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# A WORD-OF-MOUSE APPROACH FOR WORD-OF-MOUTH MEASUREMENT

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**Abstract:**
*Despite of the fact that word-of-mouth phenomenon gained unseen dimensions, only few studies have focused on its measurement and only three of them developed a word-of-mouth construct. Our study develops a bi-dimensional scale which assigns usual word-of-mouth mechanisms available in online networking sites (eg: Recommend, Share, Like, Comment) into the WOM (+) - positive word-of-mouth valence dimension - respectively into the WOM (-) - negative word-of-mouth valence dimension. We adapted e-WOM construct developed by Goyette et al. (2010), and we obtained a word-of-mouth propensity scale, whose items include the usual online mechanisms. Our scale measures word-of-mouth propensity on 6 items grouped in 2 dimensions: positive word-of-mouth (index: Recommend, Share, Like) and negative word-of-mouth (index: negative Comment, Share negative comment, Like negative comment). Scale was tested along two studies, a German sampled one and a Romanian sampled other, highlighting adaptations to cultural specifics. High reliability was found in both studies. Providing an instrument that would easily work as a common denominator between theory and practice, present paper contributes to the dissemination of research findings into the business and managerial area.*

**Key words**: word of mouth propensity, WOM measurement, online WOM scale, online WOM, word of mouth in online networking

**JEL classification:** M31, M13, D83

## BACKGROUND AND MOTIVATION

It is known that advertising is no longer the powerful image creator it used to be in the 20th century. While mainstream media still preserves an important role in disseminating mass and general information, Internet channels offer new media choices and empower meaningful interactions between companies and consumers, leading to a conversational style of marketing which highly increases the importance of word of mouth (WOM), referrals and social marketing.

Since the new landscape of consumer-to-consumer influences emerged together with a decentralized flow of information about products, companies are looking for alternative ways - such as viral marketing and buzz marketing - to increase awareness and stimulate word of mouth. That is, word of mouth proved to be a powerful influential tool that can act for or against a brand (Lam & Mizerski, 2005). Social networking empowers people to promote their opinions about products and companies and to influence others ( McCann, 2008, KPMG, 2009; Dann, 2009), contributing to the brand creation (Qualmann, 2009; Bloomberg, 2010).

In an effort to increase the likelihood that online users will behave desirably towards their brands, companies seek to understand what motivates audiences to generate word of mouth (WOM). Such an understanding would help companies to adopt a proper strategy regarding communication, networking and connecting with users in order to establish a committed relationship with them.

More than before, delivered quality is judged not only through the lens of offered products, but also through the lens of company - customer interaction. The importance of interactivity was highlighted even before social networking explosion, when findings of Hanjun et al. (2005) showed that consumers who interacted more evaluated the website more positively, leading to positive attitudes toward the brand and increased purchase intent. As far as an important aspect of social networking sites is their interactive nature, become easy to understand why companies tend to pay a special attention to their online communication strategies and WOM generation.

Impacting awareness, expectations, perceptions, attitudes, intentions and behavior (Buttle, 1998) WOM influence consumers along entire purchase process through specific types of

messages: product news that offer informations about product attributes, advice giving that relates to a personal opinion without trial, and personal experience that express opinions about a product after trial (Assael, 1995).

Because WOM occurs before and after buying a product (Buttle, 1998; Assael, 1995), we focused on the effect of a launching communication on WOM giving propensity. We wanted to find out if certain messages are able to engage potential consumers in WOM production, before experiencing company's products.

## PURPOSE OF THE STUDY

Our paper emerged from a larger objective relating with market - launch campaigns and those messages that would be able to trigger consumer's positive impressions and attitudes.

For isolating the effect of messages from some other influences, we set up an experimental frame to test for differences in willingness to buy and word of mouth propensity between our participants.

Central to our interest was to understand what motivates audiences to generate word of mouth (WOM) and how would they react in the online contexts.

Willing to fully benefit from our results, we sought to measure online WOM propensity in a way that would enable us to easily compare test predictions with an implemented and tracked campaign.

Thus, we start searching for a previously developed WOM measurement scale whose items include LIKEs, RETWEETs, and other mostly used, eventually one-click-functionalities for opinion sharing in online networking.

That was the moment of starting this intermediary research, because, despite of the fact that a growing number of companies are struggling for getting LIKE's and all kind of instant-giving word-of-mouse (Pickton and Broderick, 2005), we were not able to find out in academic literature such a specific scale for measuring WOM.

We sought to develop a WOM scale whose items include the usual WOM mechanisms available in online networking sites because we considered that it would easily work as a common denominator between theory and practice.

## WORD-OF-MOUTH SCALES. LITERATURE REVIEW

While word-of-mouth has been studied extensively, only few studies have focused on WOM scales. As Harrison-Walker (2001) noted, "WOM was not treated as a construct to be measured but rather as a category to be assigned based on responding to a survey."

Goyette et al. (2010) highlights in their comprehensive review of the studies containing empirical research on WOM, that "there are only six papers that explicitly present a Cronbach's alpha" and "communicator's viewpoint (individuals that start the conversation) had mostly been taken into consideration while the receiver's viewpoint had been ignored".

Goyette et al. (2010) emphasize on the fact that most of the WOM scales used are measuring only one dimension of WOM, on a single item, with no mentions about which dimension is measured.

Conducting an in depth analysis of the previously published papers, they found that a lot of one-dimensional studies: Black, Mitra and Webster (1998); Bone (1995); Burzynski & Bayer (1977); Singh (1990); Swan & Oliver (1989), measured word of mouth valence: positive WOM (prise) or negative WOM. Depicting word of mouth valence (positive or negative) as a recurrent theme in past one-dimensional studies, authors caught our attention on it and its importance.

Yet, there are three researches focused on the WOM construct. A first measurement was developed by Harrison-Walker (2001) as a two–dimensions WOM construct comprising word of mouth praise (2 items) and word of mouth activity (4 items). A second WOM construct, also bi-dimensional, belongs to Godes & Mayzlin (2004) and it measures WOM volume and WOM dispersion. The third, and most inclusive construct is e-WOM scale developed by Goyette et al. (2010).

e-WOM scale was developed as an online word of mouth measurement on 9 items to measure four dimensions, as follows: WOM content (2 items), WOM intensity (3 items which includes activity, volume, dispersion), positive valence WOM (2 praise items), negative valence WOM (2 negative items). Paraphrasing Goyette et al. (2010), e-WOM scale measures (1) what is being said about the organization (content), (2) the scope of what is being said (intensity), and (3) the online users' attitude (positive or negative) towards the organization.

Given the higher occurrence of positive word of mouth (East et al., 2007; Goyette et al.,2010), but higher sharing rate (dissatisfaction is shared to 9 people, while satisfaction only to 5) of negative word of mouth (Assael, 1995; East et al., 2007; Goyette et al.,2010) we sought to develop a WOM scale to measure Facebook users' attitude (positive or negative) towards an organization, as an effect of the company's launching communication. In this regard we adapted e-WOM scale for the specific situation of WOM giving before purchasing, aiming to measure individual's intention to talk about an organization (positively or negatively) to their online networking peers.

## METHOD AND RESULTS

To test our messages effect on driving consumer's positive impressions that would increase WOM giving propensity we placed our study in the context of online networking.

Since students are an important target for our product we started our empirical investigation with an exploratory study.

We conducted 10 face-to-face interviews and participant observation with German graduate students (25 – 28 years old, 6 male and 4 female), during May 2011, to explore participant's opinions, motivations and habits of using Facebook and Twitter (as two important social networking sites) as well as their WOM sharing habits.

Thus, participants were asked about their usual online networking destinations. With no exception, all participants indicated Facebook as being their main networking destination.

When asking them to particularly talk about Facebook and Twitter we found a bigger difference than we expected, regarding the time they use to spend on each of those sites. While Facebook is a daily used tool, like e-mail, Twitter is only rarely used for information purposes, being considered "rather a place for bloggers or experts wanting to gain followers and spread their opinions or accomplishments, than a place for student's talk"(Christian, 27 y.o. graduate student). Facebook appeared to be the place for doing a lot of things they are interested in: connecting, relating and keeping in touch with people, grouping with others by interest; announcing, organizing and scheduling group events; the place for getting and providing information but also for discussing, joking, relaxing and time spending.

Results about low frequency of Twitter usage among German students, seems to come in line with findings from an earlier qualitative study (Andrei, Iosub and Iacob, 2010) that we conducted in order to explore Romanian users' motivations of online networking. From a total of 50 Romanian participants we interviewed in that study, only 3 were Twitter users and all three were bloggers – from which, one was student, too.

Interviewed German students were invited to detail their attitude towards business pages, advertising or any commercial related news available in social networking context. They were asked to talk about phenomenon of sharing WOM regarding products (or organizations), and how this kind of WOM occurs in their friends network. They were invited to provide examples of situations and reasons for engaging in sharing this kind of WOM , to talk about WOM content and valence (positive or negative). On this point, 'LIKE' postings were reported as being the mostly used WOM generators, followed by 'Comment', 'Share' or direct recommendations and ratings between networked friends.

Confirming their previously declared Facebook orientation, our participants described word of mouth sharing by exemplifying with WOM mechanisms available on Facebook. Thus, a scale whose items would include the usual WOM mechanisms available on Facebook appeared to be the closest measure of WOM propensity in social networking context.

Following the opinion of Salzman, Matathia and O'Reilly (2003) about the "transfer of information through social networks" and spontaneous WOM occurrence "without so much as a raised finger on the part of a marketing specialist or any other person", we decided to measure WOM propensity as willingness to produce or spread WOM through the usual WOM mechanisms, available in online networking sites: Recommend, Share, Like, Comment.

In this regard we adapted e-WOM scale for the specific situation of WOM giving before purchasing, aiming to concentrate on individual's intention to share (positive or negative) talk about the company with their networking peers.

We reduced on 2 from 4 dimensions contained into e-WOM scale (WOM intensity; positive valence WOM; negative valence WOM; WOM content) developed by Goyette et al (2010), to fit our situation of analyzing before-buying moment, when online users would share their personal opinions without product trial, when their WOM propensity would be an effect of company's launching communication.

Based on the insights gained during the interviews, WOM propensity was measured on 6 items grouped in 2 dimensions: 3 items for measuring positive valence WOM ( + ) and the other 3 items for measuring negative valence WOM ( - ), as they were detailed below (table 1).

**Table 1. WOM propensity scale.**

| **Dimensions** | **WOM ( + )** | **WOM ( - )** |
|---|---|---|
| **Items** | 1. To what extent do you think people would recommend this company to their online networking peers? | 4. To what extent do you think company launch would receive negative comments from Internet users? |
| | 2. To what extent do you think people will 'SHARE to friends' events and offers posted online by this company? | 5. To what extent do you think people will 'SHARE' negative talk about company? |
| | 3. To what extent do you think this company would receive 'LIKE' from online users? | 6. To what extent do you think people would 'LIKE' negative comments about company? |

Resulted WOM propensity scale was applied using questionnaire as data collection instrument, since literature review revealed that questionnaires, interviews and even experiments (Burzynski & Bayer, 1977; Herr, Kardes and Kim, 1991; Bone, 1995) were used in previous WOM related studies as data collection method.

Participants (N = 84; 62% female; ages 20-30; German students) were asked to fill in the questions by providing rates on a 7 point Likert scale (1= not at all; 7= very much).

Paper-based questionnaire was filled in during a face-to-face interaction with researcher.

Projective technique was applied to formulate the questions, in order to reduce errors resulting from eventual false responses, known to be higher when subjects are aware they report their own behavior.

Consistency across items resulted when tested reliability on each WOM dimension: positive WOM (index: Recommend, Share, Like; ά=.875) and negative WOM (index: negative Comment, Share negative comment, Like negative comment; ά=.840).

When we scale reverted the ratings for negative WOM items from 1 to 7 scale into 7 to 1 (1= very much to 7 = not at all), high consistency was found across all 6 items we used to measure WOM propensity: Recommend, Share, Like, negative Comment (scale reverted), Share negative comment (scale reverted), Like negative comment (scale reverted); ά=.858.

We could observe that some participants mentally labeled our items under negative talk or positive talk and they used one rate for all negative WOM items, respectively another rate for all

positive WOM items, while other participants carefully differentiated between items, giving them different rates.

We consider important to notice a higher occurrence of offering identical ratings for WOM ( - ) items, which reflects people's tendency to easier label WOM ( - ) under a negative talk umbrella, but to distinguish clear differences between Recommend, Share, Like, assigning them different ratings.

Knowing that the main constituent of WOM is positive valence (East et al., 2007, Goyette et al.,2010), but negative valence is having a higher sharing rate - satisfaction is shared to 5 people while dissatisfaction is shared to 9- (Assael, 1995; East et al., 2007; Goyette et al.,2010), we used 3 WOM ( + ) items and 3 WOM ( - ) items to measure WOM propensity.

As we observed in our participants' undifferentiated ratings, people tend to easier label all WOM ( - ) items under the same umbrella, which might result in an inflated WOM ( - ) total score because they might rate high all three items instead of only one which correspond with sharing a dissatisfaction. Because of that situation, in some samples, it would be advisable to measure WOM propensity by restraining negative valence dimension to only 1 item (from 3). That was the case we applied to measure WOM propensity on a Romanian population sample (N = 50; 60% female; ages 20-30, Romanian students), in order to avoid a distorted effect resulted from an inflated WOM ( - ) score. We restrained WOM propensity on 4 (from 6) items in order to avoid an inflated WOM ( - ) score resulted from the combination of higher sharing rate of negative WOM with predictive power of extraversion and communal orientations on an individual's propensity to produce WOM (Babin et al., 2005; Mooradian & Swan, 2006; Goossens, 2008) and people's tendency to easier assign undifferentiated ratings on WOM ( - ) items while rating differentiated on each WOM (+) items.

Thus, we restrained WOM ( - ) dimension on a single item: “To what extent do you think company launch would receive negative comments from Internet users?” to measure Romanians propensity to negative WOM giving.

WOM ( - ) item was scale reverted from 1 to 7 scale into 7 to 1 (1= very much to 7 = not at all) before summing up with WOM (+) items into WOM propensity variable (index: Recommend, Share, Like, Negative Comments, ά=.702).

Consistency across all 4 items resulted when tested reliability (ά=.702).

## CONCLUSIONS AND MANAGERIAL IMPLICATIONS

A growing number of companies are daily monitoring how many LIKEs they have managed to gather, or how user recommendation system performs. Online communication and WOM became important subjects on their daily agenda, since consumer-to-consumer influence gained unseen dimensions.

Despite of this reality, only few studies have focused on WOM measurement, and only three of them developed a WOM construct. None of them considered to include usual WOM mechanisms available in online networking when measuring word of mouth.

Our study developed a WOM scale whose items include the usual WOM mechanisms available in online networking sites, such as: Recommend, Share, Like, Comment.

Adapting e-WOM scale developed by Goyette et al. (2010), we provide a new measurement scale whose items include the usual online WOM mechanisms.

Our scale measures WOM propensity on 6 items grouped in 2 dimensions: 3 items (Recommend, Share, Like) for positive valence WOM ( + ) and the other 3 items (negative Comment, Share negative comment, Like negative comment) for negative valence WOM ( - ).

Developed WOM propensity scale was applied along two studies, different nation sampled: German and Romanian.

Consistency across items resulted on German sample when tested reliability on each WOM dimension: positive WOM (index: Recommend, Share, Like) and negative WOM (index: negative Comment, Share negative comment, Like negative comment). High consistency was found across all 6 items, after scale reverting the ratings for negative WOM items from 1 to 7 scale into 7 to 1 (1= very much to 7 = not at all).

We noticed people's tendency to easier label WOM ( - ) under one umbrella and rating identically for all WOM ( - ) items, but to distinguish clear differences between WOM ( + ) items (Recommend, Share, Like), assigning them different ratings.

Thus, we identified situations when it is advisable to restrain negative dimension on only 1 item (from 3), resulting a total of 4 (from 6) items to calculate WOM propensity. This kind of restraining is meant to avoid an inflated WOM ( - ) score which may occur in some samples exhibiting extraversion and communal orientations. In such samples, distorted measurements can result from combination of higher sharing rate of negative WOM, and people's tendency to easier assign undifferentiated ratings on WOM ( - ) items, while rating differentiated on each WOM ( + ) items, with predictive power of extraversion and communal orientations on an individual's propensity to produce WOM (Babin et al., 2005; Mooradian & Swan, 2006; Goossens, 2008).

We present such a case of measuring WOM propensity on a Romanian sample, with 3 WOM (+) items but a restrained WOM ( - ) on a single item.

Resulted WOM propensity variable comprised a total of 4 items (Recommend, Share, Like, Negative Comments), and proved consistency across all 4 items, after scale reverting negative comments from 1 to 7 scale into 7 to 1 (1= very much to 7 = not at all).

Rather than adding theoretical novelty, our approach adds value from a practical, managerial perspective.

Meant to easily work as a common denominator between theory and practice, our instrument provides a friendly interface for disseminating research findings into the business practice, offering a valuable help to those managers that strive for likelihood that online users will behave desirably towards their brands.

Not at least, reporting research results on this type of WOM scale, researchers would enable managers to get new meanings from their online WOM metrics, such as consumers underlying behavior or some hidden effects of the applied strategies.

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## REFERENCES

1. Andrei A., Iosub D., Iacob A. (2010). Motivations for Using Social Networking Sites: The Case of Romania, Revista Economică, 5(52):17-22.
2. Assael, H. (1995). Consumer behavior and marketing action. Ohio: Southwestern College Publishing.
3. Babin, B., Lee, Y., Kim, E., Griffin, M. (2005). Modeling consumer satisfaction and word-of-mouth: restaurant patronage in Korea, Journal of Services Marketing, 19/3: 133-139.
4. Black D.S.S., Mitra K., Webster C. (1998). Word-of-Mouth communications: A motivational analysis. Advances in Consumer Research, 25: 527–531.
5. Bloomberg, 2010 - Bloomberg T. (2010), Social Media Marketing GPS – Interviews with 40 marketing Leaders. eBook, Licensed under a Creative Commons Attribution Alike 3.0 United States License. http://www.box.net/shared/0n18eeycl4
6. Bone, P.F. (1992). Determinants of Word-of-Mouth communication during product consumption. Advances in Consumer Research, 19: 579–583.
7. Bone, P.F. (1995). Word of Mouth effects on short-term and long-term product judgments. Journal of Business Research, 32(3): 213–223.
8. Burzynski M.H., Bayer D.J.(1977). The effect of positive and negative prior information on motion picture appreciation. The Journal of Social Psychology, 101(1): 215–218.
9. Buttle, A.F. (1998). Word-of-mouth: Understanding and managing referral marketing. Journal of Strategic Marketing, 6: 241-254

10. Dann,S.(2009). Redefining social marketing with contemporary commercial marketing definitions. Journal of Business Research. http://www.sciencedirect.com
11. East R., Hammond K., Wright M. (2007). The relative incidence of positive and negative word of mouth: a multi-category study. Journal of Research in Marketing, 24: 175-184
12. Goossens N, (2008), I am WOM. Word-of-mouth: An Analysis of Personality Motivations. http://arno.unimaas.nl/show.cgi?fid=16092
13. Goyette I., Ricard L., Bergeron J., Marticotte F. (2010), Canadian Journal of Administrative Sciences, 27: 5–23
14. Hanjun, K. Chang-Hoan, C., & Roberts, M. (2005). Internet uses and gratifications: A structural equation model of interactive advertising. Journal of Advertising, 34(2): 57-70.
15. Harrison-Walker, L.J. (2001). The measurement of Word-of-Mouth communication and an investigation of service quality and customer commitment as potential antecedents. Journal of Service Research, 4(1): 60–75.
16. Herr, P.M.; Kardes, F.R.; Kim, J. (1991). Effects of word-of-mouth and product attribute information on persuasion: an accessibility-diagnosticity perspective. Journal of Consumer Research, 17: 454-462.
17. KPMG International (2009), Emerging Business Models to Help Serve Tomorrow's Digital Tribes. http://www.kpmg.com
18. Lam D. & Mizerski D. (2005). The effects of locus of control on word-of-mouth communication. Journal of Marketing Communications, 11 (3): 215-228
19. Mooradian, A. & Swan, K. (2006). Personality and culture: The case of national extraversion and word-of-mouth. Journal of Business Research, 59: 778-785
20. Pickton, D. & Broderick, A. (2005). Integrated Marketing Communications. Harlow: Pearson Education Limited.
21. Qualmann, E. (2009). Socialnomics. Wiley 2009.
22. Salzman M, Matathia I. and O'Reilly A. (2003). Buzz: Harness the Power of Influence and Create Demand, Wiley 2003.
23. Singh, J. (1990). Voice, exit, and negative Word-of-Mouth behaviors: An investigation across three service categories. Journal of the Academy of Marketing Science, 18(1):1–15.
24. Swan, J.E. & Oliver, R.L. (1989). Postpurchase communications by consumers. Journal of Retailing, 65(4), 516–533.
25. Universal McCann (2008), When did we start trusting strangers? www.universalmccann.com/global/knowledge/view?Id=34