Research on the Classification of Reviewers in Online Auction

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Abstract

Online reviews are more influential than expert reviews towards marketing communication. Starting from the network reputation, this article classified online reviewers through the study of consumer reviews motivation and dominant willingness. The research deemed that the online-reviewers should be classified into Dominant egoist, Dominant altruist, Robust egoist, Robust altruist, Accommodated egoist, Accommodated altruist, Avoidant egoist and Avoidant altruist, and these four types enrich online users' behavior characteristics theory. Different marketing strategies for various online users' motivation were also proposed, which may help the website operators to understand their users, to choose the communication channels of EWOM and design internet marketing strategy.

Keywords: Online reviews; customer word-of-mouth; Word-of-mouth motivation; Dominant willingness.

1. Introduction

HITWISE released that mobile phone buyers over the age of 18 in the United States were affected by the online media significantly. Based on it, IResearch found that nearly 61% of them were influenced by other users' evaluation and introduction; while about 30% consumers' purchase decisions were affected by the blogs. With the development of online review systems, word-of-mouth sites and virtual communities, online reviews are more influential than expert reviews and become an important foundation for consumers' purchase decisions. Jianyuan Yan researched the relationship between review content and its usefulness, which revealed that the deeper and more objective of the content review was, the higher of the usefulness would be [1].

In many document researches, most scholars had committed to the IWOM motivation research [2], review comment [1], and there were also a small amount of scholars researching online consumers' classification criteria [3], while few researches on the classification of online reviewers. With the basis and proceeding from the perspective of the online reviews, this article analyzes online reviewers' behavior motivation and discussed their motivation and behavior rules to understand the characteristics of user behavior, and provided reference for website operators to market strategically.

2. Comments research

2.1. Word of mouth and online reviews

The traditional word-of-mouth is mainly among non-commercial individuals who communicate the products or the companies. It is of great influence and often occurs in strong ties such as the crowd of relatives and friends. The traditional word-of-mouth has been playing an important role in consumption, and has influenced the consumers' purchase decisions [4], as well as views of the post-purchase product [5]. In the United States, more than 90% of the respondents claimed that they based on recommendations of friends before deciding to purchase a product or service [6].

Along with the development of communication technology and modern network, the concept of electronic word-of-mouth, which assaulted and improved the traditional word-of-mouth concept, has been proposed. Consumers' communication relating to information on the Internet is called "Internet consumers Exchange" [7]. Through a variety of network channels (such as forums, blogs, etc.) consumers and other Internet users share information about the product or service. This form of information is known as "electronic reputation", which is EWOM (Electronic Word-Of-Mouth) [8]. EWOM can overcome the limitations of the traditional reputation [9]. And there is an abundance of online consumers' reviews than traditional reviews in the offline world [10]. Whether "Internet consumers" communication or electronic word-of-mouth, both of which can be seen as different periods of network development form.

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The paper argues that the electronic word-of-mouth is positive or negative assessments which are published on the web and disseminated to others about products, services, or the company. It is online reviews essentially. Similar to the traditional WOM, online consumer reviews serve as a recommendation of the relevant products or sellers [11].

2.2. Source of online reviews

With the proliferation of e-commerce and the increasing numbers of product reviews, consumers are more and more relying on them for target search. Being compared with traditional WOM, online reviews are presented in the form of text, so information and expressions are becoming richer and more diverse. In the process of online reviews, positive WOM will deliver the pleasure and satisfaction of consumers experience and negative WOM can allow consumers to vent chagrin, resentment and anger. Comments propagation of results and potential decision-making will be affected by emotional attitude and way of expression.

Online consumers are the important information source of online reviews as well as important assessors [12]. The online-reviewers are disseminators of reputation, which can be roughly divided into three categories, which are marketers, individuals with direct experience and individuals with indirect experience [13]. WOM becomes another fast and convenient channel for marketers to promote their products.

2.3. Opinion Leaders

Opinion leaders are one of the important factors of online reviews WOM. "Opinion leaders" can largely promote the speed and range of information dissemination. What's more, the information is more likely to trust and have greater influence [14].

The research of opinion leaders was originated from a decision-making mechanism of the referendum made by Lazarsfeld in 1948. The study proposed the "two-level mobile communication theory", which thought the mass media did not "flow" to the general audience directly, but was through the middle part of the opinion leaders, the mode is mass communication----opinion Leaders----general audience [15].Although scholars have different definitions over opinion leaders, they basically thought that opinion leaders are the "activists" who often provide information, opinions, and comments for others and influence others.

Many papers pointed out that the opinion leaders have fields [16] and have some common characteristics, such as a wide range of social and information channels,

compassion and responsibility [17]. Yung-Ming Li established a review mining model to evaluate the influence of online-reviewers, and used this model to find the opinion leaders for carrying out the network marketing [18]. Feng Li etc. retrieved to the author and the reader, then analyzed the relationship between them through the blogs content, and identified opinion leaders in order to implement an effective marketing strategy [19].Obviously, opinion leaders have a large influence in the promotion of information [14], and play important roles in WOM and marketing [19].

3. Classification of online-reviewers

3.1. Classification of online-reviewers based on the motivations

In the process of information communication, the disseminators share valuable information and establish a mutually beneficial relationship with the recipient, prompting the receiver to feedback out of responsibility, which leads to consumer information transmission behaviors[20].Most scholars have researched traditional WOM in term of motivation in previous researches. Thurau etc. (2004) proposed that the classification is also applicable to electronic WOM motivation behavior [21].This paper discusses and summarize the online reviews motivation, shown in Table 1.

Table 1.Motivation research on word-of mouth behavior

Scholar	WOM motivation
Dichter E. (1966)	Product/ Self / Other / Massage Involvement
Sundaram, Mitra, Webster (1998)	Altruism , Product involvement , Self-enhancement, Helping the company,
Gianfranco (2004)	Happy, Help, Responsibility
Hennig-Thurau (2004)	Caring for others, Social interaction needs, Economic incentives, Expression of positive emotions
Peddibhotla , Subramani (2007)	Self-directed, Other-directed
Y. Tong, X. Wang, H.H. Teo (2007)	Information feedback, Help others
Jason Y. C. Ho,	Express individuality, Altruism

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Melanie Dempsey (2010)		
Jun Yan, Yinbo Jiang, Yaping Jiang (2011)		Emotional share, Support / punish businesses, Community flourished, Improve service, Rewarded, Enhance image
Christy M. K. Cheung (2012)		Enhance reputation, Sense of belonging, Help others

According to the documents, most scholars studied in term of review motivation, but they did not classify them. In the process of behavior, motivation dominates the direction and intension of the behavior. Jun Yan, Yinbo Jiang and others divided motivation into 9 species, which could be classified as egoistic and altruistic categories [22]. Christy etc. extracted several main motivations from the view of social psychology, and proved that reputation, helping others and sense of belonging significantly related to EWOM motivation [2]. Improving the reputation, sharing information to help others and enjoying the process is a commitment, responsibility or a sense of belonging to them, and these all affect consumers EWOM willingness. Based on aforementioned discussion, this paper divides online reviews motivation into two types of egoism and altruism.

Table2. Reputation of behavior motive

Scholar	egoistic type	Altruistic type
Engel, Blackweli, Miniard (1966)	Self Involvement	Product-Involvement Other-Involvement Massage-Involvement
Sundaram Mitra, Webster (1998)	Self-enhancement, Vengeance	Altruism, Product involvement, Helping the company
Gianfranco (2004)	Happy	Help, Responsibility
Hennig-Thurau (2004)	Social interaction needs, Economic incentives, Expression of positive emotions	Caring for others
Peddibhot, Subramani (2007)	Self-directed	Other-directed
Y.Tong, X. Wang, H.H. Teo	-----	Information feedback, Help others

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Jason Y. C. Ho,Melanie Dempsey (2010)	Express individuality	Altruism
Jun Yan, Yinbo Jiang, Yaping Jiang (2011)	Emotional share, Rewarded, Enhance image	Support/punish businesses, Community flourished, Improve service
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3.1.1. Egoistic type

A motive is considered egoistic if the ultimate goal is to increase the actor's own welfare [23]. Individuals are deemed as egoistic when they aim at tangible or intangible returns after sharing information with others. Being rational, people try to look for returns (e.g. pay, prizes, reputation, and recognition) by maximizing their benefits and minimizing their cost during information exchange process with others [24]. This perspective has been widely adopted in many EWOM communication publications [21, 25]. People share and contribute their knowledge because they want to gain an informal recognition and establish themselves as experts [26]. The typical one is opinion leaders.

For U.S. consumers, encouraging usage of online reviews and providing an Internet shopping site with an online review component may be an effective way to maximize the effect of online reviews [27]. Online reviews can be used as an indirect network marketing communication tool that plays a recommended role in the relevant product or seller[11], so businesses will take measures to incentive online shoppers to add some positive WOM comments, from which online shoppers could get benefits, such as discounts, reward, and better service [21].Consumers will cover up the product defect, and give a positive evaluation for immediate benefits, even if the product does not reach a satisfactory level. This type of online reviewers is egoistic. In addition, as it is mentioned above, enhancing self-image [22], improving reputation, expression of personality [28], the demand for social interaction [21], or willingness to express their pleasant consumer experience [19], all of which are egoistic factors for consumers to make online reviews , no matter the factor is active or passive.

3.1.2. Altruistic type

Altruism is motivation with the ultimate goal of increasing the welfare of one or more individuals other than oneself [23]. Individuals acting on altruistic goals are willing to volunteer themselves to contribute their knowledge to online consumer reviews without expecting direct rewards in return. For example, consumers may share purchasing experience just because others have a need for it [29]. The online reviewers committing evaluation is considered to be an online knowledge sharing behavior in the reputation system [30].Reviewers provide advice to others in online communities, blogs or forums[31], which aim at helping others make the right purchase decision or preventing them encountering a similar situation from their experience of failure [32].This type of online-reviewers' motivation is out of concern for others, or supporting a positive or negative opposition which is to vent their dissatisfaction with the product or service and publicizing negative WOM [31].

3.2. Classification of online -reviewers based on the dominant intention

Domination refers to the process and behavior which disposable subjects influenced on objectives in accordance with the given conditions and objectives. Domination wishes mean that direct others to commit adhering to their own thing. Different personalities have different domination willingness. Therefore, domination willingness is divided into 4 levels: the dominant type is someone who has a strong desire; robust type is someone who has the domination wishes, but lacks mobility; accommodated type is someone who has the lower domination willingness; and the avoidant type is someone who has little control willingness.

Table3. Domination willingness and behavioural characteristics

Domination willingness	Behavior characteristics
Dominant Type	Unique; Interested in the success and achievement; Desire for influence and gain respect;
Robust Type	Calm ; good at thinking and analysis; judgment; possessed of definite views
Accommo-dated Type	Friendly; focus so much on the ideas of others and enjoy being with others
Avoidant Type	Do not take the initiative to share information; poor expression; evasive when cope with stress

4. Classification of online reviews based on consumer motivation and domination willingness

The same behavior may have different motivations, in other words, a variety of motives can be manifested by the same kind of behavior; different behaviors can also be motivated by the same or similar motives. The motivations varied in the same individual, some motives were in dominating position, and some were in subordinate position. As the discussion shown above, online-reviewers have two dominant motivations--- egoistic and altruistic motivations. The article discusses the cross-effect between consumer reviews motivation and domination willingness, and classified online -reviewers into dominant egoist, dominant altruist, robust egoist, robust altruist, accommodated egoist, accommodated altruist, avoidant egoist and avoidant altruist. As shown in   Figure1.
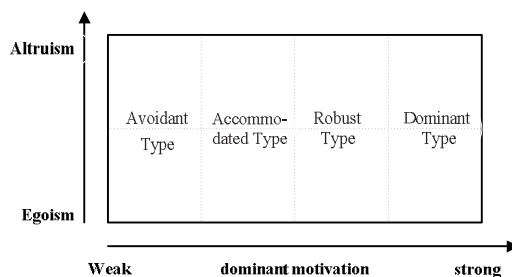
Fig1. Motivation behaviour pattern

4.1. Dominant egoist and dominant altruist

Dominant individuals do not want to be ordered or restricted. They will use all appropriate means to be in dominant position, such as argument, rank which is a location of power. The dominant egoists are interested in success and achievement; they hope to get others' recognition and respect, and take the initiative to fight to earn a reputation, or enhance the image. The dominant altruist will criticize discontent, when they will persuade and dominate others to comply with their comments and suggestions. Opinion leaders are the typical representatives, who always get more mass media information than other groups, have thorough understanding and comprehensive evaluation, and can make a secondary diffusion of information.

4.2. Robust egoist and robust altruist

Robust individuals are calm, like thinking, and have the judgment and strong-minded. They often observe first when they face things around, and would like to find out the context of the matter, then involve in. They would like to use their own judgment to distinguish right from wrong, and comment with concern over justice and fairness.

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When they encounter negative information, they will be opposed resolutely, and will not to take the initiative to change other people's views and opinions. Egoistic and altruistic motivation of robust individual is not obvious enough. A robust individual's behavior will turn into dominant type or the other, showing the egoistic or altruistic motives under certain conditions.

4.3. Accommodated egoist and accommodated altruist

Accommodated individuals are friendly, paying much more attention on others, and enjoy being with others, and they are generous or have benevolent gesture. They will ignore their own interests to meet the concern of others; they still can obey the commands of others, or succumb to the other people's point of view in order to find a part to meet both favorable and acceptable ways even if they are not reluctant.

For instance, in the evaluation of the online shopping, the sellers often kept contacting the buyers who did not give decent comments, the buyers felt so boring that they modify the bad into praise comment [33]. Reviewers of the characteristics belong to the accommodated egoistic type; they are more cautious and will conform to the interests of others in order to avoid trouble. In addition, the main content of Chinese traditional culture includes the fate, moderation and humility. In such a cultural context, consumers believe that fate and tend to be outer control, which makes accommodated altruist attribute the failure to uncontrollable factors such as environment, luck. If accommodated altruists get a service failure or defects of the commodity, they adhere to the idea of a forward-looking, and give their buying advice to support corporate businesses, expecting products and services would be improved [21], or through their own positive publicity to help companies increase sales [32] expecting to do a little to help correct it and are willing to maintain long-term contact [34].

4.4. Avoidant egoist and avoidant altruist

Avoidant individuals are silent, not good at expression and have a strong self-protection consciousness. When facing the pressure, they will avoid argument and be evasive. Reviewers of this type only browse the information, and less share information and with more features of the egoistic in order to protect their own interests. When not infringed, they remain silent. If the messages are negative, avoidant individuals do not do negative WOM publicity, which is negative altruism.

4.5. Marketing Implications

Online reviews can help consumers to make the purchase decision [35] and represent the market performance of the product, and are often used as indicators of product awareness [36]，which are playing an increasingly powerful influence on consumer decision-making [37]. Because of this, the research of psychological behavior is particularly important in the comment process. Different types of online shoppers have different dominant wishes and comments motivations, website operators only

according to the different types of people to carry out network marketing to make the marketing effectiveness maximization.

Because the WOM behavior affected by emotion sharing and self-improvement, website operators should provide some special services to meet the needs of reviewers who are egoists with dominant behavior (such as opinion leaders) or altruistic person. Specific measures may include: open related product forum and discussion group on the platform，which not only meet consumers' desire to express their views and share information but also make the enterprise understand consumer issues and give timely resolution.

Individuals of robust behavioral characteristics possess definite views but lack of mobility. In this regard, the network operators should improve information sharing mode at community platform, creating a good atmosphere for the community and establishing an incentive mechanism so that individuals can participate in.

In order to help others, reward / punish businesses, accommodated individuals will tolerate others sometimes expecting the operators improvement, but it will easily lead to the occurrence of negative WOM and the actual loss of consumers in the long run. Therefore, website operators should remedy the failed transaction actively, reshape consumer satisfaction, and increase customer loyalty.

For avoiding troubles and pressure, avoidant individuals with characteristics of motivation less share information or experience who belong to the potential of online-reviewers. This type of online consumers is a waste of resources. In this regard, website operators should create a community platform of communication atmosphere, such as the establishment of independent club on the Internet and channels of communication. In the club, players can design their own interesting topics that can attract and encourage such consumer reviewers.

5. Conclusion

How to manage consumers' WOM and carry out WOM marketing has become a problem that can not be ignored. Online reviews provide a powerful inexpensive and influential channel and publicity tool for marketing communications. Marketers will take the opportunity to use online reviews for the publicity and promotion of product or service. As a source of information and WOM publicity for online reviews, consumers play a crucial role in the decision-making of the potential shoppers.

Starting from the network reputation and discussing consumer reviews motivation with domination willingness, the article deems that the online-reviewers should be classified into Dominant egoist, Dominant altruist, Robust egoist, Robust altruist, Accommodated egoist, Accommodated altruist, Avoidant egoist and Avoidant altruist. And the article puts forward different marketing strategies for different motivated behaviors of online-reviewers, which may be helpful for web site operators to understand WOM motivation that consumer participated in and know how to choose WOM communication channels and design marketing strategies.

References

[1] Yan Jianyuan, Zhang Li, Zhang Lei, An Empirical Study of the Impact of Review Content on Online Reviews Helpfulness in E-commerce, Information Science, vol. 30, no. 5, pp. 713-716, 2012.

[2] Christy M. K. Cheung, Matthew K. O. Lee. What Drives Consumers to Spread Electronic Word of Mouth in Online Consumer-Opinion Platforms, Decision Support Systems, vol. 53, no.1, pp. 218-225, 2012.

[3] Wang Haiping, Research Review of Online Consumers Typology, East China Economic Management, vol. 25, no. 3, pp. 147-150, 2011.

[4] Engel, J. F., Blackwell, R. D. and Kegerreis, R. J. How information is used to adopt an innovation, Journal of Advertising Research, vol. 9, no. 4, pp. 3-8, 1969.

[5] Bone, P. F. Word-of-mouth effects on short-term and long-term product judgments, Journal of Business Research, vol. 32, no.3, pp. 213-223, 1995.

[6] AC Nielson. Trust in Advertising: A Global Nielsen Consumer Report, Nielsen Media Research, New York 2007.

[7] Stauss ,B. Using new media for customer interaction: A challenge for relations hip marketing [M].In T.Henning - Thurau& U.Hansen (Eds.)，Relationship Marketing，Berlin: Springer, pp.233- 253,2000.

[8] Hanson，W.A. Principles of Internet Marketing. South-western College Publishing，Cincinnati, pp.211-215, 2000.

[9] D. Godes, and D. Mayzlin, Using Online Conversations to Study Word of Mouth Communication, Marketing Science, vol.23, no. 4, pp. 545–560, 2004.

[10] Jumin Lee , Do-Hyung Park , Ingoo Han ,The effect of negative online consumer reviews on product attitude: An information processing view, Electronic Commerce Research and Applications , vol.7, pp. 341–352, 2008.

[11] Y. Yubo Chen ，Jinhong Xie , Online consumer review: a new element of marketing communications mix, Working Paper Management Science, vol. 54, no. 3, pp. 477-491, 2008.

[12] Jinhyung Cho ,Kwiseok Kwon ,Yongtae Park.Q-rater: A collaborative reputation system based on source credibility theory. Expert Systems with Applications, vol.36, pp.3751–3760, 2009.

[13] Wang Rong-lin, Wang Yu-qi, Study on the dissemination mechanism of internet consumer's mouth word, Science-technology and management, vol. 12, no. 6, pp. 108-111, 2012.

[14] Luo Xiaoguang, Xi Lulu, On the Opinion Leader of Customer Word-of-Mouth Communication Network Based on the Social Network Analysis Approach, Management Review, vol. 24, no. 1, pp. 75-81, 2012.

[15] Lazarsfield P., Berelson B., Gaudet, H. The People's Choice, Columbia University Press, New York, 1948.

[16] Hellevik O., Bjorklund T. Opinion Leadership and Political Extremism, International Journal of Public Opinion Research, vol. 3, no. 2, pp. 157-181, 1991.

[17] Beth Harben, Soyoung Kim. Attitude Towards Fashion Advertisements with Political Content: Impacts of Opinion Leadership and Perception of Advertisement Message, International Journal of Consumer Studies, vol. 32, no. 1, pp. 88-98, 2008.

[18] Yung-Ming Li，Chia-Hao Lin, Cheng-Yang Lai. Identifying Influential Reviewers for Word-of-Mouth Marketing, Electronic Commerce Research and Applications,vol.9, no.4, pp. 294-304, 2010.

[19] Feng Li,Timon C. Du. Who is Talking? An Ontology-Based Opinion Leader Identification Framework for Word-of-Mouth Marketing in Online Social Blogs, Decision Support Systems, vol. 51, no. 1, pp. 190-197, 2011.

[20] H. Elizabeth, Melanie Wall endorf. Motives Underlying Marketing Information Acquisition and Knowledge Transfer, Advertising, vol. 11, no. 3, pp. 25-31, 1982.

[21] Hennig-Thurau T, Gwinner K.P., Walsh G., Gremler D. Electronic Word-of-Mouth via Consumer-Opinion Platforms: What Motivates Consumers to Articulate Themselves on the Internet? Interactive Marketing, vol. 18, no. 1, pp. 38-52, 2004.

[22] Yan Jun, Jiang Yinbo, Chang Yaping, Relationship between Motives and Behavior of eWord-of-Mouth, Management Review,vol.23, no.12, pp.84-89, 2011.

[23] C.D. Batson, Why act for the public goods? Four answers, Personality and Social Psychology .Society and Natural Resources. vol.20, no.5, pp. 603–6101, 1994.

[24] K.R. Lakhani, E. Von Hipper, How open source software works:'free'user-to-user assistance. Research Policy, vol. 32, no. 6, pp.923-942, 2003.

[25] Y. Tong, X. Wang, H.H. Teo. Understanding the intention of information contribution to online feedback systems from social exchange and motivation crowding perspectives , Proceedings of Hawaii International Conference on System Sciences, Hilton Waikoloa Village, Big Island, 2007.

[26] M.M. Wasko, S. Faraj, Why should I share? Examining social capital and knowledge contribution in electronic networks of practice? MIS Quarterly, vol. 29, no. 1, pp.35–57, 2005.

[27] Cheol Park ,Thae Min Lee .Antecedents of Online Reviews ' Usage and Purchase Influence: An Empirical Comparison of US .Journal of Interactive Marketing, vol. 23, no. 4, pp. 332–340, 2009.

[28] Jason Y. C. Ho,Melanie Dempsey. Viral Marketing: Motivations to Forward Online Content. Journal of Business Research，vol.63, no.9, pp.1000-1006, 2010.

[29] Peter Kollock, Marc Smith. The economies of online cooperation: gifts, and public goods in cyberspace, Communities in Cyberspace. Routledge, New York, pp. 220–239,1999.

[30] Dellarocas，C. The digitization of word of mouth：Promise and challenges of online feedback mechanisms, Management Science, vol. 49, no. 30, pp. 1407-1424, 2003.

[31] Inge M. etc. Never Eat in that Restaurant, I did! : Exploring Why People Engage in Negative Word-of-Mouth Communication. Psychology and Marketing, vol. 24, no. 8, pp. 661-680, 2007.

[32] Sundaram，DS. ，Mitra,K. ，&Webster,C. ” Word-of-mouth communications: A motivational analysis” ，advances in Consumer Research, vol.25, pp. 527-53, 1998.

[33]Hu Zunrang, Yuan Miao, Wang Zhiyi, The unreasonable Talking of C2C e-commerce credit evaluation system, e-business journal, vol. 7 , pp. 29-33, 2010.

[34]Matos，C．A．d．, Rossi，C．A．v．"Word-of-mouth communications in marketing：a meta-analytic review of the antecedents and moderators"，Academy of Marketing Science,vol.36, pp. 578-596, 2008.

[35] Sajjad Nazir, Arsalan Tayyab, Aziz Sajid, Haroon ur Rashid , Irum Javed, "How Online Shopping Is Affecting Consumers Buying Behavior in Pakistan?" International Journal of Computer Science Issues, Vol. 9, No. 1, pp: 1694-0814, 2012

[36] Chevalier, J. A., & Mayzlin, D., The effect of word of mouth on sales: Online book reviews. Journal of Marketing Research, vol. 43, no. 3, pp. 345-354, 2006.

[37] Gerzema, J., & D' Antonio, M. Spend shift: How the postcrisis values revolution is changing the way we buy, sell and live, San Francisco: Jossey-Bass, pp. 126-128, 2011.

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