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NARCISSISTIC PROSOCIALITY IN SOCIAL MEDIA CAMPAIGNS: FINDINGS FROM A SURVEY QUASI- EXPERIMENT

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ABSTRACT. We investigate whether conspicuous participation in online social media campaigns is associated with narcissism and whether this association results in apathy, and free riding. We address these questions in the context of the Ice Bucket Challenge (IBC) campaign by examining the relationship between degree of participation (exposure), personality traits (Big Five and grandiose narcissism), and measures of apathy (unaware of the social cause) and free riding (letting others donate). In a two-stage survey quasi-experiment that decouples personality tests from behavioural questions we find significant associations between conspicuous behaviour (direct-exposure) and grandiose narcissism, particularly amongst female respondents. However, we find no significant association between this relationship and apathy for the campaign's social cause, nor did we find conclusive evidence of free riding. These results suggest that narcissistic prosociality (the combination of personal gratification and social concern) was a significant motivation for participating in this social media campaign.

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Introduction

The study of individual motives for prosocial actions has a long tradition in social behaviour research. Evolutionary biologists, political philosophers, social psychologists, and behavioural economists have long sought to understand the drivers of prosociality with particular emphasis on isolating an altruistic or communal strand such as an empathetic concern for others (Batson, 2011). What truly motivates prosocial behaviour is however an *aporia*, that is, a conundrum that can never be fully resolved (Benson, 2011). Repeatedly observing acts of sharing or giving does not establish an altruistic motive because these actions are often just as plausibly explained by the pursuit of personal benefits such as feeling good about oneself, finding purpose, averting guilt or retribution, seeking external validation, signalling virtue, abiding by moral norms, and countless other motives that ultimately are rooted in self-interest.

In this study, we look at the individual motives of participants in a viral social media campaign set up to deliver a public good (funding for medical research). Analysis of motives for performing prosocial acts is often conducted via collective action experiments (Güth & Kocher, 2014), which pitch tangible short-term individual losses such as donating money against uncertain long-term community benefits such as finding cures. Unlike these approaches, our study examines prosocial motivation through its interrelatedness with personality traits. Our hypothesis is that the motive for high-profile participation is social image competition (seeking external validation by exhibiting virtue) and the underlying trait for this motive is grandiose narcissism (self-enhancement and lack of empathy).

Although prosocial motivation and narcissism have separately been extensively researched worldwide, their potential interrelatedness ('narcissistic prosociality') has only recently started to attract the attention of researchers, mostly social psychologists. We have found no evidence of research investigating the association between narcissistic prosociality and apathy or free riding.

In this paper, we present the results of a survey quasi-experiment of participants in the 2014 Ice Bucket Challenge (IBC). The IBC was a viral online campaign, which raised awareness and funding for medical research into amyotrophic lateral sclerosis (ALS) an incurable neurodegenerative disease also known as motor neurone disease (MND) and Lou Gehrig disease. We approached participants' motivations by looking at their degree of exposure in the campaign (actively, passively, or not involved), their material contributions (donated / did not donate) and their level of attachment to its underlying cause (awareness / apathy). We focused most of our attention on direct participation (high exposure), which consisted of participants recording a video of themselves dumping (or being dumped) a bucket of ice-cold water on their heads, post it on social media, and then challenge friends to follow suit within 24 hours or else donate \$100 to ALS research.

Over a few weeks, the campaign generated funding for curative research equivalent to a decade of regular donations. This remarkable outcome was achieved by creating a simple and easily reproducible medium for campaign participants to publicly exhibit virtuous behaviour, whilst at the same time providing a vehicle for contributing to its social cause. Whether the campaign met its twin goal of raising genuine and sustained awareness for the condition itself is more debatable. Subsequent market research and analysis of social media traffic volumes suggested there was significant apathy and free riding amongst participants, who appeared more focused on the attention capital they derived than on donating or urging other to donate (Jenders, 2014; Moore, 2014). Some media decried the IBC as an 'orgy of narcissism', a social image competition rather than a collective movement inspired by a worthy cause.

Apathy can be a significant issue for the social issues campaigns such as the IBC hope to alleviate. Drawing analogy with the importance of developing consciousness for climate

change, social scientists have wondered whether the ephemeral nature of the IBC might not prove detrimental to the long-run interests of ALS sufferers and their supporting organisations (van der Linden, 2017).

Does narcissistic prosociality necessarily beget apathy for social causes? As a virtue-signalling platform supplying a conventional public good the IBC campaign provides a fitting context to examine interrelatedness between prosocial acts and participants' personality, whether apathy and free riding flow from this relationship, and what can be inferred for the enduring legacy of social campaigns.

Section 1 discusses viral social campaigns and describes the IBC campaign. Section 2 presents our survey instrument and the methodological principles that guided its design. Section 3 presents the results from our analysis whereas section 4 discusses our results. A concluding section summarizes our findings and provides implications social media campaigns.

1. Viral social campaigns

1.1. Campaign selection

To test for the interrelatedness between grandiose narcissism, apathy, free riding, and prosocial acts we had to select a suitable high-profile prosocial campaign, one that resonated with our students and that did not involve an excessively long recall period. At the time we designed our survey instrument several viral social media campaigns had attracted much attention online in Western nations. These campaigns were “#Haiti”, “Kony2012”, “Movember”, and the ALS Ice Bucket Challenge. Each campaign aimed at gathering support for a worthy cause and it was not immediately apparent which of these initiatives should be the subject of our quasi-experiment.

We first decided to observe the level of social awareness surrounding these viral campaigns. Using Google and Facebook we measured internet search volumes for these causes relative to current affairs. The Invisible Children's campaign “Kony2012” aimed at raising awareness about the activities of the Lord's Resistance Army and the capture of its leader, Joseph Kony. Although the campaign generated much social media activity in Australia its unusual objective, hunting down a warlord, had a sensational and entertaining dimension that humanitarian aid or medical research campaigns tend to lack. Similarly, we rejected the 2010 Haiti earthquake campaign because the youngest participants in our survey would have been too young at the time the disaster struck and therefore unlikely to have participated.

The Ice Bucket Challenge (IBC) was eventually selected for its viral campaign characteristics and its promise of yielding a targeted (not random) sample: its timing in 2014 ensured many of our students would have taken part in the campaign. In addition, the IBC had obvious virtue signalling objectives for narcissists or conspicuous altruists, and it supplied a conventional public good - raising funding for non-commercial medical research. The design of the IBC campaign also exhibited interesting features to probe for specific features of participants' behaviour, which we discuss next.

1.2. The IBC campaign

The IBC was a social campaign aimed at raising awareness and funding for medical research into ALS (amyotrophic lateral sclerosis), a rare but devastating neurodegenerative disease with no curative treatment. The campaign launched organically in the US in early June 2014. It consisted of participants either pouring a bucket of ice-cold water over their head and post an online video of the feat within 24 hours or, passing, to donate \$100 to ALS research.

Participants having selected the ice bucket option would then go on to nominate and challenge two other candidates to submit to the same set of actions.

In the absence of a charity leading the campaign, donations were directly channelled to various non-profit organisations that advocate for- and fund research on ALS. The largest beneficiary, the Washington DC-based ALS Association (ALSA), dubbed the IBC the ‘biggest charitable phenomenon of all time’. Between July and August 2014 ALSA collected \$115 million - about half the campaign’s donations worldwide - representing a 7-fold increase in a mere 6 weeks of their average annual revenue (ALSA, 2015). ALSA estimated that 28 million active participants (‘bucketeteers’) joined the campaign and 440 million viewers watched their videos. The ALS Society in Canada, and the Motor Neuron Disease Association in the UK were the next two main recipients (Sohn, 2017). All major ALS foundations reported considerable increases in their yearly revenue over the July - September 2014 period, with an upper estimate of \$220 million raised globally (Chowdhry, 2015).

The short-lived but intense nature of this social campaign helped coin the term ‘viral altruism’ to characterise prosocial movements that start organically (one individual following another) and propagate wildfire-like through social networks but prove hard to sustain past their tipping point (van der Linden, 2017). Van der Linden associates the short half-life of viral altruism campaigns to their reliance on extrinsic motives for participation (stimulated by social incentives) rather than intrinsic motives (stimulated by moral or emotional feelings).

There are indeed signs most IBC participants did not engage very deeply with the ALS community and its advocacy. According to Toronto-based Sysomos, a social media analytics firm, less than 20 percent of the 15.5 million tweets posted during the campaign mention ALS when referring to the IBC (Jenders, 2014). Separate market research by Philadelphia-based RJMetrics - a business intelligence firm, suggests 26 percent of bucketeteers did not refer to the ALS in their videos and only 20 percent mentioned having donated money to the cause (Moore, 2014). These numbers alone do not necessarily establish indifference or disregard for the campaign’s declared aim (raise funding) but they provide cues that some of the signalling was about the action and not the underlying cause (Jenders, 2014).

Undeniably, the Challenge’s design encouraged conspicuous behaviour and provided scope for ‘slacktivism’ (free riding). Either one accepts the challenge and derives the associated attention capital, or one donates a hundred dollars to an ALS research foundation. There is no onus on those taking the challenge to donate and therefore no public opprobrium should they fail to demonstrate having done so. Given the in-built incentives for bucketeteers to free ride on the donations of others, the reported 20 percent conversion bucketeteers-to-donors is not trivial.

Moore (2014) attributes this substantial conversion rate to the campaign’s *successive approximation* design (ie. varying exposure) whereby participants were nudged to take incremental steps towards donating (gather friends, take the challenge, have it recorded, upload video, mention ALS, donate, nominate friends) rather than being called outright to donate. Donation and care for the cause (mentioning or talking about ALS) correlate strongly with active participation across all steps: bucketeteers who donated were more likely to nominate others and would nominate more individuals than non-donors. Bucketeteers who mentioned ALS in their videos were considerably more likely to donate themselves (Moore, 2014).

In contrast with business research, academic research on the drivers and consequences of the IBC campaign is relatively sparse. Konrath et al. (2016) conducted an online survey (n = 9062, MA 37.7, 64% F) which asked participants for their degree of involvement in the IBC campaign and measured their narcissism using a single item scale. They found narcissism highest among those who posted a video and lowest among those who only donated, with non-participants and other types of participants scoring in between these extremes. Prewett et al. (2019) similarly found narcissists were motivated by social recognition but displayed no

inclination to donate. More recently, Fazio et al. (2023) found that exposure to the IBC increases the probability of donating money, amount of money donated, as well as the likelihood of volunteering, but their study doesn't focus on narcissism. Song et al. (2023) find that narcissism actually predicts prosocial behaviour but only in public spheres, not when the behaviour is inconspicuous or anonymous. .

2. Methodological approach

2.1. Data collection

We designed a two-stage survey instrument aimed at collecting information about the psychological profile of IBC participants and their behaviour during the campaign. Respondents consisted of undergraduate students enrolled at the University of Canberra in 2017 and 2018, recruited through the Faculty of Business, Government & Law.

The first wave of respondents was recruited in Semester 2, 2017, solely from economics classes, with 116 surveys drawn from this recruitment. The survey was then repeated in Semester 2, 2018, with a further 336 students recruited across a broader range of classes in Law, International Business (which was subsumed under Economics), Sociology, and Political Science. Student responses were captured in 28 tutorial classes pertaining to two law courses, two economics units, one international business course (economics), two political science courses and one sociology unit. Students were asked to sign a consent form before taking the survey, and they had the right to refuse participating (less than ten students exercised that right)

The survey was conducted at the start tutorial classes, so questions were designed to minimize response time and class disruption. Students were not told in advance of the two-stage design and questions used a mix of multichotomous and dichotomous queries rather than open-ended questions, allowing for greater comparability in the responses. The survey instrument produced a sample of 452 respondents, almost all of whom (399) had in the past five years been living in a group of six English-speaking countries that had experienced a viral IBC campaign (Australia, Canada, Ireland, The United Kingdom, The United States or New Zealand). Gender representation was 50.9% male, 49.1% female, and about 85 percent of respondents were aged 18 to 25.

2.2. Measures

Exposure measure - Survey respondents were asked an initial two-part question: "Did you participate in the ice bucket challenge?"; "If yes, to what degree did you participate?" with multi-response options available to the respondent including being a physical observer, having ice poured on themselves or pouring ice onto someone else, filming the activity and posting or re-posting on-line. If respondents did not directly participate, they were asked whether their friends did and/or if they recalled viewing the IBC online.

Apathy measure - To test for the prevalence of apathy, respondents were asked questions in stage 2 about their understanding of the medical condition the IBC campaign was hoping to relieve, and whether they knew high-profile individuals diagnosed with ALS (they were also asked in stage 1 whether they donated). The three key questions included: (i) (open-ended) can you name a public figure who has the condition/ disease the ice bucket challenge intended to raise awareness about? (ii) (choice list, 5 options) what was the name of this condition / disease? and (iii) (choice list, 5 options) what part of the body did this condition / disease affect?

The public figure question was the only open-ended question of the survey, with 11.7% (n=53) indicating that they could name a public figure diagnosed with ALS. Of this group,

almost 70% gave a correct answer (Stephen Hawking was the most popular correct answer, and Michael J. Fox - who suffers from Parkinson's disease - the most popular incorrect answer). Among direct-exposure participants, 8.6% correctly answered the public figure question and between 6.8% and 10.2% of individuals in the other groups did.

The condition / disease question was multichotomous giving respondents pause to recall that the IBC was to generate awareness of and funding for Amyotrophic Lateral Sclerosis. We had noticed high correct answer rates in a pilot project, which only used the acronym ALS and surmised that though respondents remembered the acronym they may remember little else about the disease. Thus, the multichotomous question featured other diseases: Acute myeloid leukemia, Parkinson's disease, as well as Acetolactate synthase a protein found in plants and microorganisms that has the same acronym as Amyotrophic lateral sclerosis. Thirty percent of all respondents correctly answered Amyotrophic lateral sclerosis, and 41% could correctly identify the body part the disease affects. Among the direct-exposure group, the same proportion (30%) identified the name correctly, but a higher proportion (47%) answered the body part question correctly.

All three questions, if answered correctly, demonstrate a level of understanding and awareness about the disease that an agent/advocate is ultimately seeking to improve. We considered the weight of each in achieving this awareness outcome, including whether an individual's knowledge of the scientific name for the disease compared to knowledge of a celebrity or the part of the body the disease it affects is a superior outcome. We eliminated celebrity knowledge from our overall awareness index, as 90% of respondents answering this question correctly were also able to correctly identify the body part the disease affected. We do however note that celebrity awareness is intrinsically likely to lead to a greater knowledge stock and awareness of a cause or disease, and that the two are closely linked.

To assess the level of awareness and consequently the degree of apathy that may exist among participants, we chose to construct a variable that weighted equally knowledge of the disease and the condition, noting that knowledge of one aspect may be a more desirable outcome for a charity or campaign and lead to greater resources directed towards the cause. Within our sample, donators were more likely to have knowledge of the affected body part compared to knowledge of the disease name.

Personality measure - To gain a broader picture of respondents' personalities and psychometrics, we tested for extraversion, agreeableness, and most importantly for willingness to help strangers (openness). The 240 item NEO-PI-R Big Five Inventory developed by Costa and McCrae (1992) is the most widely used and extensively researched model of personality (John & Srivastava, 1999), measuring personality at the broadest possible level of abstraction and representing it through five empirically-determined dimensions: extrovert (introvert), emotionally stable (neurotic), agreeableness (quarrelsome), open to new experience (conventional), conscientious (disorganized).

Time constraints prevented us from conducting even the 60 or 44 item versions of the NPI test. We selected the Ten-Item Personality Inventory (TIPI) developed by Gosling et al. (2003), which is derived from the Big Five. Compared to larger multi-item instruments short tests such as the TIPI are much easier to administer whilst not giving up too much ground in terms of validity and reliability (Nai, 2019; Rammstedt & John, 2007). Gosling et al. (2003) support its use whenever 'time and space are in short supply and when only an extremely brief measure of the Big Five will do' (p.525). In the TIPI test, each of the Big Five personality factors is tested twice (each factor is bipolar) and rated on a 7-point Likert scale (disagree strongly = 1; agree strongly = 7).

Narcissism measure - We were particularly interested in identifying grandiose narcissism as a proxy for a predisposition towards social image and preoccupation with oneself.

Although some of the Big Five traits can be used to predict antisocial traits such as narcissism, they are not the best suited instrument for the task (Lee & Ashton, 2014).

A widely used tool in personality and social psychology research is the 220 item Narcissism Personality Inventory (NPI) developed by Raskin and Hall (1979). Again, it is a large test that would have taken too long to administer - even in its shorter versions (e.g. NPI-40, NPI-16). Shorter but exhaustive measures have recently been developed. Amongst them, the Dirty Dozen (Jonason & Webster, 2010) was rejected as the questionnaire bore a risk of questions not being answered correctly (i.e. it was doubtful whether respondents would truthfully answer questions like 'I tend to feel that I am better than others' or 'I tend to try to be dominant in social situations').

Instead, we selected the narcissism subdivision (N) of the Short Dark Triad test (SD3) (Jones & Paulhus, 2014). The Dark Triad (machiavellianism, psychopathy and narcissism) is a group of socially aversive personality traits (Kowalski 2001) linked through disagreeableness and callousness. The SD3 measure has been shown to have broader predictive power than the Dirty Dozen (Furnham et al., 2013). The SD3_N also focuses on the grandiosity and exhibitionism of interest to our study of conspicuous behaviour. The SD3_N instrument uses a 5 step Likert scale to measure 9 items of the narcissistic personality.

2.3. Survey design

The survey instrument targeted respondents' degree of participation (exposure) in the campaign, their degree of apathy for the IBC's cause and whether they donated to the ALS foundations. The sequence of questions was strategically ordered to expose respondents' individual preferences and decrease the level of self-censorship.

A two-stage approach was chosen whereby respondents were first handed out Survey 1, which contains basic demographic questions, IBC participation (exposure) questions, TIPI questions, a dichotomic donation question and a question about the value of several public policy options. Respondents were not told in advance that upon turning in their completed Survey 1, they would then be asked to complete a second survey. Survey 2 contains SD3_N questions, IBC recall questions (focused on awareness and knowledge of the IBC's cause) and a dictator game. Thus, for survey 2 questions, respondents were unable to go back and change their answers to survey 1. Exposing contradictions could help us detect imperfectly altruistic behaviour and test for the presence of apathy.

Consistency between the two stages' questionnaires was ensured by asking students to put an identifier on Survey 1 (to promote more truthful responses surveys were anonymous so respondents' names and IDs were not asked). We suggested the identifier be the name of someone famous or someone they admire (a name they would then remember when asked to complete Survey 2). This strategy enabled us to decouple narcissism and apathy questions from participation and other personality questions, while at the same time keeping the ability to reconcile the data collected in both stages for each respondent. Respondents were asked not to use devices such as smartphones and laptops (apathy questions rested on recall, which could easily be restored with internet access). This issue also ruled out conducting the survey online.

2.4. Hypotheses

Equipped with the reconciled two-staged survey data, our aim is to test the following hypotheses:

- H1 (apathy) individuals who participated or were observers in the ICB campaign do not recall the campaign's purpose (apathy),

- H2 (grandiosity) Personality traits that associate strongly with high Narcissism scores correlate positively with exposure to the IBC
- H3 (free riding) Exposure to the IBC campaign associates negatively with donating to the campaign.

3. Results

3.1. Campaign exposure

Table 1 displays the incidence and shares of four groups of respondents, broken down by their degree of exposure to the IBC campaign. Of our total sample, 70 respondents (15.5%) had directly participated in the IBC campaign constituting a direct-exposure group (had ice dumped on their head, dumped ice on someone else's head, recorded a video, posted it on a social media account).

The direct-exposure group ($n = 70$) has a younger age structure (93% in the 18_25 age group) than the whole sample (85%), with a much larger proportion of 18_20 years old (65% vs. 44% for indirect and 18% for no-exposure groups). Otherwise, the gender distribution of the direct-exposure group did not differ from the entire sample's (i.e. nearly equal: 51.4% M, 48.6% F) and the proportion of English-speaking countries residents was similar too.

Table 1. Exposure groups and demographic characteristics

Exposure group	Variables		Gender (%)		Age group (%)			
	<i>n</i>	%	<i>Males</i>	<i>Females</i>	<i>18_20</i>	<i>21_25</i>	<i>26_30</i>	<i>31+</i>
Direct exposure	70	15.5	51.4	48.6	64.3	28.6	4.3	2.9
Indirect exposure – online & friends	211	46.7	47.0	46.4	50.7	41.2	2.8	5.2
Indirect exposure – online only	127	28.1	48.8	51.2	33.1	44.1	10.2	12.6
No exposure	44	9.7	54.6	45.5	18.2	50.0	11.4	20.5
All	452	100.0	50.9	49.1	44.7	40.9	6.0	8.4

Source: own data and calculations

The share of the no participation group was low among respondents (9.7%) and they were recorded as having no exposure to the IBC through any means. The remaining 75% of the sample recorded no direct participation, however, did report some degree of exposure to the IBC either through viewing the IBC online or recalling a friend's participation.

Two sub-groups emerged in the indirect exposure (75%) cohort: (i) respondents who recalled both viewing the IBC online and a friend's participation (46.7%) and (ii) those who reported viewing the IBC online but recalled no participation of friends and acquaintances (28.1%). Thus, four groups with differing degrees of exposure to the IBC were used in the analysis. Nineteen respondents reported having a family member diagnosed with ALS.

3.2. Personality tests

Table 2 displays the results of the TIPI (i.e. Big Five) personality test for our sample relative to a normative reference distribution provided by Gosling et al. (2014) and the Narcissism (SD3) relative to norms sourced from Jones and Paulhus (2014). Cronbach's alpha for the Big Five are generally lower than those available for similar age group (15-21 years) in the Gosling study, which is expected given our much smaller sample size.

Low alpha are also an unavoidable consequence of using a measure of broad personality domains (rather than narrow facets) such as the TIPI. In their Note on alpha reliability, Gosling et al. (2014) caution that “the TIPI was designed using criteria that almost guarantee it will perform poorly in terms of alpha and Confirmatory Factor Analysis (CFA) ... the goal of the TIPI was to create a very short instrument that optimized validity (including content validity) ...NOT to create an instrument with high alphas and good CFA fits”.

Means and standard deviations are generally consistent with norms across both the Big Five and SD3_N (Narcissism). Standard deviations for our sample are generally smaller. Our sample of participants does appear less open than the norm, but more extrovert and conscientious. The relationship between the Big Five individual personality traits and Narcissism was considered for the group as well as for each individual exposure group.

Table 2. Big 5 personality and narcissism: norm comparison, Cronbach's α and correlations

Big Five	<i>Mean (SD)</i>		<i>Mean (SD)</i> <i>Norms</i>		α	1	2	3	4	5	6
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>							
1. E	4.12 (1.29)	4.39 (1.52)	3.79 (1.55)	4.06 (1.58)	.43	1.000					
2. A	4.31 (0.92)	4.67 (1.13)	4.47 (1.22)	4.73 (1.22)	.51	-.053	1.000				
3. S	4.77 (1.24)	4.17 (1.35)	4.61 (1.47)	4.07 (1.46)	.39	.252**	.025	1.000			
4. C	4.82 (1.22)	5.16 (1.18)	4.41 (1.39)	4.52 (1.42)	.40	.105*	.089**	.274**	1.000		
5. O	4.75 (1.11)	4.95 (1.07)	5.43 (1.17)	5.58 (1.10)	.35	.271**	.208**	.170**	.245**	1.000	
N	2.97 (0.44)	3.02 (0.43)	2.92 (0.45)	2.78 (0.48)	.49	.075	-.032	.030	.085	.146**	1.000

Source: own data and calculations. E = Extraversion; A = Agreeableness; S = Stability; C = Conscientiousness; O = Openness; N = Narcissism. Big Five Norms have been sourced from the 15–21-year age group in Gosling, et al. (2014), which are norms for the Ten Item Personality Inventory (n=79,648). Narcissism (SD3) norms have been sourced from Jones and Paulhus 2014 Table 3. Note. A relates to Cronbach's alpha. *Denotes statistical significance at the 1% level, ** statistical significance at the 5% level

We now need to verify our hypothesis 2, which conjectures that direct-exposure IBC participants are indeed narcissists or at least more narcissistic than other groups. Table 3 reports Big5 and SD3_N profiles by IBC exposure group. The direct-exposure group (n = 70) is significantly more narcissistic than other groups in our sample (n = 382), with a mean SD3_N score of 3.13, compared to 2.99. A t-test of the difference between each group mean returns a highly statistically significant result at the 5% level when comparing the direct exposure group with all other groups.

Table 3. Personality traits of IBC exposure groups

<i>Exposure group</i>	<i>E</i>	<i>A</i>	<i>S</i>	<i>C</i>	<i>O</i>	<i>N</i>
	<i>mean (se)</i>	<i>mean (se)</i>	<i>mean (se)</i>	<i>mean (se)</i>	<i>mean (se)</i>	<i>mean (se)</i>
Direct Exposure	4.49 ^c (0.18)	4.42 (0.11)	4.72 ^{a,b} (0.16)	4.81 (0.15)	4.91 (0.16)	3.13 ^{a,b,c} (0.04)
Indirect Exposure – Online & Friends	4.20 (0.10)	4.48 (0.07)	4.40 (0.10)	5.10 ^d (0.09)	4.87 (0.07)	2.97 (0.03)
Indirect Exposure - Online only	4.32 (0.12)	4.54 (0.10)	4.36 (0.11)	4.90 (0.10)	4.78 (0.09)	2.99 (0.03)
No Exposure	3.98 (0.18)	4.45 (0.15)	4.75 ^b (0.19)	4.99 (0.19)	4.88 (0.16)	2.88 (0.10)

Source: own data and calculations

Note: a The mean is higher than indirect exposure – online & friends group at $p < .05$; b The mean is higher than indirect exposure – online only group at $p < .05$; c The mean is higher than the no exposure group at $p < .05$; d The mean is higher than direct exposure at $p < .05$.

Looking at the gender of narcissism scores (figure 1), there is another salient feature – direct-exposure females score much higher for SD3_N (3.3) than their male counterparts (3.0), whereas there are no noticeable differences between male and female narcissism in the other groups. This gender difference in the SD3_N score among direct-exposure individuals is highly significant ($P = 0.0017$).

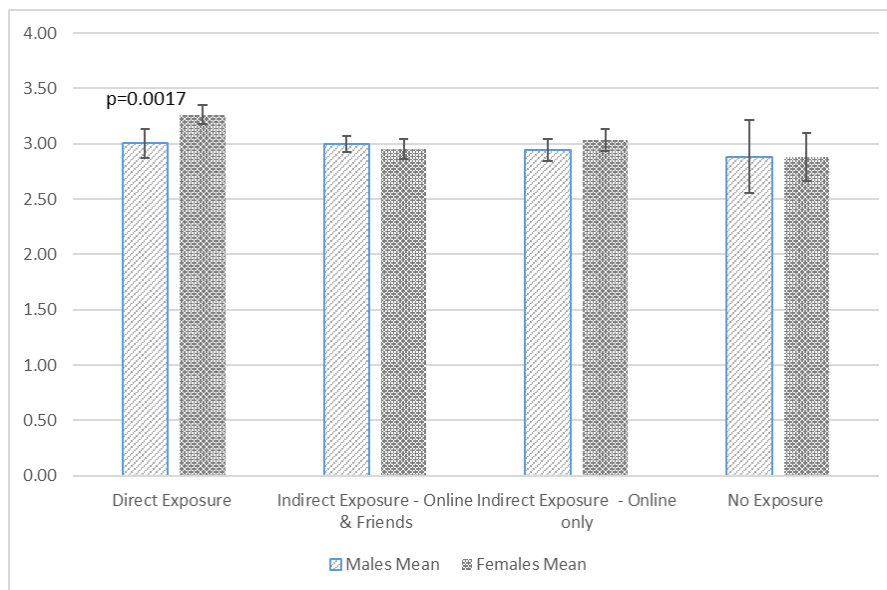


Figure 1. Mean narcissism of exposure groups, by gender

3.3. Apathy and free riding

We now evaluate hypothesis 1, which suggests that direct exposure groups are more apathetic (have less awareness of the IBC's underlying cause) than other groups. We use multivariate analysis with marginal effects, and we report our results in Table 4.

Table 4. Awareness and IBC exposure: Probit regression

<i>Dependent variable: Awareness</i>	(1) <i>Exposure groups only</i>	(2) <i>+ Demographic controls</i>	(3) <i>+ Personality controls</i>
Direct Exposure [ref]			
Indirect Exposure online and friends	-0.02 (0.76)	-0.01 (0.89)	0.00 (0.99)
Indirect Exposure online only	-0.02 (0.84)	0.03 (0.74)	0.04 (0.62)
No Exposure	-0.33 (0.00)**	-0.29 (0.00)**	-0.29 (0.01)**
Female		-0.10 (0.04)*	-0.08 (0.13)
Age 18-20 years [ref]			
Age 21-25 years		-0.06 (0.23)	-0.05 (0.31)
Age 26-30 years		-0.08 (0.46)	-0.08 (0.45)
Age 31+ years		-0.23 (0.01)*	-0.23 (0.01)*
Narcissism			0.02 (0.70)
Extraversion			0.01 (0.46)
Agreeableness			-0.06 (0.01)*
Stability			0.01 (0.60)
Conscientiousness			0.01 (0.63)
Openness			0.00 (0.94)
LR Test	17.66 (0.00)	27.70 (0.00)	36.25 (0.00)
No. Obs	452	452	452

Source: own data and calculations.

Note. *Denotes statistical significance at the 1% level, ** statistical significance at the 5% level

Our dependent variable is a binary indicator of ALS awareness. The baseline model (1) includes only indicators of the degree of exposure to the IBC and shows the no exposure group to have significantly less ALS awareness ($p < 0.01$) relative to the direct exposure group. This finding is robust to the inclusion of demographic controls (col 2) and additional personality controls (col 3). Older age cohorts have significantly less awareness of ALS compared to younger age groups and those with more agreeable personality were also less aware. Overall, the direct-exposure group displayed no greater awareness for the cause served by the IBC campaign compared to those that recalled viewing or friend's participation in the IBC. However, the awareness of the cause for the direct and indirect exposure groups was significantly higher than for the group that had no exposure to the challenge at all.

We test the level of apathy further by assessing the incidence of free riding, to the degree that this could be ascertained given that by its very design the IBC induced interested parties to avoid donation through direct participation. The question had the potential to confront those who did participate but failed to make a tangible contribution. Thus, this question was given in the first questionnaire before the more technical questions of the second questionnaire. Marginal effects, with baseline and fuller model specifications are shown in Table 5.

Table 5. Propensity to Donate: Probit regression

<i>Dependent variable: Donates</i>	<i>(1)</i> <i>Exposure groups</i> <i>only</i>	<i>(2)</i> <i>+ Demographic</i> <i>controls</i>	<i>(3)</i> <i>+ Personality</i> <i>controls</i>
Indirect Exposure online only [ref]			
Direct Exposure s	0.38 (0.00)**	0.37 (0.00)**	0.38 (0.00)**
Indirect Exposure online and friend	0.06 (0.11)	0.05 (0.17)	0.05 (0.18)
No Exposure	-----	-----	-----
Female		0.02 (0.39)	0.01 (0.65)
Age 18-20 years [ref]			
Age 21-25 years		0.00 (1.00)	0.00 (0.95)
Age 26-30 years		-0.05 (0.43)	-0.05 (0.44)
Age 31+ years		-----	-----
Narcissism			0.01 (0.77)
Extraversion			0.00 (0.91)
Agreeableness			0.01 (0.35)
Stability			0.00 (0.71)
Conscientiousness			0.00 (0.71)
Openness			-0.01 (0.60)
LR Test	42.58 (0.00)	41.87 (0.00)	43.22 (0.00)
No. Obs	408	379	379

Source: own data and calculations.

Note. *Denotes statistical significance at the 1% level, ** statistical significance at the 5% level

Contrary to what we expected, IBC direct exposure groups were more likely to donate to the cause than other exposure groups. These findings are robust to the inclusion of demographic and personality features (specifications 2 and 3) that may also drive donation behaviour. No other demographic or personality characteristic had a significant impact on increasing the propensity to donate to the IBC. Thus, high-profile participation in the IBC did translate into some tangible contributions and our study finds no evidence of free riding (direct-exposure participants harvesting attention capital without donating).

4. Discussion

Although the direction of the relationship between narcissism (the dark triad trait SD3_N in our study) and the synthetic Big Five measures of personality is well established in the literature, the strength of that relationship varies quite widely. Using the 44 items BFI measure for the Big Five, Paulhus and Williams (2002) found positive (resp. negative) associations for extraversion and openness (resp. agreeableness), as did Ames et al. (2006) using the shorter NPI_16 measure. Using the TIPI, which we also used, Cook et al. (2020) found strong positive (resp. negative) associations between narcissism and extraversion (resp. agreeableness) but they did not consider the other three Big Five dimensions.

We find similar relationships in our sample. In table 2 we observe that narcissism correlates negatively with agreeableness (-0.032) and positively with the four remaining personality traits, with openness having the strongest association. In table 3, we show that there is a strong relationship between openness and extraversion within our direct exposure group. These mean scores are higher than those of Jones and Paulhus (2014) but of similar magnitude and rank-order to those of Konrath et al. (2016). Since extroversion and openness are known predictors of grandiose narcissism (Miller et al., 2011; Paulhus & Williams, 2002; Zajenkowski

& Szymaniak, 2019), these findings lend support to our hypothesis H2 – that personality types that associate strongly with narcissism are more common in the direct exposure group.

On the other hand, it is well known that all Big Five traits have some degree of positive or negative influence on the prosocial personality (Mooradian et al., 2011). The most prominent influences are exerted by agreeableness because it describes a communal orientation and subsumes traits such as altruism, trust and modesty (Graziano & Eisenberg, 1997; Habashi et al., 2016), and neuroticism (the bipolar of emotional stability) because of its association with antisocial behaviour (Costa & McCrae, 1995; John & Srivastava, 1999). Conscientiousness has been argued to mediate prosociality via its association with sense of duty and obedience to norms both social and prosocial (Jensen-Campbell et al., 2002).

As far as helping and giving is concerned there is research evidence that extroversion and openness are also traits of interest. Extroversion is positively related to volunteerism (Carlo et al., 2005) and openness predicts willingness to help strangers (Oda et al., 2014). Taken together, extraversion and openness predict charitable giving whereas agreeableness predicts blood and organ donation (Bekkers, 2006). Thus, openness and extraversion traits in the IBC's direct-exposure group not only help explain conspicuous participation but also a demand for outgoing volunteering activities that have the potential to help strangers. This perspective helps shed light on the main finding of our paper, which is that high-profile participants (direct participants) in social media campaign are prosocial narcissists, that is, grandiose exhibitionism and social concern both explain their behaviour.

An unexpected secondary finding in our sample was that female participants scored significantly higher on narcissism in the direct exposure group than their male counterparts (with no such differences in the other groups. This is surprising because (i) there is substantial (if not conclusive) evidence that men are generally more narcissistic than women (Ames et al., 2006; Foster et al., 2003; Hoertel et al., 2018; Kluger, 2014; Lemaitre, 2016; Yang et al., 2015), and (ii) there is no significant difference in narcissistic levels between women and men across the entire sample. One possible explanation is that the definition of narcissism is largely premised on clinical descriptions mostly drawn from male case studies, so NPI-derived measures (such as the SD3_N) may capture a clear-cut narcissistic disorder in men but only a borderline condition in women (Morf & Rhodewalt, 2001).

There is also evidence that women's motivations for acting prosocial are rooted in communal motives whereas men's motives are agentic (Eagly, 2009) but there is no such gender discrepancies for agentic narcissism ("I'm the smartest person") and communal narcissism ("I'm the most helpful person"). Agentic narcissism relates to masculinity, but men and women do not differ significantly on communal narcissism (Gebauer et al., 2012). An important qualification to our finding therefore is that the higher SD3_N score for female respondents may capture a somewhat different, possibly milder narcissistic condition than for male respondents.

Our results reported in table 4 suggest that there was greater awareness of the IBC's social cause among individuals that had some type of exposure rather than none. Direct participation did not significantly translate into greater or lesser awareness. Our hypothesis H1 was that narcissistic direct participants would show little awareness of the cause relative to other participants, which could be seen as evidence of apathy. A counterhypothesis could also have been made that direct participant having more "skin in the game" should have deeper knowledge of the cause they serve. As it happens, we found neither ground for support or rejection of hypothesis H1.

Our final set of results related to the presence of free riding in the direct exposure group. Contrary to what we expected, IBC direct exposure groups were more likely to donate to the cause than other exposure groups. These findings are robust and stand in contrast with the

findings of Konrath et al. (2016) and Prewett et al. (2019). No other demographic or personality characteristic had a significant impact on increasing the propensity to donate to the IBC. Thus, high-profile participation in the IBC did translate into some tangible contributions and our study finds no evidence of free riding (direct-exposure participants harvesting attention capital without donating). We therefore find no support for hypothesis H3.

There are important limitations to our study. Our quasi-experimental research design was aimed at minimizing selection and response bias but other potential biases, such as recall issues, could affect our survey responses. Time constraints surrounding the implementation of our two-stage survey design also imposed data limitations such as using very summary personality tests and collecting only the most essential demographics. Another limitation is that we have no indication of respondents' awareness of ALS before they participated in the IBC, so we could not distinguish between participants who had a pre-existing stake in the ALS cause (other than through knowing someone) and those who simply responded to a new social movement.

Finally, as raised by a referee, the survey results cannot be generalised as the study sample is not representative of the wider population that took part in the IBC. Conducting the survey exclusively on a group of students, even with a significant sample size ($n=452$), should not be presumed to provide a comprehensive view of the phenomenon. At best, we conclude that our results apply to students who participated directly or indirectly in the IBC. Studies of other groups might conclude differently.

Conclusion

We set out to determine whether participation in conspicuous prosocial campaigns is associated with narcissism and whether this association is characterized by apathy and free riding. We addressed this question in the context of the Ice Bucket Challenge campaign (IBC) by examining the relationship between degree of participation (exposure), personality traits (Big Five and grandiose narcissism), and measures of participants' awareness for the campaign's cause.

In a two-stage survey quasi-experiment that decouples personality tests from behavioural questions we found significant associations among respondents between conspicuous behaviour (direct-exposure participation) and grandiose narcissism, and this was particularly pronounced amongst female respondents. However, we found no association between this relationship and apathy for the campaign's social cause. Direct-exposure participants ('bucketeers') did not merely harvest attention capital, many of them also donated and they did not appear to care less for the cause than other participating groups. This finding would suggest that the ephemeral nature of online social campaigns is not due to narcissistic apathy but to a more general problem of sustaining public attention for online charity campaigns and prosocial movements.

Our results contribute to an emergent body of research on narcissistic prosociality (how grandiose narcissism interrelates with prosocial behaviour). This literature has generally not been kind on narcissists, casting them as opportunistic players who act pro-socially when the costs (effort, money) are low and rewards (attention, esteem) high. Our results somewhat mitigate this assessment. Personal gratification and social concern need not rule one another out. Properly harnessed, narcissistic prosociality constitutes an important resource for charitable causes and the conduct of social campaigns.

Research on narcissistic prosociality remains at a rudimentary stage. In the context of online social media campaigns future applied research should weave in measures of objective and subjective prosociality, which could shed further light on narcissists' degree of care or

apathy for the social causes they conspicuously profess to serve. More broadly, further research is needed to understand how personality traits and their determinants contribute to sustaining charitable movements in the long-haul.

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