CONFLICTING ELECTRONIC WORD-OF-MOUTH (EWOM) PROCESSING: A REVIEW AND RESEARCH AGENDA

Aun Ahmed, Indian Institute of Technology Ropar
Paheli Nigam, Sri Balaji University, Pune
Komal Gatagat, Sri Balaji University, Pune
Neetu Kumari, Sri Balaji University, Pune

ABSTRACT

Conflicting information is a prominent characteristic of electronic word-of-mouth (eWOM) but extant literature has produced contradictory findings about the impact of conflict on eWOM-processing outcomes. Literature on eWOM processing itself has been noted to be scarce; moreover, dual process models such as the Elaboration Likelihood Model have been overwhelmingly used. We present reviews on the foregoing topics, refer to the debates and critiques surrounding them to problematize the literature, and identify research questions. The questions provide a research agenda. The paper calls for insights into the psychological processes undergone during eWOM-processing in the presence of conflict. Such an attempt would dispel the confusion in the literature and help practitioners manage conflicting information on eWOM platforms.

Keywords: Electronic Word-of-Mouth, Ewom, Information Processing, Dual-Process Theory, Elaboration Likelihood Model, Cognitive Conflict.

INTRODUCTION

A mobile phone available on Amazon.in has an aggregate rating of 4.4, but the top two reviews (which are visible first) have the titles '*worst performance'* and '*very poor camera performance*'. These top reviews award a one-star and two-star rating respectively. For another product, the first review is a two-star negative review and the very next review awards a five-star; moreover, both these reviews were written by '*top 1000 reviewers'*. Amazon provides a feature to filter '*positive reviews'* and '*critical reviews'* to compare differing customer-opinions; it also displays product-attribute ratings signifying attribute- level performance collated from consumer review data (Waghmare et al., 2024). Conflicting information about attribute-level performance has the effect that consumers' attribute preferences are guided more by the conflicting information about attributes than by the relevance of the attribute to product performance (Liu & Karahanna, 2017). On TripAdvisor.com, the photograph of a hotel room posted by TripAdvisor's 'professional photographer' and the photograph posted by '*management*' of the hotel present different pictures. Such instances are sure to cause cognitive conflict- a '*prominent characteristic'* of eWOM (Liu & Karahanna, 2017). Consumers may also *perceive* conflict, irrespective of objective reality, between the eWOM information and their initial attitude — positive, negative, or neutral — towards the focal product. By definition, cognitive conflict may arise whenever two or more pieces of information are compared (De Neys & Glumicic, 2008), or when there is competition in information processing (Yeung, 2014). How does the presence of conflict affect consumers' eWOM processing? Some studies (e.g. Schlosser 2011; Qiu et al., 2012; Baek, Ahn & Choi 2012; Cheung, Sia & Kuan 2012; Quaschning, Pandelaere & Vermeir 2014; López-López & Parra, 2016; Kupor & Tormala, 2018) have examined manifestations of conflict in eWOM but the results are contradictory.

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Literature on consumption and processing of electronic word of mouth (eWOM) by consumers is scarce (Martin & Lueg, 2013). From a review of one hundred and ninety articles, King, Racherla and Bush (2014) conclude that 'we still do not know how consumers actively consume and process eWOM information during different stages of the decision processes. More recently, Gottschalk and Mafael (2017) opine that 'we currently still lack fundamental insights on consumers processing of eWOM information' (p. 93). Extant eWOMliterature is replete with two models based on the dual-process theory – the elaboration- likelihood model (ELM) and the heuristic-systematic models (HSM) (Chan & Ngai, 2011; Cheung &Thadani, 2012). In this article we first review the dual process theory whilekeeping our focus on the ELM. Secondly, we review selected eWOM studies using the ELM and the studies on conflicting eWOM to highlight the contradictory findings in the literature. We summarize observations from these reviews and identify research questions which should stimulate research on consumers' processing of conflicting eWOM.

Dual Process Theory

Dual process theory is a generic term (Gawronski & Creighton, 2013) applied to theories in which the key principle is that '*behavior is determined by the interplay of automatic and controlled processing'* (Barrett, et al., 2004; p.553) of information. The automatic processes are fast, effortless, intuitive, etc. and are labeled Type 1; the controlledor Type 2 processes are slow, effortful, analytic, etc. (Evans & Stanovich, 2013). Dual process theories abound for a variety of phenomena (Barrett, et al., 2004) including persuasion and attitude change, judgment and decision making, and buying and consumption behavior (Samson & Voyer, 2012). Examples of dual process models of persuasion are the Elaboration Likelihood Model (Petty & Cacioppo, 1986) and the Heuristic Systematic Model (Chaiken, 1980). Evans (2008) proposes two categories of dual process models – *parallel- competitive* and *default-interventionist*. Parallel-competitive models posit that both Type 1and Type 2 processes operate together from the beginning itself and compete to produce a response or outcome of processing (Pennycook, et al., 2015; Smith & Collins, 2009). Since Type 1 processes are faster, they produce a response before the Type 2 processes. If there is a conflict between the two responses, further Type 2 processing occurs. Parallel-competitive theories regard monitoring for conflict as a Type 2 process and detection of conflict as a source of Type 2 processing (Pennycook et al., 2015), this amounts to the fallacy that Type 2 processing is caused by itself. According to the default-interventionist perspective, processing begins with a '*default intuition'*- a Type 1 process, which may be overridden in case of lack of confidence in the default or when cognitive resources are available for further Type 2 processes (Kruglanksi, 2013). This distinction is ambiguous (Smith & Collins, 2009). Both the parallel-competitive and the default-interventionist models assume, in effect, that Type 2 is caused by itself (Pennycook et al., 2015). Meyers-Levy and Malaviya (1999) makea similar observation while noting the limitations of dual process theories such as '*the ELM and its variants'*. Such theories deal 'exclusively' with factors that determine the supply of cognitive resources required for central (or Type 2) processing (Meyers-Levy & Malaviya, 1999). They argue that the sufficiency of the supply of resources will also depend on the information characteristics. In other words, both the supply and demand for cognitive resources need to be accounted for. In the ELM terminology, consumers' switching from the peripheral to the central route or movement along the elaboration continuum is not clear (Kitchen, et al., 2014). The crux of this shortcoming of dual-process theories is that cognitive control – the human mind's ability to guide information processing to realize when to rely on
Type 1 processes and when to recruit Type 2 – is not sufficiently explained. In this regard, Botvinick, Braver, Barch, Carter and Cohen (2001) note:

"*For any theory of cognitive control to be complete, it will need to offer an account ofhow the system determines when control is required (p.624)"*

In their influential paper, Botvinick et al., (2001) propose that the demand for cognitive

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control may be partly explained by monitoring for conflicts in information processing. This issue with dual-process models raises the question '*What causes Type 2 processing?*' Indeed, dual-process theories have been '*heavily criticized'* for their inability to clarify when a consumer will engage in Type 1 or Type 2 processing (Pennycook et al., 2015). Both the ELM and the HSM posit that motivation and ability determine whether an individual's attitude will be based more on the processing of arguments or cues and heuristics (Albarracin, 2002). That is, top-down factors will determine which elements in the information will be processed. Top-down factors, as opposed to bottom-up factors, are factors extraneous to the message. Some common top-down factors are motivation, ability, individual differences such as need for cognition, etc. Bottom-up factors are '*stimulus-triggered*' (Pennycook et al., 2015) or message-based. The assumption that top-down factors will determine whether systematic processing will occur has been regarded as a deficiency of these models. Albarracin (2002) has articulated this deficiency in the question: '*Do people perform a selection of information beforehand?*'. In other words, do consumers decide in advance whether they will process arguments (or central cues) and avoid the peripheral cues, or they will skip some arguments in favour of simpler cues? So far, we have raised two questions – one about dual-process theories (which also applies to all models based on the dual-process such as the ELM) and the other about persuasion-specific dual-process models, the ELM and the HSM.

Our research questions have so far been positioned within a review of dual-process theory, referring to the ELM only occasionally. Since the ELM is the dual-process model used most often in eWOM research, we direct closer attention to the ELM while also reviewing recent eWOM studies that have used the ELM.

Ewom Studies Using the ELM

eWOM studies frequently use the ELM as the theoretical framework, sixteen such studies were found to have been published between 2015 to 2019. In this section, we review how the ELM has been applied in the eWOM studies. The ELM is a dual-process model of persuasion that categorizes the various psychological processes by which attitude change may happen into two categories signifying effortful thinking and relatively effortless thinking (Bagozzi, et al., 2002). In the ELM terminology, the two categories are called the central and the peripheral route of processing. This distinction between the central and the peripheral route is akin to the two types of thinking posited by the dual-process theory.

Almost all of the sixteen eWOM studies in our literature review explicitly referred to the '*two routes to persuasion'*; we subsequently cite several examples. Cheng & Ho (2015) have also noted that *"[eWOM] researchers often classify the content quality of reviews into the central route and other cues into the peripheral route…"* (p. 884). The '*two routes to persuasion*' is a '*basic tenet'* (Kitchen et al., 2014) of the ELM; Petty himself has acknowledged that the ELM is '*best known*' for its two routes to persuasion Petty & Brinol, (2008); Petty et al (1999). The eWOM-ELM studies also invoked '*motivation*' and '*ability*'- the hallmark variables of ELM- which moderate the contribution of the two routes to the persuasion process (Bagozzi et al., 2002).Also striking was that in many studies, the ELM was supplemented with another theory; for example, affect-as-information theory in Aghakhani, Karimi & Salehan (2018), the classical ideal point concept in Agnihotri and Bhattacharya (2016), identity theory in Davis and Agrawal (2018), cognitive overload theory in Kaushik, et al., (2018), prospect theory in Maslowska, Malthouse and Viswanathan (2017), and the information adoption model in Peng, et al., (2016).

Aghakhani et al., (2018) distinguish between cognitive and affective attitudes; they invoke the ELM to derive hypotheses regarding cognitive attitude and the affect-as- information theory to hypothesize about affective attitude. We argue that using the ELM for examining cognitive attitude is misguided because the ELM '*identifies the attitude concept with a general evaluative dimension*' (Petty & Cacioppo, 1986) and does not subscribe to the tripartite (cognitive, affective, behavioral) model of attitude. Bagozzi et al. (2002) have debunked the tripartite model to have '*little utility beyond historical or heuristic value*' (p. 27).

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Using the ELM, Cheng and Ho (2015) find that the peripheral route's influence is higher than that of the central route on the readers of eWOM. Contrarily, Bi, Liu and Usman (2017) find that the central and peripheral routes' influence is '*almost equal'*. They collect data from a Chinese crowdfunding website containing '*signals of project quality*' ('*word count*' and '*video count*') of the investment project and eWOM ('*like count*' and '*number of reviews*'). Interestingly, they classify information available on the website into '*signals of project quality*' and '*eWOM*' and then map these onto 'central route' and '*peripheral route'*, respectively. Cheng and Ho (2015) define '*argument quality as the central route and source credibility as the peripheral route*' (p. 884); they also classify Image Count and Word Count as argument quality and use these counts as the operational definition of the constructargument quality. All of this is alien to the ELM; if we look at the original figure depicting the ELM (e.g. Petty & Cacioppo, 1986), '*number of arguments*' is listed as a peripheral cue. There are two separate things to be understood: Argument, and Argument Quality. Argument is just any piece of information that appears to a person as relevant to determining the '*true merits of an advocated position'* (Petty & Cacioppo, 1986). There is an element of subjectivity involved; what appears to be an argument to one person may not be an argument for another. Lest this reasoning sounds specious, we should emphasize that subjectivity in the definition of an argument stems from the fact that people hold attitudes for many different reasons (Petty & Cacioppo, 1986; Katz, 1960). For example, two people may hold equally favorable attitudes toward the Apple iPhone. Still, one may have based her attitude on its design features and the other on its security features. Therefore, in evaluating a mobile phone, design features are central for the first person, but security features are central for the second. Now, what is argument quality? Bagozzi et al. (2002) define argument quality as "*a metric by which to measure differences in the extent those individuals elaborate content of the message*" (p.110). Going back to our example, if an eWOM talks about the Apple iPhone's design features, and it induces the first person to elaborate on the message, the eWOM will be said to have high argument quality or to be a '*strong argument*'. The same eWOM will be a weak argument for the second person (because of low relevance) and will be processed as a peripheral cue. Peripheral cues are stimuli capable of affecting attitudes without requiring effortful processing (Petty & Cacioppo, 1986); they also are subject to subjectivity.

Ketron (2017) classifies the quality of grammar and mechanics ('*QGAM*') of online reviews as peripheral cues. They argue that processing of central cues for search (vs. experience) goods is easier, and therefore, QGAM matters less for such goods.

Invoking the ELM, Xu, et al., (2015) classify video-based eWOM as peripheral and find that they are more credible and persuasive than text-based eWOM. In the concluding section of their paper, they note that the central and peripheral routes of the ELM are '*independent*' and that the HSM posits a '*co-existence*' of the systematic and heuristic system. To be sure, in the ELM, there is an inverse relationship between the two routes; the importance of one processing route decreases as the importance of the other increases (Gawronski & Creighton, 2013).

The classification of variables into '*central*' and '*peripheral*' routes in studies selected from the said sixteen studies is shown in Table 1.

Table 1
DICHOTOMOUS CLASSIFICATION OF VARIABLES IN RECENT EWOM LITERATURE

Sl. no.	Peripheral route	Central route	Study
1.	Source credibility (tie strength, peerimage building)	Product-related information	Aghakhani, Karimi &Salehan, 2018
2.	Credibility, likeability, number ofreviews posted in the past	Message-text	Agnihotri & Bhattacharya, 2016
3.	Like count, Number of reviews	Introduction word count,Video count	Bi, Liu & Usman, 2017
4.	Source credibility (reviewers no. of followers, reviewer's level of expertise)	Argument quality (Imagecount, Word count)	Cheng & Ho, 2015

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Such categorization, specifically, '*equating distinct contents with distinct processes*' has led to '*one of the most important arguments raised against*' dual-process models of persuasion (Gawronski & Creighton, 2013).This problem has also been articulated as information content being used as proxies for the two types of processing (Sherman, et al., 2014). The information content represented by variables such as '*product-related information*', '*message-text*', '*argument quality*' (Table 1), etc may simply differ in complexity to demand varying amounts of processing resources and employ different processes (or routes) (Gawronski & Creighton, 2013).

The dichotomous categorization of variables is problematic. It violates the '*multiple roles hypothesis*' of the ELM and is, therefore, '*misguided*' (Bagozzi et al., 2002; Petty, et al., 1987); Petty, et al., 1993). According to the '*multiple roles hypothesis*', any variable can affect attitudes in four ways: by acting as a central or a peripheral cue, or affecting the direction or extent of processing (Brinol & Petty, 2009). In reply to Stiff's (1986) critique of the ELM, Petty et al., (1987) explicitly mention that 'The ELM does not distinguish between "*central cues*" and "*peripheral cues*".' (p. 236) and then explain the multiple roles hypothesis of the ELM. Petty et al., (1993) have clarified that the ELM has a '*probabilistic*' nature, however it is sometimes treated "*as if it deals with 'absolutes'*". The central and peripheral routes are not taken in an either/or fashion, nor are the two routes less or more probable in a given situation. Rather, the processes in each of the two routes explain differential amounts (depending on the extent of elaboration) of change in attitude (Petty et al., 1993). A vital contribution of the ELM is to categorize the various processes by which persuasion could occur into two categories (the central and the peripheral), depending on the differences in elaboration. But the ELM has been often misunderstood to construe differences in elaborationas a function of persuasion variables (Bagozzi et al., 2002; Petty et al., 1993; Petty & Wegener, 1999). The misunderstandings have prevailed among the critics (Petty et al., Petty et al 1993; Petty et al. 2002; Petty et al. 2007) and some researchers who have adopted the ELM in eWOM research. The examples of eWOM studies using the ELM (discussed above) substantiate our claim that ELM- misunderstandings have prevailed among some eWOM researchers.

Some of the problems with the ELM applications in eWOM research can be attributed to misunderstandings; nevertheless, there remain valid shortcomings in the ELM. Kitchen et al., (2014) provide a comprehensive review and critique of the ELM. Here we selectively note some of the criticisms of the ELM which are pertinent to eWOM processing. The ELM was initially developed to explain persuasion from mass-media advertisements in the pre- internet era (Kitchen et al., 2014). However, eWOM is fundamentally different from advertisements. eWOM is consumer-generated rather than firm- or marketer-generated. It commands more consumer-trust than advertisements in mass-media (Gopinath, et al., 2014), and has more influence on consumer behavior (Bickart & Schindler, 2001). eWOM is processed more voluntarily than advertisements, is served in a digital landscape, and consumers generally have to wade through a '*jungle*' of eWOM and undertake '*selective processing*' (Gottschalk & Mafael, 2017). Kitchen et al. (2014) have cautioned against 'habitually' using the ELM and risking looking at the market through a '*1980s lens*'.

Macinnis and Jaworski (1989) developed an integrative model of advertisement processing; they observed that the focus on the two routes to persuasion obscures the differences between the various attitude formation processes. Persuasion theories before the ELM (e.g., HYCP approach, balance process theories such as cognitive dissonance, self- perception theory, and the cognitive response approach) each offered a single psychological process (Bagozzi et al., 2002), or emphasized one of the two routes (Petty & Cacioppo, 1986) underlying persuasion. In contrast, the ELM hypothesized that persuasion could result from various psychological processes. As mentioned earlier, the ELM categorizes the different psychological processes underlying persuasion into two routes- central and peripheral. The central route is similar to the persuasion process posited by the cognitive response approach (Greenwald, 1968; Petty, et al., 1981), a precursor of the ELM (Bagozzi et al., 2002). The peripheral route encompasses the less effortful processes such as classical conditioning, mere exposure, heuristic shortcuts, etc. (Bagozzi et al.,

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2002). It does not require scrutiny of message arguments (Petty & Cacioppo, 1986).

Despite this integrative feat, the ELM has beenregarded by Eagly and Chaiken (1993) and by other researchers (Cook, et al., 2004) to be unable to model psychological processes underlying persuasion (Kitchen et al., 2014).

For persuasion in the online context, several studies have proposed extensions to the ELM. Hershberger (2003) has extended the ELM to develop the electronic ELM (eELM). Sher and Lee (2009) have added personality factor to the ELM framework to account for varying consumer skepticism about eWOM. Li (2013) has extended the ELM by integrating with it the social influence theory. Cho (1999) has developed the Modified Elaboration Likelihood Model to explain the processing of advertisements on the Internet. SanJosé-Cabezudo, et al., (2009) find that the inverse relationship between the two routes in the ELM is '*not totally suited, at least in an online context*,' and that '*the two routes act jointly'*(p. 306). More recently, Cyr, et al., (2018) have proposed extensions to the ELM to understand how the digital environment can be an aid to persuasion. Indeed, the numerous enhancements and extensions have contributed to the ELM's popularity (Kitchen et al., 2014). These extensions highlight the need to relook at the ELM in evolving contexts and in light of emerging research in persuasion and information processing. The proponents of the ELM have themselves refined and extended it, for example, the ways in which variables can affect attitudes have been extended from four to five.

To sum up, our reviews of the ELM and the eWOM studies using the ELM establish that:

1. Dichotomizing of variables is common even though it is problematic in more ways than one
2. Even if misunderstandings shrouding the ELM are eliminated, valid shortcomings remain
3. The ELM has in the past been refined and extended to keep up with evolving contexts and toembrace emerging research.

We had earlier cited that the empirical results about the processing of conflicting eWOM are contradictory. In the next section, we discuss these and build a case for refinement of the dual-process approach to understanding consumer information processing, especially online and in the presence of conflict.

Cognitive Conflict: A Prominent Characteristic of Ewom

Cognitive conflict is a '*prominent characteristic*' of eWOM (Liu & Karahanna, 2017), and is ubiquitous (Chang, 2016; Bigne, et al., 2020). It can affect consumer decision- making (Bigne et al., 2020) and choice — two of the most common topics of interest in consumer behavior and consumer psychology. A crisp way of understanding conflict in the eWOM context is to think of it as '*stimulus incongruency*' (Verguts, et al., 2011), i.e., different elements of a composite stimulus pointing toward different responses (Verguts et al., 2011). Two commonly investigated eWOM characteristics are volume and variance (Liu & Karahanna, 2017; Maslowska et al., 2017); variance reflects the degree of disagreement (Zablocki, et al., 2018) among the consumers contributing to the eWOM platform, or the heterogeneity in consumer opinions (Sun, 2012). The sheer volume of eWOM available to consumers, the myriad eWOM cues such as numerical and star ratings, frequency distributionof ratings, facility of sorting reviews by valence, and the numerous descriptive textual reviews, etc. combined with the diverse initial attitudes held by consumers are sufficient to warrant cognitive conflict. In table 2, we summarize manifestations of conflict in the eWOM literature.

There is a general agreement between studies one to six listed in Table 2; these studies found empirical support for the hypothesis that conflict is negatively correlated with eWOM outcomes such as credibility, persuasiveness, and helpfulness. Studies seven and eight, on the other hand, found that conflict may promote persuasiveness. Thus, there are mixed results regarding conflict in eWOM; also, the literature on conflict in eWOM is scarce. We submit that cognitive conflict in eWOM needs to be examined more directly for a better understanding of persuasion from eWOM. We also see that all the studies listed in Table 2 assume that

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persuasiveness (or related outcome variables such as credibility, helpfulness,etc.) is inherent in the message, or in other words, depends on message characteristics. We argue that rather than being inherent, persuasiveness also depends on the psychological processes undergone during the processing of the message.

Table 2
MANIFESTATIONS OF CONFLICT IN THE EWOM LITERATURE

Study	Term	Operationalization	Pertinent finding
1.Cheung, Luo, Sia, & Chen,2009	Recommendation consistency	Measured with the items: (1) comments in review are consistent with other reviews (2) comments in review are similar to other reviews	Recommendation consistency has a positive effect on eWOM credibility
2.Schlosser, 2011	Consistency	Consistency between a reviewer'sarguments and rating.	Reviews with arguments consistent with its rating aremore persuasive
3.Qiu et al., 2012	Conflicting aggregated rating	Inconsistency between aggregate star rating and individual review rating. E.g., a four-star review for aproduct with a two-star aggregate rating	Conflicting aggregated ratings decrease eWOM credibility
4. Baek, Ahn & Choi 2012	Rating inconsistency	Difference between review rating and aggregated rating	Higher inconsistency lowers review helpfulness
5.Cheung,Sia & Kuan 2012	Review consistency	Measured with two items using the adjectives 'consistent' and 'similar'	Review consistency enhances review credibility
6.Quaschning, Pandelaere, Vermeir 2014	Valence consistency	Consistency between a review'svalence and other reviews	Consistent (vs. inconsistent) reviews are more helpful
7. López-López& Parra 2016	Conflicting aggregate valence; Incongruent	Incongruence between a review's valence and the aggregated valence	Helpful reviews that areincongruent with the aggregate rating are persuasive
8. Kupor & Tormala 2018	Deviatory Reviews	Reviews that are not consistent withthe perceived default, i.e., aggregated rating	Depending on the perceived default in a given context, reviews that deviate from thedefault are persuasive

Concluding Remarks about Ewom Processing Research

Thus far, we have reviewed the eWOM processing literature, the dual-process theory, and the eWOM studies using the ELM. Proceeding from prior observations about the lack of eWOM processing literature, from our systematic literature search, we concluded that more research on consumers' eWOM processing is required. Since dual-process models, especially the ELM, are very popular in eWOM research, we presented a review of dual-process theory to highlight the criticisms and deficiencies of these models to argue that for further insights into eWOM processing, we might need to look beyond these models. Also, applications of these models in eWOM have sometimes not circumvented the misconceptions surrounding these models. eWOM-ELM studies have at times produced contradictory results. Despite being a characteristic feature, conflict in eWOM has not been sufficiently investigated. All studies covered in our review dealt with conflict between aggregated rating and review rating,or the conflict between two reviews, such instances of conflict stem from objective reality,but there is a lack of literature on conflict subjectively perceived by consumers.

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Indeed, much of eWOM research has focused on '*objective processing*' or 'bottom-up' processing of eWOM. Subjective or '*top-down*' processing of eWOM, which is influenced by consumers' extant attitude schema, remains to be explored. As discussed earlier, a handful of empirical results indicate that cognitive conflict has a negative impact on eWOM processing outcomes such as credibility, persuasiveness, helpfulness, etc. Contrarily, two relatively recent studies (López-López & Parra, 2016; Kupor & Tormala, 2018) find that conflict has a positive impact on eWOM processing outcomes, specifically, that conflicting reviews are more persuasive. Our literature review identifies several research gaps or open-questions (summarized in Table 3) that require attention for a more nuanced understanding of consumers' eWOM processing. To this end, greater attention to the psychological processes undergone during the processing of eWOM is required.

Table 3
RESEARCH GAPS/ QUESTIONS ON EWOM PROCESSING, IDENTIFIED ON THE BASIS OF LITERATURE REVIEW

eWOM processing research is scarce	Martin & Lueg 2013;King et al., 2014;Gottschalk & Mafael, 2017	An overarching conceptualmodel that takes into account various psychological processes undergone during eWOM processing is lacking.
Cognitive conflict is common ineWOM	Liu & Karahanna, 2017	What impact does cognitiveconflict have on eWOM processing?
Results regarding the impact of conflict on eWOM processing arecontradictory	Cheung et al., 2009; Schlosser 2011; Qiu et al., 2012;Baek, Ahn & Choi 2012;Cheung et al.2012;Quaschning et al., 2014; Eslami & Ghasemaghaei 2018;López-López & Parra, 2016 ;Kupor& Tormala 2018	Does cognitive conflict positively (vs. negatively) affect eWOM processing outcomes?
Dual-process theories have been criticised for being unable to explainwhen will processing happen in an effortful or an effortless fashion	Pennycook et al., 2015	What determines whetherconsumers will engage ineffortful or effortless processing of eWOM?
Both the ELM and the HSM posit that top-down factors such as motivation and ability determine whether an individual's attitude willbe based more on the processing of arguments or cues and heuristics	Albarracin, 2002	What role do bottom-up or astimulus-triggered factor such as cognitive conflict play in eWOM processing?
eWOM variables are routinely classified as central and peripheral	Gawronski & Creighton, 2013	What is the basis of the classification of variables into central and peripheral?Is it theoretically sound?
There are contradictory results regarding the degree of impact of thetwo routes during eWOM processing	Cheng & Ho, 2015;Bi et al., 2017	Do the peripheral, and thecentral route vary in their impact on eWOM processing?
Numerous studies have investigatedthe persuasiveness of eWOM, and itis assumed that persuasiveness is inherent in eWOM.	Tsao & Hsieh, 2015	Can the same eWOM produce variable amounts of attitude change in different consumers? Do attitudes after processing eWOM vary in strength? How do the psychological processes undergone duringprocessing determine the final attitude strength? The initial attitude held before processing eWOM has not been considered inthe literature. What role does initial attitude play in eWOM processing?

FUTURE RESEARCH DIRECTIONS

From our reviews, we identified the importance of conflict and initial attitude in eWOM processing. The impetus came from the observations that eWOM literature frequently uses the dual-process theory, but the state-of-the-art in dual-process research has not been capitalized. The modified dual-process model of Pennycook et al., (2015) could provide us with additional insights into the processing of conflicting eWOM information. According to the model, the two processes (Type 1 & Type 2) are divided into three stages. It focuses on the bottom-up or stimulus-triggered sources of Type 2 processing. However, top-down factors such as situational involvement and individual differences may also determine the propensity to engage in Type 2 processing. Conflict monitoring has long been recognized as asource of Type 2 processing but it has not been included as a separate stage in prior dual- process models (Pennycook et al., 2015). Pennycook and colleagues include conflict monitoring as a separate stage in their model. The model breaks down

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Type 2 processing intotwo parts; early-Type 2 or Stage 2, and late-Type 2 or Stage 3. In Stage 3, Type 2 processing is bifurcated into qualitatively distinct classes: rationalization and cognitive decoupling. Rationalization is the attempt to justify Type 1 responses and decoupling is the attempt to override or falsify a Type 1 response and give precedence to an alternative Type 2 response. The three-stage model is an integrative model combining theoretical advances made by a number of researchers. Originally, the model was validated by Pennycook and colleagues using reasoning problems.

We, however, argue that it is applicable also to information processing from eWOM or in general, because: (1) the three-stage model makes contributions at the level of meta- theory (and that testable predictions can be derived therefrom), and (2) reasoning, judgment, and decision-making are '*overlapping and interlinked'* aspects of thinking (Hardman and Macchi, 2003). Since we regard persuasion to be relative changes in attitude, we propose that the three-stage model be extended by adding initial attitude as a metacognitive mediator in Stage 2. Indeed, Pennycook and colleagues admit that the idea of metacognition has not been fully integrated into their model. Metacognition has also been incorporated into the ELM. Petty and Briñol (2002) have proposed metacognition as the fifth way (in addition to the original four ways of the ELM) in which variables can affect attitudes. After primary thoughts have been generated as a result of eWOM processing, consumers may generate secondary thoughts which are '*reflections*' on the primary thoughts (Briñol & Petty, 2009). We argue that such '*reflections*' take place in light of the initial attitude of the consumers and that they play a role in the detection of conflict (Petty, et al., 2007). The advent in the eWOM-section exposes a consumer to various content and non-content cues varying in processing fluency—the ease or difficulty with which information can be processed (Schwarz, 2004) — may 'elicit multiple conflicting outputs' (Pennycook et al., 2015). The model addresses the criticism that the dual-process theories fail to elucidate *when* a consumer engages in effortful (vs. effortless) information processing. The hugely popular dual-process models, the ELM and the HSM, posit that motivation and ability determine whether consumer information processing will be effortful, but the role of bottom-up factors such as stimulus-triggered cognitive conflict is not apparent. The three-stage model focuses on cognitive conflict, a bottom-up factor that causes consumers to engage in effortful processing.Several variables such as brand attitude, attitude towards eWOM, and attitude towards eWOM platforms are expected to have effects on eWOM processing. We surmise that the variables to be taken into account will depend on the dependent variable being investigated and how many relationships we intend to examine in a structural model. This could be a topic for future research. As an example, Bartikowski and Walsh (2014) have found that product attitude and brand attitude mediate the effect of eWOM on purchase intention.

CONCLUSION

The second research gap is addressed by the framework in that it throws light on the impact of cognitive conflict on eWOM processing; it posits conflict to be a likely promoter of systematic, effortful processing of eWOM. Since this is based on results established in other contexts, e.g., in reasoning tasks in and in low-importance processingtasks in Maheswaran and an empirical examination of the causal role of perceived cognitive conflict in initiating systematic processing of eWOM is an important topic for future research.

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