Towards Fluent Decision Making Experience by Adopting Information Curation Functions

Research-in-Progress

Wenjie Fan   **Yanqing Lin**

Yong Liu   **Hongxiu Li**

Virpi Kristiina Tuunainen

Abstract

Information curation function (ICF) is a function that online review platforms implement to facilitate users' review reading process given a sheer volume of reviews pertaining to a brand. Based on both fluency and information overload theories, this research attempts to unravel the role of ICF in alleviating information overload and facilitating consumers' decision making process. Specifically, this study strives to quantify the impact of ICF use on users' brand selection and satisfaction with selection through an integrated model that explores the effect of both external environmental cues and internal metacognitive cues. The study is expected to not only inform practitioners the usefulness of ICF, but also inspire them to seek solutions to optimize consumers' decision making.

Keywords: Fluency theory, information overload, online customer review, information curation, decision making

Introduction

Consumers today are increasingly utilizing online customer reviews (OCRs), as a new form of word-of-mouth (WOM), to reduce purchase uncertainties and justify their online purchase decisions (Baek et al. 2012; Dellarocas 2003). More than 68 percent of consumers consult OCRs posted by other peer customers before making purchase online (Hinckley 2015). Meantime, ample studies have corroborated a significant influence of OCRs on consumer choices (Chevalier and Mayzlin 2006; Dellarocas et al. 2007; Ye et al. 2009). Comprehending OCRs from those who have purchased and experienced a service exerts particular strong influences for experience goods, because their quality can only be known upon consumption (Ye et al. 2011).

Despite various merits of using online reviews, a huge amount of OCRs may cause the problem of information overload (Baek et al. 2012; Yin et al. 2014), thus making it difficult for consumers to identify the most relevant OCRs. This is fueling a demand for new means to organize OCRs so that consumers can easily find the most relevant review pertaining to their needs. In this vain, information curation adds value by selecting and refining data, which has been extensively discussed in the fields of communication, news and advertisement (Dale 2014; Pentina and Tarafdar 2014). Major OCR platforms like TripAdvisor and Yelp have begun to implement *information curation functions (ICFs)* by mining their repositories of enormous OCRs. Specifically, TripAdvisor curates OCRs via generating representative topics that are frequently mentioned by reviewers and the function allows potential consumers to select relevant reviews in the generated representative topics. Yet, whether and how the adoption of this ICF alleviates information overload to facilitate consumers' decision making remain understudied in prior research.

ICFs usage may affect consumers' decision making via altering the level of fluency in the process. Specifically, fluency describes a subjective perception of ease or difficulty with information processing (Oppenheimer 2008). Past studies revealed that people have access to not only external cues about the environment, but also internal metacognitive cues about their own mental processes while comprehending information and making judgments (Oppenheimer 2008). As one of the most influential internal cues engaged in reasoning, fluency has been extensively investigated in the psychology literature. Particularly, past studies have demonstrated the impact of fluency on consumers' purchase decisions and choice satisfaction (Iyengar and Lepper 2000; Jarvenpaa and Todd 1996; Mosteller et al. 2014; Szymanski and Hise 2000). In this vein, extant information systems (IS) design research mainly focus on the external cues, but pays little attention to the internal metacognitive cues like fluency.

In light of this research gap, our work draws on both the theory of information overload and the fluency theory to explore how ICFs usage would alter both external environmental cues and internal metacognitive cues, and their subsequent impacts on consumers' decision making. To this end, this study aims to add to a growing body of IS research on IT adoption and OCRs in two folds by: 1) eliciting the effectiveness of ICF adoption in facilitating consumers' decision making process on OCR platforms; and 2) exploring the mechanism that ICFs affect consumers' decision making experience, especially their choice confidence and choice satisfaction.

Theoretical Background and Literature Review

Theory of Information Overload

Consumers are now living among unprecedented abundance. In the literature of information systems and decision science, human beings have been widely regarded as information processing systems with limited processing capacity (Chen et al. 2009). People will have to make more effort to process information if the input on information increases. Information overload appears when the available amount of information makes it confusing and dysfunctional, given the time constraint and processing capability involved in decision making processes (Jacoby 1977). Once the given information load surpasses the processing capacity, the decision maker would be overloaded by the operation of information processing, affecting choice quality or even resulting in choice deferral (Pilli and Mazzon 2016).

Nonetheless, information overload can be mitigated. Jackson and Farzaneh (2012) built a theory-based model to understand the cause of information overload, and explicated an important role of information relevance in both improving information quality and reducing information overload. In this vein, information overload is a real phenomenon disorienting people, which can possibly be cured via information curation (Dale 2014). In other words, ICFs may exhibit a useful instrument to alleviate the possible information overload problems driving from a rich availability of peer reviews.

Fluency Theory

Fluency refers to "the subjective experience of ease or difficulty associated with completing a mental task" (Oppenheimer 2008, p. 237). A multitude of studies, in both offline and online contexts, have

demonstrated fluency as a prominent element affecting a wide array of reasoning processes. Fluency was found to play important roles in consumer decision making in an offline environment, such as brand image evaluation (Labroo and Lee 2006), assessment of truth (Reber and Schwarz 1999) and affective judgements (Reber et al. 1998). A significant body of e-commerce literature also demonstrated the importance of shopping process fluency in shaping consumers' behavioral intention, attitude and satisfaction (Iyengar and Lepper 2000; Jarvenpaa and Todd 1996; Mosteller et al. 2014; Szymanski and Hise 2000).

Specifically, Jarvenpaa and Todd (1996) articulated that online shopping experience is a salient factor shaping customers' attitude and affecting their purchasing behaviors, and suggested to enhance the design of e-commerce sites for reduced time and effort associated with online shopping. Iyengar and Lepper (2000) manipulated decision fluency by varying choice set size, and reported that consumers experienced difficulties when the choice set increased to a disfluent size. The findings by Szymanski and Hise (2000) explicated that consumers' perception of online shopping convenience and site design are two dominant determinants of consumer satisfaction with online retailing. In addition, a recent work by Mosteller et al. (2014) observed that perceptual fluency positively influences consumers' judgments about choice satisfaction, which is mediated by both cognitive effort and positive affect experienced during online shopping process. Evidently, the availability of an overwhelming volume of OCRs to consumers can inevitably lead to perceptions of disfluency among consumers. In this vein, we argue that, by mitigating information overload and enabling a more fluent decision making process, consumers' decision quality can be improved.

OCRs, ICFs and Decision Making

Recent years have witnessed a rapid growth in the use of OCRs as a key reference for consumers' purchasing decision support. For instance, a recent survey has indicated that a majority of consumers refer to OCRs to evaluate the quality of a local brand, and they trust OCRs as much as personal recommendations (Anderson 2014). Past studies have also confirmed consumers' reliance on OCRs to make purchase online by recognizing a positive relationship between OCRs and business performance (Chevalier and Mayzlin 2006; Dellarocas et al. 2007; Luca 2016; Shaw et al. 2011; Ye et al. 2009, 2011; Yu et al. 2012). The seminal paper of Chevalier and Mayzlin (2006), for example, revealed that both review volume and review rating positively affect online book sales. The study of Ye et al. (2011) discovered that review rating boosts online hotel booking. Likewise, an one-star increase in Yelp rating to a local business was reported to bring about five to nine percent revenue increase (Luca 2016).

Nonetheless, a sheer volume of OCRs is increasingly available, leading to information overload and thereby hindering consumers from optimal decision making. For instance, one may see hundreds of reviews toward a business such as a hotel. Recent studies highlighted a need of using technological and social approaches towards easing of information overload (Koltay 2017; Pentina and Tarafdar 2014). In this vein, Landhuis (2016) suggested researchers to club together and create their own curation systems to stay on top of the deluged information. In the meantime, Dale (2014) advocated information curation as a cure for information overload. Subsequently, with the emergence of big data curation (Miller 2014), OCR platforms strive to facilitate consumer decision making by integrating and presenting OCRs in a value-added fashion. ICFs usage offers a potentially useful instrument to alleviate information overload problem by facilitating a better review reading experience and optimal decisional outcomes.

Research Model and Hypotheses Development

This research aims to generate novel insights in online decision making by investigating the effect of ICF usage on consumers' decision making. Specifically, we investigate the influence of ICF usage on both information overload and perceived fluency, which in turn, affect consumers' choice confidence and satisfaction. Furthermore, we explore the underlying mediating mechanism by introducing positive affect and cognitive effort that mediate the impacts of fluency on consumers' choice confidence and satisfaction (Mosteller et al. 2014). The information overload and fluency theories are employed as the

basic theoretical framework to develop our conceptual model. The proposed research model is depicted in Figure 1.
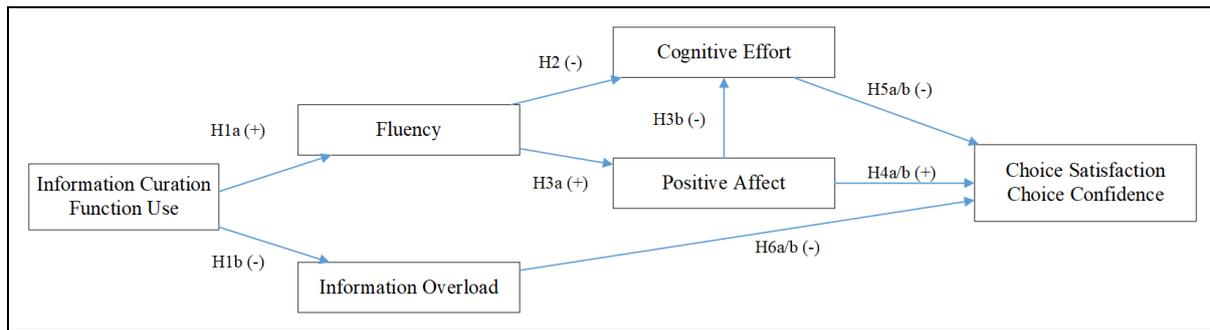
Figure 1. Research Model

A screenshot of ICF from TripAdvisor is offered at Figure 2. Obviously, TripAdvisor employs ICFs to summarize the contents of OCRs, displays the frequently mentioned topics and links these topics to the relevant reviews, such as "central location", "nice breakfast", "rude staff" and so forth.
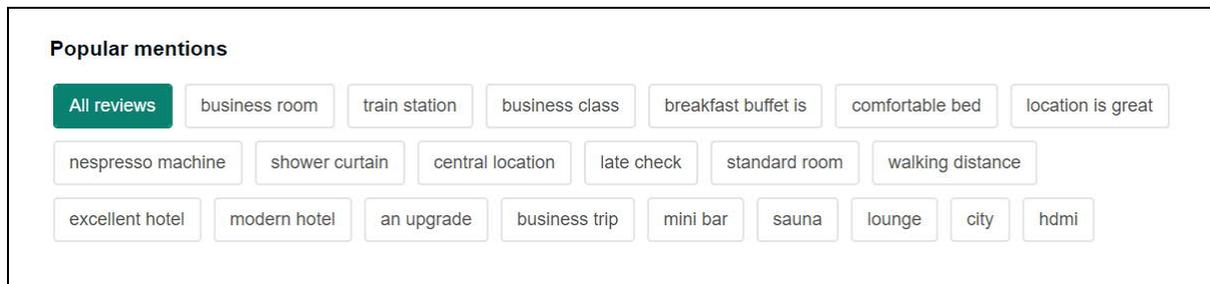
Figure 2. A Screenshot of ICF

Information Curation Function

Past studies articulated that relevance of a review contributes to an important dimension for consumers to evaluate the helpfulness of a review (Park et al. 2007). Jackson and Farzaneh (2012) explicated that information relevance is an important factor affecting perceived information quality and perceived information overload. As noted above, ICFs were developed to categorize information so that relevant content can be easily identified and accessed by users. Through ICFs, review readers can quickly recognize the most mentioned topics and selectively read the ones relevant to their needs. Thus, we argue that ICFs can alleviate consumers' perception on information overload by enabling them to access OCRs most relevant to their needs, and a better information accessibility provided by ICFs will enable a more fluent decision making process. We therefore hypothesize that:

H1a. ICF usage positively affects consumers' perception of fluency.

H1b. ICF usage negatively affects perceived information overload.

Fluency, Cognitive Effort and Positive Affect

The process of comprehending information to support judgements associates with difference levels of fluency feelings. Fluency "can be generated by nearly any form of thinking" (Oppenheimer 2008, p. 237), representing a subjective feeling of ease appertaining to a cognitive operation but not the cognitive operation itself. Specifically for the current study, fluency, as an internal metacognitive cue, can be conceptualized as the perceived ease to access relevant OCRs. In order to explore the mediating mechanism underlies this phenomenon, positive affect and cognitive effort are introduced, which mediate the effect of fluency on consumers' choice confidence and satisfaction (Mosteller et al. 2014). In line with Shugan's (1980) conceptualization of "thinking costs", cognitive effort refers to the

perceived amount of effort that is required to accomplish an online hotel booking task. Positive affect refers to the extent a consumer perceives the online hotel booking experience to be enjoyable and pleasant (Mosteller et al. 2014).

We posited that a fluent review reading process will associate with a low cognitive effort in processing OCR to support decision making. Mosteller et al. (2014) alleged that people would perceive a low cognitive effort when the overall visual properties of the presented information is perceived to be fluent. In this vein, if consumers consider it easy to access the relevant information to support their decision making, the perceived fluency is likely to reduce decision makers' efforts expended in evaluating a brand of interest. Therefore, a negative association between fluency and cognitive effort to process the OCRs is proposed:

H2. *Consumers' perception of fluency negatively affects cognitive effort associated with accomplishing the online hotel selection task.*

A multitude of past studies explicated that fluency can generate positive affect, such as pleasantness and enjoyment, which in turn, increases product evaluation (Bornstein 1989; Janiszewski 1993; Labroo and Pocheptsova 2016; Landwehr et al. 2011; Zajonc 1968). The review by Bornstein (1989) affirmed that positive affect can be evoked by various kinds of stimuli, including photographs, audios, objects, nonsense words and syllables, meaningful words, product logos, brand names, and so forth. Fluency amplifies the liking of a stimulus by activating brain regions involved in pleasantness (Winkielman and Cacioppo 2001). Specifically, a fluent comprehension of OCRs results in an experience of ease of processing information, which might lead to a positive affective response to a pertinent service or product (Winkielman and Cacioppo 2001). The positive affect that consumers experience during decision making process may evoke favorable cognitive assessments, alleviating the perceived effort required to accomplish the online hotel booking task. Thus, we propose that:

H3a. *Consumers' perception of fluency positively affects positive affect associated with accomplishing the online hotel selection task.*

H3b. *Positive affect negatively affects cognitive effort associated with accomplishing the online hotel selection task.*

Choice Confidence and Choice Satisfaction

The experience of positive affect is likely to trigger positive evaluations on decision confidence and satisfaction. For instance, Manes (1997) reports that a good website design, good organization of information, easy search functionalities and fast presentations can improve user satisfaction. Furthermore, fluency can evoke positive responses, such as creating engagement and increasing willingness to pay for the services or products (Lee and Aaker 2004). Fluency can also increase evaluations of truthfulness, linking and confidence via inducing positive affective responses appertaining to pleasure and enjoyment (Alter and Oppenheimer 2009). An unpleasant and effortful decision making experience leads to less confidence in making optimal choices for consumers. Moreover, experiencing difficulties in decision making process may lead to choice avoidance among users. For instance, Novemsky et al. (2007) accentuated that high cognitive effort perceived by consumers tends to result in choice deferral. Iyengar and Lepper (2000) alleged that consumers experience difficulties when the choice set increased to a disfluent size while the increased cognitive effort impedes them from make decisions. The above argument collectively suggests that high perceived pleasantness and low perceived effort in the online decision making process jointly affect consumers' confidence and satisfaction toward their choices. Thus, we hypothesize that:

H4a. *Positive affect positively affects consumers' choice satisfaction.*

H4b. *Positive affect positively affects consumers' choice confidence.*

H5a. *Cognitive effort negatively affects consumers' choice satisfaction.*

H5b. *Cognitive effort negatively affects consumers' choice confidence.*

Information Overload

Information overload takes place when the availability of too much information makes the decision making difficult (Chewning and Harrell 1990; Jacoby 1977). Research has shown that information overload leads to difficulties in information seeking, which results in uncertainty and lack of confidence (Chowdhury et al. 2011). Evidently, information overload is very likely to occur in brand selection when a huge amount of reviews on the brand is available (Iyengar and Lepper 2000). Past studies revealed that consumers reported being less confident of and less satisfied with their purchasing choices facing an extensive set of brand choices (Iyengar and Lepper 2000). Gao et al. (2012) found that, when choosing experience products online, consumers are especially more easily confused with a rich amount of information. Meanwhile, information overload is likely to cause consumers to overlook relevant information which may be useful in their decision making, resulting in suboptimal decisions (Gao et al. 2012). Furthermore, Bollen et al. (2010) attested that increased choice difficulties reduce choice satisfaction. Taken together, we posit that perceived information overload is negatively associated with consumers' judgments about choice satisfaction and choice confidence. We therefore hypothesis that:

H6a. *Perceived information overload negatively affects consumers' choice satisfaction.*

H6b. *Perceived information overload negatively affects consumers' choice confidence.*

Methodology

To empirically validate the hypotheses proposed, a scenario-based experiment, as well as pre- and post-experiment surveys are designed. The pre-experiment survey collects information about participants' demographics and experience pertaining to TripAdvisor and OCR usage. The experiment employs a principal-agent task design (Diehl 2005), which sets a scenario and asks participants to select a hotel for a vacation trip. Scenarios are widely used in design science research considering its advantage in both reducing difficulties associated with real life observations and reducing biases (Smith et al. 1999). In the experiment, a modified TripAdvisor website will be developed and used, in which the availability of ICFs can be manipulated. Participants will be randomly assigned to either the control group or the treatment group to complete a hotel selection task. A post-experiment survey follows upon the completion of the task. Based on previous research, questionnaires will be developed to measure participants' perceptions on information overload (Chen et al. 2009, p. 2490), positive affect and cognitive effort (Mosteller et al. 2014, p. 57). Measures for perceived fluency, which is derived from psychology literature (Alter and Oppenheimer 2009), will be adapted to our context of choosing a proper hotel brand. Finally, choice confidence and choice satisfaction will be measured based on the subjective ratings provided by participants.

The study will conduct a manipulation check through a use of Analysis of Variance (ANOVA) method. Particularly, this effort will ensure that the influence of ICF usage on choice confidence and choice satisfaction is solely caused by ICFs rather than other confounding factors, such as individual differences and so forth. Partial least squares structural equation modeling (PLS-SEM), a technique that has been widely adopted in IS studies, will be employed to estimate both the measurement and the structural models depicted in Figure 1.

Expected Contributions

This study is among the first to simultaneously explore how IS functions like ICFs affect perceived fluency and information overload, which in turn alter users' decision performance. We strive to contribute to both theory and practice. First, drawing on *fluency theory* (Oppenheimer 2008), the current study adapts the concepts of *fluency*, *positive effort* and *cognitive effort* to capture the subjective perception of ease or difficulty with OCR evaluation. Second, through the theoretical lens of *theory of information overload* (Jacoby 1977), this study attempts to unravel the role played by ICFs in alleviating information overload and facilitating consumers' decision making process. Practically, findings from this study could inform practitioners about the usefulness of ICFs and inspire them to optimize consumers' decision making process.

References

Alter, A. L., and Oppenheimer, D. M. 2009. "Uniting the Tribes of Fluency to Form a Metacognitive Nation," *Personality and Social Psychology Review*, (13:3), pp. 219–235.

Anderson, M. 2014. "88% Of Consumers Trust Online Reviews As Much As Personal Recommendations,"(available at http://searchengineland.com/88-consumers-trust-online-reviews-much-personal-recommendations-195803; retrieved April 27, 2017).

Baek, H., Ahn, J., and Choi, Y. 2012. "Helpfulness of Online Consumer Reviews: Readers' Objectives and Review Cues," *International Journal of Electronic Commerce*, (17:2), pp. 99–126.

Bollen, D. G. F. M., Knijnenburg, B., Willemsen, M. C., Graus, M., Bollen, D., and Knijnenburg, B. P. 2010. "Understanding choice overload in recommender systems Comics as a Medium for Privacy Notices View project Understanding Choice Overload in Recommender Systems," in *RecSys2010*, Barcelona, Spain, pp. 63–70.

Bornstein, R. F. 1989. "Exposure and affect: Overview and meta-analysis of research, 1968–1987," *Psychological Bulletin*, (106:2), pp. 265–289.

Chen, Y.-C., Shang, R.-A., and Kao, C.-Y. 2009. "The effects of information overload on consumers' subjective state towards buying decision in the internet shopping environment," *Electronic Commerce Research and Applications*, (8:1), pp. 48–58.

Chevalier, J. A., and Mayzlin, D. 2006. "The Effect of Word of Mouth on Sales: Online Book Reviews," *Journal of Marketing Research*, (43:3), pp. 345–354.

Chewning, E. G., and Harrell, A. M. 1990. "The effect of information load on decision makers' cue utilization levels and decision quality in a financial distress decision task," *Accounting, Organizations and Society*, (15:6), pp. 527–542.

Chowdhury, S., Gibb, F., and Landoni, M. 2011. "Uncertainty in information seeking and retrieval: A study in an academic environment," *Information Processing & Management*, (47:2), pp. 157–175.

Dale, S. 2014. "Content curation: The future of relevance," *Business Information Review*, (31:4), pp. 199–205.

Dellarocas, C. 2003. "The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms," *Management Science*, (49:10), pp. 1407–1424.

Dellarocas, C., Zhang, X. (Michael), and Awad, N. F. 2007. "Exploring the value of online product reviews in forecasting sales: The case of motion pictures," *Journal of Interactive Marketing*, (21:4), pp. 23–45.

Diehl, K. 2005. "When Two Rights Make a Wrong: Searching Too Much in Ordered Environments," *Journal of Marketing Research*, (42:3), pp. 313–322.

Gao, J., Zhang, C., Wang, K., and Ba, S. 2012. "Understanding online purchase decision making: The effects of unconscious thought, information quality, and information quantity," *Decision Support Systems*, (53:4), pp. 772–781.

Hinckley, D. 2015. "New Study: Data Reveals 67% of Consumers are Influenced by Online Reviews - Moz,"(available at https://moz.com/blog/new-data-reveals-67-of-consumers-are-influenced-by-online-reviews; retrieved January 8, 2019).

Iyengar, S. S., and Lepper, M. R. 2000. "When choice is demotivating: can one desire too much of a good thing?," *Journal of personality and social psychology*, (79:6), pp. 995–1006.

Jackson, T. W., and Farzaneh, P. 2012. "Theory-based model of factors affecting information overload," *International Journal of Information Management*, (32:6), pp. 523–532.

Jacoby, J. 1977. "Information Load and Decision Quality: Some Contested Issues," *Journal of Marketing Research*, (14:4), pp. 569–573.

Janiszewski, C. 1993. "Preattentive Mere Exposure Effects," *Journal of Consumer Research*, (20:3), pp. 376–392.

Jarvenpaa, S. L., and Todd, P. A. 1996. "Consumer Reactions to Electronic Shopping on the World Wide Web," *International Journal of Electronic Commerce*, (1:2), pp. 59–88.

Koltay, T. 2017. "The bright side of information: ways of mitigating information overload," *Journal of Documentation*, (73:4), pp. 767–775.

Labroo, A. A., and Lee, A. Y. 2006. "Between Two Brands: A Goal Fluency Account of Brand Evaluation," *Journal of Marketing Research*, (43:3), pp. 374–385.

Labroo, A. A., and Pocheptsova, A. 2016. "Metacognition and consumer judgment: fluency is pleasant

but disfluency ignites interest," *Current Opinion in Psychology*, (10), pp. 154–159.

Landhuis, E. 2016. "Scientific literature: Information overload," *Nature*, (535:7612), pp. 457–458.

Landwehr, J. R., Labroo, A. A., and Herrmann, A. 2011. "Gut Liking for the Ordinary: Incorporating Design Fluency Improves Automobile Sales Forecasts," *Marketing Science*, (30:3), pp. 416–429.

Lee, A. Y., and Aaker, J. L. 2004. "Bringing the Frame Into Focus: The Influence of Regulatory Fit on Processing Fluency and Persuasion.," *Journal of Personality and Social Psychology*, (86:2), pp. 205–218.

Luca, M. 2016. "Reviews, Reputation, and Revenue: The Case of Yelp.com," Harvard Business School Working Paper.

Manes, S. 1997. "Web sites: slow by design?," *Informationweek*, (642), p. 124.

Miller, R. J. 2014. "Big data curation," in *COMAD '14 Proceedings of the 20th International Conference on Management of Data*, Hyderabad, India: Computer Society of India, pp. 4–4.

Mosteller, J., Donthu, N., and Eroglu, S. 2014. "The fluent online shopping experience," *Journal of Business Research*, (67:11), pp. 2486–2493.

Novemsky, N., Dhar, R., Schwarz, N., and Simonson, I. 2007. "Preference Fluency in Choice," *Journal of Marketing Research*, (44:3), pp. 347–356.

Oppenheimer, D. M. 2008. "The secret life of fluency," *Trends in Cognitive Sciences*, (12:6), pp. 237–241.

Park, D.-H., Lee, J., and Han, I. 2007. "The Effect of On-Line Consumer Reviews on Consumer Purchasing Intention: The Moderating Role of Involvement," *International Journal of Electronic Commerce*, (11:4), pp. 125–148.

Pentina, I., and Tarafdar, M. 2014. "From 'information' to 'knowing': Exploring the role of social media in contemporary news consumption," *Computers in Human Behavior*, (35), pp. 211–223.

Pilli, L. E., and Mazzon, J. A. 2016. "Information overload, choice deferral, and moderating role of need for cognition: Empirical evidence," *Revista de Administração*, (51:1), pp. 36–55.

Reber, R., and Schwarz, N. 1999. "Effects of Perceptual Fluency on Judgments of Truth," *Consciousness and Cognition*, (8:3), pp. 338–342.

Reber, R., Winkielman, P., and Schwarz, N. 1998. "Effects of Perceptual Fluency on Affective Judgments," *Psychological Science*, (9:1), pp. 45–48.

Shaw, G., Bailey, A., and Williams, A. 2011. "Aspects of service-dominant logic and its implications for tourism management: Examples from the hotel industry," *Tourism Management*, (32), pp. 207–214.

Shugan, S. M. 1980. "The Cost of Thinking," *Journal of Consumer Research*, (7:2), pp. 99–111.

Smith, A. K., Bolton, R. N., and Wagner, J. 1999. "A Model of Customer Satisfaction with Service Encounters Involving Failure and Recovery," *Journal of Marketing Research*, (36:3), pp. 356–372.

Szymanski, D. M., and Hise, R. T. 2000. "E-satisfaction: an initial examination," *Journal of Retailing*, (76:3), pp. 309–322.

Winkielman, P., and Cacioppo, J. T. 2001. "Mind at ease puts a smile on the face: Psychophysiological evidence that processing facilitation elicits positive affect.," *Journal of Personality and Social Psychology*, (81:6), pp. 989–1000.

Ye, Q., Law, R., and Gu, B. 2009. "The impact of online user reviews on hotel room sales," *International Journal of Hospitality Management*, (28:1), pp. 180–182.

Ye, Q., Law, R., Gu, B., and Chen, W. 2011. "The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings," *Computers in Human Behavior*, (27), pp. 634–639.

Yin, D., Bond, S. D., and Zhang, H. 2014. "Anxious or Angry? Effects of Discrete Emotions on the Perceived Helpfulness of Online Reviews," *MIS Quarterly*, (38:2), pp. 539–560.

Yu, X., Liu, Y., Huang, X., and An, A. 2012. "Mining Online Reviews for Predicting Sales Performance: A Case Study in the Movie Domain," *IEEE Transactions on Knowledge and Data Engineering*, (24:4), pp. 720–734.

Zajonc, R. B. 1968. "Attitudinal effects of mere exposure.," *Journal of Personality and Social Psychology*, (9:2, Pt.2), pp. 1–27.