

How Damaging is Negative Word of Mouth?

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The purpose of this exploratory study was to seek evidence of whether word of mouth (WOM) has a significant effect on the attitudes and probability of purchase of potential consumers. The study, which partially replicates that of Herr, Kardes and Kim (1991), tested the following two research hypotheses: i. That both positive and negative WOM will affect consumers' probability of purchase and attitudes towards a product. ii. That negative WOM will have a stronger effect than positive WOM on consumers' probability of purchase and attitudes towards a product. The results of this exploratory study indicate that WOM, both positive and negative, is indeed a force that can influence the attitudes and predicted purchase behaviour of consumers. However, due to the lack of significant differences between the experimental groups and the neutral (control) group, this study can not give reliable estimates of the precise magnitude of this effect. Several authors contend that negative WOM is more influential than positive WOM, however, this proposition was not supported by our research.

Keywords: negative word of mouth, customer dissatisfaction, retention, attitude measurement

Introduction

The marketing literature abounds with the claim that word of mouth communication has a substantial influence on consumer purchase decisions. Word of mouth (WOM) is a message about an organisation's products or services or about the organisation itself. Usually WOM involves comments about product performance, service quality, trustworthiness, and modus operandi, passed on from one person to another. 'Senders' who have personal experience with products or services from a particular organisation are regarded as fairly objective sources of information by 'receivers'. The information communicated by senders can be positive, negative, or a mixture of both.

Most organisations, particularly those involved in services, recognise that consumer dissatisfaction can and will occur from time to time. Consumer response to dissatisfaction with a product or service can take several forms:

- Direct complaints to the seller.
- Private responses such as brand switching and negative WOM.
- Third party responses such as taking legal action and complaining to consumer "watchdog" groups.

Of these possible responses, the private action of negative WOM can be particularly insidious for retailers and manufacturers. For, unlike complaint behaviours, negative WOM is largely invisible, at least in the short-term.

To date, little research has been conducted to determine the effects of WOM communications on the purchase behaviour of those who receive them. One of the first empirical studies of WOM influence in marketing was conducted by Arndt (1967a). He was able to monitor the adoption of a new food product in test market conditions and assess the impact of WOM on short-term purchase behaviour. Arndt found that exposure to favourable WOM increased actual buying levels while exposure to unfavourable comments decreased these levels.

Twenty years later, Richins (1987) wrote that "although consumer dissatisfaction is ubiquitous in the marketplace, empirical studies of dissatisfaction have been narrow in focus...these investigations tend to ignore all dissatisfaction responses except complaint behaviour" (p.24).

Richins' statement still has considerable validity; the few studies found in the dissatisfaction literature that examine WOM are generally limited to reporting the incidence of complaint behaviour.

There is some evidence, however, that the potential impact of negative WOM may be grossly underestimated by managers who rely on complaint rates as indicators of dissatisfaction. The nationwide US Technical Assistance Research Programmes (TARP) studies of the late 1970's report that 31% of households do not complain, even when faced with products and services with serious problems (TARP, 1979). A.C. Nielsen (1983) report that nearly 70% of customers who experience a problem do not complain to the seller. Similarly, Day, Grabicke, Schaetzle and Staubach (1981) found that only one third of dissatisfied customers complain directly to the organisation concerned. Regardless of the exact figure, the general consensus is that those customers who do complain are in the minority.

Complaint rates not only underestimate the number of dissatisfied customers, but they fail to indicate the extent to which negative WOM may adversely affect business. Richins (1983), for example, found that 85% of customers dissatisfied with a clothing item told an average of five others. Richins' (1987) replication study reported similar findings. There is also some evidence to support the views of several researchers (Lutz, 1975; Mizerski, 1982; Weinberger and Dillon, 1980; Wright, 1974) that consumers place more weight on negative information in making product evaluations. For example, Kotler (1991), quoting from work by Arndt (1967a), TARP (1986) and Richins (1987), states that customers dissatisfied with a product spread negative WOM to eleven acquaintances, while satisfied customers may spread positive WOM to only three. Similarly, Hart, Heskett, and Sasser (1990) suggest that those with memories of poor service tell approximately 11 people while those with pleasant recollections tell only six. This ratio of positive to negative WOM is supported by TARP (1986) findings which suggest consumers engage in about twice as much WOM when they are dissatisfied compared to when they are satisfied.

The findings of research to date, limited though they are, suggest that it is important for a firm to be aware of negative WOM about its products. Recognising the influence of WOM is important to marketers' decisions on customer service, especially in regard to justifying expenditure on complaint handling, customer retention, and service recovery. Thus the purpose of this exploratory study was to seek evidence of whether WOM has a significant effect on the attitudes and probability of purchase of potential consumers. The study, which partially replicates that of Herr, Kardes and Kim (1991), tested the following two research hypotheses:

- H1: That both positive and negative WOM will affect consumers' probability of purchase and attitudes towards a product.
- H2: That negative WOM will have a stronger effect than positive WOM on consumers' probability of purchase and attitudes towards a product.

Method

Sample

Sixty Massey University undergraduates were recruited for this study. Twenty students were assigned to one of three conditions - positive WOM, negative WOM or no WOM - and participated in the experiment in groups of ten. Groups of this size were used to ensure all subjects could hear instructions clearly and so that the WOM appeared to be a natural communication. The independent variable in each condition was the nature of a WOM communication (positive, negative, none). An incentive of five dollars was offered for taking part in some "marketing research".

Procedure

Each participant was given written information about a personal computer; the amount, content, and type of information was held constant across each group. The computer was described as an Elite 486 SX 33 and a number of relevant features including monitor, memory capacity, disk drives, and accessories were described along with a short sales pitch. While the subjects read the information, the researcher asked if there were any questions. One member of the group was a confederate (briefed by the researcher) who delivered the face-to-face WOM communication. None of the subjects knew the confederate. The confederate asked if it was all right if she took part in the study as she had recently purchased the same model of computer. The confederate then added, in positive conditions, *"it's an excellent computer - I haven't had any problems with it"*. In negative conditions she stated, *"it's a terrible computer - I had to take it back to the shop"*. The researcher checked that it was the same model of computer, indicated that she should still take part in the study, and asked the group to continue without any talking. The third group, the control, received no WOM communication.

A self-completion questionnaire was administered to all of the participants. First, subjects were asked to rate the computer on three 11-point semantic differentials anchored by 0 and 10 (bad/good, unfavourable/favourable, undesirable/desirable). These scales were adapted from an experiment by Herr et al. (1991) and allow a partial replication and comparison to their study.

Second, the Juster Scale was used to measure participants' purchase probabilities (see Appendix). The Juster Scale is an 11-point scale that has been found to be an accurate measure for predicting purchase rates for a variety of consumer goods and services (Seymour, Brennan and Esslemont 1994). Participants were asked to imagine they were planning to buy a personal computer and that the computer in the study was just within their price range. The question then asked, "taking everything into account, what are the chances that you personally would buy the Elite 486 SX 33 in the next 12 months?".

Results and Discussion

Effect of WOM on Attitudes

As can be seen from Table 1, the group means on the three attitude measures varied in the expected direction of the WOM influence. That is, the mean scores for the group exposed to

positive WOM were consistently higher across the measures, followed by the neutral group, with the group exposed to negative WOM reporting the lowest mean scores. However, the variation within each of these groups on the 11-point scales was considerable; the standard deviation ranged from 1.6 to 2.1 while the mean differences between the experimental groups (positive and negative) and the control ranged from only 0.4 to 0.9.

Table 1. Mean scores on attitude measures

Group	Attitude Measure*					
	Bad/Good		Unfavourable/ Favourable		Undesirable/Desirable	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Positive	6.9	1.6	6.5	1.6	6.7	1.7
Neutral	6.1	1.7	5.8	1.9	5.8	1.8
Negative	5.7	1.6	5.4	1.7	4.9	2.1

Note: n for each group = 20.

* 11 point Likert scale.

Effect of WOM on Purchase Probabilities

In order to compare the effect of WOM on attitudes with the effect of WOM on purchase probabilities, an overall brand attitude index was compiled (see Table 2). This was calculated by averaging the scores of each group (positive WOM, negative WOM, neutral) across all three attitude scales. In the study conducted by Herr et al. (1991) the mean score on this attitude index was 6.4 for a group exposed to positive WOM about an automobile and 5.5 for a group exposed to negative WOM, a difference significant at $p < 0.05$. As Table 2 indicates, this study concurs with their results with a mean of 6.7 for the positive group compared to a mean of 5.3 for the negative group, also a significant difference at $p < 0.05$.

Table 2. Mean scores: combined Attitude Index

Group	Attitude Index	
	Mean	Std. Dev.
Positive	6.7	1.6
Neutral	5.9	1.8
Negative	5.3	1.8

Note: n for each group = 20.

Table 3. Mean scores on Juster Scale

Group	Juster Scale	
	Mean	Std. Dev.
Positive	6.0	2.8
Neutral	4.9	2.7
Negative	4.1	2.1

Note: n for each group = 20.

The mean purchase probabilities given by the Juster Scale (see Table 3) are consistent with the pattern of results indicated by the attitude measures. However, the mean Juster scores tend to demonstrate even more variability within groups than the attitude measures as shown by the large standard deviations. The consistent pattern of results between the attitude scales and the Juster purchase probabilities (see Tables 2 and 3) gives some degree of convergent validity to the findings (Jacoby 1978).

Analysis of Variance

A one way analysis of variance was conducted for the three groups comparing the group means on the three attitude measures and from the Juster Scale. The results are reported in Table 4.

Table 4. Analysis of variance for group means

Measure	F-Ratio	P
Unfavourable/Favourable	1.9	0.17
Bad/Good	2.6	0.08
Undesirable/Desirable	4.6	0.01
Juster Purchase Probability	2.8	0.07

Note: total n = 60; 3 groups of 20.

As can be seen from Table 4, all of the measures except unfavourable/favourable showed a significant difference between groups at the $p < 0.10$ level. The undesirable/desirable measure was particularly sensitive to the influence of WOM with a significant difference between group means found at the $p = 0.01$ level. These results indicate that WOM has an effect on both brand perceptions and purchase probability. Thus, fairly reliable support can be given to Hypothesis One, *"that both positive and negative WOM will affect consumers' probability of purchase and attitudes towards a product"*.

Multiple Range Test (Least Significant Difference)

In order to determine whether negative WOM has a greater influence than positive WOM, a multiple range test was conducted using a modified least significant difference procedure. This is equivalent to taking all possible Student t tests between the groups. At the same time, this analysis is adjusted to account for the fact that as the number of individual tests increases so does the probability of getting a significant difference between any two of the groups by chance alone (Tukey 1977). Table 5 reports the means for each of the measures used in this study, the differences between the control and experimental means, and shows the results of the multiple range test.

There was no significant difference between either the positive or negative groups and the control. This result was consistent across both the attitude measures and the Juster purchase probability measure. Notably, the findings are contrary to the expectations reflected in Hypothesis Two. Thus, Hypothesis Two, *"that negative WOM will have a stronger effect than positive WOM on consumers' probability of purchase and attitudes towards a product"*, is not supported.

Table 5. Magnitude of differences between mean responses

	Mean responses			LSD test	Difference from control	
	positive (p)	control (c)	negative (n)		p-c	n-c
Unfavourable/Favourable	6.5	5.8	5.4	n.s.	0.7	-0.4
Bad/Good	6.9	6.1	5.7	n.s.	0.8	-0.4
Undesirable/Desirable	6.7	5.8	4.9	n.s.	0.9	-0.9
Juster Probability	6.0	4.9	4.1	n.s.	1.1	-0.8

Note: total n = 60; 3 groups of 20.

n.s. = non-significant

Conclusion

The results of this exploratory study indicate that WOM, both positive and negative, is indeed a force that can influence the attitudes and predicted purchase behaviour of consumers. However, due to the lack of significant differences between the experimental groups and the neutral (control) group, this study can not give reliable estimates of the precise magnitude of this effect. Several authors contend that negative WOM is more influential than positive WOM, however, this proposition was not supported by our research.

Any generalisations made from this exploratory work should be viewed with caution. The sample sizes used in the study are fairly small and the purchase intentions of undergraduate students are not necessarily representative of the population. The study did not allow for interaction between parties which would happen in more realistic circumstances and there was only a short time lapse between when the participants received the WOM

communication and when their purchase probabilities were measured. In addition, one of the reasons held to explain why WOM has such a powerful influence is that the source is credible (Arndt, 1967b). In this study, the source was a stranger, rather than a friend or acquaintance, thus WOM may have an even greater effect in reality than that reported here. The study focused on a personal computer product, and while a study by Herr et al (1991) showed similar results for consumer attitudes towards cars, the influence of WOM may vary substantially across other product categories.

Future research into WOM should consider using larger, representative sample sizes in order to draw more reliable inferences about the population. In addition, studies need to determine if the impact of WOM varies across product categories and how this can be predicted.

A number of studies have provided estimates of the incidence of positive and negative WOM. However, very few researchers have examined the subsequent effects of these communications on the consumers who receive them. Future research examining the influence of WOM on consumer purchase behaviour will give the findings from the current body of literature greater value.

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Appendix: Juster Scale Question

Now, imagine that you are planning to buy a personal computer. The Elite 486 SX 33 is just within your price range if you allow yourself enough money to buy the software and printer you want.

Q.5. Using the scale below and taking everything into account, what are the chances that you personally would buy the Elite 486 SX 33 in the next 12 months?

PLEASE WRITE ANSWER (FROM 0 TO 10) HERE _____

10	Certain, practically certain	(99 in 100)
9	Almost sure	(9 in 10)
8	Very probable	(8 in 10)
7	Probable	(7 in 10)
6	Good possibility	(6 in 10)
5	Fairly good possibility	(5 in 10)
4	Fair possibility	(4 in 10)
3	Some possibility	(3 in 10)
2	Slight possibility	(2 in 10)
1	Very slight possibility	(1 in 10)
0	No chance, almost no chance	(1 in 100)