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How do Facebook followers co-create value with charities?

Proposing a typology considering conspicuous donation behavior.

Abstract

Purpose: This study presents a typology of Facebook followers of charities, drawing on theories of value co-creation, impression management and conspicuous donation behavior.

Design/Methodology/Approach: Data from 234 students based in an Irish University, and 296 adults in the United States were subjected to cluster analysis.

Findings: Four segments were identified, common to both samples. *Quiet donors* are less likely to engage with a charity on Facebook, yet they may donate to the charity. They follow a charity if it offers intrinsic meaning and they quietly donate money. *Facebook expressives* mention charities on Facebook to impress others, but have low intention to donate. Following the charity on Facebook is a means to virtue signal, but it helps to spread word of mouth. *Friendly donors* are active on social media and engage with charities on Facebook when there is personal meaning, and they will donate. Following the charity offers them intrinsic value, and their Facebook mentions promote the charity online. Finally, *dirty altruists* are motivated by a desire to help, but also to impress others. They will donate but they will ensure to highlight their good deed on Facebook, to virtue signal.

Originality/Value: The study contributes to the literature investigating individuals' motivations to connect with charities through social media, and suggests value co-created by types of charity followers on Facebook.

Keywords: Value Co-Creation, Impression Management, Conspicuous Donation Behavior, Donor Typology.

Article classification: Research Paper

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Introduction

An ongoing challenge for charitable organizations is to encourage individuals to make donations of time or money (Cockrill and Parsonage, 2016). Charities utilize social networks such as Facebook in their marketing communications campaigns. However, following a charity on social media might not lead to donation or positive action. For example, although Cancer Research UK's #nomakeupselfie campaign became a social media craze, some users did not even know which charity it supported as they focused on the selfie component of the campaign (Lee, 2014). Similarly, independent reports have indicated that the Ice Bucket Challenge, the fundraising campaign for the ALS which peaked in 2014, boosted the ALS funding by 187% (Strub, 2019). Yet even with such large-scale viral campaigns, mentions may not translate into awareness, and the online conversation may be about the action (such as the challenge), rather than about the cause (James, 2014). A key criticism is that not everyone donates, with Bloomberg writer Leonid Bershidsky calling such social media campaigns a "narcissist's bonanza" (Townsend, 2014).

To better understand the effect of social media marketing, Hoffman and Fodor (2010) argued that managers should turn the concept of return on investment (ROI) on its head, and consider returns in terms of consumer response, investigating their motivations to use social media and the investments they make to engage with the organization. The literature also argues that social media could be a powerful way to generate sustainable word of mouth (WOM), whereby the right individuals spread the right message to others over the right platform (Kumar and Mirchandani, 2012). Yet firms investing in social media also need a

better understanding about why consumers engage with electronic word of mouth (eWOM) (Rossmann et al., 2016).

From a services perspective, the concept of value co-creation is salient, as the service experience is the outcome of interaction between customer and service provider (Grönroos, 2011; Choi et al., 2019). Social media such as Facebook present an opportunity for co-creation, leading to better customer experience and loyalty (Huang and Chen, 2018), and offering a platform for co-creation with brand communities (Kao et al., 2016). However, there is need for caution. On Facebook, people may post about good deeds, such as posting photos of themselves taking part in a charity challenge, to highlight those deeds to others (Berman et al., 2015). Yet for some, online posts may not reflect their offline reality (Schau and Gilly, 2003), and this may also apply to actions such as charity donations. As such, an individual could consume good by mentioning a charity on Facebook, for the purpose of impression management (Hollenbeck and Kaikati, 2012; Schau and Gilly, 2003), with little intention to donate. Although some nascent research in the area of conspicuous behavior has investigated the relationship between online mentions of a charity and intention to donate (Wallace et al., 2017), it is limited in its assumption that all Facebook followers of a charity are similar. Moreover, to the authors' knowledge, no studies have considered the potential value created by those followers who may not intend to donate, yet mention the charity on their Facebook pages.

The main objective of this study therefore is to investigate a typology of those who are followers of charities on their social media. In this research, the term followers is used to describe those individuals who interact in some way with the charity on Facebook, such as by Liking or commenting about the charity on social media, or by sharing posts by the charity. This study also seeks to investigate the nature of value co-created by those Facebook followers both in terms of donation intention, and opportunities for online mobilization through eWOM.

To achieve these objectives, individuals mentioning charities on Facebook are clustered on the basis of their conspicuous donation behavior (CDB) (Grace and Griffin, 2006; 2009). After identifying distinct and practice relevant groups, this research explores whether the clusters differ in terms of their donation intention and their traits (i.e., self-esteem, materialism, self-monitoring and need for uniqueness). In addition, the clusters revealed in the study are informed by individuals' demographics and Facebook usage behaviors.

The paper makes important contributions to the literature. First, it distinguishes between those who post about charities for impression management and those who post about charities and intend to donate, showing that even those who post for impression management can co-create value for the charity. As there were no studies featuring the motives and traits of different groups of people who connect with charities through Facebook (Lucas, 2017), the study fills a gap by presenting a typology of people who mention charities on Facebook, illustrated by those traits and motives. Second, the study considers charitable mentions on Facebook as a form of conspicuous consumption, drawing on the concept of CDB (Grace and Griffin, 2006) and exploring online co-creation with charity as a form of virtual consumption. Therefore, it addresses Grace and Griffin's (2009) call to investigate the relationship between conspicuous consumption of charities, and donation intention. With some exceptions (e.g., Chell and Mortimer, 2014), CDB has mainly been studied in an offline context, such as wearing ribbons following donations. In an online context, the study of CDB has been limited to considering motives for CDB, and exploring the link between CDB and donation intention in general (Wallace et al., 2017). Thus, the current study augments these insights by providing a typology of those followers who mention the charity on Facebook, segmented by their CDB. Third, the typology of consumers of charities is the first of its kind, and offers insights into those individuals who connect with charities on Facebook, considering how each type co-creates value. As Quinton and Fennemore (2013) note, marketers can encourage co-creation

through social media to encourage donations, but also to generate informal communication with online consumers and informal online communities, helping to create emotional attachment to the cause. This is the first study to distinguish between the profiles of followers who intend to donate to the charity, and self-enhancing donors, who do not intend to donate but may have large friendship networks on social media which they can mobilize through eWOM. Therefore, the study provides guidance for charities seeking to better understand the value co-created by all of their Facebook followers.

Theoretical Background

Co-creation, self-expression and impression management using charities on Facebook

The Service Dominant logic (S-D logic) (Vargo and Lusch, 2004) highlights the importance of the consumer as the co-creator of value (Vargo and Lusch, 2006). Consumers determine value when a service is consumed and from the experiences they have over time (Payne et al., 2008). Payne et al. (2008) note that communication encounters, those activities carried out to connect with customers, help to facilitate value co-creation.

On social media, value co-creation "has moved beyond the consumer's purchasing power and the financial purposes of products to focus on the symbolic meaning of consumption" (Pongsakornrungslip and Schroeder, 2011, p. 306). People contribute, create and join online social media to fulfil belongingness needs, to enjoy being connected to others, and to be recognized, as well as to interact with other members of that community (Laroche et al., 2012). Value co-creation is generated through the consumer-consumer interactions on social media, for example through providing value by posting views or facts about a football club with other fans (Pongsakornrungslip and Schroeder, 2011). Indeed, recent studies suggest that positive eWOM in social media encourages the value co-creation process (See-To and Ho, 2014; Seifert

and Kwon, 2019). With the growth of digital technologies and social media use, the concept of eWOM, defined as “consumer-generated, consumption-related communication that employs digital tools and is directed primarily to other consumers” (Rosario et al., 2020, p. 427), has amplified the role of WOM in influencing consumption (see Verma and Yadav, 2021, for a recent state-of-art review on eWOM). Previous studies have shown that eWOM influences consumers’ purchase intentions (e.g., Erkan and Evans, 2016; Kudeshia and Kumar, 2017) and “encourages the involvement of consumers in value co-creation” (See-To and Ho, 2014, p. 186). As noted by Cappocia (2018), the single best thing that small businesses can do to attract new customers is to take control of online review scores on sites such as Yelp. As “everyone has the Internet in their pocket” (Cappocia, 2018), eWOM is invaluable, with 90% of customers influenced by online reviews.

Recent literature has also investigated examples of how user generated content (UGC) (Kaplan and Haenlein, 2010) can be proactively harnessed to disseminate a brand’s proposition, through users’ co-creation of visual content and its dissemination on social media (Koivisto and Mattila, 2020), cognizant that the follower may be seeking enhance the self (Schau and Gilly, 2003). In addition to engaging with the brand online, the value derived by the follower can include connecting with others in a brand community (Muniz and O’Guinn, 2001), personal intrinsic enjoyment (Christodoulides et al., 2012) or “impression management and self-branding” (Koivisto and Mattila, 2020, p. 575). Followers who digitally associate on social media may repeat the brand narrative composed by marketers but they have also an opportunity to extend their digital selves through association with the brand (Koivisto and Mattila, 2020; Belk, 2013). From a charity’s perspective, while online interactions are helpful in creating awareness, they may not lead to donations by the consumer. For example, an individual may take part in a no make-up selfie, posting images of themselves on Facebook

(Dockterman, 2014), with the sole motivation of self-enhancement. Therefore, consumer interactions with charities may simply form a means of self-expression, as it is explored next.

It is often thought that those who are generous must exhibit modest behavior, rather than bragging about it (Berman et al., 2015). Yet those who engage in helping behavior may do so because of the self-serving benefits of helping others (White and Peloza, 2009). On Facebook, the opportunity for such self-serving is augmented, and charitable acts can be a form of self-enhancement (Hollenbeck and Kaikati, 2012). Social media presents opportunities to encourage donations. However, it is possible that those who mention charities on their Facebook page for the purpose of self-enhancement, do not have any intention to donate to the charity. For these individuals, their creation of value is through their interaction with the charity on Facebook, rather than through donation.

Existing literature has cautioned that ones' online social media consumption does not always reflect ones' material reality (Schau and Gilly, 2003). Facebook consumption is often virtual, whereby individuals may choose to associate with products for self-expressive reasons, without intention of ownership (Belk, 2013).

It is understood that self-expression may be at least part of a consumer's motive for social media association with conspicuously consumed brands such as luxury brands (Koivisto and Mattila, 2020). Yet when charities make appeals, and people engage with them, it is usually assumed people are motivated, at least in part, by altruism (Batson, 1990). However, as noted earlier, there is increasing recognition that people are motivated by self-benefiting appeals (Holmes et al., 2002), and extant literature considers impression management and identity formation as motivators to create eWOM (Belk, 2013), in addition to motivators such as altruism (Hennig Thurau et al., 2004). Therefore, while Facebook charity campaigns may facilitate impression management, they could fail to achieve donations, if a strong motive of the follower is self-promotion.

This study seeks to distinguish between the value co-created by those consumers who seek to enhance the self by simply posting about charities online, and those who are genuinely motivated to give to the charity. To understand the relationship between consumers' interactions with charities and their self-enhancement motives, the study draws on the theory of CDB, which is discussed below.

Conspicuous donation behavior (CDB)

The theory of conspicuous donation behavior (CDB) was developed by Grace and Griffin (2006) and involves "an individual's show of support to charitable causes through the purchase of merchandise that is overtly displayed on the individuals' person or possessions (e.g. the wearing of empathy ribbons, red noses, etc.)" (Grace and Griffin, 2009, p. 149). As this study sought to investigate whether mentioning charities online as a form of impression management resulted in actual donations, CDB was an appropriate construct with which to cluster donors.

Grace and Griffin (2009) distinguish between CDB self-oriented, that "is motivated by the desire to seek intrinsic benefits" and CDB other-oriented, that "is motivated by the desire to display the behavior to others" (Grace and Griffin, 2009, p. 22). Both forms of CDB have relevance when studying conspicuous consumption of charity on Facebook as some individuals may post about charities for the purpose of impressing others, and others may post about charities for the purpose of showing others and themselves that they are a good person. Wallace et al. (2017) noted that CDB can negatively influence donation intention. That is, when individuals post about charities online, for the purpose of signaling to others, they are less likely to donate time or money to that charity. However, Wallace et al. (2017) did not consider that those individuals who post without having an intention to donate might still co-create value with the charity. This study therefore investigates whether individuals mentioning a charity on Facebook could be clustered according to their self-oriented and other-oriented CDB, in order

to better understand the potential for value co-creation by each cluster. In particular, the following research question is addressed:

RQ1: Can different types of individuals who post about charities on Facebook be identified based on their CDB?

The behavior and characteristics informing the typology

CDB is a form of conspicuous consumption (Grace and Griffin, 2006, 2009). Therefore, other behaviors and characteristics commonly associated with conspicuous consumption were investigated to provide more insight into these individuals' behaviors. As this study considers following charity a potential form of conspicuous consumption, these individuals are called consumers of charity.

First, Grace and Griffin (2009) advocated the consideration of CDB in relation to behaviors such as intention to donate. Therefore, this study considered whether *intention to donate* informed the clusters of consumers of charities on Facebook. Donations included both time and money and were measured separately, as an individual may be time rich and cash poor, yet wish to donate. Intentions were measured, to avoid self-reported bias stating actual donations. This approach is consistent with existing literature (e.g., Cockrill and Parsonage, 2016; White and Peloza, 2009).

Consumers of charities on Facebook may also be motivated by their personality traits. Grace and Griffin (2006, 2009) called for further investigation of CDB by exploring self-monitoring and materialism, and in structural models, both constructs were identified as antecedents of CDB (Wallace et al., 2017). Self-esteem has also been considered in studies of the brand and the self (e.g., Wallace et al., 2017; Mälar et al., 2011). Furthermore, literature on conspicuous consumption considers need for uniqueness (NFU) a predictor of self-presentation

attitude (Bian and Forsythe, 2012). Therefore, these traits, described below, informed the typology.

Materialism is "the tendency to view worldly possessions as important sources of satisfaction in life" (Belk and Pollay, 1985, p. 394). CDB is correlated with material success (Grace and Griffin, 2009), because "materialists view themselves as successful to the extent they can possess products that project the desired images" (Richins and Dawson, 1992, p. 3-4). As Facebook is a means to present an ideal self (Hollenbeck and Kaikati, 2012), materialism informs this typology.

Self-esteem refers to the individual's overall evaluation of their self-worth (Rosenberg, 1965). Self-esteem influences whether individuals consume brands that are similar to their actual or ideal selves (Mälar et al., 2011). As conspicuous charity consumption may represent an ideal self on Facebook (Hollenbeck and Kaikati, 2012), self-esteem was included to characterize the typology.

Self-monitoring is "self-observation and self-control guided by situational cues to social appropriateness" (Snyder, 1974, p. 526). Self-monitoring is especially relevant in a study of CDB on Facebook, where the presentation of the self is virtual and individuals post while cognizant of the evaluations of their social network (Hollenbeck and Kaikati, 2012).

Need for uniqueness (NFU) is an individual characteristic to pursue brands to convey an identity distinguishing oneself from others (Tian et al., 2001). NFU influences self-expressive attitudes as, for example, individuals may consume specific brands to express their individuality (Bian and Forsythe, 2012).

Finally, demographics and the number of Facebook friends and time spent on Facebook in an average day informed the typology. These later items are helpful as they indicate the users' level of Facebook use and characterize individuals in relation to their Facebook use

(Ellison et al., 2007). Moreover, the number of Facebook friends has been investigated as a moderator between self-presentation and brand-related WOM (Choi and Kim, 2014). Therefore, it is interesting to include this variable in the study of CDB and value co-creation on Facebook.

Accordingly, the following research question is addressed:

RQ2: How do the identified types differ by their intentions to donate (time and money), traits (i.e., self-esteem, materialism, self-monitoring and NFU), demographics and Facebook use?

Method

Survey design and samples

This research is exploratory and seeks to generate a typology based on a survey that was replicated for generalizability. First, a sample of students based in Ireland (N = 234) explored the cluster profile. Then, a second sample of adult consumers based in the US (N = 298) further investigated the cluster profile. This approach is in line with other works (e.g., Lankton et al., 2017) that used both a student sample and a general sample to identify respondents groups, allowing for a broader understanding by capturing two views about CDB on Facebook.

Sample 1: Irish student sample. The survey was circulated as a SurveyMonkey link in an email to all students in an Irish University. A student sample was considered relevant to investigate the typology because students are more likely to engage with charities on social media (Ho and O'Donohoe, 2014). Moreover, student giving is a reliable proxy for giving by the college-educated later in life (de Oliveira et al., 2011) and studies of self-presentation have focused on students (Pounders et al., 2016). As incentive, participants who completed the survey were entered into a draw for an iPad.

Facebook was chosen because of the visibility of ones' posts to others in ones' friendship network (Hollenbeck and Kaikiti, 2012). Participants were asked two screening questions. First, they were asked "Do you have a Facebook account, accessed in the past month?" Second, they were provided with a definition of a Charity, from the Charity Commission, UK (2013):

"A Charity includes any non-profit organization that works to: Aid the prevention of poverty, advance health or the saving of lives; Advance citizenship or community development; the arts, culture or heritage; amateur sports; Advance environmental protection; Provide relief of those in need (those who are aged, have a disability, finical hardship, or other need); Advance animal welfare."

They were then asked "In the past year, have you mentioned a charity brand on Facebook?" The word mentioned was used in the screening question because pretests and pilot tests revealed consumers often use photographs, or share content, or Like a charity, to follow or associate with it. Therefore, the word mentioned was considered more inclusive than Liked. In total, 234 complete cases answered 'yes' to both questions and were included in the analysis.

Sample 2: US adult sample. A general adult sample of 300 individuals was recruited via Amazon's Mechanical Turk (MTurk). MTurk provides a more diverse pool of participants than student samples (Buhrmester et al., 2011; Gosling et al., 2004). Moreover, MTurk samples are reliable and comparable to traditional samples (Buhrmester et al., 2011; Gosling et al., 2004). The US sample allowed for a second cluster analysis which could provide reassurance of the generalizability of the results. By including a second sample, with many non-students, the study was able to overcome potential limitations associated with reliance on a student sample.

The survey procedure for the US sample was the same as the procedure for the Irish student sample. The survey screening questions were consistent. All participants had a Facebook account that they had accessed in the past month, and all participants had mentioned a charity on Facebook in the past year.

The average completion time for the survey with the student sample was 10 minutes. Therefore, for the MTurk sample, each participant was paid $1.10 for their participation, based on a 10-minute completion time. An attention check was included (i.e., one instructed response question requested that participants would select "strongly disagree" on a Likert scale) (Meade and Craig, 2012). Four participants were removed for incorrectly answering this attention check. The deletion of these cases resulted in a final sample size of 296 participants. Table I shows a demographic profile of both samples.

[Table I Here]

Measures

The variables included in the study were measured using the following scales from the literature. The full list of the scale items is provided in Appendix A.

Conspicuous donation behavior (CDB) was measured using Grace and Griffin's (2009) scale. The conspicuous donation act of wearing charity ribbons in Grace and Griffin's (2009) measure was replaced with mentioning the charity on Facebook. For example items included: "It increases my self-respect when I mention this charity on Facebook", measured on a 7-point Likert scale (1 = *strongly disagree*; 7 = *strongly agree*).

Intention to donate was measured using items from Wheeler (2009). The scale distinguished between volunteering time and donating money, in line with Wheeler (2009). Participants were asked about the possibility, likelihood and probability that they would volunteer time to the charity and would donate money to the charity. These intentions were

measured separately on 7-point scales (1= *impossible*, 7= *possible*; 1= *unlikely*, 7= *likely*; 1= *improbable*, 7= *probable*).

Self-esteem was measured using Rosenberg's (1965) scale. An example of scale items includes "I feel that I have a lot of good qualities" measured on 5-point Likert scales (1= *strongly disagree*; 5= *strongly agree*).

Materialism was measured using Richins' (1987) scale. Items included "It's really true that money can buy happiness" measured on 7-point Likert scales (1= *strongly disagree*; 7= *strongly agree*).

Self-monitoring was measured using the susceptibility to interpersonal influence scale (Bearden et al., 1989). An example of scale items is "At parties I usually try to behave in a manner that makes me fit in", measured on a 5-point scale (1= *always false*; 5= *always true*).

Need for uniqueness (NFU) was measured using items from Bian and Forsythe (2012). Consistent with the literature, three components of NFU were measured: creative choice counter-conformity, with items such as "I'm often on the lookout for new products or brands that will add to my personal uniqueness"; unpopular choice counter-conformity, with items such as "I often dress unconventionally even when it's likely to offend others"; and similarity avoidance counter-conformity, with items such as "I dislike brands or products that are customarily purchased by everyone". Each item was measured on a 7-point Likert scale (1= *strongly disagree*; 7= *strongly agree*).

Scale validation

Confirmatory factor analyses (CFA) were conducted to assess the reliability, dimensionality and validity of the variables in each sample using EQS 6.2 and the robust maximum-likelihood estimation.

Sample 1: Irish student sample. CFA suggested deleting one item from the other-oriented CDB measure. Likewise, results suggested deleting three items of the materialism measure, two of the self-esteem scale and six from the self-monitoring construct. After this deletion, CFA of the multi-item scales produced an acceptable fit to the data (S-B $\chi^2 = 895.52$ (549) $p<0.001$, NNFI = 0.912, CFI = 0.924, IFI = 0.925, RMSEA = 0.049). All factor loadings were above 0.5 and were statistically significant. In addition, the composite reliability (CR) and average variance extracted (AVE) values were greater than 0.7 and 0.5 respectively, which guarantee the internal validity of the measurement model (see Appendix A). Results also supported the discriminant validity of the scales as the AVE for any two constructs was always greater than the squared correlation estimate.

Sample 2: US adult sample. Results of CFA suggested the deletion of one item of the other-oriented CDB measure, three items of the materialism measure, two of the self-esteem scale and six from the self-monitoring construct. The overall model fit statistics were good (S-B $\chi^2 = 952.14$ (549) $p<0.001$, NNFI = 0.925, CFI = 0.935, IFI = 0.936, RMSEA = 0.050). Standardized factor loadings were above 0.5 and statistically significant. CR and AVE values were greater than 0.7 and 0.5 respectively (see Appendix A). Finally, the discriminant validity of the scales was also evident as the AVE for each construct was greater than the square of the correlation.

Measurement invariance

As the study was conducted in two countries with two different samples, measurement invariance was assessed using multigroup CFA. A sequential testing procedure with increasingly restrictive forms of measurement invariance was performed. Specifically, three types of measurement invariance are pertinent to this study: configural, metric, and scalar invariance (Steenkamp and Baumgartner, 1998). To evaluate the models and determine

evidence of noninvariance across groups, two criteria were employed (Byrne, 2006; Cheung and Rensvold, 2002): the fit of the model to the data and the difference in the CFI values between nested models.

Configural invariance requires that the same number of factors and factor loading pattern be the same across groups. No constraints are imposed on the parameters. The final models obtained previously were used to test this first level of invariance. The multigroup analysis of the baseline models for the Irish and US samples had acceptable fit indices (Appendix B). Therefore, the proposed model, which provides the basis for comparison with the subsequent models, exhibited configural invariance.

Metric invariance ensures that different groups respond to the items in the same way and is achieved when all factor loading parameters are equal across groups. Therefore, test of metric invariance requires constraining the factor pattern coefficients to be equal across samples. As Appendix B shows, the estimation results suggested that this model fits the data well. Furthermore, CFI declined insubstantially (0.002). Full metric invariance was therefore supported.

Finally, scalar invariance allows that means of underlying constructs can be meaningfully compared across groups. The intercepts of items were constrained to be the same across groups. Again, this model had acceptable fit and there was no substantial difference in CFI (see Appendix B). Thus, it can be concluded that the scales exhibited scalar invariance across both groups.

Based on these results, there is adequate support for a reasonable invariance of the constructs across both samples; that is, the constructs have the same meaning for both Irish and US respondents and substantive cross-sample comparisons can be conducted.

Cluster analysis

For both samples, cluster analysis was used to identify homogenous groups, using SPSS 20. Cluster analysis is a highly useful tool for taxonomy description, data simplification, and relationship identification (Balijepally et al., 2011). Therefore, this methodology is helpful in revealing distinct groups and profiles of respondents (Zhong and Lin, 2018) with similar level of CDB. The measures of CDB were used to cluster the groups using a hierarchical cluster analysis followed by a non-hierarchical cluster analysis K-means. Then individuals' intention to donate and traits (self-esteem, materialism, self-monitoring and NFU) as well as individuals' demographics and Facebook usage behaviors were used to inform those clusters. The process is outlined in further detail below.

Sample 1: Irish student sample. Following the validation process, a single composite measure for self-oriented and other-oriented CDB was calculated to form the clustering variables. A two-step approach was employed. In the first step, a hierarchical procedure, Ward's method, using squared Euclidean distance was applied. Several criteria identified in previous research were used to determine the number of groups (Hair et al., 2006; Nurosis, 2011). First, the percentage change of the agglomeration coefficient was examined. The agglomeration coefficient increases going from a group solution to the next solution with one less group. A large increase compared to the previous increases indicates the appropriate number of groups. There was a 27.26% increase in the agglomeration coefficient from five to four clusters, a 34.92% change from four to three clusters, and a 41.81% change from three to two. Thus, both four- and three-cluster solutions seemed to be optimal candidates. Second, the silhouette measure of cohesion and separation was used as a measure of validity of the within- and between-cluster distances. The silhouette measure for both three and four clusters was calculated. The silhouette measure value was maximized for the four-cluster solution (0.396), which indicates a fair cluster quality. Finally, solutions with three and four clusters were

profiled and examined using practical judgment and theoretical foundations (Hair et al., 2006) to ensure that they are meaningful and managerially relevant. These analyses also supported the four-cluster solution, as it had a clear and meaningful interpretation of all groups. Therefore, based on these criteria, the four-cluster solution was selected as the most acceptable. In the second step, a K-means clustering analysis was performed for the four-cluster solution. The initial centroids of the four clusters were used as the starting centers for the analysis. The solution provided the greater contrast between the groups (Hair et al., 2006). Finally, discriminant analysis supported the appropriateness of the four-cluster solution.

Sample 2: US adult sample. As in the Irish student sample, a single composite measure for self-oriented and other-oriented CDB was calculated to form the clustering variables. First, hierarchical cluster analysis using Ward's method was employed to determine the number of groups. The agglomeration schedule suggested a four-cluster solution. Specifically, the agglomeration coefficient increased sharply when going from four to three clusters (45.97%), compared with the smaller percentage change moving from five to four (20.14%) and the change between three and two (36.13%). Second, the silhouette measure of cohesion and separation was calculated for both the four- and three-cluster solution. The silhouette measure was higher for the four-cluster solution (0.381), suggesting a fair solution. Finally, to ensure that the four clusters are meaningful and managerially relevant, they were profiled and examined using practical judgment and theoretical foundations (Hair et al., 2006). Solution with three clusters was explored too. However, the interpretation of the four-cluster solution was clearer and more meaningful. Therefore, the four-cluster solution was the most acceptable. This estimate was prespecified in a K-means cluster analysis. The solution provided the greater contrast between the groups (Hair et al., 2006). Discriminant analysis supported the appropriateness of the four-cluster solution.

Results

For both samples, an analysis of variance (ANOVA) was conducted to test for differences among the four clusters. To test the existence of significant group differences among means, post-hoc multiple comparison tests using Tukey's HSD for equal variances and Games-Howell for unequal variances were performed. Tables II, III and IV illustrate the cluster profiles.

[Table II Here]

[Table III Here]

[Table IV Here]

As shown in Table II, the result of the cluster analysis was consistent across the two samples. Tables III and IV show the profile of each cluster. In the student sample, less significant differences are found between the groups. A reason for this may be the fact that, as widely acknowledged in the literature, student samples are more homogenous in nature and, therefore, show less variation. However, overall a similar profile is found across both Irish and US samples, which provide reassurance that cluster profiles are reliable. The four types are characterized as follows, and summarized in Figure 1. In each instance, the similarities and particularities are discussed. The primary value that the consumer creates through their interaction with the charity is also highlighted.

Cluster 1: Quiet donors.

Value Co-Created: intrinsic meaning and quiet actual donations.

This type has the lowest score for both other- and self-oriented CDB across both samples, which indicates that their mentions of charity on Facebook are not intended for impressing others, or creating a better self-image. Of all of the groups, they are least likely to donate time to the charity; they are more likely to donate money than time. Across both samples, they show low materialism, which supports Grace and Griffin's (2009) assertion that

higher CDB is more likely when one is more materialistic. This group is less interested in impressing others. They have the lowest NFU (creative choice and similarity avoidance) across both samples, meaning they do not need to stand out and are not using charity mentions to express their individuality. In the student sample, they are the oldest group, with the smallest number of Facebook friends, spending the least time on Facebook. The adult sample also reveals that this group spends less time on Facebook and has fewer Facebook friends than other clusters. This group is called *quiet donors* as, although they mention charities on Facebook, they are less likely to engage with the charity on Facebook or to talk about it to impress others, but they may quietly donate money to the charity. They are closer to the category of non-conspicuous private donors identified by Grace and Griffin (2009).

Cluster 2: Facebook expressives.

Value Co-Created: Self-expression and WOM on Facebook.

This cluster type has average levels of CDB (self- and other-oriented), across both samples. In the student sample, they have the least intention to donate money, in the adult sample they have the second-lowest intention to donate money, and across both samples they have the second-lowest intention to donate time to the mentioned charity. The lack of intention to donate is surprising given that a large proportion of this type is working and earns income. It is likely they mention a charity on Facebook for self-expression. The analysis supports this assertion. Existing research suggests that normative expectations may influence behavioral standards such as giving (White and Peloza, 2009). Moreover, Saxton and Wang (2014, p. 863) found that social factors may encourage donors to give to more "socially acceptable" causes. In this study, the Facebook expressive's self-monitoring score is high for both samples, that is, they may post about charities on Facebook to create an ideal self which they believe others expect them to present (Hollenbeck and Kaikati, 2012). Across both samples, this type spends most time on Facebook and has higher numbers of Facebook friends. They also have high

NFU scores (creative choice and similarity avoidance) across both samples. Given their high Facebook usage, they may post about charities to stand out by looking better than or different to others who post online. However, their need for others to see their posts offers charities value, through eWOM.

Cluster 3: Friendly donors.

Value co-created: intrinsic value, as well as actual donations, genuine promoters of the charity on Facebook.

Across both samples, this group has high levels of self-oriented CDB, but low levels of other-oriented CDB. *Friendly donors* mention a charity only if it has personal meaning. For both student and adult samples, this group has a high intention to donate time and money to the charity, because mentioning it offers intrinsic benefits. This type is called *friendly donors* because they are genuine donors, and because they are not using the charity to make an impression on others, as revealed by their low other-oriented CDB. This type is typically male, especially in the adult sample. Unlike the *quiet donors*, they are more active Facebook users, with moderate Facebook use, indicated by a medium number of Facebook friends and an average amount of time spent on Facebook. They also have low levels of self-monitoring. This suggests that they are less concerned about the views of others on their social network and it is therefore less likely they post on their Facebook profile to impress others. Findings reveal this group also has a medium level of materialism for the student sample, and a low level of materialism for the adult sample. Their NFU scores are low (creative choice, similarity avoidance and unpopular choice). This suggests that, although they use Facebook, the site serves less of a self-expressive role for them, and they are less concerned about standing out through the products they mention on Facebook.

Cluster 4: Dirty altruists.

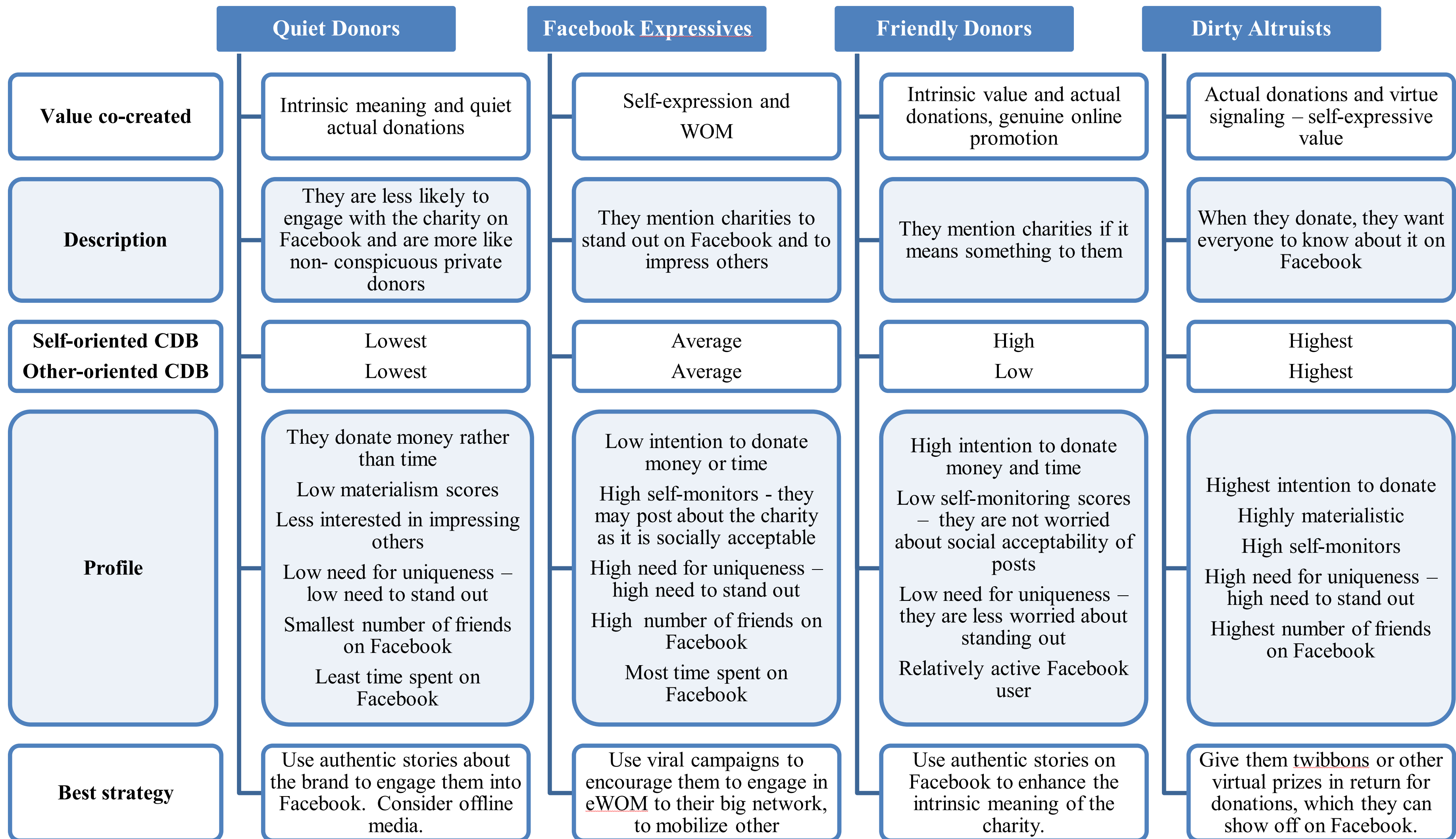
Value co-created: actual donations for the charity, and virtue signalling self-expressive value for the follower.

This final group has the highest level of CDB (self- and other-oriented), suggesting that they virtually consume charities on Facebook for self-expression purpose and to impress others. Unlike the *Facebook expressives*, who engage in CDB but have a lower intention to donate money, this group has the highest intention to give time and a high intention to donate money, across both samples. This group gives, but they also like to post about their generosity, so that others know about it. Similar to the *Facebook expressives*, a larger proportion of females occupy this type, especially in the adult sample. This type is also highly materialistic. Consistent with the literature that suggests more materialistic consumers engage in more conspicuous consumption (Podoshen and Andrzejewski, 2014), these materialistic individuals mention their generosity on Facebook, at least in part, as conspicuous consumption. They also have high levels of self-monitoring and NFU, suggesting that they also post about their good deeds on Facebook to stand out from others, cognizant that others are evaluating them based on their Facebook posts.

The study calls this group *dirty altruists*, in line with the concept of impure altruism (Andreoni, 1990), which recognized that donors receive utility from their generosity but may be less concerned with the outcome of that generosity. The *dirty altruist* cluster has the largest number of Facebook friends, in both samples. When they donate, they want to ensure their large Facebook friendship group sees their generosity. Their altruism is tarnished, or dirty, as it is motivated by a desire for impression management, rather than to help others.

Figure 1 presents a summary of the types, identifying the value each type co-creates, and providing suggestions for managers who may wish to adopt different strategies to target each group. These implications are discussed in more detail in the General discussion, below.

Figure 1: Overview of clusters



General discussion

As Quinton and Fennemore (2013, p. 47) noted "opportunities (for charities) in the form of differentiation and segmentation are made possible through better understanding of online social networks". They advocated segmenting followers by their social media interaction to better understand behavior, and they lamented that this type of learning was underutilized by the sector. Addressing this gap, this study provides insights into four types of consumers of charity brands on Facebook, segmenting them on the basis of their CDB. The clusters are consistent across two samples, in two countries, giving reassurance of generalizability.

Theoretical implications

Nascent literature has indicated that there is a negative relationship between CDB on social media and actual donation intentions (e.g., Wallace et al., 2017). However, extant literature provides little insight into the relationship between online posts and real world behavior, considering different types of Facebook followers. This study considers consumption of the charity on Facebook as providing mentions of the charity on Facebook, through likes or shares of comments, photos, or video (see Table 1). The authors acknowledge that some consumption is for the purpose of self-expression or CDB, where the follower mentions the charity, potentially without intending to donate. However, current literature suggests there is a giving type (de Oliveira et al., 2011), as some donors may give to many charities. This study is focused on the charity mentioned by the individuals on Facebook, but it also adds to the literature on the giving type because it identifies types of consumer who tend to donate.

This study reveals two types who will only consume the charity on Facebook by mentioning it on Facebook if it has personal meaning. These are groups who like to quietly donate money and are less active on Facebook (*quiet donors*), and those who are active on Facebook and intend to donate money or time to the charity (*friendly donors*). The study also

identifies a third type of consumer who donates but also likes to tell their social network about their generosity (*dirty altruists*). These types provide new insights into those consumers who mention charities on Facebook and donate to the charity, in addition to a better understanding of the behaviors and attitudes of these groups. Furthermore, the concept of the *dirty altruists* adds to the extant literature on eWOM, which asserts that consumers engage in this behavior out of a need for impression management and status (Berger, 2014).

Both *Facebook expressives* and *dirty altruists* have more females in those clusters. This suggests that the female donor is more motivated to highlight her good deeds to the social network. To the authors' knowledge, this insight was not revealed by extant literature, and it provides opportunities for practitioners to target these groups effectively.

Moreover, consistent with the literature, results suggest a fourth type of donor who is engaged in impression management by mentioning charities on Facebook, yet it is less generous with their time or money than perhaps its mentions would suggest (Berman et al., 2015; Grace and Griffin, 2009). Existing literature suggests that people emphasize their good deeds after they donate, as a form of conspicuous virtue signaling (Grace and Griffin, 2009). This study advances this idea, as it shows that, for *Facebook expressive*s, Facebook mentions of a charity may not result in donation: these individuals are seeking to create an impression without an intention to donate in the real world. Their mention of charities is self-expressive, in the same way that consumers display products on social media, without owning them (Schau and Gilly, 2003). Often those individuals are seeking to present an ideal self to their network, through their Facebook posts (Hollenbeck and Kaikati, 2012).

The study seeks to make a contribution to the understanding of value co-creation on social media. Choi et al. (2019) found consumers perceived service forms as more socially responsible when they engaged in CSR with local appeals and the support of local beneficiaries. Perhaps local appeals have greater intrinsic meaning for both *friendly donor* and *quiet donor*

types, and consequently these groups express a greater intention to donate. Moreover, in line with Kozinets et al.'s (2010) conceptualization of network co-production, this study highlights the potential co-creation opportunities presented by those for whom charity mentions have a more self-expressive function, while having a large number of Facebook friends. The research identifies *dirty altruists* who engage with the charity through Facebook mentions. It also identifies *Facebook expressives* who post about the charity on Facebook, with little intention to donate.

The results show how both *Facebook expressives* and *dirty altruists* can nevertheless co-create value, as their mentions of the charity support their own character narratives, as well as generate a helpful endorsement of the charity on Facebook. As both of these types have a large number of Facebook friends, their online mentions have the potential to reach a wide social network, thereby generating positive eWOM. Therefore, they are key influencers on their social networks. They may also encourage new fans who are active on Facebook but not yet committed to the charity (Quinton and Fennemore, 2010), offering charities a means to create a fanbase through peer-to-peer communication (Ramaswamy, 2008). Therefore, those cluster types are helpful target clusters for charities, as they can co-create value through mobilizing their Facebook followers, generating goodwill and positive feelings towards the charity.

Managerial implications

Although social media conversations and ROI are not yet well understood by managers, the findings help to inform managers of charities about which types of followers will lead to donations rather than only exposure through online mentions. This research also offers a contribution to managers seeking to enhance eWOM through social media. In recent research on eWOM, Rosario et al. (2020, p. 430) ask: "if consumers hold more self-expressive motives,

will they be interested in sending eWOM about products that have less identity signaling value or threaten identity preservation?". This study goes some way towards answering this question, as it distinguishes between those who seek self-expressive value from interactions with charities, and those who seek more intrinsic meaning. The study also shows that even those followers who offer only exposure also co-create value. As they tend to have larger groups of followers on Facebook, their mentions of the charity offer a form of eWOM which helps to create awareness of the charity on their social networks, and to mobilize other donors. Therefore, it is suggested that those who mention charities on their Facebook profiles can co-create value in two ways – through their donations and through their eWOM. The findings suggest that charitable organizations should be cognizant of the four types of follower when planning social media activities. Figure 1 above presents some suggested strategies for each cluster type, and more recommendations for charity managers are outlined below.

Utilizing authentic stories about the charity brand, such as stories about local beneficiaries, may encourage more *quiet donors* to engage with the charity on Facebook, thereby appealing to Facebook donors who prefer to give when the charity has personal meaning. While these individuals are less likely to use Facebook or to post about their good deeds online, reading about the charity on Facebook, such as its local activities, or its support for local causes, could motivate them to donate money by enhancing the charity's intrinsic meaning. In addition, as they are not big Facebook users in terms of time spent online or their number of Facebook friends, Facebook activities would be supported by offline campaigns for this group. For example, a personalized letter, through a direct marketing campaign, may appeal to the *quiet donor* who may prefer to have a one-to-one interaction with the charity rather than through Facebook.

Managers of charities targeting *Facebook expressives* should be aware that members of this group have relatively low levels of intention to donate money or time, but will still engage

with the charity on Facebook as a means to express themselves in a positive way to their friends. This group may post about a charity because they think it is a socially acceptable thing to do, and they like to stand out on Facebook, so mentioning charities is a way to achieve this. Is this group valuable to marketers if it does not intend to donate? The authors suggest that they are, as they offer valuable eWOM, which can then mobilize other donors. As this group has a large number of Facebook friends, their online posts about the charity give those messages a wide reach, and therefore their value is in providing eWOM and spreading the charities message online. They may be most likely to respond well to viral marketing campaigns, or those which invite UGC, such as sharing selfies or taking part in challenges. As this group has a high NFU, charities could also provide updates on Facebook on a regular basis, so that these individuals have something new to share with their friends, and this will keep their posts fresh and interesting. Creating new news about charity activities and seeding them on Facebook would be a relatively inexpensive way to reach this group and encourage them to spread the charity's message on social media.

Authentic stories may also encourage donations from *friendly donors*, who engage on Facebook, but also intend to donate time and money. This group is also motivated when the charity has intrinsic meaning for them. Therefore, charities could adopt a storytelling approach on Facebook, talking about real stories related to the charity, which the friendly donor could share with their Facebook friends. By doing so, they offer a more genuine (rather than self-expressive) promotion of the charity on Facebook through eWOM. As this group is less concerned about the social acceptability of posts, their social network may already perceive their posts as more genuine, and therefore find any correspondence shared by this type to be very compelling. In addition, Facebook campaigns targeting this group are likely to result in both donations of money or time, as this cohort express intention to donate in both ways. Therefore, the charity could also invite this Facebook user to spend time with the charity and

post about it online, which could encourage further donations from the friendly donor, as well as invaluable eWOM on Facebook.

By contrast, *dirty altruists* have a high level of intention to donate but also a high need to stand out online, and an awareness of the views of others. They have a high level of CDB, suggesting that they give, in part because they need others to believe that they are good people. This type would be motivated by post-donation features such as twibbons and other images that they can overlay on their Facebook profile, as this would give them an opportunity to brag online about their generosity. Also, as the use of twibbons for donations has been found to enhance further donation intention (Chell and Mortimer, 2014), giving such rewards to the *dirty altruist* may encourage ongoing donations from this group. Another option to appeal to this group is to offer badges, or other personalized thank you's. As an example: following a donation from Susan, a charity could provide a virtual badge saying "Susan has donated - thank you Susan!" which Susan can post on her Facebook page. By offering opportunities for virtue signaling, managers of charities can motivate Susan to donate again next time, as well as encouraging her to show off her generosity to her friends on Facebook and thereby offering positive eWOM.

In the typology, the findings distinguish between the types of followers who will lead to donations rather than only exposure through online mentions. In relation to the value of exposure on Facebook, both *Facebook expressives* and *dirty altruists* present opportunities. Berman et al. (2015, p. 101) note braggarts "can do more good for a cause than their silent counterparts, because the act of bragging not only promotes their own behavior but also publicizes a cause". These groups have the largest numbers of Facebook friends and their online boasting may promote a "culture of giving" (Berman et al., 2015, p. 101) on Facebook that emphasizes doing good –even though it does not question whether one is doing good for the right reasons.

Limitations and future research

The research has limitations which provide opportunities for future research.

First, this study is exploratory. Additional research could further explore the generalizability of clusters to provide further insights into the relationship between CDB on Facebook and consumers' consumption of charity brands, both offline and online.

Second, it is acknowledged that social desirability could influence the responses. That is, respondents may report a higher level of donation intention to appear good. As noted earlier, intention rather than actual donation was measured to try to avoid self-reported bias in relation to actual donations (in line with Cockrill and Parsonage, 2016; White and Peloza, 2009). Nevertheless, further research could control for social desirability to determine whether respondents may exaggerate their intention to donate.

Third, it is recommended that further research would capture the data from charity databases and social media pages to investigate whether those donations of time or money are greater from the charity's most engaged users on social media. In addition, it is suggested that research would capture a measure of identification with the charity in advance of a social media campaign, to investigate whether those who are more engaged or have greater identification with the charity are more likely to respond positively to subsequent social media campaigns.

Fourth, the study did not find any significant gender differences across the four groups for the student sample, however there were some differences in the adult sample. The authors suggest that there may be more homogeneity in perspectives across gender among the student sample, but this requires investigation through further study. Earlier it was noted that *Facebook expressives* and *dirty altruists* have a greater number of females in their clusters than other types. Moreover, *friendly donors* are typically male. This suggests that females may be more inclined to highlight their good deeds on Facebook, however this does not always translate into

donations (see the *Facebook expressives*). Research could investigate the extent to which message processing may influence CDB on Facebook and the influence of gender on such message processing, especially for younger consumers. In addition, further research could consider gender differences in investigating the relationship between online posts and offline behavior, particularly in the context of charity posts and donations. Longitudinal research could also consider how gender differences in these attitudes change over time.

Fifth, further research could investigate the relationship between donation intention and expression among *Facebook expressives* and *dirty altruists*. People who tell others about their good deeds may be less intrinsically motivated to help others. As the individual continues to brag (e.g., posting about charities on Facebook), the information becomes less novel, and others may become more suspicious of their motives (Berman et al., 2015).

Finally, longitudinal research could distinguish between the effects of charitable mentions, where the motive is solely impression management, or where the motive is genuine value co-creation.

Conclusion

The study supports the understanding of the value of social media conversations and ROI for charities, by providing insights into four types of charity followers on Facebook. By presenting a typology of those who mention charities on their Facebook pages, this research helps to inform managers which types of followers will lead to donations rather than only exposure through online mentions. This study shows how each of the four types co-creates value with the charity and explains that those followers who offer only exposure also co-create value through their potential to mobilize others through eWOM on the social network.

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Table I. Profile of survey respondents (demographics and Facebook use)

Category	Irish student sample Sample 1 (N = 234)	US adult sample Sample 2 (N = 296)
Gender	71.2% = Female 28.8% = Male	57.8% = Female 42.2% = Male
Age	Mean = 22.98 years SD = 6.05	Mean = 37.14 years SD = 11.17
Nationality	80.3% = Irish 19.7% = Other	99.3% = US 0.7% = Other
Employment status	43.8% = Yes 56.2% = No	86.4% = Yes Others include retired (2%), unemployed (2%), homemaker (6.8%), student (2.4%).
Level of education	Current level of education: 80.3% = Undergraduate student 5.1% = Higher Diploma 6% = Masters student 8.1% = Doctoral student	Final level of education attained: 4.7% = Primary 24.3% = Secondary 53.7% = Undergraduate degree 15.5% = Postgraduate degree 1.7% = Other
Has a Facebook account, accessed in past month	100% = Yes	100% = Yes
Has mentioned a Charity brand on Facebook in the past year	100% = Yes	100% = Yes
Type of mention*		
– Profile activities/interests	41.9%	34.8%
– 'Liked' or reacted to a post or message about the Charity	88%	81.1%
– 'Liked' or reacted to a photo or video about the Charity	73.5%	48.3%
– 'Liked' or reacted to a post by a celebrity about the Charity	21.8%	11.5%
– Shared stories about the Charity from friends	35%	20.6%
– Shared stories about the Charity, from the Charity itself	37.6%	24%
– Shared stories about the Charity, from a celebrity	8.1%	4.4%

Category	Irish student sample Sample 1 (N = 234)	US adult sample Sample 2 (N = 296)
– Shared a photo or video of myself involved in activities in relation to the Charity	30.3%	8.4%
– Shared a photo or video from a friend about the Charity	26.1%	10.8%
– Shared a photo or video from a celebrity about the Charity	7.7%	3.7%
– Shared a photo or video from the Charity itself	34.2%	15.2%
– Tagged a friend in a story or post about the Charity	27.4%	6.4%
– Other	4.7%	4.4%
Number of Facebook friends	Mean = 570.47 friends SD = 372.02	Mean = 346.14 friends SD = 382.16
How long do they spend on Facebook on a typical day?	Mean = 163.43 minutes SD = 112.5	Mean = 115.8 minutes SD = 152.8

Note: SD = Standard deviation from the mean. * Percentages sum to greater than 100, as some respondents engaged in more than one type of mention.

Table II. Description of clusters

Sample 1: Irish student sample						
Variable	**Cluster 1** ***Quiet donors***	**Cluster 2** ***Facebook expressives***	**Cluster 3** ***Friendly donors***	**Cluster 4** ***Dirty altruists***	**F-value**	**Post-hoc test**
Self-CDB[a]	2.55	4.01	4.52	5.78	213.11**	1-2, 1-3, 1-4, 2-3, 2-4, 3-4
Other-CDB[a]	1.36	3.45	1.63	4.39	257.34**	1-2, 1-3, 1-4, 2-3, 2-4, 3-4
No. cases	65	56	73	40		
%	27.8%	23.9%	31.2%	17.1%		
Sample 2: US adult sample						
Variable	**Cluster 1** ***Quiet donors***	**Cluster 2** ***Facebook expressives***	**Cluster 3** ***Friendly donors***	**Cluster 4** ***Dirty altruists***	**F-value**	**Post-hoc test**
Self-CDB[a]	2.60	4.74	5.02	5.94	151.56**	1-2, 1-3, 1-4, 2-4, 3-4
Other-CDB[a]	1.25	3.83	1.52	5.63	627.80**	1-2, 1-3, 1-4, 2-3, 2-4, 3-4
No. cases	50	95	84	67		
%	16.9%	32.1%	28.4%	22.6%		

Note: **p<0.05; a: 7-point scale.

Table III. Profiles of cluster groups: Intention to donate and personal traits

Sample 1: Irish student sample						
Variable	**Cluster 1** ***Quiet donors***	**Cluster 2** ***Facebook expressives***	**Cluster 3** ***Friendly donors***	**Cluster 4** ***Dirty altruists***	**F-value**	**Post-hoc test**
Intention to donate time[a]	5.49	5.77	5.93	6.06	1.72	-
Intention to donate money[a]	5.84	5.46	6.00	6.29	3.27**	2-4
Materialism[b]	3.88	4.32	4.42	4.61	2.78**	1-4
Self-esteem[a]	3.65	3.75	3.77	3.84	0.85	-
Self-monitoring[b]	2.89	3.10	2.88	3.30	2.55*	3-4
NFU: creative choice[a]	3.49	4.04	3.88	4.71	5.37**	1-4, 3-4
NFU: unpopular choice[a]	2.80	3.04	2.44	3.47	5.29**	2-3, 3-4
NFU: similarity avoidance[a]	3.02	3.75	3.25	3.58	2.32*	-
Sample 2: US adult sample						
Variable	**Cluster 1** ***Quiet donors***	**Cluster 2** ***Facebook expressives***	**Cluster 3** ***Friendly donors***	**Cluster 4** ***Dirty altruists***	**F-value**	**Post-hoc test**
Intention donate time[a]	4.39	5.08	5.54	5.56	5.99**	1-4, 1-3
Intention donate money[a]	5.66	5.75	6.27	6.26	4.82**	2-3, 2-4
Materialism[b]	4.07	4.54	3.63	5.10	17.04**	1-4, 2-3, 2-4, 3-4
Self-esteem[a]	3.80	3.89	4.06	3.96	1.29	-
Self-monitoring[b]	2.78	3.20	3.03	3.60	10.71**	1-2, 1-4, 2-4, 3-4
NFU: creative choice[a]	2.79	4.17	4.11	4.89	18.13**	1-2, 1-3, 1-4, 2-4, 3-4
NFU: unpopular choice[a]	2.11	2.99	2.64	3.44	8.17**	1-2, 1-4, 3-4
NFU: similarity avoidance[a]	2.45	3.25	2.78	3.48	5.38**	1-2, 1-4, 3-4

Note: **p<0.05; *p<0.1; NFU = Need for uniqueness; a: seven-point scale; b: five-point scale.

Table IV. Profiles of cluster groups: Demographics and Facebook use

Sample 1: Irish student sample					
Variable	**Cluster 1** ***Quiet donors***	**Cluster 2** ***Facebook expressives***	**Cluster 3** ***Friendly donors***	**Cluster 4** ***Dirty altruists***	
	%	**%**	**%**	**%**	χ^2
Gender: Male	75.4%	64.3%	73.6%	70%	2.09
Female	25.6%	35.7%	26.4%	30%	
Employment:					
Yes	40%	44.6%	41.7%	52.5%	1.76
No	60%	55.4%	58.3%	47.5%	
	Mean	**Mean**	**Mean**	**Mean**	**F-value (Post-hoc test)**
Age	24.54	21.43	22.70	23.05	2.70** (1-2)
No. FB Friends	436.03	665.52	564.55	666.68	5.21** (1-2, 1-4)
Time on FB (min)	142.66	191.07	155.96	172.13	2.08
Sample 2: US adult sample					
Variable	**Cluster 1** ***Quiet donors***	**Cluster 2** ***Facebook expressives***	**Cluster 3** ***Friendly donors***	**Cluster 4** ***Dirty altruists***	
	%	**%**	**%**	**%**	χ^2
Gender: Male	56%	53.7%	71.4%	47.8%	9.89**
Female	44%	46.3%	28.6%	52.2%	
Employment:					
Yes	88%	90.5%	78.6%	89.6%	6.47*
No	12%	9.5%	21.4%	10.4%	
	Mean	**Mean**	**Mean**	**Mean**	**F-value**
Age	36.62	37.29	38.98	35.00	1.63
No. FB Friends	321.26	322.72	326.45	423.77	1.17
Time on FB (min)	86.60	140.17	97.51	126.79	1.95

Note: **p<0.05; FB = Facebook.

Appendix A. Constructs, items, descriptives and measurement model results

Construct/Measures	Irish student sample					US adult sample				
	M	SD	λ	CR	AVE	M	SD	λ	CR	AVE
Self-CDB If I mention this charity on Facebook, I feel like I have made a difference It increases my self-respect when I mention this charity on Facebook Mentioning this charity on Facebook makes me feel good I like to remind myself of this charity I support through mentioning it on Facebook	4.07	1.28	.66-.86	0.844	0.578	4.73	1.36	.71-.80	0.834	0.556
Other-CDB I like to mention this charity on FB because I get to show something about my support [a,b] I like to mention this charity on Facebook so that people know I am a good person I like to mention this charity on Facebook because it makes me look good	2.46	1.36	.78-.95	0.859	0.755	3.14	1.84	.91-.93	0.918	0.848
Intention donate time Impossible / Possible Unlikely / Likely Improbable / Probable	5.79	1.41	.85-.96	.931	.818	5.20	1.74	.94-.97	.956	.878
Intention donate money Impossible / Possible Unlikely / Likely Improbable / Probable	5.87	1.37	.88-.95	.932	.820	6.00	1.27	.94-.96	.951	.865

Construct/Measures	Irish student sample					US adult sample				
	M	**SD**	**λ**	**CR**	**AVE**	**M**	**SD**	**λ**	**CR**	**AVE**
Materialism It is important to me to have really nice things [a,b] I would like to be rich enough to buy anything I want I'd be happier if I could afford to buy more things It sometimes bothers me quite a bit that I can't afford to buy all the things I want People place too much emphasis on material things (r) [a,b] It's really true that money can buy happiness [a,b]	4.28	1.40	.58-.88	.738	.494	4.33	1.42	.67-.80	.838	.637
Self-esteem On the whole, I am satisfied with myself At times I think I am no good at all (r) [a,b] I feel that I have a number of good qualities I am able to do things as well as most people [a,b] I feel that I have much to be proud of I feel that I am a person of worth I have a lot of respect for myself All in all, I am inclined to think I am a success I take a positive attitude toward myself	3.75	.64	.58-.80	.879	.511	3.94	.80	.69-.88	.923	.634

Construct/Measures	Irish student sample					US adult sample				
	M	SD	λ	CR	AVE	M	SD	λ	CR	AVE
Self-monitoring It is my feeling that if everyone else in a group is behaving in a certain manner, this must be the proper way to behave [a,b] I try to make sure that I am wearing clothes that are in style [a,b] At parties I usually try to behave in a manner that makes me fit in When I am uncertain how to act in social situations, I look to the behaviour of others for cues I try to pay attention to the reactions of others to my behaviour to avoid being out of place I find that I tend to pick up slang expressions from others and use them as part of my own vocabulary [a,b] I tend to pay attention to what others are wearing [a,b] The slightest look of disapproval in the eyes of a person with whom I am interacting is enough to make me change my approach It's important for me to fit into the group I'm with My behaviour often depends on how I feel others wish me to behave If I am the least bit uncertain as to how to act in a social situation, I look to the behaviour of others for cues I usually keep up with clothing style changes by watching what others wear [a,b] When in a social situation, I tend not to follow the crowd, but instead I behave in a manner that suits my mood at the time (r) [a,b]	3.01	.88	.64-.82	.881	.516	3.17	.86	.72-.83	.884	.523

Construct/Measures	Irish student sample					US adult sample				
	M	**SD**	**λ**	**CR**	**AVE**	**M**	**SD**	**λ**	**CR**	**AVE**
NFU: creative choice counter-conformity I'm often on the lookout for new products or brands that will add to my personal uniqueness Having an eye for products that are interesting and unusual assists me in establishing a distinctive image I often try to find a more interesting version of run-of-the-mill products because I enjoy being original	3.95	1.57	.71-.94	.881	.714	4.08	1.56 6	.84-.90	.909	.970
NFU: unpopular choice counter-conformity I often dress unconventionally even when it's likely to offend others If someone hinted that I had been dressing inappropriately for a social situation, I would continue dressing in the same manner	2.86	1.42	.63-.79	.673	.510	2.84	1.57	.75-.90	.731	.577
NFU: similarity avoidance counter-conformity I dislike brands or products that are customarily purchased by everyone I often try to avoid products or brands that I know are bought by the general population	3.36	1.65	.86-.94	.898	.814	3.03	1.62	.87-.92	.901	.821

Note: M: mean; SD: standard deviation; λ: range of factor loadings; CR: composite reliability; AVE: Average variance extracted; a: item deleted in Sample 1; b: item deleted in Sample 2.

Appendix B. Assessment of measurement invariance

Model specification	**S-Bχ^2 (df, *p*)**	**NFI**	**NNFI**	**CFI**	**IFI**	**RMSEA**	**ΔCFI**
M1: Configural invariance	1816.81 (1098, 0.00)	0.843	0.920	0.930	0.931	0.050	---
M2: Metric invariance	1870.23 (1124, 0.00)	0.839	0.919	0.928	0.929	0.050	0.002
M3: Scalar invariance	2069.04 (1156,0.00)	0.844	0.916	0.928	0.929	0.052	0.000