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

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

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3 **Groupthink 2.0 - An empirical analysis of customers' conformity-seeking in online**
4 **communities**
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10 **Abstract** Online communities have witnessed an ongoing interest from both digital
11 practitioners and scholars alike. Whilst the motives for and outcomes of customers'
12 participation have been convincingly evidenced, there is a lack of conceptual and empirical
13 understanding on the decision-making processes within virtual groups. This study employs
14 Janis' (1972) Groupthink theory to investigate customers' tendency to conform when making
15 decisions in a financial online community. Based on a sample of 343 respondents and
16 multiple regression analysis, it is shown that perceived stress and group insulation have a
17 positive influence upon groupthink, whilst group cohesion has a negative effect. The findings
18 support the applicability of Groupthink theory in an online context and emphasise defective
19 social decision-making processes in online communities as key priority for future research.
20 Digital marketers gain insight on strategies to manage their customers' conformity-seeking
21 tendencies and to prevent dysfunctional decision-making processes.
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38 **Keywords** Online community; Groupthink; Conformity; Virtual groups; Group psychology;
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40 Financial services
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47 *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, & Guinalú, 2010a), word-of-mouth behaviour (Casaló, Flavián, & Guinalú, 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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3 Harrison, 2006; Chapman, 2006). Therefore, this article primarily focuses on the underlying
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5 psychological processes in online groups, Groupthink theory being utilised as it represents
6
7 one of the most established theories on socio-psychological group decision-making. In
8
9 support of this approach, Walden & Browne (2008) as well as Rook (2006) have
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11 recommended to utilise alternative theories which complement network analyses in order to
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13 explore consumers' defective online decision-making in a financial context.
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17 In relation, four antecedents of groupthink - group cohesiveness, group insulation,
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19 directive leadership and stress - are suggested to affect customers' tendency to conform in a
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21 financial online community. A community from the financial sector was selected for this
22
23 study since financial groupthink can have considerable negative monetary consequences for
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25 individual customers and their shareholding value (Hilton, 2001) and has recently been re-
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27 emphasised as an area in need of future research (Park, Gu, Leung, & Konana, 2014; Tyler &
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29 Medlin, 2008). Moreover, authors investigating disadvantageous cascade effects of risky
30
31 financial herding behaviour have stressed the importance of studying the psychological
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33 aspects of defective conformity in online communities as well (Assadi & Ashta, 2014; Lee &
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35 Lee, 2012; Walden & Browne, 2008).
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39 The key contribution of the present article is therefore the verification of Groupthink
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41 theory as an applicable framework to model customers' defective social decision-making
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43 processes in online communities. Specifically, the results of an online survey and subsequent
44
45 regression analysis indicate that, in an online environment, directive leadership does not have
46
47 a significant influence on groupthink whilst the remaining three antecedents support Janis'
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49 original suggestions. In relation to previously reported difficulties in measuring and
50
51 observing groupthink in an authentic environment (Steiner, 1982; Turner & Pratkanis, 1998),
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53 the study highlights the methodological utility of Groupthink theory in online communities.
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55 In addition, online marketers and community managers gain an understanding of which
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3 factors have an influence on groupthink and are provided with recommendations as to
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5 potential intervention strategies.
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8 To illustrate the contributions made, this article will first provide a theoretical
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10 background to Groupthink theory, its application in online communities and its key
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12 antecedents. This will be followed by an outline of the methodological analysis, the empirical
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14 results and a discussion of the related implications for both digital marketing researchers and
15
16 practitioners. The study will conclude by outlining limitations and providing several
17
18 recommendations for future research.
19

20 21 22 23 24 25 **THEORETICAL BACKGROUND AND HYPOTHESES** 26

27 28 29 30 *Groupthink in online communities* 31

32 Groupthink can be defined as a mode of thinking that people engage in when they are deeply
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34 involved in a cohesive in-group, and when the members' strivings for unanimity override
35
36 their motivation to realistically appraise alternative courses of action (Janis, 1972).
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38
39 Groupthink has further been described as a behavioural tendency which is driven by a
40
41 conformity-seeking motive within a social context (Aldag & Fuller, 1993).
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44 Authors in the group psychology literature have focused on positive outcomes of social
45
46 decision-making processes by emphasising that different points of view can be taken into
47
48 consideration and generally proclaiming that groups arrive at better decisions than individuals
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50 (Hill, 1982; Hilton, 2001). However, group decision-making performance can be defective if
51
52 a group experiences conformity-seeking tendencies in order to maintain their emotional
53
54 stability and escape from perceived threats (Janis, 1982; Schafer & Crichlow, 1996). In fact,
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56 Turner, Pratkanis, Probasco and Leve (1992) state that dysfunctional decision-making takes
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3 place in most group settings, arguing that earlier research failed to detect these processes due
4
5 to methodological shortcomings such as insufficient group cohesiveness in artificial
6
7 laboratory settings and the utilisation of ad-hoc rather than stable groups.
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9
10 To overcome these methodological barriers, recent studies have suggested investigating
11
12 group decision-making processes within virtual groups (e.g. Turner & Pratkanis 2014; De
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14 Valck, van Bruggen, & Wierenga, 2009). Baltes et al. (2002) in particular highlight that
15
16 online groups provide a natural social setting for reliable empirical analysis. Moreover, the
17
18 anonymity and physical distance between online group members has been assumed to allow
19
20 more critical reflections upon inherent dysfunctional decision-making processes (Joinson,
21
22 2001; Harwood & Garry, 2009). In the digital marketing literature, such virtual groups are
23
24 generally referred to as online communities which, much like their offline counterparts, are a
25
26 collective of individuals with common interests who communicate regularly over the Internet
27
28 (Ridings, Gefen, & Arinze, 2002). Whilst several studies on customer behaviour have
29
30 acknowledged the importance of group norms (Kankanhalli, Tan, & Wei, 2005), social
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32 pressure (Dholakia & Algesheimer, 2009), decision-delegation (De Valck et al., 2009),
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34 susceptibility to interpersonal influence (Miller & Brunner, 2008) and false consensus
35
36 (Wojcieszak & Price, 2009) in virtual communities, little is known about the psychological
37
38 predictors of conformity-based decision processes online.
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43 However, three studies corroborate the potential of online groupthink. Kushin and
44
45 Yamamoto (2010) provide evidence that online communities lead to conformity-driven
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47 decisions on individuals' voting behaviour, and Hartmann (2010) shows that social
48
49 interactions in online communities significantly affect members' purchase decisions. More
50
51 recently, Kang and Johnson (2013) report a significant effect of conformity-motivation on
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53 social e-shopping and opinion-seeking behaviour. Importantly, several studies suggest that
54
55 groupthink-based online customer behaviour has negative implications for communities and
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3 their corporate host. It is shown, for instance, that customers experience post-purchase regret
4 and cognitive dissonance when reflecting upon a conformity-induced online purchase, which
5 can result in their exit of the community (Cheung, Xiao, & Liu, 2014). Studies on online
6 herding behaviour likewise suggest that groupthink imparts customers with over-confidence
7 which leads to sub-optimal decisions and a subsequent avoidance of the social contexts that
8 originally led to the disadvantageous decisions (Goncalo, Polman, & Maslach, 2010; Rook,
9 2006). Recent studies by Bénabou (2012) as well as Zhu, Dholakia, Chen and Algesheimer
10 (2012) particularly emphasise that collective over-optimism and contagious ignorance result
11 in negative effects for financial markets as well as consumers' welfare. Furthermore, ethical
12 questions have been raised with regards to the corporate practice of fostering groupthink by
13 installing company advocates who purposefully influence communication patterns in online
14 communities in a direction that is desirable for the company but potentially less so for the
15 customer (Dellarocas, 2006; Thompson, 2005; Van Noort & Willemsen, 2012).

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

40 41 42 43 44 45 46 47 48 49 50 51 52 ***Determinants of groupthink***

53 54 *Group Cohesiveness*

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2
3 Group cohesiveness can be described as members' overall attraction to a particular group
4
5 (McCauley, 1989), which is a result of the esprit de corps (a feeling of pride and shared
6
7 mutual loyalty) and amiability between individual group members (Janis, 1982). Early
8
9 studies on groupthink suggest that group homogeneity leads to an increased likelihood of
10
11 concurrence seeking and obfuscates individuals' critical reflections (Callaway & Esser, 1984;
12
13 Courtright, 1978). Callaway and Esser (1984) for instance claim that cohesive groups
14
15 experience dysfunctional decision-making due to a lack of precise control procedures.
16
17 However, later empirical investigations (McCauley, 1989; Tetlock, Peterson, McGuire,
18
19 Chang, & Feld, 1992) propose a negative relationship to groupthink since highly cohesive
20
21 groups were found to engage in less self-censorship and considered more alternatives. In
22
23 addition, strong group cohesion can be associated with better decision-making processes as
24
25 members carry a general expectation of emotionally pleasant reciprocity and feel more
26
27 confident to offer counter-arguments (Paulus, 1998; Brown, 2000). Mullen, Anthony, Salas
28
29 and Driskell's (1994) meta-analysis on experiments testing Groupthink theory confirms that
30
31 high group cohesion results in improved (i.e. higher quality) decision-making behaviour,
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33 which was later expanded upon by other scholars who propose social tuning theory as a
34
35 potential conceptual rationale (Bechtoldt, De Dreu, Nijstad, & Choi, 2010).
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41 A similar phenomenon can be observed in online studies where authors initially relied
42
43 upon Janis' (1972) suggestion of a positive relationship between cohesiveness and
44
45 groupthink. For instance, Postmes, Spears, Sakhel and De Groot's (2001) study indicated that
46
47 normative processes have an influence on members' perceived obligation to conform, and the
48
49 effect remained significant even when members' online profiles were anonymised. Yet, a
50
51 more recent study by Tsikerdekis (2013) provides contrasting evidence by showing
52
53 anonymity of online environments encourages non-conformity behaviour across groups with
54
55 varying levels of perceived cohesiveness. In support of the latter, Ren, Kraut & Kiesler
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3 (2007) promote the idea that group cohesiveness in online communities can lead to low
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5 conformity-seeking if group members' main purpose for participation focuses on the
6
7 exchange of interpersonal information rather than the social identification with the
8
9 community as a whole. Similarly, Wojcieszak and Price (2009) suggest that cohesive online
10
11 communities experience a false-consensus effect - the belief that others share one's own view
12
13 - which results in greater quantities of non-conforming in-group behaviour. Considering these
14
15 results, it seems likely that Postmes et al.'s (2001) initial findings were influenced by the
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17 small sample size and the fact that it was conducted at a time where online communities were
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19 a rare social phenomenon.
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22
23 With regard to the particular context of financial communities, it has recently been
24
25 argued that customers show a stronger need for credibility and mutual trust the more their
26
27 personal, financial welfare is at stake, which in turn seems likely to prevent them from
28
29 engaging in risky, disadvantageous decisions (Herzenstein, Dholakia, & Andrews, 2011).
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31 Taken together, we therefore hypothesise the following:
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36 **H1** Group cohesiveness has a negative influence on online groupthink
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43 *Directive Leadership*

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45 McCauley (1989) defines directive leadership as a group member's perception of being
46
47 influenced by a leader who premeditates a viewpoint early in the decision-making process
48
49 and ignores procedures for evaluating alternatives. Directive leadership may thus be seen as a
50
51 situational variable of perceived referent power by a dominant member (Cruz, Henningsen, &
52
53 Smith, 1999). According to Schneier and Goktepe (1983), directive leadership is often
54
55 exercised by self-appointed leaders who may not have been explicitly recognised by a group
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1
2
3 and yet play a significant role in its decision-making (Paulus, 1998). Early work on
4
5 Groupthink theory portrayed leaders as positive, organising and democratic forces who would
6
7 lead their groups to survey more alternatives to problems (Courtright, 1978; Moorhead &
8
9 Montanari, 1986) and encourage innovative and creative thinking (Manz & Sims, 1990; Neck
10
11 & Manz, 1994). Yet, other publications on the topic indicate that directive leadership
12
13 increases the likelihood of risky decision-making (Burnette, Pollack, & Forsyth, 2011),
14
15 enhances group censorship (Moorhead & Montanari, 1986; Richardson, 1994), reduces
16
17 information-sharing (Fodor & Smith, 1982) and generates a smaller number of solutions to a
18
19 problem (Turner & Pratkanis, 1998; 2014), thereby encouraging groupthink.
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23 Research on leadership in online communities supports the notion that leaders positively
24
25 affect the homogeneity of a virtual team's information processing (Kayworth & Leidner,
26
27 2002) as well as conformity-driven performance outcomes (Wakefield, Leidner, & Garrison,
28
29 2008). A recent study by Templeton, Luo, Giberson and Campbell (2012) further shows that
30
31 members of online communities strongly value agreeableness and homophily and therefore
32
33 align to those community leaders whose suggestions appear to be congruent with these
34
35 values. Due to the complexity of an individual's decision-making in the financial sector
36
37 (Assadi & Ashta, 2014) and the demonstrated power of financial opinion-leaders in the past
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39 (Andrews & Boyle, 2008; Van Dolen, Dabholkar, & de Ruyter, 2007), a positive relationship
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41 is likely to be found in financial online communities as well. In their netnographic study on
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43 an Australian online financial community, Campbell, Fletcher and Greenhill (2009)
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45 specifically highlight the power of directive leadership and thereby support similar qualitative
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47 findings from Chua, Wareham and Robey (2007) for online trading communities. It is thus
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49 hypothesised that:
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56 **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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3 inclusion and confirmed its positive effect on financial groupthink. Together, these studies
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5 lead to the following:
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10 **H3** Group insulation has a positive influence on online groupthink
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16 *Perceived Stress*

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18 Stress generally refers to any environmental, social or internal demand which requires an
19
20 individual to adjust his/her usual patterns of behaviour (Thoits, 1995). Stress is experienced
21
22 when important decision outcomes carry a high threat of loss and are perceived to be one's
23
24 personal responsibility (Whyte, 1998). In relation, Janis (1972) maintained that groupthink
25
26 can essentially be seen as a stress reduction process in times of uncertainty. In other words,
27
28 when experiencing stress, a group member can be expected to seek in-group social support
29
30 and to conform to group decisions in order to delegate responsibility and maintain a state of
31
32 emotional equanimity (Janis, 1982). Whilst early case study research could not establish
33
34 stress as a significant antecedent of groupthink (McCauley, 1989; Tetlock et al., 1992),
35
36 subsequent research has unanimously supported Janis' (1972) original hypothesis. Manz and
37
38 Neck (1995) for instance posit that cognitive based training to reduce stress whilst making
39
40 decisions leads to a decrease in groupthink. Additionally, Chen and Shu (2009) as well as
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42 Turner and Pratkanis (2014) demonstrate that groupthink will be fostered if members
43
44 experience a stress-induced decrease in self-esteem.
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50 In relation to virtual environments, evidence for the effects of stress upon communities'
51
52 social decision processes is scarce. Several studies highlight the importance of social online
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54 support as a mechanism to reduce stress (George, Dellasega, Whitehead, & Bordon, 2013;
55
56 Leung, 2007; Mikal, Rice, Abeyta, & DeVilbiss, 2013), yet little is known about the
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3 willingness to conform as an outcome of stress. However, based on a recent study by
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5 Welbourne, Blanchard and Wadsworth (2013) which shows that perceived connectedness
6
7 with an online community is negatively related to stress, a positive effect of stress on
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9 groupthink seems likely when considering that connectedness has also been found to
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11 correlate with online group conformity (Chang, Hsieh, & Tseng, 2013; Postmes et al., 2001).
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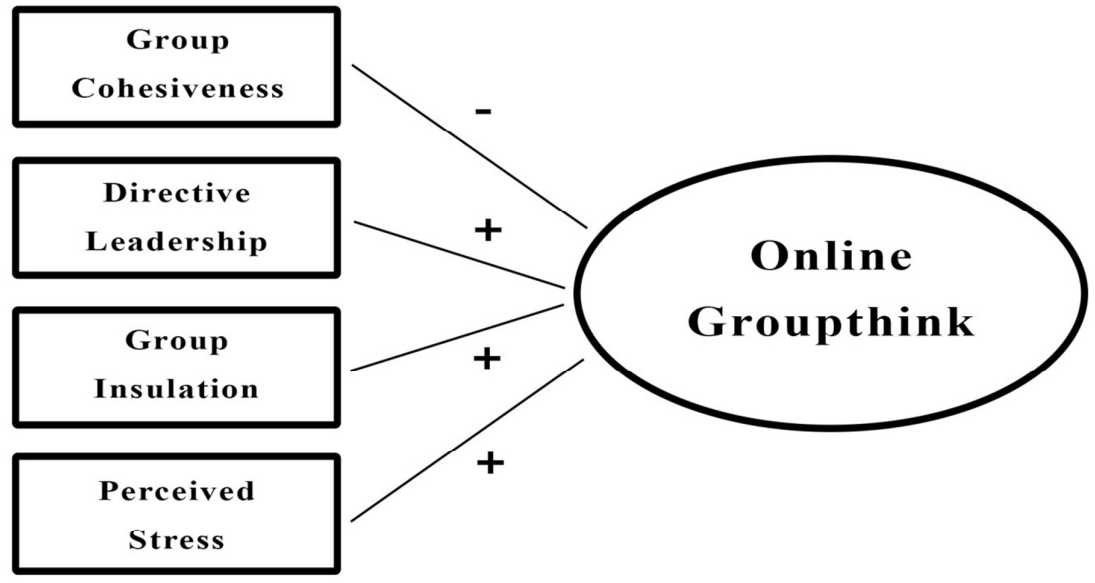
14 Financial online communities in particular are characterised by fast-paced decision-
15
16 making which was found to result in stress-related, mutually assured delusions and increased
17
18 risk-taking, as exemplified recently in both laboratory experiments and simulation models
19
20 (Bénabou, 2012; Duclos, Wan, & Jiang, 2013; Zhou, Vohs, & Baumeister, 2009). We
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22 therefore posit the following:
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27 **H4** Stress has a positive influence on online groupthink
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34 Taken together, this study employs four key antecedents of groupthink in order to investigate
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36 customers' conformity-seeking tendencies in a financial online community. Figure 1
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38 illustrates the hypothesised relationships.
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Figure 1 Conceptual Model of Online Groupthink



view Only

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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2
3 older (72%). Furthermore, 59% of the respondents had been a member of ADVFN for over
4
5 three years, and 78% made daily visits to the community.
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8 The survey instrument was constructed using established scales from the group
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10 psychology literature. Group cohesiveness (6 items), directional leadership (3 items) and
11
12 group insulation (4 items) were all measured using the Groupthink Assessment Inventory by
13
14 Montanari and Moorhead (1989). Stress (4 items) was captured using the Short Form
15
16 Perceived Stress Scale (Warttig, Forshaw, South, & White, 2013) and groupthink (4 items)
17
18 was established via the conformity-seeking scale from the Aspiration Index (Grouzet, Kasser,
19
20 Ahuvia, Dols, Kim, Lau, Ryan, Saunders, Schmuck, & Sheldon, 2005). All instruments were
21
22 measured on a five-point Likert scale (1 = 'strongly disagree' to 5 = 'strongly agree').
23
24

25
26 Following composite scale reliability tests, the Cronbach Alpha scores for group
27
28 cohesiveness (.84), group insulation (.73), groupthink (.82) and stress (.87) were above the
29
30 recommended .7 (Nunnally & Bernstein, 1994), whilst directive leadership recorded .61.
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32 Following other authors' recommendations (Bagozzi & Yi, 1988; Homburg & Baumgartner,
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34 1995), variables with a Cronbach alpha above .6 are still acceptable for analysis and thus
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36 leadership was kept for our final statistical model. An exploratory factor analysis revealed a
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38 KMO of .81 and a significant Bartlett's test of sphericity ($p < .001$). A five-factor solution
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40 with Eigenvalues greater than 1 emerged and explained 67.6% of the data. All factor loadings
41
42 were greater than .4 and thus deemed acceptable (Homburg and Baumgartner, 1995). In
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44 addition, Table 1 illustrates that correlations between the research variables were moderate
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46 ($< .3$) 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

1
2
3 To test our hypotheses, a multiple linear regression was conducted. As highlighted in
4
5 Table 2, the variance inflation factors (VIF) and the Tolerance did not suggest
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7 multicollinearity problems among the variables under investigation. Moreover, following
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9 previous studies on online communities (Benlian & Hess, 2011; Burke, Kraut, & Joice, 2009;
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11 Kankanhalli, Tan, & Wei, 2005), age, gender, membership duration and posting frequency
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13 were employed as control variables. Apart from hypothesis 2, all proposed relationships were
14
15 confirmed. As predicted, group cohesiveness was found to have a negative effect on
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17 groupthink ($\beta = -.12, p < .05$) whilst both group insulation ($\beta = .12 p < .05$) and stress ($\beta =$
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19 $.27 p < .01$) were found to have a positive effect on groupthink. Surprisingly, the effect of
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21 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
<i>Control variables</i>					
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

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.

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

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2
3 increasingly use emotion regulation strategies to deal with stressful situations (Halperin,
4 Sharvit, & Gross, 2011), an emotionally supportive group is likely to foster a false sense of
5 decision certainty (Price, Nir, & Cappella, 2006). Future research may thus investigate
6 whether more cautious stress reduction strategies such as mindfulness could prevent
7 premature group decision-making processes (see, for instance, Mick, Broniarczyk, & Haidt,
8 2004; Valentine (2010).

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16 Thirdly, we empirically confirm the importance of group insulation and cohesiveness in
17 an online community context. Our findings therefore contribute to past research on similar
18 concepts such as social benefits (Dholakia & Algesheimer, 2009; Zhao, Stylianou, & Zheng,
19 2013) and in-group homogeneity (Ren, Harper, Drenner, Terveen, Kiesler, Riedl, & Kraut,
20 2012). In addition, we highlight that a strong intra-group focus can further lead to group
21 insulation, which, in contrast to cohesiveness, fosters groupthink and may result in defective
22 decision-making process (Howard, 2011; Schnall & Greenberg, 2012). Future research in this
23 area could beneficially be linked to existing studies on the acceptance of newcomers and
24 barriers to out-group opinions in online communities (e.g. Ren et al., 2012).

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36 Fourthly, the lack of statistical support for the positive influence of directive leadership
37 on online groupthink needs further consideration. Whilst Courtright (1978) did not find
38 statistical evidence for this relationship either, the majority of past studies promote the idea
39 that the presence of dominant leaders will enhance in-group conformity (Aldag & Fuller,
40 1993; Esser, 1998; McCauley, 1998). In an online community, the power of online opinion-
41 leadership as evidenced in prior research on social networks would have further suggested a
42 significant effect (Tsang & Zhou, 2005; Iyengar, van den Bulte, & Valente, 2010). A
43 potential explanation for the present inconclusive findings may be found in Heinonen's
44 (2011) study which proposes that members' status in a community is temporal in nature and
45 posits that in-group community relationships develop in a non-linear fashion. It can thus be
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3 speculated that unless key opinion-holders are publicly recognised in their status as a group's
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5 leaders (which was not the case in the present sample community), directive power shifts fast
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7 and occurs on a more subtle level by a large number of mostly 'accidental' leaders, as
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9 suggested in studies by Watts and Dodds (2007a, 2007b). In a similar vein, perceptions of
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11 directive leadership and compliance can be expected to vary in relation to the level of in-
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13 group uncertainty (Vishwanath, 2006), the intrinsic and extrinsic motivation of community
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15 members (Li, Tan, Teo, 2012), the level of governance and moderation by the community
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17 host (O'Mahony & Ferraro, 2007), and the Internet-specific conversation techniques used
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19 within the community (Kelly, Davis, Nelson, & Mendoza, 2008). Future research on online
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21 communities may thus employ concepts which focus more on leadership as a directive,
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23 influential communication style rather than one that reflects a group's perception of being
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25 controlled by a leader, as undertaken in the present study. Importantly, the non-significant
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27 finding highlights that the influence of leadership differs between offline and online
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29 environments, as already suggested - but not tested for - by Avolio, Sosik, Kahai and Baker
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31 (2014).
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36 Finally, this article's focus on financial online communities is worth discussing as well.
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38 Our results substantiate past research on the significant impact of stress (e.g. about customers'
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40 own financial welfare), cohesiveness (e.g. as a result of a need for credible sources) and
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42 insulation (e.g. due to a perception of weak ties with the society as a whole) on groupthink in
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44 offline scenarios (Assadi & Ashta, 2014; Bénabou, 2012; Herzstein et al., 2011). Yet,
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46 previous suggestions in relation to the positive effect of directive leadership on financial
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48 groupthink (e.g. Campbell et al., 2009; Chua et al., 2007) were not confirmed. It can be
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50 speculated that trust in opinion-leaders and experts has decreased since the financial crises of
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52 the past decade (Yum, Lee, & Chae, 2012; Zhang & Liu, 2012), and that implicit directive
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54 leadership styles based on subtle, non-verbal means of persuasion are less likely to be
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3 conveyed online (Van Dolen et al., 2007). The present findings thus encourage future
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5 research to investigate the role of leadership in financial online communities in more detail to
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7 corroborate these propositions.
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10 11 *Managerial Implications*

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13 Digital marketers need to carefully monitor and moderate damaging conformity-seeking
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15 decision-making processes within online communities. Our study supports the groupthink
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17 phenomenon in an online context and suggests several means through which community
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19 managers can address customers' defective decision-making.
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23 First, it is recommended to foster the social benefits provided in a community since a
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25 group's cohesiveness clearly reduces premature concurrence-seeking. For instance, past
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27 research has shown that the creation of high quality membership profiles enhances
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29 communication credibility and intra-group bonding, as well as fostering long-term
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31 membership commitment (Schwämmlein & Wodzicki, 2012). Likewise, in order to heighten
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33 customers' perceived functional benefits, this study suggests the provision of out-group
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35 information in order to prevent members from experiencing group insulation. For instance,
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37 evidence suggests that introducing an external expert in form of a devil's advocate may prove
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39 a beneficial strategy (Howard, 2011), especially if done in a transparent fashion (Schnall &
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41 Greenberg, 2012).
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45 In addition, we emphasise the importance of salient interventions to prevent customers'
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47 stress-induced groupthink. Digital marketers may make use of promotional stress-reduction
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49 campaigns which have been successfully implemented in the health sector in order to allow
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51 customers to better reflect upon their decision-making process. Coulson, Buchanan and
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53 Aubeeluck's (2007) study for instance has shown that a balance between informational and
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3 emotional message content may be the most effective managerial means to moderate stress-
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5 induced, undesirable behaviour within online communities.
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8 Our finding that directive leadership does not have a significant impact on online
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10 groupthink implies that community managers cannot rely on the referent power of in-group
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12 opinion-leaders but rather need to focus on the underlying dynamics of opinion-consensus
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14 formations that occur outside of potential group leaders' sphere of influence (Langley,
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16 Hoeve, Ortt, Pals, & Van Der Vecht, 2014; Oh & Jeong, 2007). As such, techniques such as
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18 network analysis and sentiment analysis may prove a useful complement in monitoring the
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20 opinion-consensus within an online community. Alternatively, content managers may be able
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22 to avoid groupthink by explicitly promoting tools which track the democratic formation of in-
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24 group opinions such as the possibility for members to rank content in relation to its perceived
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26 effectiveness (De Souza, Nicolaci-da-Costa, da Silva, & Prates, 2004; Templeton et al.,
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28 2012).
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36 **CONCLUSION AND LIMITATIONS**

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41 In summary, this article's key contribution is the empirical verification of Groupthink theory
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43 in an online context and its significant potential for future research within social media and
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45 content management. The present findings emphasise that both group-related (cohesiveness,
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47 insulation) and individual (stress) factors can affect defective social decision-making within
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49 online communities. By outlining several key implications for future research on groupthink
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51 within online communities and related managerial intervention strategies, this study provides
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53 a theoretical foundation which encourages further applications of groupthink theory in virtual
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55 environments.
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3 A few limitations need to be noted. First, this study did not test the actual impact of
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5 groupthink on customers' decision-making quality. Although this relationship has been
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7 convincingly established in previous work (Chen & Shu, 2009), a quantitative analysis of, for
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9 instance, the return of investment for groupthink-based decisions would have further
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11 corroborated the impact of our findings. Second, the present results might have been affected
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13 by response biases such as social desirability, a limitation mentioned in survey methodologies
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15 of related past research as well (Templeton et al., 2012; Welbourne et al., 2013). Third, since
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17 decision-making within groups is likely to change over time (Katz, 1982), a time-series
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19 analysis would have provided a more extensive picture of groupthink processes as compared
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21 to the here conducted regressions. Finally, this article did not consider the potential for
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23 positive consequences of groupthink as was suggested, for example, by studies on
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25 organisational teamwork and discussion-based employee decisions (Choi & Kim, 1999;
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27 Sniezek, 1992).
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REFERENCES

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41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Abrantes, J. L., Seabra, C., Lages, C. R., & Jayawardhena, C. (2013). Drivers of in-group and out-of-group electronic word-of-mouth (EWOM). *European Journal of Marketing*, 47, 1067-1088. doi: 10.1108/03090561311324219
- Aldag, R. J., & Fuller, S. R. (1993). Beyond fiasco: A reappraisal of the groupthink phenomenon and a new model of group decision processes. *Psychological Bulletin*, 113, 533-552. doi: 10.1037/0033-2909.113.3.533
- Andrews, L., & Boyle, M. V. (2008). Consumers' accounts of perceived risk online and the influence of communication sources. *Qualitative Market Research: An International Journal*, 11(1), 59–75. doi: 10.1108/13522750810845559
- Arnone, L., Geerts, A., & Scoubeau, C. (2009). Implementing company-managed virtual communities as a relationship marketing tool: a decision systems analysis. *Journal of Customer Behaviour*, 8(1), 5–27. doi: 10.1362/147539209X414362
- Assadi, D., & Ashta, A. (2014). Innovative transposition of trust mechanisms in social lending groups from offline to online. *Strategic Change*, 23, 461–480. doi: 10.1002/jsc.1989
- Avolio, B. J., Sosik, J. J., Kahai, S. S., & Baker, B. (2014). E-leadership: Re-examining transformations in leadership source and transmission. *The Leadership Quarterly*, 25(1), 105–131. doi:10.1016/j.leaqua.2013.11.003
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94. doi: 10.1007/BF02723327

- 1
2
3 Balkundi, P., & Harrison, D. A. (2006). Ties, leaders, and time in teams: Strong inference
4 about network structure's effects on team viability and performance. *Academy of*
5 *Management Journal*, 49, 49-68. doi: 10.5465/AMJ.2006.20785500
6
7
8
9
10
11 Baltes, B.B., Dickson, M.W., Sherman, M.P., Bauer, C.C., & LaGanke, J.S. (2002)
12 Computer-mediated communication and group decision making: A meta-analysis.
13 *Organizational Behaviour and Human Decision Processes*, 87(1), 156-179. doi:
14
15 10.1006/obhd.2001.2961
16
17
18
19
20
21 Bechtoldt, M. N., De Dreu, C. K. W., Nijstad, B. A., & Choi, H.-S. (2010). Motivated
22 information processing, social tuning, and group creativity. *Journal of Personality and*
23 *Social Psychology*, 99, 622–637. doi:10.1037/a0019386
24
25
26
27
28 Bénabou, R. (2012). Groupthink: Collective delusions in organizations and markets. *The*
29 *Review of Economic Studies*, 80, 429-462. doi: 10.3386/w14764
30
31
32
33
34 Benlian, A., & Hess, T. (2011). The signaling role of it features in influencing trust and
35 participation in online communities. *International Journal of Electronic Commerce*,
36 *15*(4), 7–56. doi:10.2753/JEC1086-4415150401
37
38
39
40
41 Brown, R. (2000). Social identity theory: Past achievements, current problems and future
42 challenges. *European Journal of Social Psychology*, 30, 745-778. doi: 10.1002/1099-
43 0992
44
45
46
47
48
49 Burke, M., Kraut, R., & Joyce, E. (2009). membership claims and requests: Conversation-
50 level newcomer socialization strategies in online groups. *Small Group Research*, 41, pp.
51 4–40). doi:10.1177/1046496409351936
52
53
54
55
56
57
58
59
60

- 1
2
3 Burnette, J. L., Pollack, J. M., & Forsyth, D. R. (2011). Leadership in extreme contexts: A
4
5 groupthink analysis of the May 1996 Mount Everest disaster. *Journal of Leadership*
6
7 *Studies*, 4(4), 29-40. doi: 10.1002/jls.20190
8
9
- 10 Callaway, M. R., & Esser, J. K. (1984). Groupthink: Effects of cohesiveness and problem-
11
12 solving procedures on group decision making. *Social Behavior and Personality*, 12(2),
13
14 157-164. doi: 10.2224/sbp.1984.12.2.157
15
16
- 17 Callaway, M. R., Marriott, R. G., & Esser, J. K. (1985). Effects of dominance on group
18
19 decision making: Toward a stress-reduction explanation of groupthink. *Journal of*
20
21 *Personality and Social Psychology*, 49, 949-952. doi: 10.1037/0022-3514.49.4.949
22
23
24
- 25 Campbell, J., Fletcher, G., & Greenhill, A. (2009). Conflict and identity shape shifting in an
26
27 online financial community. *Information Systems Journal*, 19, 461-478. doi:
28
29 10.1111/j.1365-2575.2008.00301.x
30
31
32
- 33 Casaló, L. V., Flavián, C., & Guinalú, M. (2010a). Antecedents and consequences of
34
35 consumer participation in on-line communities: The case of the travel sector.
36
37 *International Journal of Electronic Commerce*, 15(2), 137-167. doi: 10.2753/JEC1086-
38
39 4415150205
40
41
42
- 43 Casaló, L. V., Flavián, C., & Guinalú, M. (2010b). Determinants of the intention to
44
45 participate in firm-hosted online travel communities and effects on consumer behavioral
46
47 intentions. *Tourism Management*, 31, 898-911. doi: 10.1016/j.tourman.2010.04.007
48
49
50
- 51 Cassar, A., Crowley, L., & Wydick, B. (2007). The effect of social capital on group loan
52
53 repayment: Evidence from field experiments. *The Economic Journal*, 117, F85-F106.
54
55 doi: 10.1111/j.1468-0297.2007.02016.x.
56
57
58
59
60

- 1
2
3 Chang, A., Hsieh, S. H., & Tseng, T. H. (2013). Online brand community response to
4
5 negative brand events: the role of group eWOM. *Internet Research*, 23, 486-506. doi:
6
7 10.1108/IntR-06-2012-0107
8
9
10 Chapman, J. (2006). Anxiety and defective decision making: an elaboration of the groupthink
11
12 model. *Management Decision*, 44, 1391–1404. doi: 10.1108/00251740610715713
13
14
15
16 Chen, C. K., & Shu, C. H. T. K. C. (2009). An exploratory study for groupthink research to
17
18 enhance group decision quality. *Journal of Quality*, 16(2), 137 - 152.
19
20
21
22 Cheung, C. M., Xiao, B. S., & Liu, I. L. (2014). Do actions speak louder than voices? The
23
24 signaling role of social information cues in influencing consumer purchase decisions.
25
26 *Decision Support Systems*, 65, 50-58. doi:10.1016/j.dss.2014.05.002
27
28
29 Choi, J. N., & Kim, M. U. (1999). The organizational application of groupthink and its
30
31 limitations in organizations. *Journal of Applied Psychology*, 84, 297-306. doi:
32
33 10.1037/0021-9010.84.2.297
34
35
36
37 Chua, C. E. H., C., Wareham, J., & Robey, D. (2007). The role of online trading communities
38
39 in managing Internet auction fraud. *MIS Quarterly*, 31, 759–781.
40
41
42 Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. London: Routledge.
43
44
45
46 Constant, D., Sproull, L., & Kiesler, S. (1996). The kindness of strangers: The usefulness of
47
48 electronic weak ties for technical advice. *Organizational Science*, 7(2), 119-135. doi:
49
50 10.1287/orsc.7.2.119
51
52
53 Coulson, N.S., Buchanan, H., & Aubeeluck, A. (2007). Social support in cyberspace: A
54
55 content analysis of communication within a Huntington's Disease online support group.
56
57 *Patient Education & Counselling*, 68(2), 173-178. doi: 10.1016/j.pec.2007.06.002
58
59
60

- 1
2
3 Courtright, J. A. (1978). A laboratory investigation of groupthink. *Communications*
4
5 *Monographs*, 45(3), 229-246. doi: 10.1080/03637757809375968
6
7
- 8 Cruz, M. G., Henningsen, D. D., & Smith, B. A. (1999). The impact of directive leadership
9
10 on group information sampling, decisions, and perceptions of the leader. *Communication*
11
12 *Research*, 26, 349-369. doi: 10.1177/009365099026003004
13
14
- 15 De Souza, C. S., Nicolaci-da-Costa, A. M., da Silva, E. J., & Prates, R. O. (2004).
16
17 Compulsory institutionalization: investigating the paradox of computer-supported
18
19 informal social processes. *Interacting with Computers*, 16, 635–656. doi:
20
21 10.1016/j.intcom.2004.07.003
22
23
24
- 25 De Valck, K., van Bruggen, G. H., & Wierenga, B. (2009). Virtual communities: A
26
27 marketing perspective. *Decision Support Systems*, 47, 185-203. doi:
28
29 10.1016/j.dss.2009.02.008
30
31
32
- 33 Dellarocas, C. (2006). Strategic manipulation of internet opinion forums: Implications for
34
35 consumers and firms. *Management Science*, 52, 1577–1593.
36
37 doi:10.1287/mnsc.1060.0567
38
39
- 40 Dholakia, U.M., Bagozzi, R.P., & Pearo, L.K. (2004). A social influence model of consumer
41
42 participation in network- and small-group-based virtual communities. *International*
43
44 *Journal of Research in Marketing*, 21, 241-263. doi: 10.1016/j.ijresmar.2003.12.004
45
46
47
- 48 Dholakia, U. M. B. V. W. C., & Algesheimer, R. (2009). How customers benefit from
49
50 participation in firm-hosted virtual P3 communities. *Journal of Service Research*, 12(2),
51
52 208-226. doi: 10.1177/1094670509338618
53
54
55
- 56 Di Blasio, P., & Milani, L. (2008). Computer-mediated communication and persuasion:
57
58
59
60

1
2
3 Peripheral vs. central route to opinion shift. *Computers in Human Behavior*, 24, 798-815.

4
5 doi: 10.1016/j.chb.2007.02.011
6
7

8 Duclos, R., Wan, E. W., & Jiang, Y. (2013). Show me the honey! Effects of social exclusion
9 on financial risk-taking. *Journal of Consumer Research*, 40, 122–135. doi:

10
11
12 10.1086/668900
13
14

15
16 Esser, J. K. (1998). Alive and well after 25 years: A review of groupthink research.

17
18 *Organizational behavior and human decision processes*, 73(2), 116-141. doi:

19
20
21 10.1006/obhd.1998.2758
22
23

24 Fodor, E. M., & Smith, T. (1982). The power motive as an influence on group decision

25 making. *Journal of Personality and Social Psychology*, 42, 178-185. doi: 10.1037/0022-

26
27
28 3514.42.1.178
29
30

31 George, D. R., Dellasega, C., Whitehead, M. M., & Bordon, A. (2013). Facebook-based

32 stress management resources for first-year medical students: A multi-method evaluation.

33
34
35 *Computers in Human Behavior*, 29, 559-562. doi: 10.1016/j.chb.2012.12.008
36
37

38
39 Goncalo, J. A., Polman, E., & Maslach, C. (2010). Can confidence come too soon? Collective

40 efficacy, conflict and group performance over time. *Organizational Behavior and*

41
42
43 *Human Decision Processes*, 113(1), 13–24. doi: 10.1016/j.obhdp.2010.05.001
44
45

46 Grouzet, F. M., Kasser, T., Ahuvia, A., Dols, J. M. F., Kim, Y., Lau, S., Ryan, R.M.,

47
48
49 Saunders, S., Schmuck, P., & Sheldon, K. M. (2005). The structure of goal contents

50 across 15 cultures. *Journal of personality and social psychology*, 89, 800-816. doi:

51
52
53 10.1037/0022-3514.89.5.800
54
55
56
57
58
59
60

- 1
2
3 Halperin, E., Sharvit, K., & Gross, J. (2011). Emotion and emotion regulation in intergroup
4
5 conflict: An appraisal-based framework. In D. Bar-Tal (Ed.), *Intergroup Conflicts and*
6
7 *Their Resolution: A Social Psychological Perspective* (83-103). New York: Psychology
8
9 Press.
10
11
12
13 Hartmann, W. R. (2010). Demand estimation with social interactions and the implications for
14
15 targeted marketing. *Marketing Science*, 29, 585-601. doi: 10.1287/mksc.1100.0559
16
17
18 Harwood, T., & Garry, T. (2009). Infiltrating an e-tribe: marketing within the Machinima
19
20 [computerised games] community. *Journal of Customer Behaviour*, 8, 67–83. doi:
21
22 10.1362/147539209X414399
23
24
25
26 Heinonen, K. (2011). Conceptualising consumers' dynamic relationship engagement: the
27
28 development of online community relationships. *Journal of Customer Behaviour*, 10(1),
29
30 49–72. doi: 10.1362/147539211X570519
31
32
33 Herzenstein, M., Dholakia, U. M., & Andrews, R. L. (2011). Strategic herding behavior in peer-to-
34
35 peer loan auctions. *Journal of Interactive Marketing*, 25(1), 27–36. doi:
36
37 10.1016/j.intmar.2010.07.001
38
39
40 Hill, G. W. (1982). Group versus individual performance: Are N + 1 heads better than one?
41
42 *Psychological Bulletin*, 91, 517-539. doi: 10.1037/0033-2909.91.3.517
43
44
45
46 Hilton, D. J. (2001). The psychology of financial decision-making: Applications to trading,
47
48 dealing, and investment analysis. *The Journal of Psychology and Financial Markets*,
49
50 2(1), 37-53. doi: 10.1207/S15327760JPFM0201_4
51
52
53
54 Homburg, C., & Baumgartner, H. (1995). Beurteilung von Kausalmodellen. *Marketing:*
55
56 *Zeitschrift für Forschung und Praxis*, 17(3), 162-176.
57
58
59
60

- 1
2
3 Howard, A. (2011), Groupthink and corporate governance reform: changing the formal and
4
5 informal decision-making processes of corporate boards. *Southern California*
6
7 *Interdisciplinary Law Journal*, 20, 425-57.
8
9
- 10 Hsu, C., & Lu, H. (2007). Consumer behavior in online game communities: A motivational
11
12 factor perspective. *Computers in Human Behavior*, 23, 1642-1659.
13
14 doi:10.1016/j.chb.2005.09.001
15
16
- 17
18 Iyengar, R., Van den Bulte, C., & Valente, T. W. (2010). Opinion leadership and social
19
20 contagion in new product diffusion. *Marketing Science*, 30, 195-212. doi:
21
22 10.1287/mksc.1100.0566
23
24
- 25
26 Janis, I. L. (1972). *Victims of groupthink: A psychological study of foreign-policy decisions*
27
28 *and fiascos*. Oxford: Houghton Mifflin.
29
30
- 31 Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascos*.
32
33 Boston: Houghton Mifflin.
34
35
- 36
37 Joinson, A. N. (2001). Self disclosure in computer mediated communication: The role of self
38
39 awareness and visual anonymity. *European Journal of Social Psychology*, 31, 177-192.
40
41 doi: 10.1002/ejsp.36
42
43
- 44 Kang, J. Y. M., & Johnson, K. K. (2013). How does social commerce work for apparel
45
46 shopping? Apparel social e-shopping with social network storefronts. *Journal of*
47
48 *Customer Behaviour*, 12(1), 53-72. doi: 10.1362/147539213X13645550618524
49
50
- 51
52 Kankanhalli, A., Tan, B., & Wei, K. (2005). Contributing knowledge to electronic knowledge
53
54 repositories: an empirical investigation. *MIS Quarterly*, 29, 113-143.
55
56
57
58
59
60

- 1
2
3 Katz, R. (1982). The effects of group longevity on project communication and performance.
4
5 *Administrative Science Quarterly*, 27, 81-104. doi: 10.2307/2392547
6
7
8
9 Kayworth, T. R., & Leidner, D. E. (2002). Leadership effectiveness in global virtual teams.
10
11 *Journal of Management Information Systems*, 18(3), 7-40.
12
13
14 Kelly, E., Davis, B., Nelson, J., & Mendoza, J. (2008). Leader emergence in an Internet
15
16 environment. *Computers in Human Behavior*, 24, 2372–2383. doi:
17
18 10.1016/j.chb.2008.02.013
19
20
21 Kushin, M. J., & Yamamoto, M. (2010). Did social media really matter? College students'
22
23 use of online media and political decision making in the 2008 election. *Mass*
24
25 *Communication and Society*, 13, 608-630. doi: 10.1080/15205436.2010.516863
26
27
28
29 Langley, D. J., Hovee, M. C., Ortt, J. R., Pals, N., & van der Vecht, B. (2014). Patterns of
30
31 herding and their occurrence in an online setting. *Journal of Interactive Marketing*,
32
33 28(1), 16–25. doi: 10.1016/j.intmar.2013.06.005
34
35
36
37 Lee, E., & Lee, B. (2012). Herding behavior in online P2P lending: An empirical
38
39 investigation. *Electronic Commerce Research and Applications*, 11, 495–503. doi:
40
41 10.1016/j.elerap.2012.02.001
42
43
44 Leung, L. (2007). Stressful life events, motives for Internet use, and social support among
45
46 digital kids. *Cyberpsychology & Behavior*, 10, 204-214. doi: 10.1089/cpb.2006.9967
47
48
49
50 Li, Y., Tan, C.-H., & Teo, H.-H. (2012). Leadership characteristics and developers'
51
52 motivation in open source software development. *Information & Management*, 49(5),
53
54 257–267. doi: 10.1016/j.im.2012.05.005
55
56
57
58
59
60

- 1
2
3 Malhotra, N., & Birks, D. (2007). *Marketing Research: an applied approach: 3rd European*
4
5 *Edition*. Harlow: Pearson Education.
6
7
- 8 Manz, C. C., & Sims, H. P. (1990). *Super-leadership*. New York: Berkley Publishing Group.
9
10
- 11 Manz, C. C., & Neck, C. P. (1995). Teamthink: beyond the groupthink syndrome in self-
12
13 managing work teams. *Journal of Managerial Psychology*, 10(1), 7-15. doi:
14
15 10.1108/02683949510075155
16
17
- 18 McAlexander, J.H., Schouten, J.W., & Koenig, H.F. (2002). Building brand community.
19
20 *Journal of Marketing*, 66(1), 38-54. doi: 10.1509/jmkg.66.1.38.18451
21
22
- 23 McCauley, C. (1989). The nature of social influence in groupthink: Compliance and
24
25 internalization. *Journal of Personality and Social Psychology*, 57, 250-260. doi:
26
27 10.1037/0022-3514.57.2.250
28
29
- 30 Mick, D. G., Broniarczyk, S. M., & Haidt, J. (2004). Choose, choose, choose, choose, choose,
31
32 choose, choose: Emerging and prospective research on the deleterious effects of living in
33
34 consumer hyperchoice. *Journal of Business Ethics*, 52, 207-211. doi:
35
36 10.1023/B:BUSI.0000035906.74034.d4
37
38
- 39 Mikal, J. P., Rice, R. E., Abeyta, A., & DeVilbiss, J. (2013). Transition, stress and computer-
40
41 mediated social support. Special issue on social media. *Computers in Human Behavior*,
42
43 29, 40-53. doi: 10.1016/j.chb.2012.12.012
44
45
- 46 Miller, M. D., & Cryss Brunner, C. (2008). Social impact in technologically-mediated
47
48 communication: An examination of online influence. *Computers in Human Behavior*, 24,
49
50 2972-2991. doi:10.1016/j.chb.2008.05.004
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Montanari, J. R., & Moorhead, G. (1989). Development of the groupthink assessment
4
5 inventory. *Educational and Psychological Measurement*, 49(1), 209-219. doi:
6
7 10.1177/0013164489491023
8
9
- 10 Moorhead, G., & Montanari, J. R. (1986). An empirical investigation of the groupthink
11
12 phenomenon. *Human Relations*, 39, 399-410. doi: 10.1177/001872678603900502
13
14
- 15 Moorhead, G., Neck, C. P., & West, M. S. (1998). The tendency toward defective decision
16
17 making within self-managing teams: The relevance of groupthink for the 21st century.
18
19 *Organizational Behavior and Human Decision Processes*, 73, 327-351.
20
21 doi:10.1006/obhd.1998.2765
22
23
- 24 Mullen, B., Anthony, T., Salas, E., & Driskell, J. E. (1994). Group cohesiveness and quality
25
26 of decision making an integration of tests of the groupthink hypothesis. *Small Group*
27
28 *Research*, 25, 189-204. doi: 10.1177/1046496494252003
29
30
31
- 32 Neck, C. P., & Manz, C. C. (1994). From groupthink to teamthink: Toward the creation of
33
34 constructive thought patterns in self-managing work teams. *Human Relations*, 47, 929-
35
36 952. doi: 10.1177/001872679404700804
37
38
39
- 40 Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory (3rd ed.)*. New York:
41
42 McGraw-Hill.
43
44
- 45 O'Mahony, S., & Ferraro, F. (2007). The emergence of governance in an open source
46
47 community. *Academy of Management Journal*, 50, 1079–1106. doi:
48
49 10.5465/AMJ.2007.27169153
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Oh, W., & Jeon, S. (2007). Membership herding and network stability in the open source
4
5 community: The Ising perspective. *Management Science*, 53, 1086–1101. doi:
6
7 10.1287/mnsc.1060.0623
8
9
- 10 Park, J. H., Gu, B., Leung, A. C. M., & Konana, P. (2014). An investigation of information
11
12 sharing and seeking behaviors in online investment communities. *Computers in Human*
13
14 *Behavior*, 31, 1-12. doi: 10.1016/j.chb.2013.10.002
15
16
17
- 18 Paulus, P. B. (1998). Developing consensus about groupthink after all these years.
19
20 *Organizational Behavior and Human Decision Processes*, 73(2), 362-374. doi:
21
22 10.1006/obhd.1998.2767
23
24
25
- 26 Postmes, T., Spears, R., Sakhel, K., & De Groot, D. (2001). Social influence in computer-
27
28 mediated communication: The effects of anonymity on group behavior. *Personality and*
29
30 *Social Psychology Bulletin*, 27, 1243-1254. doi: 10.1177/01461672012710001
31
32
33
- 34 Price, V., Nir, L., & Cappella, J. N. (2006). Normative and informational influences in online
35
36 political discussions. *Communication Theory*, 16(1), 47-74. doi: 10.1111/j.1468-
37
38 2885.2006.00005.x
39
40
- 41 Reinhart, C. M., & Rogoff, K. (2009). *This time is different: Eight centuries of financial folly*.
42
43 Princeton: Princeton University Press.
44
45
- 46 Ren, Y., Harper, F. M., Drenner, S., Terveen, L. G., Kiesler, S. B., Riedl, J., & Kraut, R. E.
47
48 (2012). Building member attachment in online communities: Applying theories of group
49
50 identity and interpersonal bonds. *MIS Quarterly*, 36, 841-864.
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Ren, Y., Kraut, R., & Kiesler, S. (2007). Applying common identity and bond theory to
4 design of online communities. *Organization Studies*, 28(3), 377–408. doi:
5 10.1177/0170840607076007
6
7
8
9
10 Richardson, N. (1994). *The effects of conformity predisposition and leader behavior on the*
11 *production of groupthink and the quality of a group's decision*. Beaumont: Lamar
12 University Press.
13
14
15
16
17
18 Ridings, C. M., Gefen, D., & Arinze, B. (2002). Some antecedents and effects of trust in
19 virtual communities. *The Journal of Strategic Information Systems*, 11(3), 271-295. doi:
20 10.1016/S0963-8687(02)00021-5
21
22
23
24
25
26 Rook, L. (2006). An economic psychological approach to herd behavior. *Journal of*
27 *Economic Issues*, 40(1), 75–95.
28
29
30
31 Rothaermel, F.T., & Sugiyama, S. (2001) Virtual Internet communities and commercial
32 success: Individual and community-level theory grounded in the atypical case of
33 TimeZone.com. *Journal of Management*, 27, 297-312. doi:
34 10.1177/014920630102700305
35
36
37
38
39
40
41 Schafer, M., & Crichlow, S. (1996). Antecedents of groupthink: A quantitative study. *Journal*
42 *of Conflict Resolution*, 40, 415-435. doi: 10.1177/0022002796040003002
43
44
45
46
47 Schnall, E., & Greenberg, M. J. (2012). Groupthink and the Sanhedrin: An analysis of the
48 ancient court of Israel through the lens of modern social psychology. *Journal of*
49 *Management History*, 18(3), 285-294. doi: 10.1108/17511341211236228
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Schneier, C. E., & Goktepe, J. R. (1983). Issues in emergent leadership: The contingency
4 model of leadership, leader sex, leader behavior. H. H. Blumberg (Ed.). *Small groups*
5 *and social interaction*, (413-421). Chichester, UK: John Wiley & Sons.
6
7
8
9
10 Schwämmlein, E., & Wodzicki, K. (2012). What to tell about me? Self-Presentation in online
11 communities. *Journal of Computer-Mediated Communication*, *17*, 387-407.
12 doi:10.1111/j.1083-6101.2012.01582.x
13
14
15
16
17
18 Simon, H. (2009). The crisis and customer behaviour: eight quick solutions. *Journal of*
19 *Customer Behaviour*, *8*(2), 177-186. doi: 10.1362/147539209X459796
20
21
22
23
24 Sims, R. R., & Sauser, W. I. (2013). Toward a better understanding of the relationships
25 among received wisdom, groupthink, and organizational ethical culture. *Journal of*
26 *Managemen Policies and Practices*, *14*(4), 75-90.
27
28
29
30
31 Sniezek, J. A. (1992). Groups under uncertainty: An examination of confidence in group
32 decision making. *Organizational Behavior and Human Decision Processes*, *52*(1), 124-
33 155. doi: 10.1016/0749-5978(92)90048-C
34
35
36
37
38
39 Steiner, I. D. (1982). Heuristic models of groupthink. In H. Brandstatter, J. H. Davis, & G.
40 Stocker- Kreichgauer (Eds.), *Group decision making* (503–524). New York: Academic
41 Press.
42
43
44
45
46 Tang, T. L. P., & Gilbert, P. R. (1995). Attitudes toward money as related to intrinsic and
47 extrinsic job satisfaction, stress and work-related attitudes. *Personality and Individual*
48 *Differences*, *19*, 327-332. doi:10.1016/0191-8869(95)00057-D
49
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Templeton, G. F., Luo, X. (Robert), Giberson, T. R., & Campbell, N. (2012). Leader personal
4 influences on membership decisions in moderated online social networking groups.
5
6 *Decision Support Systems*, 54, 655-664. doi:10.1016/j.dss.2012.08.011
7
8
9
10 Tetlock, P. E., Peterson, R. S., McGuire, C., Chang, S. J., & Feld, P. (1992). Assessing
11 political group dynamics: a test of the groupthink model. *Journal of Personality and*
12 *Social Psychology*, 63, 403-425. doi: 10.1037/0022-3514.63.3.403
13
14
15
16
17
18 Thoits Peggy A. (1995) Stress, coping, and social support processes: Where are we? What
19 next? *Journal of Health and Social Behavior*, 35, pp. 53-79.
20
21
22
23
24 Thompson, C. J. (2005). Consumer risk perceptions in a community of reflexive doubt.
25 *Journal of Consumer Research*, 32, 235–248. doi: 10.1086/432233
26
27
28
29 Tsang, A. S. L., & Zhou, N. (2005). Newsgroup participants as opinion leaders and seekers in
30 online and offline communication environments. *Journal of Business Research*, 58,
31 1186-1193. doi:10.1016/j.jbusres.2004.05.002
32
33
34
35
36
37 Tsikerdekis, M. (2013). The effects of perceived anonymity and anonymity states on
38 conformity and groupthink in online communities: A Wikipedia study. *Journal of the*
39 *American Society for Information Science and Technology*, 64, 1001–1015. doi:
40 10.1002/asi.22795
41
42
43
44
45
46
47 Turner, M. E., Pratkanis, A. R., Probasco, P., & Leve, C. (1992). Threat, cohesion, and group
48 effectiveness: Testing a social identity maintenance perspective on groupthink. *Journal*
49 *of Personality and Social Psychology*, 63, 781-796. doi: 10.1037/0022-3514.63.5.781
50
51
52
53
54
55
56
57
58
59
60

- 1
2
3 Turner, M. E., & Pratkanis, A. R. (1998). Twenty-five years of groupthink theory and
4
5 research: Lessons from the evaluation of a theory. *Organizational Behavior and Human*
6
7 *Decision Processes*, 73(2), 105-115. doi: 10.1006/obhd.1998.2756
8
9
- 10 Turner, M. E., & Pratkanis, A. R. (2014). Preventing groupthink risk through deliberative
11
12 discussion: Further experimental evidence for a social identity maintenance model.
13
14 *International Journal of Risk and Contingency Management*, 3(1), 12-24. doi:
15
16 10.4018/ijrcm.2014010102
17
18
- 19 Tyler, K., & Medlin, C. J. (2008). Marketing relationships in financial services business
20
21 markets: The global hedge fund industry. *Journal of Customer Behaviour*, 7(4), 293-313.
22
23 doi: 10.1362/147539208X386842
24
25
26
- 27 Valentine, S., Godkin, L., & Varca, P. E. (2010). Role conflict, mindfulness, and
28
29 organizational ethics in an education-based healthcare institution. *Journal of Business*
30
31 *Ethics*, 94, 455-469. doi: 10.1007/s10551-009-0276-9
32
33
34
- 35 Van Dolen, W. M., Dabholkar, P., & de Ruyter, K. (2007). Satisfaction with online
36
37 commercial group chat: The influence of perceived technology attributes, chat group
38
39 characteristics, and advisor communication style. *Journal of Retailing*, 83, 339-358.
40
41 doi:10.1016/j.jretai.2007.03.004
42
43
44
- 45 Van Noort, G., & Willemsen, L. M. (2012). Online damage control: The effects of proactive
46
47 versus reactive webcare interventions in consumer-generated and brand-generated
48
49 platforms. *Journal of Interactive Marketing*, 26(3), 131-140.
50
51 doi:10.1016/j.intmar.2011.07.001
52
53
54
55
56
57
58
59
60

- 1
2
3 Vishwanath, A. (2006). The effect of the number of opinion seekers and leaders on
4
5 technology attitudes and choices. *Human Communication Research*, 32(3), 322–350.
6
7 doi:10.1111/j.1468-2958.2006.00278.x
8
9
- 10 Wakefield, R. L., Leidner, D. E., & Garrison, G. (2008). Research note - A model of conflict,
11
12 leadership, and performance in virtual teams. *Information Systems Research*, 19, 434-
13
14 455. doi: 10.1287/isre.1070.0149
15
16
- 17 Walden, E., & Browne, G. J. (2008). Rational fads in investor reactions to electronic
18
19 commerce announcements: An explanation of the Internet bubble. *Electronic Commerce*
20
21 *Research and Applications*, 7, 44–54. doi: 10.1016/j.elerap.2006.09.001
22
23
24
- 25 Wang, Y., & Fesenmaier, D. R. (2004). Modeling participation in an online travel
26
27 community. *Journal of Travel Research*, 42(3), 261-270. doi:
28
29 10.1177/0047287503258824
30
31
32
- 33 Warttig, S. L., Forshaw, M. J., South, J., & White, A. K. (2013). New, normative, English-
34
35 sample data for the Short Form Perceived Stress Scale (PSS-4). *Journal of Health*
36
37 *Psychology*, 18, 1617-1628. doi: 10.1177/1359105313508346
38
39
- 40 Watts, D. J., & Dodds, P. (2007a). The accidental influentials. *Harvard Business Review*,
41
42 85(2), 22–23.
43
44
45
- 46 Watts, D. J., & Dodds, P. (2007b). Influentials, networks, and public opinion formation.
47
48 *Journal of Consumer Research*, 34, 441–458. doi:10.1086/518527
49
50
- 51 Weiss, A. M., Lurie, N. H., & MacInnis, D. J. (2008). Listening to strangers: Whose
52
53 responses are valuable, how valuable are they, and why? *Journal of Marketing Research*,
54
55 45, 425-436. doi: 10.1509/jmkr.45.4.425
56
57
58
59
60

- 1
2
3 Welbourne, J. L., Blanchard, A. L., & Wadsworth, M. B. (2013). Motivations in virtual
4 health communities and their relationship to community, connectedness and stress.
5
6
7 *Computers in Human Behavior*, 29, 129-139. doi: 10.1016/j.chb.2012.07.024
8
9
- 10 Whyte, G. (1998). Recasting Janis's groupthink model: The key role of collective efficacy in
11 decision fiascoes. *Organizational Behavior and Human Decision Processes*, 73(2), 185-
12 209. doi: 10.1006/obhd.1998.2761
13
14
15
16
17
- 18 Wojcieszak, M., & Price, V. (2009). What underlies the false consensus effect? How personal
19 opinion and disagreement affect perception of public opinion. *International Journal of*
20 *Public Opinion Research*, 21(1), 25-46. doi:10.1093/ijpor/edp001
21
22
23
24
25
- 26 Wolny, J., & Charoensuksai, N. (2014). Mapping customer journeys in multichannel
27 decision-making. *Journal of Direct, Data and Digital Marketing Practice*, 15, 317-326.
28 doi: 10.1057/dddmp.2014.24
29
30
31
32
- 33 Xie, Y. H., & Singh, N. (2007). The impact of young adults' socialisation on consumer
34 innovativeness. *Journal of Customer Behaviour*, 6, 229-248. doi:
35 10.1362/147539207X251031
36
37
38
39
40
- 41 Yum, H., Lee, B., & Chae, M. (2012). From the wisdom of crowds to my own judgment in
42 microfinance through online peer-to-peer lending platforms. *Electronic Commerce*
43 *Research and Applications*, 11, 469-483. doi: 10.1086/518527
44
45
46
47
- 48 Zhao, K., Stylianou, A. C., & Zheng, Y. (2013). Predicting users' continuance intention in
49 virtual communities: The dual intention-formation processes. *Decision Support Systems*,
50 55, 903-910. doi: 10.1016/j.dss.2012.12.026
51
52
53
54
55
56
57
58
59
60

1
2
3 Zhou, X., Vohs, K. D., & Baumeister, R. F. (2009). The symbolic power of money reminders
4 of money alter social distress and physical pain. *Psychological Science*, *20*, 700-706. doi:
5 10.1111/j.1467-9280.2009.02353.x
6
7
8

9
10 Zhou, Z., Jin, X.-L., Vogel, D. R., Fang, Y., & Chen, X. (2011). Individual motivations and
11 demographic differences in social virtual world uses: An exploratory investigation in
12 Second Life. *International Journal of Information Management*, *31*(3), 261-271.
13 doi:10.1016/j.ijinfomgt.2010.07.007
14
15
16
17

18
19
20 Zhu, R., Dholakia, U. M., Chen, X., & Algesheimer, R. (2012). Does online community
21 participation foster risky financial behavior? *Journal of Marketing Research*, *49*, 394–
22 407. doi: 10.1509/jmr.08.0499
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
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