receives PWOM is already more positively predisposed to act than the audience that receives advertising, thereby indicating it is relevant to include prior probabilities to act in any modelling of comparative effects.

Table 4: Comparing prior probabilities of viewing for audiences reached by TV advertising and PWOM

Chances out of ten will watch the program	Overall sample % (n=2,639)	Shorter-term			Longer-term	
		Exposed to TV ads % (n=1,150)	Received PWOM % (n=55)	Received PWOM % SI^ only (n=43)	Exposed to TV ads % (n=1,291)	Received PWOM % (n=138)
Zero	46	39*	13*	16*	41*	22*
One in ten	7	6*	9	9	6*	6
Two in ten	6	5	9	12	6	2*
Three in ten	5	5	6	7	6*	1*
Four in ten	4	4	2	2	4	2
Five in ten	8	8	11	9	9*	6
Six in ten	3	3	6	7	3	4
Seven in ten	5	6*	6	7	6*	5
Eight in ten	4	5	9	7	4	10*
Nine in ten	4	6*	15*	14*	5*	11*
Ten	8	12*	16*	9	9*	30*
Total	100	100	100	100	100	100

^Second interview only, *p<0.05 cell is significantly different from overall sample equivalent cell

Multivariate logistic regression was then used to address RQ1a and RQ1b. Model 1 includes all longer-term variables for advertising (i.e. TV, radio, outdoor, and online), PWOM, and PR exposure, as well as probability of viewing the program (collected first interview), regressed against the binary dependent variable of viewing the program (collected second interview). The results show only probability of viewing the program and TV advertising are statistically significant (Nagelkerke R²=37.7%; probability of viewing Exp(B)=1.45 (1.39-1.50) Wald=348.1; p<0.001; frequency of viewing TV advertising Exp (B)=1.08 (1.04-1.13) Wald=17.5; p<0.001). This suggests that the impact of PWOM is fully mediated by the probability of future viewing, answering RQ1a.

Model 2 was a similar multivariate logistic regression, this time including the week-of-airing variables for advertising, PWOM, and PR, also with the probability of viewing. The results show a similar result to Model 1 with only probability of viewing and TV advertising exposure statistically significant (Nagelkerke R²=39.4%; probability of viewing Exp(B)=1.43 (1.37-1.47) Wald=354.3; p<0.001; frequency of viewing TV advertising Exp (B)=1.18 (1.13-1.23) Wald=56.7; p<0.001). This result suggests that exposure to advertising in the week-of-airing still impacts on future viewing, but not PWOM, answering RQ1b.

The implication of the modelling is that the previously significant findings from H1a and H1c become insignificant and therefore appear to be artefacts of PWOM reaching an audience biased with a higher propensity to act than does advertising (as shown in Table 4). Another version of the models was run with dummy variables for the individual programs (with one omitted for the purposes of comparison). None of the program dummy variables are significant, which suggests the results can be generalised across all programs.

Mindful of East et al.'s (2008) *room for change* theory that suggests the influence of WOM may be dampened because it reaches those with high probability to act, the model with the week-of-airing variables was rerun including only respondents with a prior probability below eight (out of ten) of viewing the target program. This process reduced the sample size to 1,679 program-level observations but removed the disparity in *room for change* across the two media. The results again reveal a two-variable model (overall Nagelkerke $R^2=22.1\%$), with benchmark probabilities and week-of-airing TV advertising still significant ($p<0.01$), whereas PWOM failed significance tests ($p=0.159$). Therefore, even when the recipients of both PWOM and advertising have equal capacity for increasing choice probabilities, TV advertising has a stronger effect on future behaviour than PWOM.

New versus returning programs

Before conducting the full analysis to test H3, benchmark probabilities of those who received week-of-airing PWOM were examined for new and returning programs. The results of chi-squared tests show that PWOM about returning programs is more likely to reach those with a ten out of ten probability to act than for new programs (25% versus 4%, $p=0.04$). This finding supports the explanation that givers of WOM censor their giving in line with perceived recipient interest and such censoring leads to a substantive proportion of PWOM going to people who are pre-disposed to act positively towards the brand, thereby dampening its scope to influence viewing behaviour.

To address H3 regarding whether PWOM is more influential for totally new TV programs the viewers of entirely new programs ($n=981$) were analysed separately to the viewers of

returning series (n=1,387). Results for both types of programs show the overall model structure holds, across longer-term and week-of-airing models: prior probabilities and TV advertising are significantly linked to future viewing behaviour, but PWOM fails significance tests. Advertising also has similar effect sizes for both types of programs (for week-of-airing exposure: new program $\text{Exp}(b)=1.18$, $p<0.001$, $\text{Wald}=22.1$; returning program $\text{Exp}(b)=1.20$, $p<0.001$, $\text{Wald}=35.1$; longer-term exposure: new program $\text{Exp}(b)=1.06$, $p<0.05$, $\text{Wald}=3.6$; returning program $\text{Exp}(b)=1.10$, $p=0.001$, $\text{Wald}=11.8$). Therefore, there is no support for H3.

Checking for TV viewing weight as a confound

To check that the results do not simply reflect the relationship between the probability of watching TV in general and the probability of watching any specific program, all models were separately re-run with three dummy variables representing viewing weight: light (10 hours a week or fewer), medium (11-20 hours per week), and heavy (over 20 hours per week). Results remained unchanged with none of the TV viewing weight variables significant. The finding that TV advertising influences future TV program viewing is not an artefact of TV viewing weight.

General discussion

This research draws on a longitudinal approach to examine the relative influence of PWOM versus advertising on the viewing of new season TV programs. There were three stages to the analysis. The first stage replicated past findings that present evidence of the superior influence of WOM over advertising. Results show that in this category of TV program viewing, the relative effects of PWOM and advertising mirror past research. The second stage, made possible by the longitudinal research design, showed PWOM reached an audience more positively biased in the distribution of prior probabilities of acting than TV advertising. The audience that received PWOM (week-of-airing, second interview) would have been more likely to watch the program even *without* receiving PWOM, than the audience that received advertising would have been to watch the program *without* exposure to advertising. The third stage modelled the influence of PWOM and advertising, incorporating the benchmark probabilities of viewing the program.

Results show that once benchmark probabilities are included in the model, PWOM is no longer as significantly related to future viewing. In contrast, the influence of TV advertising exposure remains significant even with the inclusion of prior probabilities of viewing the TV program.

Results also show PWOM reaches an even more biased audience for returning programs than for new programs. This finding supports the theory that givers tend to talk about programs with other people whom they know have a high interest in the topic, which is why the audience for WOM is biased. Hence, WOM for returning programs in particular often reaches those who are already relatively committed to watch the program.

It is noted that TV advertising dominated the advertising results. Other media (such as radio, print, outdoor, online, or PR) proved insignificant or only significant if exposure reaches viewers in the week that the program is aired. There was no evidence of longer-term effects for advertising in these media.

Implications for theory and practice

Several past studies report WOM to be more influential than advertising (Katz and Lazarsfeld 1955; Day 1971; East et al 2005; Villanueva et al 2008; and Trusov et al 2009). However, past research failed to include benchmark probabilities of acting and this omission may have led to overstating the power of PWOM compared to advertising. It is important to re-examine past claims in light of this new empirical finding, which although only in one category, lacks a vast array of other influences, such as relative price and distribution.

It is possible that WOM is just another way for people to hear about a brand, in line with the advertising as creative publicity model expounded by Ehrenberg, et al. (2002). Just like advertising, WOM can, occasionally, persuade people to make a substantial revision to their opinions of a brand. However, this can only happen when it reaches people with the capacity to make this revision, in that they had an initially low likelihood to act. This research shows that this occurrence is less likely for PWOM than for advertising, simply because PWOM relies on the giver to distribute, whereas the distribution of advertising is within the control of the advertiser.

Advertising has greater capacity to reach people who have what East, et al. (2008) refer to as *room for change*. Both WOM and advertising can have a reinforcement role, to stave off memory or behavioural decay, but whether WOM has a differential benefit over advertising in this regard was not examined in this research. This would be a useful topic of investigation for future research.

Although tested in a category with a great deal of advertising, these findings are still relevant to categories with little or no advertising. The contextual influences (as shown in Mangold et al., 1999) on the giver are still relevant, with conversation about a brand needing the right circumstances to stimulate the giver. In minimally advertised categories, marketers may benefit from efforts to encourage customers to give WOM to a wider range of people, by providing information about when the brand should be recommended/talked about. This may encourage customers to go beyond the obvious scenarios for giving WOM and, thereby, reach a more diverse audience at various times throughout the purchase and decision-making cycle(s). In turn, referral programs could enhance the ROI achieved. Further research aimed at exploring the giver's considerations when shaping whom they give WOM to may uncover additional ways to influence conversion in order to encourage givers to share thoughts about the brand with a wider range of people.

The results also confirm the importance of TV advertising compared to advertising in other media. While this might seem obvious because the category under investigation is TV programs, this research supports findings from other advertising effectiveness research (Binet & Field, 2009; Rubinson, 2009). The finding that outdoor advertising and PR activities were only significant in the week-of-airing further suggests that the timing of exposure is an important consideration for other media. Perhaps other media, if effective, have a shorter decay rate than TV advertising and are best used closer to the purchase as a means of increasing reach, such as advertising in drive-time radio for a program showing later that night. However, it is recognized that these results are based on recall data, which may be less reliable for non-TV advertising. Cross-media single source data that verifies exposures would avoid relying on respondents'

memory. Replications using cross-media single source data are encouraged as such data becomes more readily available.

This research has implications for researching multi-media platforms, in particular, cross-media combinations that include media with low reach. In these scenarios, it would be prudent to check the assumption that those reached by one marketing activity have the same distribution of purchase probabilities as those reached by another marketing activity. If this step is omitted there is the risk of overstating the influence of activities that reach people who had a high propensity to act prior to exposure to these marketing activities. The audience for a brand's Facebook page is a relevant example. Wendy Clark, Coca-Cola's senior vice president of integrated marketing, was quoted as saying that Coca-Cola's Facebook fans are "twice as likely to consume and 10 times more likely to purchase than non-fans" (Graham, 2011). This statistic suggests that the sample of consumers reached by Coca-Cola's Facebook page activity is not typical of the Coca-Cola customer base. The evaluation of the sales outcomes of any activity on Coca-Cola's Facebook page needs to take into account the bias in this segment of customers in order to calculate the incremental effect. One should be suspicious of any cross-media effects research that fails to consider potential differences in audience composition.

While not explored in this research, there is also level of interdependence between WOM and advertising, whereby advertising stimulates WOM. Keller and Fay (2012) report that paid for advertising is the topic of one in four WOM conversations, which is closer to one in three for the media and entertainment industry. When the volume of WOM becomes elevated in a market, above what is considered the naturally occurring or normal amount of WOM, advertising is reported as responsible for three in four of these additional conversations (Mortensen, 2013). It is possible that dollars taken from advertising to stimulate WOM may actually be counter-productive. This leads to further questions around whether there is an interaction between the source of the WOM (their motivation for giving WOM) and the audience that receives it.

Further research should also explore the role of creative quality of advertising and the content of WOM in determining the relative effectiveness of each. In particular, examining

response curves for each would help to clarify the relationships between exposure, frequency, and future behaviour. It would also be useful to know if there are particular types of ads or content of WOM that have more influence on consumers with low prior probabilities to act. Given that this segment can make either a small jump in probabilities (e.g. from one to three out of ten) or a big leap (e.g. from one to eight), discovering what is conducive to a big leap would be useful for marketers trying to encourage greater shifts. One study of online WOM (OWOM), for example, found that actively recommending the brand (e.g. “buy this product”) had a greater influence on behaviour (i.e. sales of mobile phones) compared to attribute-based or emotion-based OWOM (Gopinath, Thomas, & Krishnamurthi, 2014). How this might translate to offline, interpersonal WOM, which is the dominant type of WOM in this category and most others, is unclear.

With any research, replication and extension is very important. This analysis was conducted in a single, low-involvement category and would benefit from extension to other low-involvement categories and also service markets, such as finance, restaurants, or hairdressing, where WOM has previously been considered a powerful marketing tool.

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