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The decay of positive and negative word of mouth after product experience

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ABSTRACT

Three surveys, each covering two categories, were used to investigate the decay in WOM output after product experience. The categories were restaurants, fashion stores, hotels, holiday destinations, mobile phones and films. Data were gathered in the UK and Thailand, resulting in a total of 548 usable responses.

Word-of-mouth (WOM) output decays rapidly after product experience and then flattens. There is substantial variation by category. The decay rates of positive and negative word of mouth (PWOM, NWOM) are much the same, indicating that ratio measures of the volumes of PWOM to NWOM will be largely independent of the interval over which they are measured.

This evidence on WOM decay is useful to those estimating the financial return from new customers and indicates that incentivised referral should be concentrated in the short interval after product experience if it is to draw advantage from the high rate of WOM found at this time. More generally, it is argued that decay in the output of WOM must be studied by consumer researchers if the effect of WOM is to be properly measured and modelled.

CHINESE ABSTRACT

采用三项调查对试用产品后的口碑结果衰减进行了探讨，每项调查涵盖两个类别。这些类别是餐馆、时装商店、酒店、度假胜地、移动电话和电影。这些数据是在英国和泰国收集的，总共获得548份有效答卷。试用产品后的口碑结果迅速趋于平淡，然后是无关痛痒的平铺直叙。各个类别的口碑结果差异很大。正面和负面口碑（正面口碑、负面口碑）大致相同，表明正面和负面口碑数量的定比测量将很大程度上独立于时间间隔的测量。口碑衰减证据对新客户的财务回报预估是有用的，并指出试用产品后短期内应关注那些有利口碑，才能从这次发现的较高口碑中获得好处。从更为广泛的意义上来看，有人认为，消费者研究人员必须研究口碑结果的衰减是否对口碑效应进行了适当的测量和模型预测。

1. Introduction

The effect of an influence process, such as word of mouth (WOM) or advertising, is not constant. Typically, the effect decays after the initial stimulus. When this occurs there will be less total effect if the decay is rapid rather than slow. Thus, to understand how the influence process produces change in consumer response, we need to study its decay.

WOM is consumer-to-consumer advice that may be face-to-face, or via phone, text or Internet. The form and content of WOM may be complex; quite often, advice contains both positive and negative elements about concepts, or it may be neutral. Mazzarol, Sweeney and Soutar (2007) discuss such different aspects of WOM. However, we work with the respondent's classification as positive or negative WOM (PWOM, NWOM) as a necessary simplification. This paper is focused on the decay in the output of PWOM and NWOM in the period shortly after purchase or completion of consumption in the case of services.

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Decay in WOM is interesting for at least four reasons. First, it is informative about the nature of WOM; second, it is relevant to measurement; third, it bears on the modelling of diffusion effects; and fourth, it relates to the interventions that marketers may use to induce referral.

The nature of WOM. There is some controversy about whether PWOM and NWOM are fundamentally different in the way they bring about change. Reichheld (2006) claimed that NWOM is substantially more influential than PWOM and Goldenberg et al. (2007), following Midgley (1976), suggested that NWOM has a more complex influence on adoption behaviour than PWOM. If the decay rates are markedly different, it seems more likely that these two forms of WOM differ in their psychological or social basis. Conversely, evidence of similarity in the decay rates of PWOM and NWOM supports those who claim that PWOM and NWOM are much the same, save for their direction of influence on behaviour.

Evidence on the decay pattern of WOM indicates what processes may be at work when it changes. A simple pattern of decay is an exponential decline towards a background level. Such decays are characterised by their half-life, the period of time needed for the changing component to halve. A more complex two-component model may apply in some cases (e.g. when the WOM has a carryover into a new form of influence such as greater sensitivity to advertising). WOM decay could also be more complex if the initial expression of WOM alters a consumer's propensity to express WOM later. Thus, evidence on the decay pattern of WOM may help us to decode the processes involved in its production.

Measurement. Researchers report on the ratio of PWOM to NWOM volume but, if the decay rates differ, these ratios will vary with the period of measurement and will lack comparability. One study indicates that ratios of PWOM to NWOM are relatively independent of period but more evidence is needed on this matter (East et al., 2013). Another measurement application is to customer value. Customer recommendations add to the customer's value by creating more sales and a rapid decay means that fewer recommendations are given.

Modelling. Measurement of decay is relevant to diffusion of innovation modelling. Surprisingly, decay is not represented in the Bass model where all adopters are treated as having equal influence on those yet to adopt (Bass, 1969). By contrast, if there is decay in WOM, recent adopters will be more influential than long-established adopters because they currently produce more WOM and this should be recognised in the modelling.

Application of findings. The fourth reason is more practical. The timing of attempts to induce customer referral relates to decay since the inducement to refer is likely to be most effective when WOM production is naturally high. In addition, any widespread increase in WOM may have sales effects, so that knowledge of the decay pattern should help to predict sales changes.

Given the importance of decay to our understanding of WOM phenomena, it may seem surprising that there is no specific research on this topic. However, research on decay requires large amounts of data and this is difficult to obtain; there may not be much WOM for some products or services, and the interval over which we need to study it is often quite short. This data problem has probably restrained research in this field.

2. Research

2.1. The decay of WOM in different categories

The novelty and activation involved in the purchase of goods or use of a service may stimulate advice giving, which then subsides as increased familiarity, forgetting, and interference from other stimuli dissipate both novelty and activation. In addition, people usually try to avoid repeating themselves and this will increasingly inhibit WOM as contacts are "used up". Thus, a prediction based on activation and "using up" is that WOM drops off quite sharply in the period after purchase of goods or use of services. Supporting this analysis, two studies comparing new with old customers showed that new customers give substantially more PWOM than established customers (Naylor and Kleiser, 2000; Wangenheim and Bayón, 2004).

There may be differences in decay between categories related to the salience of the category; hotels, for example, are not normally seen after use, whereas products such as mobile phones persist as stimuli in the post-purchase environment. Evidence on this has been presented by Berger and Schwartz (2011); they found that products that remained in the environment, or were cued by other environment factors, were talked about more than initially interesting products that were not visible later and therefore ceased to activate consumers. This category variation leads to the first research question:

RQ1. After product experience, how does WOM production differ between categories?

2.2. Are PWOM and NWOM different phenomena?

When NWOM is expressed to another consumer it is rarely unpleasant and is not like complaining to a supplier where raw emotion may drive behaviour; rather, both PWOM and NWOM are usually helpful advice and the term "negative" relates to the direction of action that is advocated with regard to goods or services, rather than to the mood of the advice giver. Sweeney et al. (2008), on the basis of focus group research, suggest that PWOM bears more heavily on cognitive factors and NWOM on more emotional factors. Richins (1983) noted that people may advise against a product because they found it unsatisfactory but Parthasarathy and Forlani (2010) found that customers may also advise against a brand despite their personal satisfaction with it. This suggests that it is a mistake to relate all NWOM to dissatisfaction, as has been done by Goldenberg et al. (2007). In the analysis of motivation for WOM, some differences have been found between PWOM and NWOM (Dichter, 1966; Hennig-Thurau et al., 2004; Sundaram et al., 1998) but a study of the factors precipitating WOM by Mangold et al. (1999) showed that the frequencies of the different factors were closely similar for PWOM and NWOM.

Another more general issue is the relative impact of PWOM and NWOM. Arndt (1967) reports a widely-cited case where NWOM had more effect on purchase but only one brand was studied. Subsequent evidence has been mixed. The matter is complicated by the method of measuring impact; it can be measured by consequential purchase, change in purchase intention, or by attitude towards the brand, and these different measures may produce different results. In impression formation research, negative information generally has more effect on attitudes than positive information (Fiske, 1980). The explanation for this is that most information is positive and, because of this, people generally form positive attitudes. As a result, the gap between an existing attitude and negative information is usually greater than the gap between an existing attitude and positive information, which leads to more change in attitude in response to negative information. But change in attitude to a product as a result of NWOM has little marketing relevance if purchase was unlikely before the NWOM was received. East et al. (2008) defined impact as change in the probability of purchase, rather than attitude change, and found that NWOM had less impact on purchase intention than PWOM, on average. The main explanation for this was that people were usually less than 50% likely to buy the