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Groupthink 2.0: An empirical analysis of customers' conformity-seeking in online communities

Breitsohl, Jan; Wilcox, James Peter; Harris, Ian

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Abstract Online communities have witnessed an ongoing interest from both digital practitioners and scholars alike. Whilst the motives for and outcomes of customers' participation have been convincingly evidenced, there is a lack of conceptual and empirical understanding on the decision-making processes within virtual groups. This study employs Janis' (1972) Groupthink theory to investigate customers' tendency to conform when making decisions in a financial online community. Based on a sample of 343 respondents and multiple regression analysis, it is shown that perceived stress and group insulation have a positive influence upon groupthink, whilst group cohesion has a negative effect. The findings support the applicability of Groupthink theory in an online context and emphasise defective social decision-making processes in online communities as key priority for future research. Digital marketers gain insight on strategies to manage their customers' conformity-seeking tendencies and to prevent dysfunctional decision-making processes.

Keywords Online community; Groupthink; Conformity; Virtual groups; Group psychology; Financial services

Word count: 5,307 (excluding references)

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INTRODUCTION

One of the most effective social and content media strategies over the past ten years has been the provision and pro-active management of online customer communities (Arnone, Geerts, & Scoubeau, 2009). Research has established that successful online communities positively affect customers' repurchase intentions (Casaló, Flavián, & Guinalíu, 2010a), word-of-mouth behaviour (Casaló, Flavián, & Guinalíu, 2010b), engagement with advertising (Rothaermel & Sugiyama, 2001) and brand preferences (McAlexander, Schouten, & Koenig, 2002). Yet, little is known with regard to how customers come to make online decisions in general (Wolny & Charoensuksai, 2014), and specifically within online communities (Di Blasio & Milani, 2008; Weiss, Lurie, & MacInnis 2008). Baltes, Dickson, Sherman, Bauer and LaGanke (2002) as well as Kushin and Yamaoto (2010) call for future research on more encompassing theoretical approaches to decision-making processes in virtual groups. Turner & Pratkanis (2014) specifically highlight defective group practices to be one of the key challenges for digital marketing scholars in future years, and thus the present study focuses on the undesirable aspects of social decision-making rather than its potential for beneficial outcomes as suggested by Choi and Kim (1999) for example.

This study applies Janis' (1972) seminal Groupthink theory to explore conformity-seeking preferences as key components of customers' defective social decision-making. Groupthink theory is particularly suitable as it addresses incipient negative aspects of conformity-seeking in groups such as poor information search, a failure to examine significant risks and a limited discussion of alternatives (Janis, 1972; Moorhead, Neck, & West, 1998). In comparison to the analysis of network effects, Groupthink theory focuses on the psychological aspects of in-group conformity rather than the behavioural sequence of decisions and the relationships between strong and weak ties for instance (Balkundi &

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Harrison, 2006; Chapman, 2006). Therefore, this article primarily focuses on the underlying psychological processes in online groups, Groupthink theory being utilised as it represents one of the most established theories on socio-psychological group decision-making. In support of this approach, Walden & Browne (2008) as well as Rook (2006) have recommended to utilise alternative theories which complement network analyses in order to explore consumers' defective online decision-making in a financial context.

In relation, four antecedents of groupthink - group cohesiveness, group insulation, directive leadership and stress - are suggested to affect customers' tendency to conform in a financial online community. A community from the financial sector was selected for this study since financial groupthink can have considerable negative monetary consequences for individual customers and their shareholding value (Hilton, 2001) and has recently been re-emphasised as an area in need of future research (Park, Gu, Leung, & Konana, 2014; Tyler & Medlin, 2008). Moreover, authors investigating disadvantageous cascade effects of risky financial herding behaviour have stressed the importance of studying the psychological aspects of defective conformity in online communities as well (Assadi & Ashta, 2014; Lee & Lee, 2012; Walden & Browne, 2008).

The key contribution of the present article is therefore the verification of Groupthink theory as an applicable framework to model customers' defective social decision-making processes in online communities. Specifically, the results of an online survey and subsequent regression analysis indicate that, in an online environment, directive leadership does not have a significant influence on groupthink whilst the remaining three antecedents support Janis' original suggestions. In relation to previously reported difficulties in measuring and observing groupthink in an authentic environment (Steiner, 1982; Turner & Pratkanis, 1998), the study highlights the methodological utility of Groupthink theory in online communities. In addition, online marketers and community managers gain an understanding of which

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factors have an influence on groupthink and are provided with recommendations as to potential intervention strategies.

To illustrate the contributions made, this article will first provide a theoretical background to Groupthink theory, its application in online communities and its key antecedents. This will be followed by an outline of the methodological analysis, the empirical results and a discussion of the related implications for both digital marketing researchers and practitioners. The study will conclude by outlining limitations and providing several recommendations for future research.

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THEORETICAL BACKGROUND AND HYPOTHESES

Groupthink in online communities

Groupthink can be defined as a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, and when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action (Janis, 1972). Groupthink has further been described as a behavioural tendency which is driven by a conformity-seeking motive within a social context (Aldag & Fuller, 1993).

Authors in the group psychology literature have focused on positive outcomes of social decision-making processes by emphasising that different points of view can be taken into consideration and generally proclaiming that groups arrive at better decisions than individuals (Hill, 1982; Hilton, 2001). However, group decision-making performance can be defective if a group experiences conformity-seeking tendencies in order to maintain their emotional stability and escape from perceived threats (Janis, 1982; Schafer & Crichlow, 1996). In fact, Turner, Pratkanis, Probasco and Leve (1992) state that dysfunctional decision-making takes

place in most group settings, arguing that earlier research failed to detect these processes due to methodological shortcomings such as insufficient group cohesiveness in artificial laboratory settings and the utilisation of ad-hoc rather than stable groups.

To overcome these methodological barriers, recent studies have suggested investigating group decision-making processes within virtual groups (e.g. Turner & Pratkanis 2014; De Valck, van Bruggen, & Wierenga, 2009). Baltes et al. (2002) in particular highlight that online groups provide a natural social setting for reliable empirical analysis. Moreover, the anonymity and physical distance between online group members has been assumed to allow more critical reflections upon inherent dysfunctional decision-making processes (Joinson, 2001; Harwood & Garry, 2009). In the digital marketing literature, such virtual groups are generally referred to as online communities which, much like their offline counterparts, are a collective of individuals with common interests who communicate regularly over the Internet (Ridings, Gefen, & Arinze, 2002). Whilst several studies on customer behaviour have acknowledged the importance of group norms (Kankanhalli, Tan, & Wei, 2005), social pressure (Dholakia & Algesheimer, 2009), decision-delegation (De Valck et al., 2009), susceptibility to interpersonal influence (Miller & Brunner, 2008) and false consensus (Wojcieszak & Price, 2009) in virtual communities, little is known about the psychological predictors of conformity-based decision processes online.

However, three studies corroborate the potential of online groupthink. Kushin and Yamamoto (2010) provide evidence that online communities lead to conformity-driven decisions on individuals' voting behaviour, and Hartmann (2010) shows that social interactions in online communities significantly affect members' purchase decisions. More recently, Kang and Johnson (2013) report a significant effect of conformity-motivation on social e-shopping and opinion-seeking behaviour. Importantly, several studies suggest that groupthink-based online customer behaviour has negative implications for communities and

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their corporate host. It is shown, for instance, that customers experience post-purchase regret and cognitive dissonance when reflecting upon a conformity-induced online purchase, which can result in their exit of the community (Cheung, Xiao, & Liu, 2014). Studies on online herding behaviour likewise suggest that groupthink imparts customers with over-confidence which leads to sub-optimal decisions and a subsequent avoidance of the social contexts that originally led to the disadvantageous decisions (Goncalo, Polman, & Maslach, 2010; Rook, 2006). Recent studies by Bénabou (2012) as well as Zhu, Dholakia, Chen and Algesheimer (2012) particularly emphasise that collective over-optimism and contagious ignorance result in negative effects for financial markets as well as consumers' welfare. Furthermore, ethical questions have been raised with regards to the corporate practice of fostering groupthink by installing company advocates who purposefully influence communication patterns in online communities in a direction that is desirable for the company but potentially less so for the customer (Dellarocas, 2006; Thompson, 2005; Van Noort & Willemsen, 2012).

Concomitant with other work that applies psychological group theories in virtual settings (e.g. Wang & Fesenmeier, 2004; Zhou, Jin, Vogel, Fang, & Chen, 2011), Groupthink theory provides a valid basis to explore customers' conformity seeking tendencies in an online community. In particular, the four determinants of groupthink investigated in this study - group cohesiveness, group insulation, perceived stress and directive leadership - have both been suggested in Janis' (1972) original model and proven to be reliable antecedents of a group's defective decision-making in subsequent research (Baltes et al., 2002; Callaway, Marriot, & Esser, 1985; Esser, 1998; McCauley, 1989).

Determinants of groupthink

Group Cohesiveness

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Group cohesiveness can be described as members' overall attraction to a particular group (McCauley, 1989), which is a result of the esprit de corps (a feeling of pride and shared mutual loyalty) and amiability between individual group members (Janis, 1982). Early studies on groupthink suggest that group homogeneity leads to an increased likelihood of concurrence seeking and obfuscates individuals' critical reflections (Callaway & Esser, 1984; Courtright, 1978). Callaway and Esser (1984) for instance claim that cohesive groups experience dysfunctional decision-making due to a lack of precise control procedures. However, later empirical investigations (McCauley, 1989; Tetlock, Peterson, McGuire, Chang, & Feld, 1992) propose a negative relationship to groupthink since highly cohesive groups were found to engage in less self-censorship and considered more alternatives. In addition, strong group cohesion can be associated with better decision-making processes as members carry a general expectation of emotionally pleasant reciprocity and feel more confident to offer counter-arguments (Paulus, 1998; Brown, 2000). Mullen, Anthony, Salas and Driskell's (1994) meta-analysis on experiments testing Groupthink theory confirms that high group cohesion results in improved (i.e. higher quality) decision-making behaviour, which was later expanded upon by other scholars who propose social tuning theory as a potential conceptual rationale (Bechtoldt, De Dreu, Nijstad, & Choi, 2010).

A similar phenomenon can be observed in online studies where authors initially relied upon Janis' (1972) suggestion of a positive relationship between cohesiveness and groupthink. For instance, Postmes, Spears, Sakhel and De Groot's (2001) study indicated that normative processes have an influence on members' perceived obligation to conform, and the effect remained significant even when members' online profiles were anonymised. Yet, a more recent study by Tsikerdekis (2013) provides contrasting evidence by showing anonymity of online environments encourages non-conformity behaviour across groups with varying levels of perceived cohesiveness. In support of the latter, Ren, Kraut & Kiesler

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(2007) promote the idea that group cohesiveness in online communities can lead to low conformity-seeking if group members' main purpose for participation focuses on the exchange of interpersonal information rather than the social identification with the community as a whole. Similarly, Wojcieszak and Price (2009) suggest that cohesive online communities experience a false-consensus effect - the belief that others share one's own view - which results in greater quantities of non-conforming in-group behaviour. Considering these results, it seems likely that Postmes et al.'s (2001) initial findings were influenced by the small sample size and the fact that it was conducted at a time where online communities were a rare social phenomenon.

With regard to the particular context of financial communities, it has recently been argued that customers show a stronger need for credibility and mutual trust the more their personal, financial welfare is at stake, which in turn seems likely to prevent them from engaging in risky, disadvantageous decisions (Herzenstein, Dholakia, & Andrews, 2011). Taken together, we therefore hypothesise the following:

H1 Group cohesiveness has a negative influence on online groupthink

Directive Leadership

McCauley (1989) defines directive leadership as a group member's perception of being influenced by a leader who premeditates a viewpoint early in the decision-making process and ignores procedures for evaluating alternatives. Directive leadership may thus be seen as a situational variable of perceived referent power by a dominant member (Cruz, Henningsen, & Smith, 1999). According to Schneier and Goktepe (1983), directive leadership is often exercised by self-appointed leaders who may not have been explicitly recognised by a group

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and yet play a significant role in its decision-making (Paulus, 1998). Early work on Groupthink theory portrayed leaders as positive, organising and democratic forces who would lead their groups to survey more alternatives to problems (Courtright, 1978; Moorhead & Montanari, 1986) and encourage innovative and creative thinking (Manz & Sims, 1990; Neck & Manz, 1994). Yet, other publications on the topic indicate that directive leadership increases the likelihood of risky decision-making (Burnette, Pollack, & Forsyth, 2011), enhances group censorship (Moorhead & Montanari, 1986; Richardson, 1994), reduces information-sharing (Fodor & Smith, 1982) and generates a smaller number of solutions to a problem (Turner & Pratkanis, 1998; 2014), thereby encouraging groupthink.

Research on leadership in online communities supports the notion that leaders positively affect the homogeneity of a virtual team's information processing (Kayworth & Leidner, 2002) as well as conformity-driven performance outcomes (Wakefield, Leidner, & Garrison, 2008). A recent study by Templeton, Luo, Giberson and Campbell (2012) further shows that members of online communities strongly value agreeableness and homophily and therefore align to those community leaders whose suggestions appear to be congruent with these values. Due to the complexity of an individual's decision-making in the financial sector (Assadi & Ashta, 2014) and the demonstrated power of financial opinion-leaders in the past (Andrews & Boyle, 2008; Van Dolen, Dabholkar, & de Ruyter, 2007), a positive relationship is likely to be found in financial online communities as well. In their netnographic study on an Australian online financial community, Campbell, Fletcher and Greenhill (2009) specifically highlight the power of directive leadership and thereby support similar qualitative findings from Chua, Wareham and Robey (2007) for online trading communities. It is thus hypothesised that:

H2 Directive Leadership has a positive influence on online groupthink

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Group Insulation

Group insulation refers to the perceived isolation from outside opinions during a social decision-making process (Shafer & Crichlow, 1996). In general, scholars agree that group insulation positively affects groupthink. Moorhead et al. (1998) for instance show that over time, individuals of a group start consulting fewer and fewer outside sources leading them to make less considered decisions in comparison with non-insulated groups (see also Katz, 1982; Moorhead & Montanari, 1986). Similarly, Turner and Pratkanis (1998; 2014) demonstrate that an in-group focus - a preference to obtain information from one's close peers - leads to poor decision-making, whilst both McCauley (1989) and Courtright (1978) emphasise that group insulation triggers members' compliance with a premature consensus.

Early studies on weak ties within online communities indicated that study participants would not incorporate external information sources unless directly approached, and would persist in their reliance on in-group communication content even if information from out-groups was perceived to be useful (Constant, Sproull, & Kiesler, 1996). A recent study by Abrantes, Seabra, Lages and Jayawardhena (2013) further highlights that, whilst out-group electronic word-of-mouth is appreciated by customers, in-group behaviour tends to be driven by conformity-related motives such as escapism and relaxation.

In a financial context, it has been found that groups who experience a strong social homogeneity but less strong ties to the society at large were more likely to take risky lending decisions in both offline and online environments (Assadi & Ashta, 2014; Cassar, Crowley, & Wydick, 2007). Similarly, recent experimental research on risky, conformity-driven online decision making from Van Dolen et al. (2007) and Zhu et al. (2012) manipulated online

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inclusion and confirmed its positive effect on financial groupthink. Together, these studies lead to the following:

H3 Group insulation has a positive influence on online groupthink

Perceived Stress

Stress generally refers to any environmental, social or internal demand which requires an individual to adjust his/her usual patterns of behaviour (Thoits, 1995). Stress is experienced when important decision outcomes carry a high threat of loss and are perceived to be one's personal responsibility (Whyte, 1998). In relation, Janis (1972) maintained that groupthink can essentially be seen as a stress reduction process in times of uncertainty. In other words, when experiencing stress, a group member can be expected to seek in-group social support and to conform to group decisions in order to delegate responsibility and maintain a state of emotional equanimity (Janis, 1982). Whilst early case study research could not establish stress as a significant antecedent of groupthink (McCauley, 1989; Tetlock et al., 1992), subsequent research has unanimously supported Janis' (1972) original hypothesis. Manz and Neck (1995) for instance posit that cognitive based training to reduce stress whilst making decisions leads to a decrease in groupthink. Additionally, Chen and Shu (2009) as well as Turner and Pratkanis (2014) demonstrate that groupthink will be fostered if members experience a stress-induced decrease in self-esteem.

In relation to virtual environments, evidence for the effects of stress upon communities' social decision processes is scarce. Several studies highlight the importance of social online support as a mechanism to reduce stress (George, Dellasega, Whitehead, & Bordon, 2013; Leung, 2007; Mikal, Rice, Abeyta, & DeVilbiss, 2013), yet little is known about the

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willingness to conform as an outcome of stress. However, based on a recent study by Welbourne, Blanchard and Wadsworth (2013) which shows that perceived connectedness with an online community is negatively related to stress, a positive effect of stress on groupthink seems likely when considering that connectedness has also been found to correlate with online group conformity (Chang, Hsieh, & Tseng, 2013; Postmes et al., 2001).

Financial online communities in particular are characterised by fast-paced decision-making which was found to result in stress-related, mutually assured delusions and increased risk-taking, as exemplified recently in both laboratory experiments and simulation models (Bénabou, 2012; Duclos, Wan, & Jiang, 2013; Zhou, Vohs, & Baumeister, 2009). We therefore posit the following:

H4 Stress has a positive influence on online groupthink

Taken together, this study employs four key antecedents of groupthink in order to investigate customers' conformity-seeking tendencies in a financial online community. Figure 1 illustrates the hypothesised relationships.

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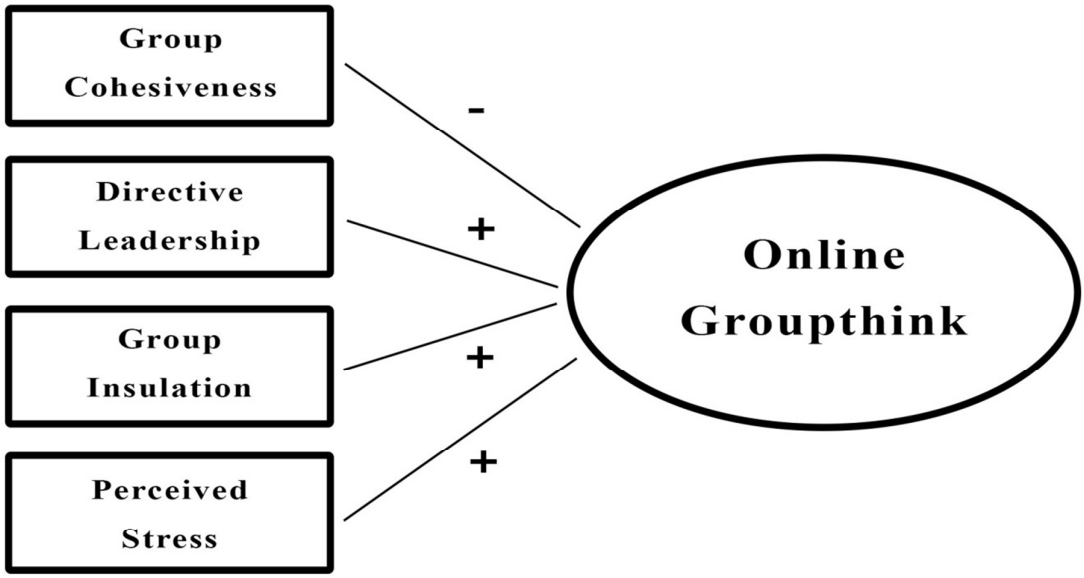
Figure 1 Conceptual Model of Online Groupthink



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RESEARCH METHOD AND FINDINGS

A financial online community (www.uk.advfn.com) was chosen as the unit of analysis. The community is hosted by a financial service provider that offers content such as real-time data streams from major international stock exchanges and facilitates discussions on share value forecasts and currency trading. The online community currently includes 2 million registered users contributing up to 12,000 posts a day. A financial community was deemed to be particularly feasible for this study due to recent evidence on the influence of groupthink during the global financial crisis and related defective decision-making (Reinhart & Rogoff, 2009; Sims & Sauser, 2013; Walden & Browne, 1999).

With the approval of the ADVFN service provider, a non-incentivised survey using Qualtrics software was posted in the community. This non-probability, convenience sampling approach has successfully been applied in previous online community research (Casaló et al., 2010a; Dholakia, Bagozzi, & Pearo, 2004). Pilot testing was undertaken with an acceptable sample size (Malhotra & Birks, 2007) of 15 respondents from a Facebook community on stock trading. Comments from the pilot test led to an improvement of the utilised financial terminology, a reduction in the number of scale items used per page, a more detailed description of the term 'online community' and a shorter introduction in relation to the fact that members in financial communities were expected to experience a perceived shortage in time. Data were sampled over a two-week period, and survey posts were made after 5pm since most community members started to interact with the forum once the FTSE had closed. Upon rejection of incomplete responses, a final sample size of 343 participants was deemed suitable for further analysis. In line with the demographic profile of the community, it should be noted that respondents were predominately male (90%), English (73%) and aged 45 or

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older (72%). Furthermore, 59% of the respondents had been a member of ADVFN for over three years, and 78% made daily visits to the community.

The survey instrument was constructed using established scales from the group psychology literature. Group cohesiveness (6 items), directional leadership (3 items) and group insulation (4 items) were all measured using the Groupthink Assessment Inventory by Montanari and Moorhead (1989). Stress (4 items) was captured using the Short Form Perceived Stress Scale (Warttig, Forshaw, South, & White, 2013) and groupthink (4 items) was established via the conformity-seeking scale from the Aspiration Index (Grouzet, Kasser, Ahuvia, Dols, Kim, Lau, Ryan, Saunders, Schmuch, & Sheldon, 2005). All instruments were measured on a five-point Likert scale (1 = 'strongly disagree' to 5 = 'strongly agree').

Following composite scale reliability tests, the Cronbach Alpha scores for group cohesiveness (.84), group insulation (.73), groupthink (.82) and stress (.87) were above the recommended .7 (Nunnally & Bernstein, 1994), whilst directive leadership recorded .61. Following other authors' recommendations (Bagozzi & Yi, 1988; Homburg & Baumgartner, 1995), variables with a Cronbach alpha above .6 are still acceptable for analysis and thus leadership was kept for our final statistical model. An exploratory factor analysis revealed a KMO of .81 and a significant Bartlett's test of sphericity ($p < .001$). A five-factor solution with Eigenvalues greater than 1 emerged and explained 67.6% of the data. All factor loadings were greater than .4 and thus deemed acceptable (Homburg and Baumgartner, 1995). In addition, Table 1 illustrates that correlations between the research variables were moderate (<.3) to weak (<.1), indicating a low degree of auto-correlation (Cohen, 2013).

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Table 1 Correlations between constructs

Variable	M	SD	1.	2.	3.	4.	5.
1. Group Cohesiveness	2.99	.72	1				
2. Directive Leadership	2.29	.74	.32**	1			
3. Group Insulation	2.62	.88	.05	.17**	1		
4. Stress	2.21	.89	-.07	.04	.14*	1	
5. Groupthink	2.61	.81	.13*	.15**	.19**	.30**	1

** significant at the .01 level; * significant at the .05 level

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To test our hypotheses, a multiple linear regression was conducted. As highlighted in Table 2, the variance inflation factors (VIF) and the Tolerance did not suggest multicolinearity problems among the variables under investigation. Moreover, following previous studies on online communities (Benlian & Hess, 2011; Burke, Kraut, & Joice, 2009; Kankanhalli, Tan, & Wei, 2005), age, gender, membership duration and posting frequency were employed as control variables. Apart from hypothesis 2, all proposed relationships were confirmed. As predicted, group cohesiveness was found to have a negative effect on groupthink ($\beta = -.12$, $p < .05$) whilst both group insulation ($\beta = .12$ $p < .05$) and stress ($\beta = .27$ $p < .01$) were found to have a positive effect on groupthink. Surprisingly, the effect of directive leadership on groupthink was not significant.

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Table 2 Regression results

Independent variable	β-value	t-value	Significance	VIF	Tolerance
Group Cohesiveness	-.12	-2.24	.026*	1.14	.88
Directive Leadership	.08	1.55	n.s.	1.15	.87
Group Insulation	.12	2.30	.022*	1.07	.94
Stress	.27	5.34	.000**	1.03	.97
Control variables					
Age	-.03	-.61	n.s	1.04	.96
Gender	-.12	-2.13	.034*	1.14	.88
Membership duration	.08	1.52	n.s.	1.11	.90
Posting frequency	-.08	-1.58	n.s.	1.09	.92

*significant at $p < .05$; **significant at $p < .001$; n.s. = non-significant; Standardised Beta values are shown; Dependent variable: Groupthink

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DISCUSSION

This study contributes to the limited literature on defective social decision-making processes in online communities by investigating key influences on customers' tendency to conform in groups. Our findings of cohesiveness, insulation and stress (but not directive leadership) as significant antecedents of groupthink support the theory's utility in an online environment and carry notable implications for both digital marketing scholars and practitioners, as will be discussed below.

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Theoretical implications

Most importantly, this study confirms Groupthink theory as a suitable concept to explain customers' conformity-seeking behaviour within an online community. We thus address previous calls for more research on customers' online decision-making (e.g. Baltes et al., 2002; Weiss et al., 2008) by empirically testing an established psychological model of undesirable conformity-seeking. Our results that cohesiveness, insulation and stress significantly affect groupthink may therefore encourage further research on Janis' (1972) original model. In particular, future analyses on the behavioural outcomes of groupthink - which Janis (1982) later referred to as 'symptoms' and 'defects' - would fruitfully expand the present findings.

Secondly, our results reveal stress as the strongest predictor of groupthink and thus underline the crucial role of social groups in mitigating perceived individual stress (Moorhead et al., 1998; Chen & Shu, 2009). However, simply conforming to a group's decision in order to lower the level of stress may lead customers to make disadvantageous financial decisions (Tang and Gilbert, 1995), as was particularly evident in the financial crises of the past decade (Simon, 2009). Furthermore, since community members

increasingly use emotion regulation strategies to deal with stressful situations (Halperin, Sharvit, & Gross, 2011), an emotionally supportive group is likely to foster a false sense of decision certainty (Price, Nir, & Cappella, 2006). Future research may thus investigate whether more cautious stress reduction strategies such as mindfulness could prevent premature group decision-making processes (see, for instance, Mick, Broniarczyk, & Haidt, 2004; Valentine (2010).

Thirdly, we empirically confirm the importance of group insulation and cohesiveness in an online community context. Our findings therefore contribute to past research on similar concepts such as social benefits (Dholakia & Algesheimer, 2009; Zhao, Stylianou, & Zheng, 2013) and in-group homogeneity (Ren, Harper, Drenner, Terveen, Kiesler, Riedl, & Kraut, 2012). In addition, we highlight that a strong intra-group focus can further lead to group insulation, which, in contrast to cohesiveness, fosters groupthink and may result in defective decision-making process (Howard, 2011; Schnall & Greenberg, 2012). Future research in this area could beneficially be linked to existing studies on the acceptance of newcomers and barriers to out-group opinions in online communities (e.g. Ren et al., 2012).

Fourthly, the lack of statistical support for the positive influence of directive leadership on online groupthink needs further consideration. Whilst Courtright (1978) did not find statistical evidence for this relationship either, the majority of past studies promote the idea that the presence of dominant leaders will enhance in-group conformity (Aldag & Fuller, 1993; Esser, 1998; McCauley, 1998). In an online community, the power of online opinion-leadership as evidenced in prior research on social networks would have further suggested a significant effect (Tsang & Zhou, 2005; Iyengar, van den Bulte, & Valente, 2010). A potential explanation for the present inconclusive findings may be found in Heinonen's (2011) study which proposes that members' status in a community is temporal in nature and posits that in-group community relationships develop in a non-linear fashion. It can thus be

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speculated that unless key opinion-holders are publicly recognised in their status as a group's leaders (which was not the case in the present sample community), directive power shifts fast and occurs on a more subtle level by a large number of mostly 'accidental' leaders, as suggested in studies by Watts and Dodds (2007a, 2007b). In a similar vein, perceptions of directive leadership and compliance can be expected to vary in relation to the level of in-group uncertainty (Vishwanath, 2006), the intrinsic and extrinsic motivation of community members (Li, Tan, Teo, 2012), the level of governance and moderation by the community host (O'Mahony & Ferraro, 2007), and the Internet-specific conversation techniques used within the community (Kelly, Davis, Nelson, & Mendoza, 2008). Future research on online communities may thus employ concepts which focus more on leadership as a directive, influential communication style rather than one that reflects a group's perception of being controlled by a leader, as undertaken in the present study. Importantly, the non-significant finding highlights that the influence of leadership differs between offline and online environments, as already suggested - but not tested for - by Avolio, Sosik, Kahai and Baker (2014).

Finally, this article's focus on financial online communities is worth discussing as well. Our results substantiate past research on the significant impact of stress (e.g. about customers' own financial welfare), cohesiveness (e.g. as a result of a need for credible sources) and insulation (e.g. due to a perception of weak ties with the society as a whole) on groupthink in offline scenarios (Assadi & Ashta, 2014; Bénabou, 2012; Herzstein et al., 2011). Yet, previous suggestions in relation to the positive effect of directive leadership on financial groupthink (e.g. Campbell et al., 2009; Chua et al., 2007) were not confirmed. It can be speculated that trust in opinion-leaders and experts has decreased since the financial crises of the past decade (Yum, Lee, & Chae, 2012; Zhang & Liu, 2012), and that implicit directive leadership styles based on subtle, non-verbal means of persuasion are less likely to be

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conveyed online (Van Dolen et al., 2007). The present findings thus encourage future research to investigate the role of leadership in financial online communities in more detail to corroborate these propositions.

Managerial Implications

Digital marketers need to carefully monitor and moderate damaging conformity-seeking decision-making processes within online communities. Our study supports the groupthink phenomenon in an online context and suggests several means through which community managers can address customers' defective decision-making.

First, it is recommended to foster the social benefits provided in a community since a group's cohesiveness clearly reduces premature concurrence-seeking. For instance, past research has shown that the creation of high quality membership profiles enhances communication credibility and intra-group bonding, as well as fostering long-term membership commitment (Schwämmlein & Wodzicki, 2012). Likewise, in order to heighten customers' perceived functional benefits, this study suggests the provision of out-group information in order to prevent members from experiencing group insulation. For instance, evidence suggests that introducing an external expert in form of a devil's advocate may prove a beneficial strategy (Howard, 2011), especially if done in a transparent fashion (Schnall & Greenberg, 2012).

In addition, we emphasise the importance of salient interventions to prevent customers' stress-induced groupthink. Digital marketers may make use of promotional stress-reduction campaigns which have been successfully implemented in the health sector in order to allow customers to better reflect upon their decision-making process. Coulson, Buchanan and Aubeeluck's (2007) study for instance has shown that a balance between informational and

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emotional message content may be the most effective managerial means to moderate stress-induced, undesirable behaviour within online communities.

Our finding that directive leadership does not have a significant impact on online groupthink implies that community managers cannot rely on the referent power of in-group opinion-leaders but rather need to focus on the underlying dynamics of opinion-consensus formations that occur outside of potential group leaders' sphere of influence (Langley, Hoeve, Ortt, Pals, & Van Der Vecht, 2014; Oh & Jeong, 2007). As such, techniques such as network analysis and sentiment analysis may prove a useful complement in monitoring the opinion-consensus within an online community. Alternatively, content managers may be able to avoid groupthink by explicitly promoting tools which track the democratic formation of in-group opinions such as the possibility for members to rank content in relation to its perceived effectiveness (De Souza, Nicolaci-da-Costa, da Silva, & Prates, 2004; Templeton et al., 2012).

CONCLUSION AND LIMITATIONS

In summary, this article's key contribution is the empirical verification of Groupthink theory in an online context and its significant potential for future research within social media and content management. The present findings emphasise that both group-related (cohesiveness, insulation) and individual (stress) factors can affect defective social decision-making within online communities. By outlining several key implications for future research on groupthink within online communities and related managerial intervention strategies, this study provides a theoretical foundation which encourages further applications of groupthink theory in virtual environments.

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A few limitations need to be noted. First, this study did not test the actual impact of groupthink on customers' decision-making quality. Although this relationship has been convincingly established in previous work (Chen & Shu, 2009), a quantitative analysis of, for instance, the return of investment for groupthink-based decisions would have further corroborated the impact of our findings. Second, the present results might have been affected by response biases such as social desirability, a limitation mentioned in survey methodologies of related past research as well (Templeton et al., 2012; Welbourne et al., 2013). Third, since decision-making within groups is likely to change over time (Katz, 1982), a time-series analysis would have provided a more extensive picture of groupthink processes as compared to the here conducted regressions. Finally, this article did not consider the potential for positive consequences of groupthink as was suggested, for example, by studies on organisational teamwork and discussion-based employee decisions (Choi & Kim, 1999; Sniezek, 1992).

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