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Document Version

Accepted author manuscript

Published in:

Personality and Social Psychology Bulletin

DOI:

[10.1177/0146167220919212](https://doi.org/10.1177/0146167220919212)

Publication date:

2021

License

Unspecified

Citation for published version (APA):

Fazekas, Z., & Hatemi, P. K. (2021). Narcissism in Political Participation. *Personality and Social Psychology Bulletin*, 47(3), 347-361. <https://doi.org/10.1177/0146167220919212>

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Download date: 27. Apr. 2024



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*Paper published in Personality and Social Psychology Bulletin, 2020.
Preprint. There may be slight differences in this version and the copyright version
Please cite full paper available at: <https://doi.org/10.1177/0146167220919212>*

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Word Count: 8,861 including abstract, main text, tables, figures, notes and references

Key Words: Narcissism; Political Participation; NPI; Authority-Seeking; Superiority

Acknowledgements: We thank Padi Joseph at YouGov for her assistance in collecting the data. We give special thanks to Keith Campbell; his presentation to the intelligence community laid the groundwork for the inspiration of this study and his valuable comments and suggestions, alongside the anonymous reviewers have improved this manuscript. We also thank Michelle Behrend and Paul Mandeltort for their thoughts and review of this work.

Narcissism in Political Participation

Abstract:

Much attention has focused on the social, institutional and mobilization factors that influence political participation, with a renewed interest in psychological motivations. One trait that has a deep theoretical connection to participation, but remains underexplored, is narcissism. Relying on three studies in the US and Denmark, two nationally representative, we find that those scoring higher in narcissism, as measured by the NPI-40, participate more in politics, including contacting politicians, signing petitions, joining demonstrations, donating money and voting in mid-term elections. Both agentic and antagonistic components of narcissism were positively and negatively related to different types political participation when exploring the sub factors independently. Superiority and Authority/Leadership were positively related to participation, while Self Sufficiency was negatively related to participation. In addition, the combined Entitlement/Exploitativeness factor was negatively related to turnout, but only in midterm elections. Overall the findings support a view of participation that arises in part from instrumental motivations.

Keywords: Narcissism; Political Participation; NPI; Authority-Seeking; Superiority

1 Understanding the factors that facilitate or hinder political participation is of great interest
2 to citizens and governments of advanced democracies. It has been widely argued by the media,
3 politicians, intellectuals and scholars that narcissism and the pursuit of political outcomes appear
4 inseparable (Economist, 2016; Glasser, 2016; McAdams, 2016; Wolfe, 1976). Jejune
5 descriptions of the current period, such as “the Age of Entitlement”, and “the Post-Truth Era”,
6 nevertheless find meaningful empirical support (Campbell et al., 2004; Twenge & Campbell,
7 2009). Arguably the public’s sense of entitlement, deservingness and pursuit of self-promotion
8 without regard to the cost of others has increased (Foster, Campbell, & Twenge, 2003; Twenge,
9 2006; Twenge et al., 2008). The last several decades have witnessed personal goals shifting
10 toward a greater focus on status, celebrity, and personal wants over the needs of society
11 (Campbell et al., 2005; Spence, 1985; Twenge, Campbell, & Freeman, 2012; Twenge & Foster,
12 2010; c.f., Wetzel et al., 2017).

13 Yet, how narcissism is being differentially represented in political behavior at the
14 individual level in the mass publics remains relatively unknown. A nascent line of research
15 suggests that individual differences in narcissism have a role in political orientations (Hatemi &
16 Fazekas, 2018) and who people vote for (de Zavala, Guerra, & Simão, 2017; Federico & de
17 Zavala, 2018). There is a dearth of research however, dedicated to identifying if individual
18 differences in narcissism have a role in who gets politically engaged. This is a particularly
19 important phenomenon to explore because higher narcissism leads to a shift in values away from
20 civic responsibility and toward narrow self-interest and gratification (Marchlewska et al., 2018),
21 analogous to the ways in which political parties and candidates mobilize the electorate with
22 populist rhetoric (Carmines, Ensley, & Wagner, 2018). In real and experimental settings, public
23 goods are exploited and common resources depleted more rapidly when individuals higher in

24 narcissism are involved (Campbell et al., 2005; Grijalva et al., 2015; Van Vugt, 2009). Socially
25 expressed narcissism also results in higher levels of out-group derogation, increased retaliation,
26 punishment, and endorsement of violent resolutions (Böckler et al., 2017; Campbell, Foster, &
27 Finkel, 2002; de Zavala, Cichocka, & Bilewicz, 2013). This is especially true in the face of
28 perceived and real challenges to economic success, identity, or personal insult (Bushman &
29 Baumeister, 1998; Lambe et al., 2018). And such influence appears prevalent regardless of
30 political orientation (Hatemi & Fazekas, 2018); take for example the xenophobia surrounding
31 immigration from the right (Lyons, Kenworthy, & Popan, 2010) or the increased prohibition of
32 free speech from the left (Lukianoff & Haidt, 2015).

33 Relying on three studies, two nationally representative, we address this lacuna and
34 provide some insight into role of narcissism on political participation, including contacting
35 politicians, signing petitions, joining demonstrations, donating money and turning out to vote.

36 **Narcissism in the General Public**

37 Narcissism is conceptualized as an independent personality trait that varies along a
38 somewhat normal continuum in the general population (Raskin & Terry, 1988). Unlike
39 pathological, or the more “vulnerable” aspects of narcissism that reflect a defensive mechanism
40 against emotional insecurity (Miller et al., 2011; Pincus & Lukowitsky, 2010), the personality
41 trait of narcissism exhibits more of the “grandiose” aspects of narcissism, which includes both
42 agentic and antagonistic features (Crowe et al., 2019). The agentic and extraverted features
43 include high self-esteem, sociability, fantasies of glory, grandiosity, uniqueness, and charisma
44 (Leckelt et al., 2015). The antagonistic features capture the devaluation of others, aggressive,
45 nonempathic, noncompliant, assertive, entitled, manipulative, dominant, superior and other-
46 derogation behaviors (Back et al., 2013).

47 One of the most commonly used measures to capture grandiose narcissism in the general
48 population is the Narcissistic Personality Inventory (NPI, Raskin & Hall, 1979). In its original
49 framework, a single overall narcissism score is derived from the multidimensional 40-item NPI
50 questionnaire that combines 1) Leadership/Authority (self-perception of leadership skills and
51 desire for power); 2) Entitlement (the expectation and amount of entitlement a person has,
52 including favorable treatment and compliance with one's wishes); 3) Exhibitionism (the desire
53 and willingness to be the center of attention); 4) Exploitativeness (how willing one is to exploit
54 others in order to achieve their own desires); 5) Self-Sufficiency (how much one is willing to
55 rely upon on others versus their own abilities to meet their needs and goals); 6) Superiority (how
56 much a person feels they are better than those around them); and 7) Vanity (view of self and
57 desire for others to see one as superior and attractive). The combinations of these traits form a
58 narcissism score that is unimodal with a positive skew.

59 Empirical and theoretical advances have converged on the importance of distinguishing
60 between the different components of grandiose narcissism (Miller et al., 2017). There are several
61 considerations. The NPI's dimensions, whether agentic, antagonistic or other, have unique
62 relationships to traits of interest (Campbell, Foster, et al., 2002; Miller et al., 2011). As such, it is
63 valuable to explore both the composite NPI score that captures the combination of all traits, and
64 the independent facets of narcissism separately. For example, narcissism's relationship with self-
65 esteem is two-sided; maintaining some level of narcissism is needed for psychological well-
66 being (Barry, Frick, & Killian, 2003), but too much leads to failure (Campbell, Rudich, &
67 Sedikides, 2002). And importantly, self-esteem has diverging relationships with some of the
68 NPI's dimensions, conflating its role when relying upon the NPI sum score (Brummelman,
69 Thomaes, & Sedikides, 2016). A similar pattern could arise for the public regarding political

70 participation. In order for a society to function as a democracy, the voice of the people must be
71 represented, and in order for this to happen, ideally everyone should believe that their opinion
72 matters and that they are “right”, at least to some degree. Indeed, high levels of participation is
73 seen as a necessary component for the stability of a democracy (Verba, Schlozman, & Brady,
74 1995). In this way, particular components of narcissism should be beneficial to achieve certain
75 outcomes.

76 There is an ongoing discussion regarding which factor model best fits the data and theory
77 of the NPI, however. The original seven factor model offers meaningful and fine-grained
78 hypotheses that theoretically connect political behavior to participation. However, a number of
79 studies have argued and provided empirical support to reduce the 7 factors into 2, 3, or 4
80 dimensions (Corry et al., 2008; Emmons, 1984; Kubarych, Deary, & Austin, 2004). Among these
81 alternatives is a recent 3-factor structure proposed by Ackerman and colleagues (2011) that
82 focuses on internal consistency and generating factors that sort into what they label as “adaptive”
83 and “maladaptive” traits. Using a subset of 25 items, this specification produces the dimensions
84 of Leadership/Authority (self-perceived leadership ability, desire for authority, and social
85 potency), Grandiose Exhibitionism (primarily self-absorption, vanity, and exhibitionism), and
86 Entitlement/Exploitativeness (entitled beliefs/behaviors and manipulateness). Therefore, in
87 order to address the theoretical links with the original specification and the potential
88 measurement benefits of a shorter scale, the current study explores 1) the combination of all the
89 NPI traits defined as Narcissism, 2) the original seven sub-facets independently and 3) Ackerman
90 et al.’s 25-item, three factor structure.

91 **Narcissism and Political Participation**

92 A person’s decision to participate, that is contacting politicians, signing petitions, joining
93 demonstrations, donating money, and turning out to vote, is a function of familial influences,
94 social networks, social forces, mobilization efforts, organizational membership, individual
95 characteristics, resources, opportunities, experiences, and skills that are developed throughout
96 one’s life (Verba et al., 1995). However, given the costs of political participation, even with
97 adequate resources, the public is only likely to participate to the extent that they are also
98 motivated (Klandermans & Oegema, 1987).

99 Recent research has emphasized the role of more deeply rooted individual factors in
100 shaping the extent to which people engage in civic life. Narcissism encapsulates self-interest,
101 ego, benefit-seeking, need for attention and recognition, preservation of self-esteem, status,
102 affiliation, and identity development, all of which are proposed antecedents to political
103 participation (Klofstad, 2010; Verba et al., 1995). If politics is the mechanism to address the
104 problem of balancing the needs and wants of the individual versus the good of society, and
105 narcissism is “a dynamic self-regulatory system where positive self-views are maintained and
106 enhanced in large part by using the social environment”(Campbell et al., 2005, p. 1358), and
107 modern political participation is rooted in agency, a superiority of ideas, personal needs over
108 others and society, combined with perceived deprivation that demands special treatment (Hatemi
109 & Fazekas, 2018), then individual differences in political participation, should emerge, in part, as
110 a function of narcissism. At the most fundamental level, those who seek attention, and want
111 their voice heard, who believe their voice matters more than others, who are also more agentic
112 and believe in their ability to effect change, but also believe they are superior to others, and are
113 more focused on their own wants, should be more likely to participate in politics. Accordingly,
114 we hypothesize that those higher in the overall NPI sum score participate more.

115 This relationship, however, is unlikely to be uniform across all the dimensions of
116 grandiose narcissism, when taken individually. Theoretically, the agentic features of sociality
117 and engagement should be independently related to increased political participation, but those
118 agentic features focused on self- reliance should prove just the opposite. Similarly, some
119 antagonistic features of narcissism, such as the need for the devaluation of others should also be
120 positively related to participatory behaviors, if to accomplish nothing less than to be part of the
121 group that controls others. However, this is also a two-sided coin; the noncompliant and anti-
122 social features of antagonistic narcissism by themselves should be related to avoiding those
123 specific activities that join the crowd. Separating out these features is possible by exploring the
124 NPI's individual facets.

125 At the sub-factor level, those who perceive themselves as leaders, including belief in their
126 capacity to influence others, and make better decisions, should believe that they should be in the
127 group that sets the rules and be the one's choosing that group. Higher Authority/Leadership
128 features should transpose into more political engagement overall, and seeking out various forms
129 to express and impose one's views on others, including shaping political outcomes. That is,
130 higher rates of political participation rely to some extent on agency, intrinsic desire and belief in
131 one's ability to lead, and their authority being acknowledged, which is in line with a view of
132 politics as a potential medium to achieve such recognition through influencing decision makers,
133 media, or fellow citizens. Recall, participation is more than voting. It includes many behaviors
134 that require actions and that others hear "you", such as contacting your elected leaders, taking
135 part in discussion forums, and public demonstrations. As such, we hypothesize that people who
136 believe they are better at leading other people will occupy a disproportionately larger share of
137 politically active and engaged citizens.

138 On the other hand, all participatory acts bear with some costs, and it is unlikely the
139 benefits associated with taking an active citizen role are great enough to motivate highly Self-
140 sufficient individuals to pay those costs and participate in politics. That is, a stronger belief in
141 one's independence and ability to succeed on their own, should make the potential benefits from
142 acts of participation less attractive for these individuals, because they should be more confident
143 in their own means to sustain themselves with less interest in convincing decision-makers or the
144 public to give them benefits or support their own goals. As such, we hypothesize that the agentic
145 factor of Self-sufficiency is negatively related to political participation.

146 Moving to the antagonistic features, those who believe they are special and superior to
147 others, should be more likely to promote their ideas and participate in highly salient activities,
148 such as politics. Superiority is an independent trait in the original seven factor solution, but is
149 not explicitly measured in Ackerman's three-factor model. Expectations for the Exploitativeness
150 and Entitlement dimensions however are mixed. On the one hand, individuals with a strong
151 sense of Exploitativeness assign importance to their own needs, and their satisfaction is
152 conditioned upon getting what they deserve at the cost of others. Only if political participation is
153 seen as something that can fulfill individual related needs, should Exploitativeness be
154 independently related to participation. Therefore, one would expect a significant relationship
155 between Exploitativeness and participation only under specific circumstances. On the other
156 hand, people who feel entitled, often feel that while something should be done for them, others
157 should be the ones who do it. This leads to some expectation that Entitlement is negatively
158 related to certain acts of participation. It would be misleading however, to simply consider
159 Ackerman's et al's (2011) Entitlement/Exploitativeness three-factor dimension a combination of
160 the two. Rather, the items selected differ (see Tables 2-3) and result in a dimension that has a

161 significant relationship with antisocial tendencies. Arguably this factor reflects a disposition that
162 should lead to less cooperative behaviors and disengagement with social institutions. Thus, we
163 hypothesize that the three-factor Entitlement/Exploitativeness dimension is negatively related to
164 political participation, at least for the most pro-social activities.

165 Finally, in the three or seven factor approach, there is little theoretical reason to expect
166 independent relationships between participation and Vanity, Exhibitionism or Grandiose
167 Exhibitionism. Casting a vote with millions of other people for example, does not offer a means
168 to bring individuals closer to being in the spotlight, or showcase their looks or talents.

169 **DATA AND METHODS**

170 In order to test our hypotheses, we collected data through two nationally representative
171 surveys, one in Denmark administered by TNS-Gallup, Denmark (n=2,450, 2011) and one in the
172 United States through YouGov, USA (n=500, 2015), alongside a third US web-based study
173 (n=2,280, 2013). We choose the combination of the US and Denmark for practical, comparative
174 and theoretical reasons. Having a research team with expertise in US and Danish politics and the
175 languages, previously validated measures and an ongoing research program in each country
176 provided practical incentives. Importantly, the characteristics of the US and Denmark are quite
177 similar in a global context, even when comparing only to other advanced democracies. For
178 example, at the time of data collection, the GDP per capita in Denmark and the US was 58,900
179 and 53,100 respectively; controlling for the cost of living, these numbers are almost equivalent,
180 making these two countries the most similar according the World Bank (2014). The countries
181 were similar in life expectancy (less than half a year difference), birth rates, and unemployment
182 (7.4% and 7.0%) among other factors (CIA, 2013). As such, we expect the direction and
183 significance of the relationship between overall narcissism and participatory behaviors to be

184 generally consistent. There are, of course, many differences between any two countries.
185 Differences in the type of democracy, domestic culture and country specific social and political
186 conditions should be reflected in differences in the magnitude of the relationship between
187 narcissism and political behaviors.

188 The Danish survey (DK11 from now on) was collected between October and November
189 of 2011 as part of a two-wave panel, which included measures specifically for this project in the
190 second wave. We received 1,972 responses from 2,840 participants active in the panel when our
191 survey was fielded, plus an additional 479 new entrants. The sample was representative of the
192 Danish population in terms of geographical region, education, sex, and age. Furthermore, our
193 data composition in terms of vote choice closely matches the official results of the 2011
194 Parliamentary Elections (see supplementary information S11).

195 Chronologically, the second study (US13 from now on), consists of a US survey
196 administered on Mturk. This survey provided a means to pilot questions for our third nationally
197 representative US study, described in the following paragraph. All participants were US citizens
198 or residents. Qualification questions were embedded in the survey to ensure response validity.
199 Two waves were collected on 19-20 November 2013 (n=968) and 9-12 December 2013
200 (n=1,056) including a conservative oversample (n=256) as previous research indicated there is a
201 higher probability of recruiting more liberal participants.

202 We fielded a third nationally representative (US) study 13-20 July of 2015 (N=500). The
203 frame was constructed by stratified sampling from the U.S. Census Bureau's 2010 American
204 Community Survey with selection within strata by weighted sampling with replacement. Voter
205 registration status and turnout were matched to this frame using the 2010 Current Population
206 Survey, yielding a nationally representative sample in terms of age, sex, ethnicity, education,

207 partisanship and political ideology (please see SI2 for more details). For all studies, all
208 participants provided informed consent. All procedures contributing to this work comply with
209 the ethical standards of the relevant national and institutional committees on human subjects and
210 with the Helsinki Declaration of 1968, as revised in 2008.

211 *Political Participation & Turnout (outcome variables)*. In all studies, participatory
212 behaviors are measured by 8 items through the widely used cross-national ISSP Questionnaire on
213 Citizenship (Verba et al., 1995). The measure includes signing a petition, boycotting or buying
214 products for political reasons, participating in a demonstration, attending political meetings,
215 contacting politicians, donating money, contacting the media and taking part in political forums
216 and discussion groups, including those on-line (for details see SI3). The average across the 8
217 items serve as a full participation index. The overall measurement properties are very good, with
218 Cronbach's alpha values of 0.79 (DK11, valid N = 2188), 0.85 (US13, valid N = 2090), and 0.89
219 for US15 (valid N = 420). Furthermore, the means across studies are very similar. After rescaling
220 the summed participation index to range from 0 to 1 means and standard deviations are as
221 follows: 0.435 (0.206) in DK11, 0.468 (0.228) in US13, and 0.448 (0.266) in US15.

222 Turnout in national elections is also a central measure of political participation. In the
223 US13 study, we analyze electoral turnout in the 2012 presidential elections, with 73% of our
224 sample having said that they voted ("I do not remember" and "Rather not say" answers were
225 treated as missing). Similarly, the US15 collected self-reported turnout in the 2012 presidential
226 elections (82% having reported voting, "Don't remember" and "Rather not say" treated as
227 missing)¹ and also in the 2014 midterm elections (71% having said they voted, "Don't

¹ In the US15 study, individuals who reported "I did not vote", alongside those not eligible to vote based on age, were excluded from the analyses (15 respondents in 2012 and 5 in 2014).

228 remember” and “Rather not say” treated as missing). There is far less variation in Denmark.
229 Actual turnout in the 2011 general election was 88%. Considering the usual problems related to
230 over-reporting in high turnout countries (Karp & Brockington, 2005), it is not surprising that
231 self-reported turnout in the Danish 2011 election was above 95%.

232 *Narcissism.* In all studies, narcissism was assessed with the Narcissistic Personality
233 Inventory (Raskin & Terry, 1988). The NPI’s forced-choice dyads ask respondents to choose one
234 of two opposing statements about themselves (e.g., “I insist upon getting the respect that is due
235 me” vs. “I usually get the respect that I deserve”). The complete NPI-40 was assessed in the
236 US13 and US15 studies, while a subset of 15 items, modeled after the shorter form NPI-16
237 (Ames, Rose, & Anderson, 2006), was assessed in the DK11 study. Exact questions are reported
238 in SI4. NPI items were coded to have values 0 and 1, where 1 represents the endorsement of the
239 statement reflecting the more narcissistic response.

240 The full NPI measure is the average across all 40 items (15 in DK11), which ranges from
241 0 to 1. This measurement is preferred to summed scores because of the ease of interpretation (see
242 Ackerman et al., 2011) and also here because the number of items available in Denmark is lower.
243 The measure exhibits good reliability (DK11 0.63 Cronbach’s alpha; US13 0.90 Cronbach’s
244 alpha; US15 0.86 Cronbach’s alpha). The means and variation of narcissism are also almost
245 identical across studies (DK11 0.31 [0.17]; US13 0.32 [0.21]; US15 0.31 [0.17]).

246 We follow previous work and evaluate sub-facet structure by fitting confirmatory factor
247 analyses, using the original 7-factor solution with no main underlying factor (Raskin & Terry,
248 1988) and the 3-factor solution by Ackerman and colleagues (2011).² The 7 sub-facets are:

² Confirmatory factor models were estimated using diagonally weighted least squares (DWLS) since we have dichotomous manifest variables, with full weight matrix used for robust standard

249 Authority Seeking, Superiority, Exploitativeness, Entitlement, Self-sufficiency, Vanity, and
250 Exhibitionism. The 3 sub-facets derived from a total of 25 items are: Leadership/Authority,
251 Grandiose Exhibitionism, and Entitlement/Exploitativeness.

252 For the US13 and US15 studies these steps are straight-forward since all 40 NPI items
253 were collected. The Danish study does not include an Exhibitionism measure, and Vanity and
254 Superiority are measured by one item only, with other sub-facets using fewer items than in the
255 full 40-item NPI studies. For the 3-factor solution, we used the 25-items of the NPI proposed by
256 Ackerman and colleagues (2011) in all US studies. Since DK11 only contained a subset of NPI
257 items, this resulted in a total of 8 items; Grandiose Exhibitionism was measured by one item³,
258 Entitlement/Exploitativeness by two items, and Leadership/Authority by five items.

259 The fit statistics of our nationally representative samples (Table 1) are comparable or
260 better than those reported in previous research on convenience and student samples. Overall,
261 both models offer an acceptable fit to the data, or good when usual narcissism measurement
262 model benchmarks are considered. The 7-factor model performs marginally better in all samples.
263 While there are some measurement limitations in the Danish study, we replicate important factor
264 structures of the NPI in the larger and nationally representative samples. Furthermore, beyond
265 the similarity in means, we also see similar factor model-fits across the different samples, be that
266 representative or stemming from different countries.

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errors, and mean- and variance-adjusted test statistics. For all models, the theoretical item structure was based on the cited articles. We apply no further variance or covariance restrictions.

³ In the 7-factor model this item is part of the Vanity sub-facet measurement.

273 **Table 1:** Comparison of 7- and 3-factor models of Narcissism

	Items used	CFI	TFI	RMSEA	SRMR
DK11					
7-factor (no exhibitionism)	15	0.927	0.901	0.038	0.058
3-factor	8	0.924	0.882	0.059	0.071
US13					
7-factor	40	0.928	0.922	0.043	0.069
3-factor	25	0.923	0.915	0.059	0.080
US15					
7-factor	40	0.919	0.912	0.033	0.097
3-factor	25	0.912	0.903	0.044	0.105

274

275 We report the standardized item loadings based on the CFA models in Tables 2 and 3.

276 While the item loadings follow the expected pattern and are acceptable to good, we identified

277 three potentially problematic items that affected both the seven and three factor models. Item 14

278 (“I insist upon getting the respect that is due me / I usually get the respect that I deserve”) had

279 weak loadings in both nationally representative studies (Entitlement related). Item 23

280 (“Sometimes I tell good stories / Everybody likes to hear my stories”) had a weak loading in

281 DK11, where in terms of prevalence it was much lower (11%) than in the US samples (24% and

282 25%). Finally, Item 22 (“I sometimes depend on people to get things done / I rarely depend on

283 anyone else to get things done”) performed poor in all three studies and did not differentiate

284 between respondents, as the narcissistic response proportions were 51%, 51%, and 59%.⁴

285 The US13 and US15 studies were very similar in terms of sub-facet averages (Table 4),

286 with the Mturk pool scoring slightly higher in Vanity and Exploitativeness than the respondents

287 from the nationally representative US15 study. In the Danish study, we find lower Superiority,

288 Entitlement and slightly lower Self-Sufficiency and Exploitativeness compared to the US

289 samples. Due to differences in the number of items we refrain from elaborating on the cross-

⁴ When these items are excluded the results are largely unchanged.

290 country differences and leave this to be explored in future research. As with the full NPI, we find
291 very high levels of similarity across all three studies for Authority. Regarding the three-factor
292 structure, we also find similar levels of consistency across samples, with the US national sample
293 scoring highest on Leadership/Authority, but lowest for the two other factors, with particularly
294 low prevalence of Entitlement/Exploitativeness. Whether this is a real difference, a measurement
295 issue, a social desirability effect or other, future research must answer.

296 For each factor we take the average of responses for each individual and use those as
297 final scores. The reliability scores range from good to acceptable in the US samples which
298 appears mostly a function of the number of items used (also discussed in Ackerman et al. 2011).
299 The measurement properties in terms of the number of items and reliability are weaker in the
300 Danish sample, where the Authority and Leadership/Authority factors are most reliably
301 measured. However, even with limited measurement options, we believe that a nationally
302 representative non-US study is a valuable addition when analyzing the so far unassessed
303 relationship between Political Participation and Narcissism.

304 *Socio-demographic correlates.* Historically, age, income, and educational level are
305 positively correlated with participation, while non-Caucasian is related to lower participation
306 (Verba et al., 1995). In DK11 the average age of the respondents is 52.6 years (range is 18-91)
307 and is 47% female. In the US13 the average age is 33 years (18-81) and 41% female; in the
308 US15 the average age is 48 years (18-87) and 53% female. Educational attainment was assessed
309 with a 9-category item in DK11 (modal category: vocational education), a 7-category item in
310 US13 (modal category: Bachelor's degree), and a 6-category item in US15 (modal category:
311 completed High School). Research in political engagement emphasizes university education as
312 the most important education difference; thus, we contrast those who completed higher education

313 (1), to those who did not (0). In the US samples we include a variable for ethnicity, coded as
314 dichotomous: 0 for Caucasian (72% in US15 and 73% in US13) and 1 for other ethnicities.
315 Relationships between narcissism and socio-demographic characteristics are reported in SI5.

316 *Analytical Strategy*

317 Our analysis has two parts. First, we establish the broader relationship between overall
318 narcissism and participation. While we have nationally representative samples and good
319 properties for outcome and narcissism measures, our analyses are between-individual and cross-
320 sectional, with no time component or experimental intervention. Therefore, they remain
321 correlational. Through regressing participation on narcissism, the models imply a causal
322 direction where narcissism influences participatory behaviors but does not test for causality. We
323 return to this point in the discussion section.

324 In the second part, we zoom in on the sub-factors and fit an identical set of models but
325 instead of the overall NPI we use the independent seven and three factor measures as main
326 predictors. For participation we specify linear regressions (OLS estimates); for turnout we use a
327 logistic regression. All continuous predictor variables were mean centered and divided by two
328 standard deviations. This method is preferred for two reasons (Gelman & Hill, 2007): (1) the two
329 standard deviation unit reflects a potential difference between one standard deviation below the
330 mean to one standard deviation above the mean area that contains likely values on the predictor;
331 (2) analytically, the effect of a continuous variable associated with a two-standard deviation unit
332 difference is comparable one-to-one to the effect of dichotomous variables, of which the current
333 study has several of interest.

334 **Table 2:** Standardized loadings, 7-factor model (standard errors in parentheses)

		DK11	US13	US15			DK11	US13	US15	
Authority	Item1	0.769 (0.025)	0.738 (0.019)	0.684 (0.050)	Exploitativeness	Item6	0.541 (0.042)	0.612 (0.026)	0.637 (0.066)	
	Item8		0.621 (0.023)	0.641 (0.051)		Item13		0.707 (0.024)	0.709 (0.067)	
	Item10		0.805 (0.015)	0.690 (0.053)		Item16	0.393 (0.036)	0.488 (0.029)	0.545 (0.063)	
	Item11	0.639 (0.025)	0.654 (0.021)	0.549 (0.057)		Item23	<i>0.172 (0.041)</i>	0.730 (0.026)	0.648 (0.066)	
	Item12		0.770 (0.017)	0.733 (0.046)		Item35		0.700 (0.023)	0.553 (0.066)	
	Item32	0.553 (0.028)	0.809 (0.016)	0.744 (0.045)		Entitlement	Item5		0.647 (0.025)	0.494 (0.063)
	Item33		0.861 (0.013)	0.751 (0.041)			Item14	<i>0.287 (0.044)</i>	0.511 (0.03)	<i>0.237 (0.076)</i>
	Item36	0.712 (0.03)	0.850 (0.015)	0.740 (0.045)			Item18		0.587 (0.028)	0.593 (0.066)
Exhibitionism.	Item2		0.673 (0.027)	0.497 (0.072)	Item24		0.471 (0.034)	0.362 (0.030)	0.360 (0.075)	
	Item3		0.543 (0.030)	0.630 (0.061)	Item25		0.596 (0.027)	0.506 (0.069)		
	Item7		0.849 (0.015)	0.837 (0.040)	Item27	0.995 (0.049)	0.768 (0.022)	0.742 (0.056)		
	Item20		0.805 (0.019)	0.678 (0.059)	Vanity	Item15		0.881 (0.019)	0.760 (0.075)	
	Item28		0.615 (0.028)	0.563 (0.064)		Item19		0.899 (0.016)	0.687 (0.071)	
	Item30		0.899 (0.014)	0.884 (0.039)		Item29	1 (0)	0.829 (0.021)	0.841 (0.076)	
	Item38		0.691 (0.028)	0.714 (0.055)	Self-Sufficiency	Item17		0.371 (0.029)	0.341 (0.072)	
	Superiority	Item4		0.768 (0.022)		0.637 (0.062)	Item21		0.490 (0.027)	0.449 (0.067)
Item9			0.802 (0.016)	0.700 (0.054)		Item22	<i>0.098 (0.035)</i>	<i>0.206 (0.03)</i>	<i>0.034 (0.077)</i>	
Item26			0.654 (0.022)	0.460 (0.066)		Item31	0.364 (0.037)	0.506 (0.026)	0.525 (0.064)	
Item37		1 (0)	0.610 (0.027)	0.636 (0.066)	Item34		0.672 (0.023)	0.540 (0.061)		
Item40		0.844 (0.016)	0.690 (0.054)	Item39	0.623 (0.051)	0.663 (0.024)	0.688 (0.06)			

335 *Notes:* Loadings below 0.3 are italicized.

336 **Table 3:** Standardized loadings, 3-factor model (standard errors in parentheses)

		DK11	US13	US15
Leadership/Authority	Item1	0.727 (0.027)	0.710 (0.019)	0.663 (0.051)
	Item5		0.587 (0.022)	0.485 (0.057)
	Item10		0.805 (0.015)	0.669 (0.053)
	Item11	0.619 (0.026)	0.649 (0.020)	0.542 (0.056)
	Item12		0.765 (0.016)	0.660 (0.050)
	Item27	0.709 (0.028)	0.687 (0.021)	0.705 (0.047)
	Item32	0.572 (0.028)	0.788 (0.016)	0.715 (0.045)
	Item33		0.862 (0.013)	0.762 (0.039)
	Item34		0.592 (0.022)	0.425 (0.059)
	Item36	0.692 (0.031)	0.825 (0.015)	0.730 (0.044)
	Item40		0.670 (0.021)	0.502 (0.057)
Grandiose Exhibitionism	Item4		0.720 (0.021)	0.612 (0.057)
	Item7		0.831 (0.016)	0.791 (0.041)
	Item15		0.759 (0.019)	0.599 (0.062)
	Item19		0.785 (0.017)	0.542 (0.063)
	Item20		0.768 (0.019)	0.657 (0.057)
	Item26		0.649 (0.021)	0.480 (0.060)
	Item28		0.589 (0.027)	0.585 (0.061)
	Item29	1 (0)	0.706 (0.020)	0.654 (0.056)
Entitlement/Exploitativeness	Item30		0.882 (0.014)	0.884 (0.037)
	Item38		0.651 (0.028)	0.713 (0.053)
	Item13		0.741 (0.031)	0.730 (0.092)
	Item14	<i>0.266 (0.057)</i>	0.618 (0.033)	0.346 (0.091)
	Item24	0.835 (0.136)	0.434 (0.034)	0.488 (0.092)
	Item25		0.693 (0.032)	0.689 (0.085)

Notes: Loadings below 0.3 are italicized.

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340 **Table 4:** Narcissism descriptive statistics and scale reliability

	Mean (SD)			Items/Cronbach's alpha		
	DK11	US13	US15	DK11	US13	US15
Narcissism (Full NPI)	0.31 (0.17)	0.32 (0.21)	0.31 (0.17)	15/0.63	40/0.90	40/0.86
<i>7-factor solution</i>						
Authority	0.40 (0.29)	0.41 (0.32)	0.41 (0.29)	4/0.56	8/0.82	8/0.76
Exhibitionism	-	0.18 (0.24)	0.16 (0.22)	-	7/0.74	7/0.71
Superiority	0.14	0.33 (0.31)	0.35 (0.28)	1/-	5/0.68	5/0.57
Exploitativeness	0.31 (0.27)	0.34 (0.29)	0.28 (0.26)	3/0.19	5/0.63	5/0.55
Entitlement	0.18 (0.25)	0.27 (0.25)	0.24 (0.21)	3/0.38	6/0.60	6/0.47
Vanity	0.29	0.26 (0.36)	0.18 (0.19)	1/-	3/0.75	3/0.61
Self-sufficiency	0.39 (0.29)	0.43 (0.27)	0.45 (0.25)	3/0.21	6/0.52	6/0.41
<i>3-factor solution</i>						
Leadership/Authority	0.35 (0.27)	0.38 (0.30)	0.40 (0.26)	5/0.61	11/0.84	11/0.76
Grandiose Exhibitionism	0.29	0.24 (0.25)	0.22 (0.22)	1/-	10/0.81	10/0.75
Entitlement/Exploitativeness	0.18 (0.28)	0.24 (0.28)	0.17 (0.23)	2/-	4/0.55	4/0.43

341 *Notes:* All measures rescaled range from 0 (minimum, lowest narcissism) to 1 (maximum, highest narcissism).

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RESULTS

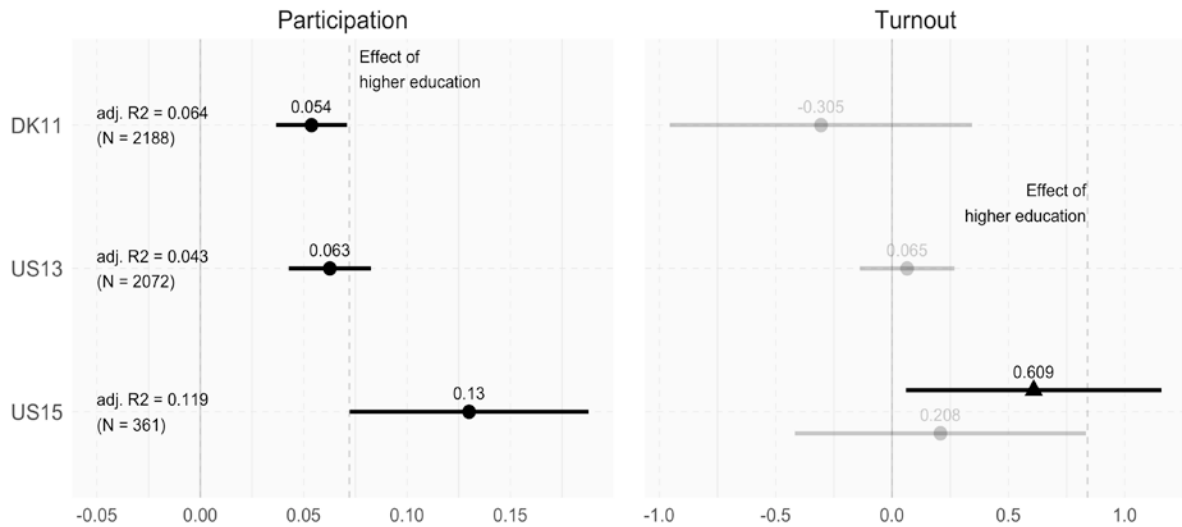
345 *Overall Narcissism Positively related to Participatory Behaviors*

346 Bivariate correlations are reported in SI5, finding significant and positive correlations for
 347 NPI and Political Participation: 0.16 in DK11, 0.08 in US13, and 0.15 in US15. Modest
 348 correlations are not unexpected; it is generally difficult to explain variation in participatory
 349 behaviors (Verba et al., 1995). Regarding turnout, none of the bivariate correlations are
 350 significant. Figure 1 displays the coefficients from the multivariate models for our two main
 351 participatory measures. Focusing our attention on Political Participation we note the robustness
 352 of our results across samples: the effects for Narcissism found in the two US studies and one
 353 Danish study are all positive and statistically significant, with more narcissistic individuals
 354 participating more in politics compared to others.

355 This between-individual difference of 2 standard deviations—close to 14 (out of 40)
 356 more narcissistic answers in US15 for example—is akin to the difference between individuals

357 who completed higher education and those who did not (Kam & Palmer, 2008; Verba et al.,
 358 1995). That is, when contextualized, the effect of overall narcissism is comparable to some of the
 359 most important predictors of participation.

360 **Figure 1:** The relationship between overall Narcissism and Political Participation



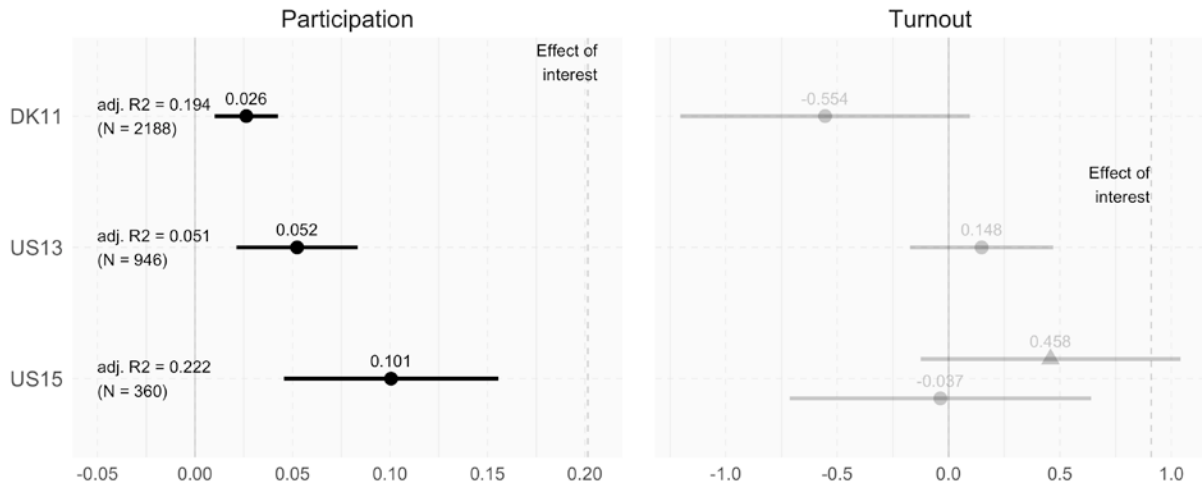
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 362 Notes: Lines are 95% confidence intervals. Coefficient plot (2 SD in narcissism). Continuous outcome on [0,1]
 363 range for participation, dichotomous outcome for turnout. Triangle for 2014 Midterm Vote (available only in US15).
 364 Full model results are reported in SI6.

365
 366 The results of our turnout analyses reveal no systematic relationship between overall
 367 Narcissism and voting in general elections. Given the higher reported turnout and less variation
 368 to explore, this is not unexpected. In midterm elections where we find more variation in turnout,
 369 we do find a positive and significant relationship between Narcissism and voter turnout.

370 The *adjusted-R²* displayed in Figure 1 shows that the explanatory power of these models
 371 is modest. Our initial goal was to establish whether there is a relationship between narcissism
 372 and political participation when socio-demographic differences are accounted for. A more
 373 complete explanation (or model) of participation would require measures of mobilization, and a
 374 substantial number of familial, social, and individual factors. In this regard, we had available a
 375 measure of political interest in all studies. Political interest serves as a reasonable proxy for

376 knowledge and a host of sociodemographic and motivational considerations (Verba et al.,
 377 1995).⁵ We refitted our models adding this predictor and the results are summarized in Figure 2;
 378 full model results are reported in SI6.

379 **Figure 2:** The relationship between overall Narcissism and Political Participation, Political
 380 Interest included as control



381 Notes: Coefficient plot (2 SD in narcissism) where lines are 95% confidence intervals. Continuous outcome on [0,1]
 382 range for participation, dichotomous outcome for turnout. Triangle for 2014 Midterm Vote (available only in US15).
 383
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385 Unsurprisingly, we find a substantial increase in the explained variation, but more importantly,
 386 the significance of Narcissism remains. Finally, the positive effect on Midterm turnout is not
 387 significant in this specification, contributing to the overall conclusions that while narcissism is
 388 systematically related to participation, its relationship with turnout is tenuous.

389 *Both Agentic and Antagonistic Dimensions Predict Participatory Behaviors*

390 So far, we have established a consistent relationship between overall Narcissism and
 391 Political Participation, but not Turnout in national elections. Here, we decompose this
 392 relationship and present each dimension's independent relationship with participation.

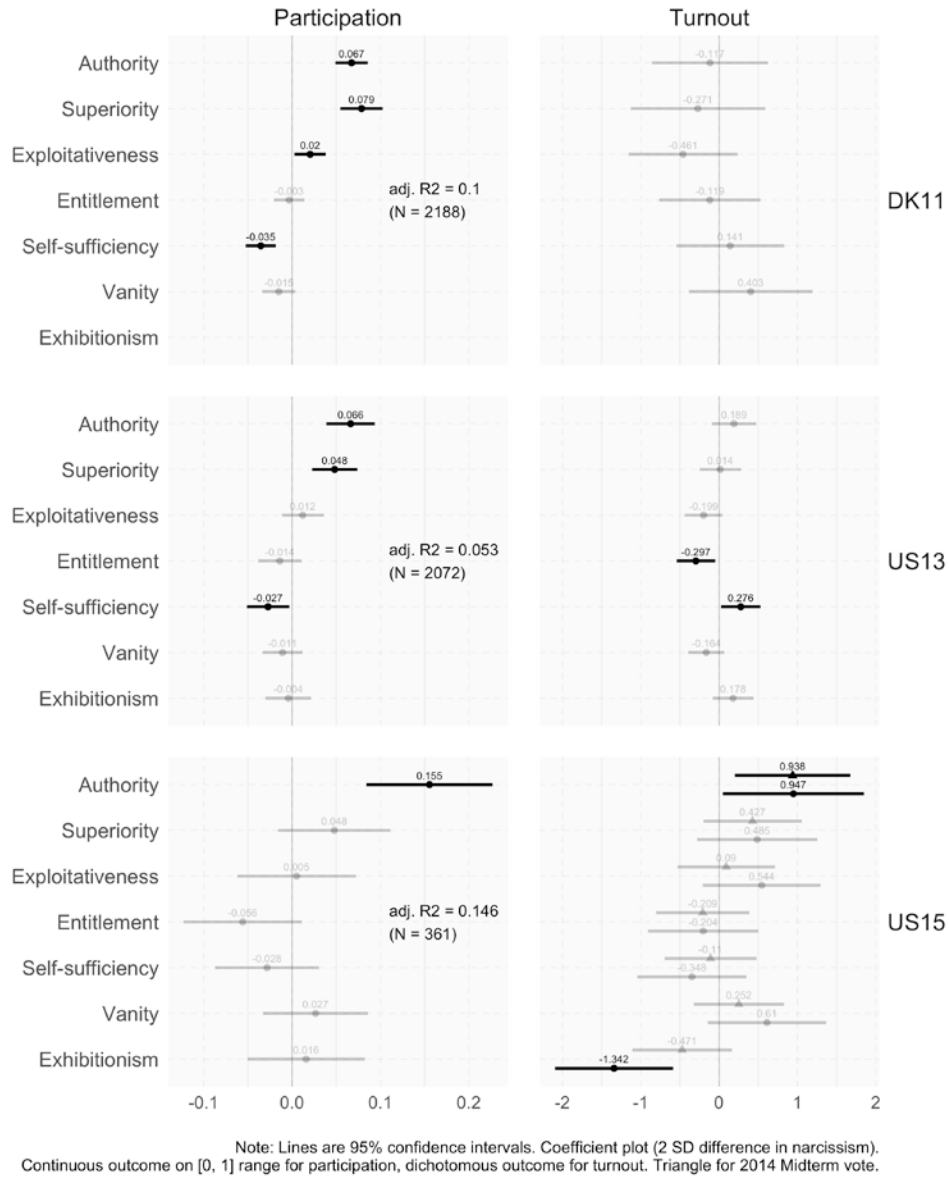
⁵ In all three studies, Political Interest was measured with a commonly used 4-point Likert scale item (“How interested are you in politics” with response from “very interested” to “not interested”).

393 Specifically, we test our hypotheses at the dimension level, where such independent influences
394 have been masked so far by using the NPI sum score. We fitted the same models, but instead of
395 the full NPI score, we included the 7 sub-facets as predictors in one set of models, and the 3 sub-
396 facets in a subsequent step of models (mean centered and divided by 2 standard deviations).
397 Bivariate correlations are reported in SI5 and full regression tables are presented in SI6. Our
398 main results are summarized in Figures 3 and 4 for the 7-factor and 3-factor models of
399 narcissism respectively. We find important heterogeneity regarding the narcissism dimensions.

400 Higher Authority-Seeking and self-perceived leadership ability is consistently associated
401 with Political Participation. As with overall Narcissism, the magnitude of the relationship is
402 substantively important. We also find the hypothesized positive relationship between Superiority
403 and Political Participation in two studies (US13 and DK11), and negative relationship between
404 Self-sufficiency and Political Participation in the same two studies. The US15 returned the same
405 direction and magnitude of these relationships, but noting that this study was the smallest in
406 sample size, the wider confidence intervals are not surprising. Buttressing this, in all three
407 studies, the zero-order correlations for Superiority were statistically significant: 0.26 (DK11),
408 0.09 (US13), and 0.12 (US15). Beyond that, other sub-facets exhibit mixed relationships
409 contingent on the study and specification. For example, we find a positive relationship between
410 Exploitativeness and Political Participation in Denmark, but not in the US.

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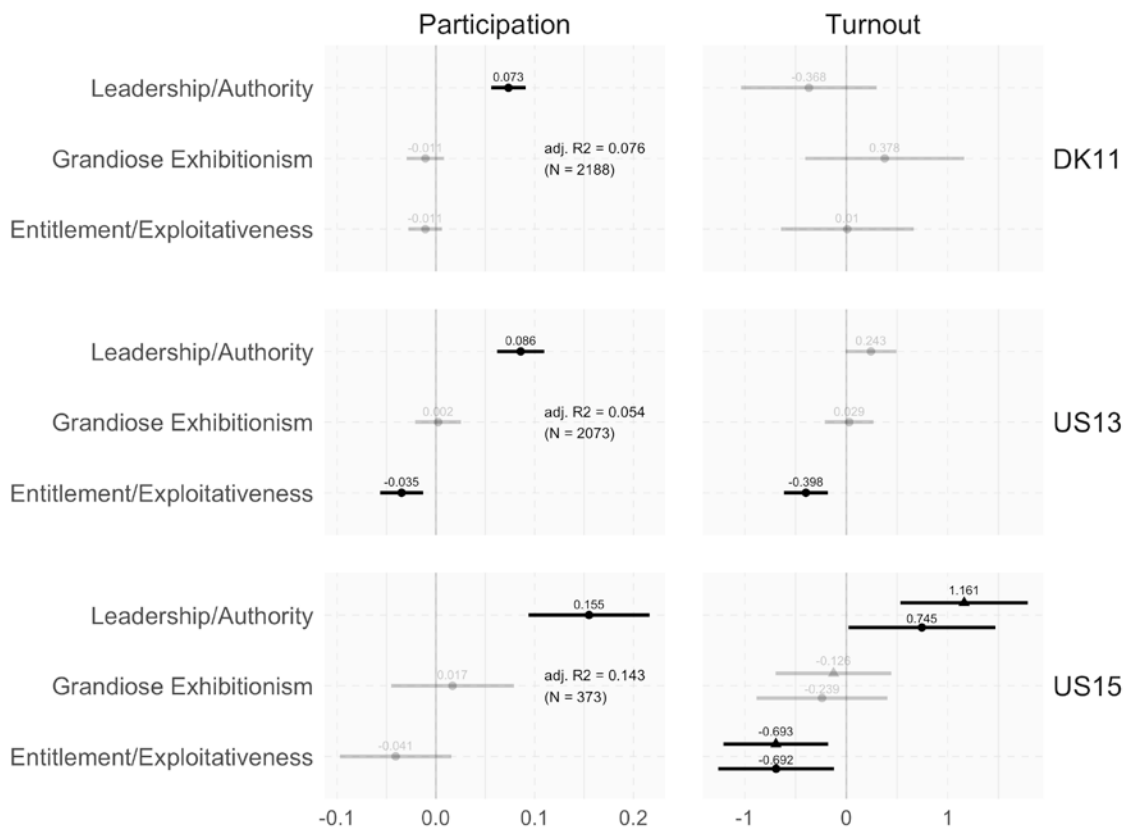
420 **Figure 3:** The relationship between overall Narcissism sub-facets (7-factors) and Political
 421 Participation
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 424 Turning to the 3-factor model of Narcissism (Figure 4), our results further confirm that
 425 participatory behaviors are positively related to the combined Leadership/Authority dimension in
 426 all three studies. We also find statistically significant relationships for Turnout in general and
 427 midterm elections in the US15 study. Ackerman et al's Entitlement/Exploitativeness factor was

428 not significantly related to participation in either nationally representative study, but we did find
 429 it was significantly related (negatively) to participation in the convenience sample (US13).
 430 Similarly, individual differences in voter turnout were not systematically related to the
 431 independent Entitlement or Exploitativeness factors in the 7-factor model, but with the 3-factor
 432 Entitlement/Exploitativeness factor we find a modest negative relationship with Turnout in both
 433 US studies.

434
 435 **Figure 4:** The relationship between overall Narcissism sub-facets (3-factors) and Political
 436 Participation

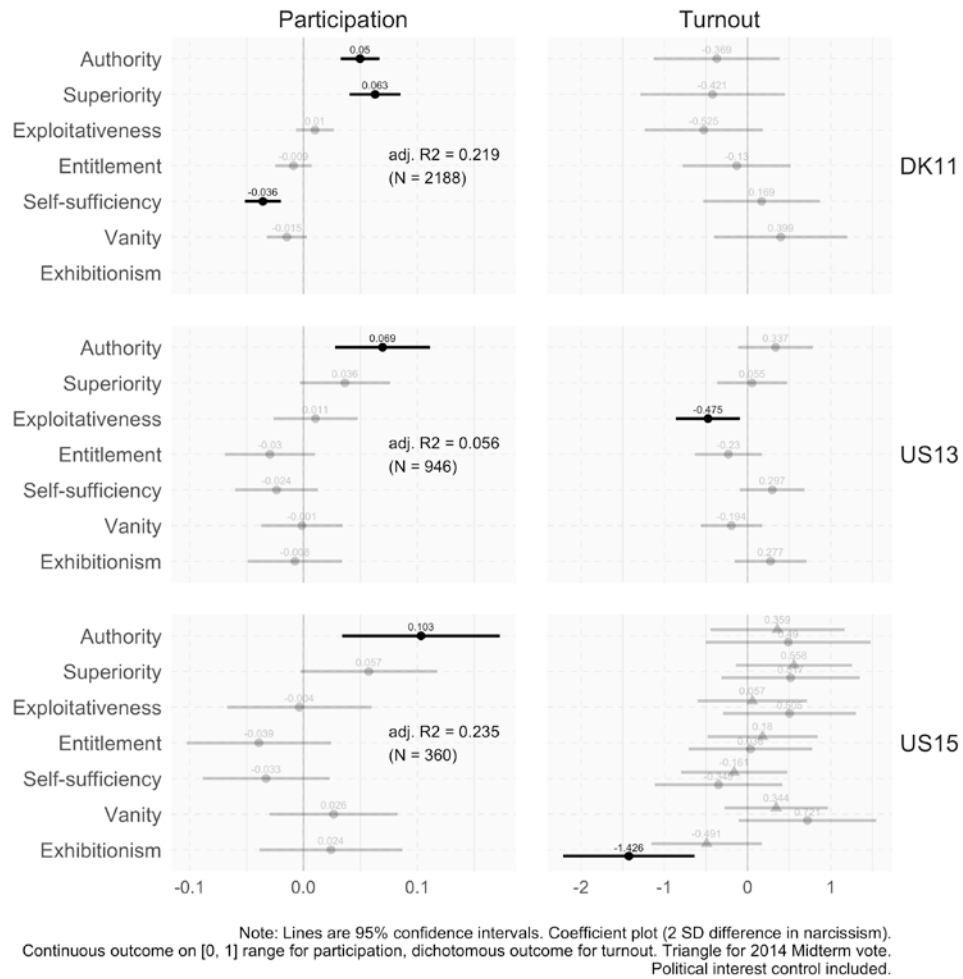


Note: Lines are 95% confidence intervals. Coefficient plot (2 SD difference in narcissism). Continuous outcome on [0, 1] range for participation, dichotomous outcome for turnout. Triangle for 2014 Midterm vote.

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 439 As with our analysis of the overall NPI, we refitted all models including a Political
 440 Interest predictor. Results are displayed in Figures 5 and 6, with full regression tables reported

441 in SI6. These models with better explanatory power largely reiterate our findings from the
 442 models with socio-demographic controls only. There is minor variation in effect-size and
 443 statistical significance.

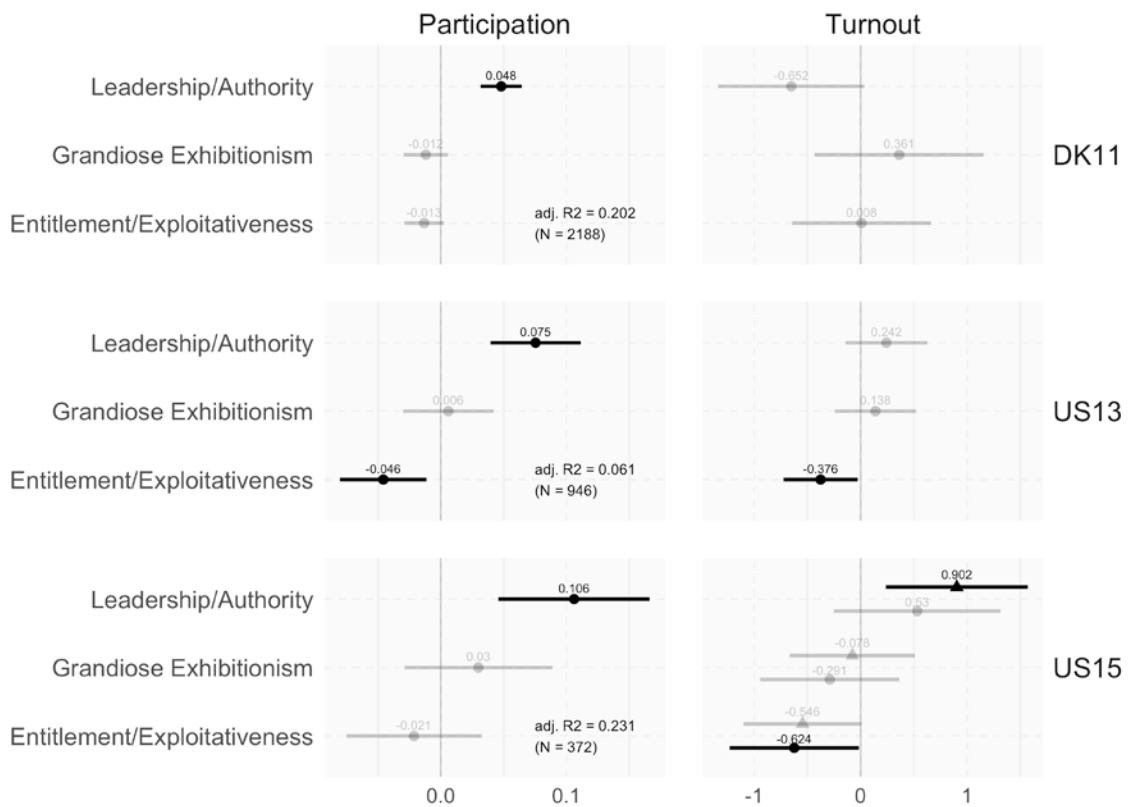
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 445 **Figure 5:** The relationship between overall Narcissism sub-facets (7-factors) and Political
 446 Participation, Political Interest included as control



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449 **Figure 6:** The relationship between overall Narcissism sub-facets (3-factors) and Political
 450 Participation, Political Interest included as control



Note: Lines are 95% confidence intervals. Coefficient plot (2 SD difference in narcissism). Continuous outcome on [0, 1] range for participation, dichotomous outcome for turnout. Triangle for 2014 Midterm vote. Political interest control included.

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DISCUSSION

453 Elections and campaigns by their very nature seek to evoke the public's wants, inspiring
 454 candidates to promise and enact policies to feed narcissistic desires. More narcissistic
 455 participants presuppose a less civil society, a condition that arguably reflects the modern political
 456 climate. Nevertheless, a certain degree of narcissism should be expected for political
 457 participation. In many ways, democracy demands this from the public. Democratic societies
 458 encourage the public to participate, join groups, invest in community, write civic leaders, take
 459 part in elections, and vote; that every voice is important and should be heard. In this view, if
 460 everyone acts with constrained self-interest, democratic outcomes should reflect the collective

461 needs of the public. That is, in order for democracy to work, some amount of narcissism appears
462 necessary.

463 Our results from three studies find that the relationship between narcissism and political
464 participation is complex, with several layers. First and foremost, people who are more
465 narcissistic, as measured by the full NPI, participate more in early politics. They are more likely
466 to contact decision makers, publicize their opinions, put issues on the agenda and engage in those
467 behaviors that embody the first stage of interaction between the public and institutionalized
468 politics. However, when it comes to voting, those higher in overall narcissism are only more
469 likely to vote in midterm elections as compared to general elections. Given the high turnout in
470 presidential elections, this is not surprising.

471 On the whole, activity in early politics, versus voting, indicates the first layer of
472 complexity in the relationship between participation and narcissism. In this first layer, it appears
473 even if only to a limited extent decision-makers follow the “public’s desires” (Gilens & Page,
474 2014), it will be the desires of the more narcissistic, since their views will be more often voiced
475 and heard. The implications of those higher in overall narcissism steering public debate, placing
476 issues on the agenda, and shaping the pool of candidates suggests that political outcomes will
477 arise from a more selfish segment of the electorate. This segment prefers to lead and have
478 authority over others with the aim of maximizing personal gain at the cost of others and society.
479 These findings are in line with a participation theory focused on self-interest and instrumental
480 motivations. This potentiates some concern when married with extant narcissism research that
481 finds the traits of self-absorption, arrogance, superiority, and entitlement combine to produce a
482 unique disposition that yields negative outcomes for society (Böckler et al., 2017; Campbell et
483 al., 2005; de Zavala et al., 2013; Lambe et al., 2018; Lyons et al., 2010; Van Vugt, 2009). While

484 the effects of narcissism on participation are not large, they are at least as large as some of the
485 most important predictors of participation, including higher education.

486 A second layer of complexity emerges through the exploration of participation's
487 relationships with the individual narcissistic dimensions. In order to substantiate differences, we
488 relied on two different NPI factor solutions. This approach had three major benefits. First, our
489 results are relevant for the conceptualization and the measurement of narcissism. In our
490 nationally representative data, we find the 40-item NPI 7-factor model fits at least as good, if not
491 better than the 25-item NPI 3-factor model. While reducing the number of items and factor
492 structure can have important benefits, since we collected the full NPI, we believed it was
493 important to consider the measure in its originally proposed structure and not to dismiss the
494 seven factors too soon. Second, we identify unique relationships with participation in both
495 approaches that would have gone unnoticed by using only one specification. Finally, those
496 factors that are comparable or shared across approaches exhibited strong convergence (such as
497 Authority or Leadership/Authority), which provides further confidence in the validity and
498 reliability of our measures and results.

499 Regarding the independent dimensions, it is not the case that agentic factors are
500 positively related, and antagonistic factors are negatively related to participation or vice versa.
501 Rather, the agentic dimension of Authority/Leadership was positively related to participation,
502 while at the same time the agentic dimension of Self-Sufficiency was negatively related. In a
503 similar manner the antagonistic factor of Superiority was positively related to participation. The
504 individual Entitlement and Exploitativeness factors or the combined
505 Entitlement/Exploitativeness factor did not have consistent or significant independent

506 relationships to participation. Regarding turnout alone however, Ackerman et al's combined
507 Entitlement/Exploitativeness specification was negatively related to voting in midterm elections.

508 These findings both mitigate and compliment those from the overall NPI. The general
509 picture is that individuals who believe in themselves, and believe that they are better than others,
510 engage in the political process more. This agentic/antagonistic combination echoes parts of the
511 overall NPI findings. At the same time, those individuals who are more self-sufficient are also
512 less likely to take part in the political process. This means that policies and electoral outcomes
513 could increasingly be guided by those who both want more, but give less. It is difficult to not
514 consider these findings in the context of the current political climate where populist candidates
515 are rewarded for promising jobs, tax relief, relief from international trade, debt forgiveness, free
516 education or health care, all at the cost to others. However, simultaneously, at least when
517 explored alone, exploitative motivations and entitlement are not independently related to
518 participation or have a negative influence on voter turnout. This latter finding reinforces the
519 distinction between early participation and turnout. Turnout appears to reflect a more civic and
520 agentic activity versus early participation, which in this context, appears to be a vehicle for those
521 seeking to benefit from other people and as an activity for those who want something from
522 others.

523 This study, as does all empirical work, comes with limitations. Ideally, we would have
524 the full 40-item NPI battery in the Danish sample, allowing for comparison of identical
525 measurements. Though outcome differences were limited, we cannot make direct comparisons
526 across countries since we cannot assess whether differences are contextual, or measurement
527 related. In this regard, we have attempted to offer a transparent discussion of the measurement
528 properties to accurately contextualize our findings. The consistency of our results is encouraging,

529 but cross-country differences in narcissism and its correlates should be further explored. This is
530 of special relevance in the case of the positive relationship found between participation and
531 Exploitativeness, which was only significant in Denmark.

532 The data include nationally representative and large samples and well-validated
533 measures, and the findings are consistent, comparable and robust across countries. Nonetheless,
534 we cannot definitely answer if narcissism or its subfactors precede political participation or if
535 participation, incites narcissism. The current study takes an empirical approach that assumes
536 rather than tests for causality, and the specific direction assumed here is one that follows the
537 majority of studies which conceptualize narcissism as a personality trait that influences
538 behaviors. However, it is probable that some parts of the relationship are reciprocal. While it
539 appears likely that more narcissistic individuals participate more (selection effect), participatory
540 behaviors may also render individuals more narcissistic (socialization effect). That is, those
541 higher in narcissism may seek out political means in which to express their disposition, and the
542 experiences that follow may also lead to, or reinforce, narcissistic tendencies. Indeed, the last
543 several decades have witnessed an increase in individualism and a global rise of populism fueled
544 by perceived entitlement that has upended the institutional control of established parties and
545 politicians, sending advanced democracies into a state of turmoil (Formisano, 2016;
546 Marchlewska et al., 2018; Zakaria, 2016). Mostly likely narcissism and political participation,
547 and the political climate by extension, interact and have a recursive relationship.

548 Future directions include disentangling this relationship and identifying the causal
549 pathways in both longitudinal and experimental research. In particular, it is of great interest to
550 know whether narcissism leads to participation, or participation leads to narcissism, or if the role
551 of narcissism on political participation is a function of social forces activating citizens to varying

552 degrees based upon their individual disposition, where such trends might change with the ebb
553 and flow of social conditions. A natural question is do populist movements activate, evoke, or
554 result from narcissism? Similarly, future research can extend the current inquiry by relying on a
555 different item-set to measure narcissism and various other factor structures to expound upon the
556 nature of the relationship between political participation and narcissism.

557 *Conclusion*

558 We find narcissism is an important characteristic to measure and a useful tool to
559 understand the disposition of the public. That is, measuring narcissism, and its agentic and
560 antagonistic factors, offer important benchmarks to understand and predict electoral activity and
561 further inform the instrumental motivations of political participation. In this way, we bring
562 further evidence for the need to incorporate psychological traits into general theories of political
563 participation. In line with previous work on political ideology, we show that narcissism is a
564 natural candidate in this sense, which is especially important in the context of increasingly
565 populist political discourse, which likely serves as an external activation. This is of particular
566 interest in the US two-party electoral system, where political outcomes are decided at the
567 margins and influenced by the loudest voices.

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Supplementary Information

Narcissism in Political Participation

Fazekas and Hatemi

Supplementary Information 1

Party vote shares in the 2011 Danish Gallup data

The data collection for the Danish study assured that the sample is representative in terms of demographics (such as age, sex, education and location). Table SI1.1 presents the distribution of our sample (second column) in terms of party vote choice (retrospective, for the 2011 elections) and official election results in the 2011 Danish parliamentary elections (third column). As seen, the party vote distribution in our sample resembles very closely the official results.

Table SI1.1: Party vote shares, Denmark 2011

	Gallup study (%)	Official results (%)
Liberal Party (Venstre)	24.64	26.4
Social Democrats (Socialdemokratene)	24.85	24.5
Danish Peoples Party (Dansk Folkeparti)	8.24	12.2
Social-Liberal Party (Radikale Venstre)	10	9.4
Socialist Peoples' Party (Socialistisk Folkeparti)	11.5	9.1
Red-Green Alliance (Enhedslisten)	7.94	6.6
Liberal Alliance (Liberal Alliance)	4.67	4.9
Conservatives (Konservative Folkeparti)	7	4.9
Christian Democrats (Kristendemokraterne)	0.96	0.8
Voted Red	54.37	50.2
Voted Blue	45.63	49.8

Note: Source for the official results ParlGov database (Döring and Manow 2012)

Supplementary Information 2

YouGov Data Collection

YouGov interviewed 531 respondents who were then matched down to a sample of 500 to produce the final dataset. The respondents were matched to a sampling frame on gender, age, race, education, party identification, ideology, and political interest. The frame was constructed by stratified sampling from the full 2010 American Community Survey (ACS) sample with selection within strata by weighted sampling with replacements (using the person weights on the public use file). Data on voter registration status and turnout were matched to this frame using the November 2010 Current Population Survey. Data on interest in politics and party identification were then matched to this frame from the 2007 Pew Religious Life Survey. The matched cases were weighted to the sampling frame using propensity scores. The matched cases and the frame were combined and a logistic regression was estimated for inclusion in the frame. The propensity score function included age, gender, race/ethnicity, years of education, and ideology. The propensity scores were grouped into deciles of the estimated propensity score in the frame and post-stratified according to these deciles.

Supplementary Information 3

Participation measurement

In all three studies, identical question batteries were used to measure participatory behavior, with original wording:

“Here are some different forms of political participation and social action that people can take. Please indicate for each one whether you have done it (1) within the past year, (2) in the more distant past, (3) have not done it, but might do it, (4) have not done it and would never, under any circumstances, do it.”

The list of different forms of participation read as follows:

- (1). Signed a petition
- (2). Boycotted or deliberately bought certain products for political, ethical or environmental reasons
- (3). Participated in a demonstration
- (4). Attended a political meeting
- (5). Contacted or attempted to contact a politician or public official to express my views
- (6). Given or collected money to support social or political activities
- (7). Contacted or appeared in the media to express my views
- (8). Participated in a political forum or discussion groups on the Internet

Supplementary Information 4

Narcissism measurement in all three studies

We report the NPI item wording in Table SI3.1 below. For each item, the two statements are listed, and the “narcissistic” choice (statement) is bolded. For the items that were also included in the Danish Study, there is an additional row (wording identical, Danish translation) reporting the percentage of narcissistic answers. In case of the US13¹ and US15 studies where the full battery was available, as reported in the main text, the summed NPI measure is the average across all 40 items.

¹ Mturk’s crowdsourcing service is increasingly popular because results converge with those found in representative samples. Regarding political traits, respondents recruited from MTurk share the same psychological correlates as those in national representative samples, with only minor differences in effect sizes (Clifford, Jewell, & Waggoner, 2015).

Table SI3.1: NPI-40 item wording and descriptive statistics

	% Narcissistic answer choice		
	<i>DK11</i>	<i>US13</i>	<i>US15</i>
I have a natural talent for influencing people / I am not good at influencing people	66	57	59
Modesty doesn't become me / I am essentially a modest person		14	17
I would do almost anything on a dare / I tend to be a fairly cautious person		16	14
When people compliment me I sometimes get embarrassed / I know that I am good because everybody keeps telling me so		24	26
The thought of ruling the world frightens the hell out of me / If I ruled the world it would be a better place		42	51
I can usually talk my way out of anything / I try to accept the consequences of my behavior	31	30	20
I prefer to blend in with the crowd / I like to be the center of attention		20	18
I will be a success / I am not too concerned about success		55	44
I am no better or worse than most people / I think I am a special person		35	34
I am not sure if I would make a good leader / I see myself as a good leader		49	60
I am assertive / I wish I were more assertive	53	43	52
I like to have authority over other people / I don't mind following orders		36	28
I find it easy to manipulate people / I don't like it when I find myself manipulating people		29	17
I insist upon getting the respect that is due me / I usually get the respect that I deserve	12	23	20
I don't particularly like to show off my body / I like to show off my body		20	13
I can read people like a book / People are sometimes hard to understand	51	54	49
If I feel competent I am willing to take responsibility for making decisions / I like to take responsibility for making decisions		43	48
I just want to be reasonably happy / I want to amount to something in the eyes of the world		24	17
My body is nothing special / I like to look at my body		26	19
I try not to be a show off / I will usually show off if I get the chance		19	14
I always know what I am doing / Sometimes I am not sure of what I am doing		39	46
I sometimes depend on people to get things done / I rarely depend on anyone else to get things done	51	51	59
Sometimes I tell good stories / Everybody likes to hear my stories	11	24	25
I expect a great deal from other people / I like to do things for other people	24	27	18

I will never be satisfied until I get all that I deserve / I take my satisfactions as they come		18	13
Compliments embarrass me / I like to be complimented		46	58
I have a strong will to power / Power for its own sake doesn't interest me	17	27	24
I don't care about new fads and fashions / I like to start new fads and fashions		17	17
I like to look at myself in the mirror / I am not particularly interested in looking at myself in the mirror	29	32	24
I really like to be the center of attention / It makes me uncomfortable to be the center of attention		25	24
I can live my life in any way I want to / People can't always live their lives in terms of what they want	43	49	42
Being an authority doesn't mean that much to me / People always seem to recognize my authority	28	29	31
I would prefer to be a leader / It makes little difference to me whether I am a leader or not		35	30
I am going to be a great person / I hope I am going to be successful		44	43
People sometimes believe what I tell them / I can make anybody believe anything I want them to		32	30
I am a born leader / Leadership is a quality that takes a long time to develop	14	23	24
I wish somebody would someday write my biography / I don't like people to pry into my life for any reason	14	25	23
I get upset when people don't notice how I look when I go out in public / I don't mind blending into the crowd when I go out in public		12	9
I am more capable than other people / There is a lot that I can learn from other people	22	31	32
I am much like everybody else / I am an extraordinary person		35	37

Supplementary Information 5

Bivariate relationships between narcissism measures and all other variables

We summarize the bivariate relationships between Narcissism and all variables (outcomes and control variables) employed in the main analysis. These are displayed in the first column of Figures SI5.1-3 as correlation plot, where text marks significant ($p < 0.05$) correlations. The remainder of the columns represents correlations between sub-facets and all variables of interest.

Note that color anchoring (low and high) is based on the empirical minimum and maximum values. Correlation coefficients for a categorical and a continuous variable are polyserial, and all other entries are Pearson's correlation estimates. For variable description please refer to main text.

While not central to our discussion or aim of the paper, in terms of socio-demographic variables, in line with previous research (Watson and Biderman 1994), we find that men score higher in narcissism compared to women in both countries, with slightly larger sex differences in the US. In all three studies, we find that older people tend to score lower on narcissism. Finally, we find relatively weak positive relationships between narcissism and educational attainment (DK11 and US15).

Figure SI5.1 Bivariate correlations, DK11

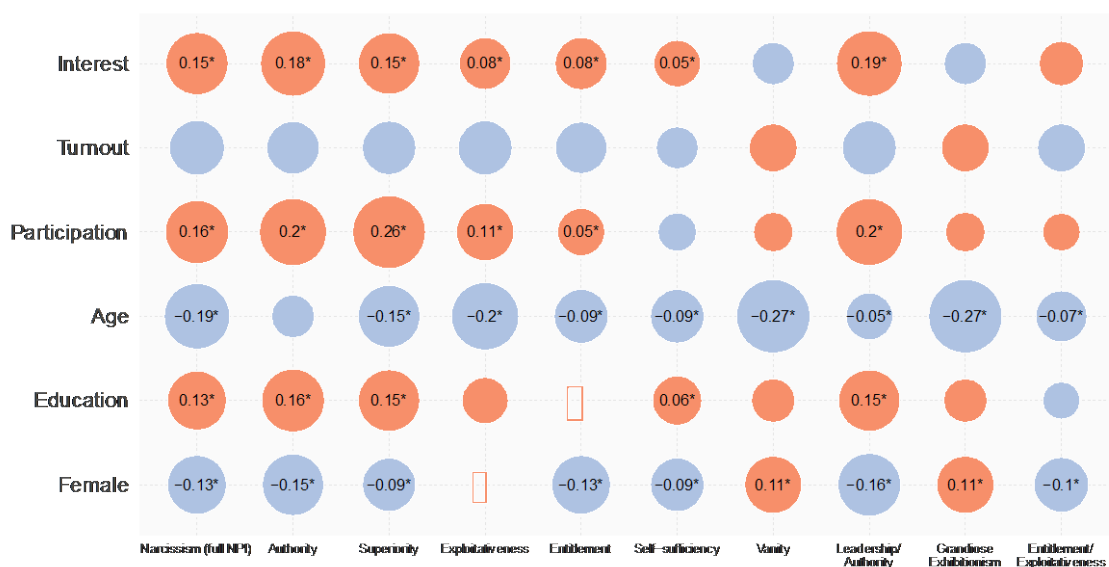


Figure SI5.2 Bivariate correlations, US13

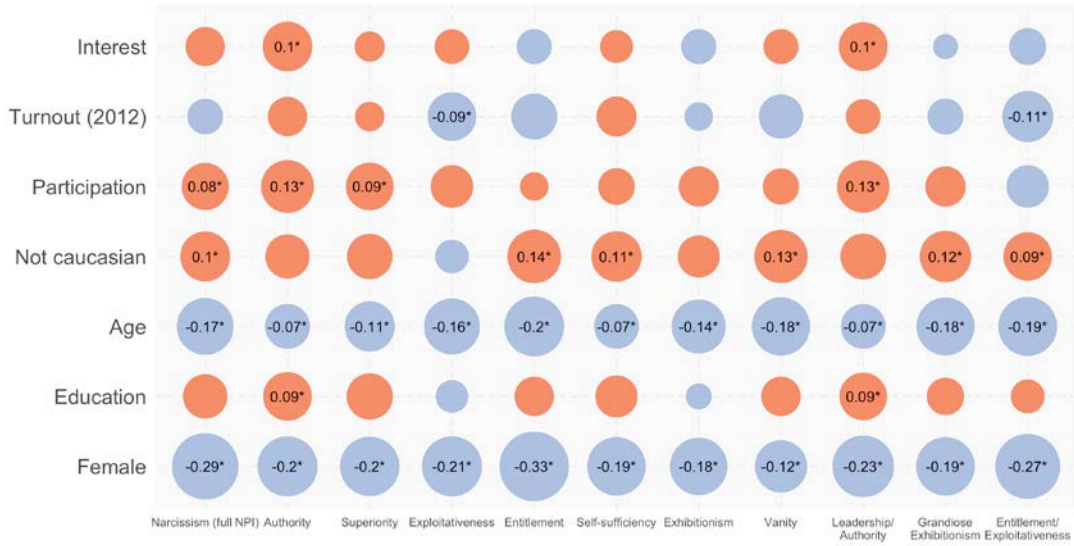
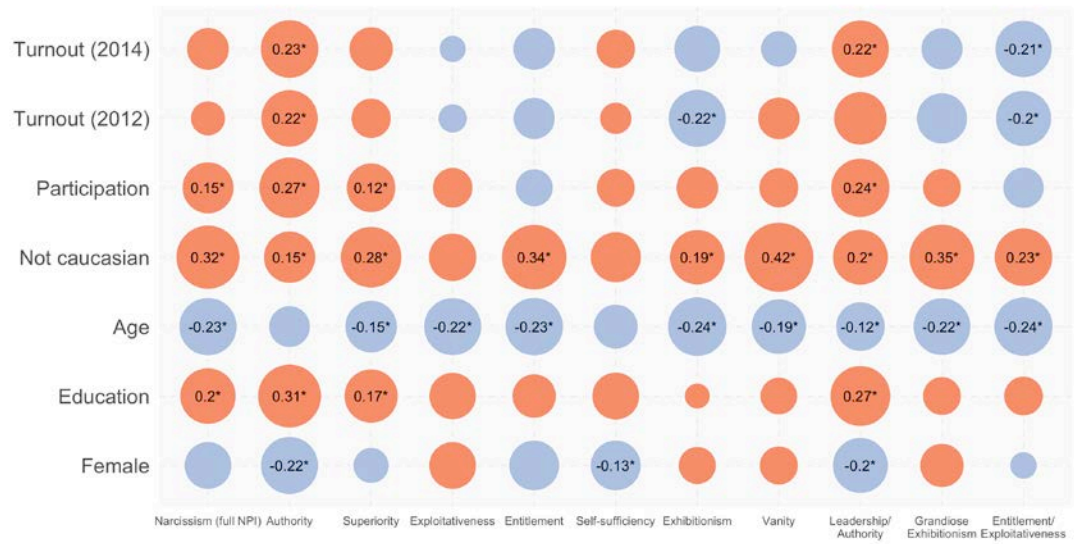


Figure SI5.3 Bivariate correlations, US15



Bivariate correlations between outcomes (participation) and other predictors (not narcissism related)

Figure SI5.4 Bivariate correlations, DK11

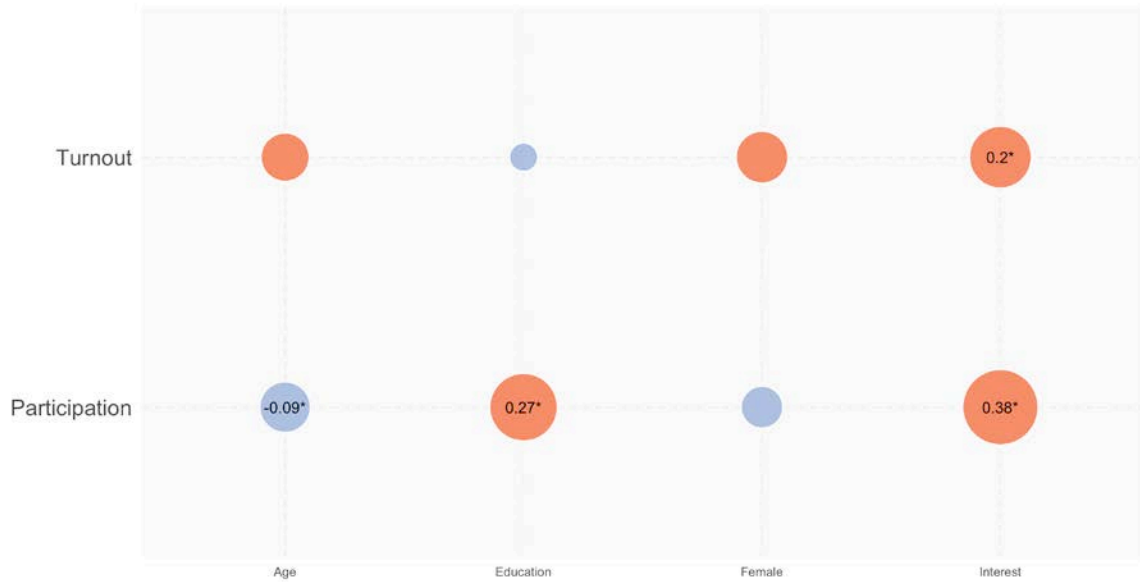


Figure SI5.5 Bivariate correlations, US13

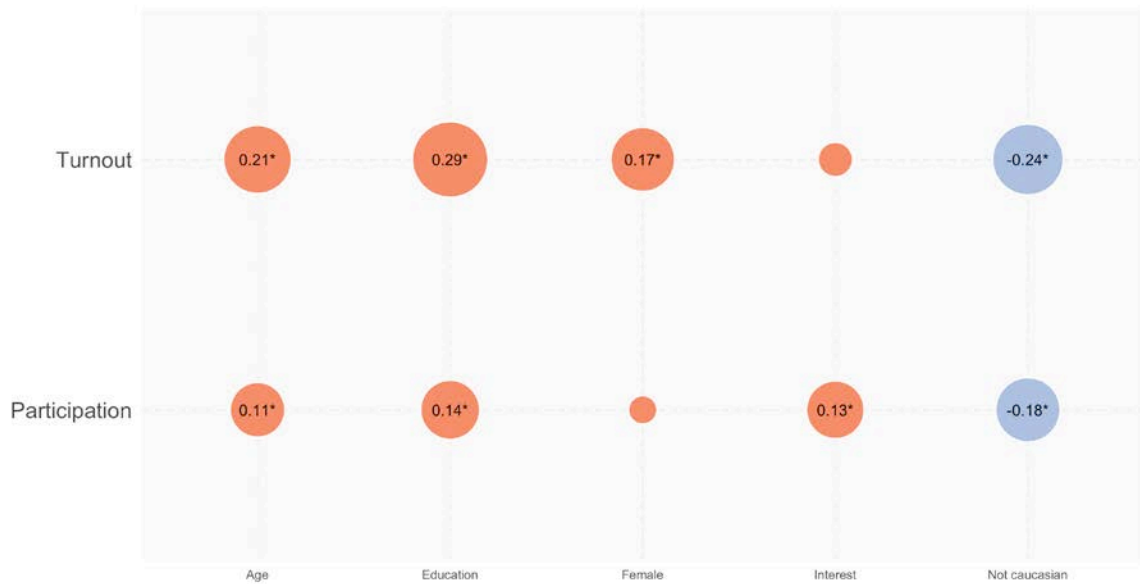
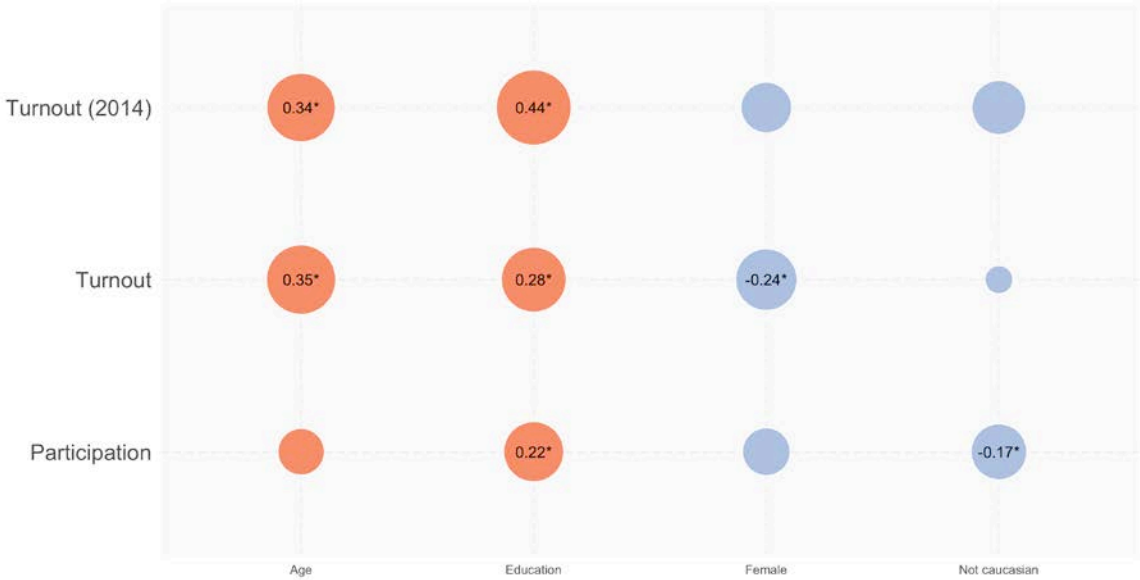


Figure SI5.6 Bivariate correlations, US15



Supplementary Information 6

Narcissism and Participatory Behaviors; detailed model results

General Notes: Standard errors in parentheses. All continuous predictors were centered and standardized with 2 SD. For non-turnout related models, we report linear regression coefficients (OLS estimates), where the outcomes range from 0 (min) to 1 (max). For turnout (including midterm) we report logit coefficients (maximum likelihood estimates) a logistic regression (voted = 1).

Table SI6.1 Regression results, overall Narcissism

(Appendix) Narcissism, political participation, and turnout

	DK11 Participation	DK11 Turnout	US13 Participation	US13 Turnout	US15 Participation	US15 Turnout	US15 Midterm
Intercept	0.42*** (0.01)	4.08*** (0.24)	0.46*** (0.01)	0.69*** (0.08)	0.44*** (0.02)	1.99*** (0.28)	1.01*** (0.22)
Narcissism (full)	0.05*** (0.01)	-0.31 (0.33)	0.06*** (0.01)	0.06 (0.10)	0.13*** (0.03)	0.21 (0.32)	0.61* (0.28)
Female	-0.02* (0.01)	0.23 (0.35)	0.01 (0.01)	0.36*** (0.11)	-0.06* (0.03)	-0.73* (0.31)	-0.38 (0.26)
Age (2SD)	-0.02* (0.01)	0.48 (0.34)	0.03** (0.01)	0.71*** (0.12)	0.06* (0.03)	1.72*** (0.37)	1.57*** (0.29)
Higher education	0.09*** (0.01)	0.22 (0.38)	0.05*** (0.01)	0.77*** (0.11)	0.09** (0.03)	0.98** (0.35)	1.39*** (0.30)
Not Caucasian			-0.06*** (0.01)	-0.50*** (0.11)	-0.11*** (0.03)	-0.04 (0.34)	-0.58* (0.29)
R ²	0.07		0.05		0.13		
Adj. R ²	0.06		0.04		0.12		
Num. obs.	2188	2440	2072	2148	361	395	389
RMSE	0.20		0.22		0.25		
AIC		381.15		2384.25		306.53	394.37
BIC		410.15		2418.28		330.41	418.16
Log Likelihood		-185.58		-1186.12		-147.27	-191.19
Deviance		371.15		2372.25		294.53	382.37

***p < 0.001, **p < 0.01, *p < 0.05

Table SI6.2 Regression results, overall Narcissism (subset of items, maximum 25)

(Appendix) Narcissism, political participation, and turnout (25 NPI items)

	DK11 Participation	DK11 Turnout	US13 Participation	US13 Turnout	US15 Participation	US15 Turnout	US15 Midterm
Intercept	0.42*** (0.01)	4.07*** (0.24)	0.46*** (0.01)	0.69*** (0.08)	0.44*** (0.02)	1.83*** (0.27)	0.98*** (0.21)
Narcissism (subset)	0.06*** (0.01)	-0.20 (0.33)	0.06*** (0.01)	0.02 (0.10)	0.14*** (0.03)	0.08 (0.31)	0.55* (0.28)
Female	-0.02 (0.01)	0.24 (0.35)	0.00 (0.01)	0.35*** (0.11)	-0.06* (0.03)	-0.60* (0.30)	-0.34 (0.25)
Age (2SD)	-0.02* (0.01)	0.51 (0.34)	0.03** (0.01)	0.70*** (0.12)	0.07** (0.03)	1.69*** (0.36)	1.49*** (0.28)
Higher education	0.08*** (0.01)	0.21 (0.38)	0.05*** (0.01)	0.77*** (0.11)	0.09** (0.03)	1.09** (0.35)	1.32*** (0.29)
Not Caucasian			-0.07*** (0.01)	-0.49*** (0.11)	-0.10** (0.03)	0.07 (0.34)	-0.63* (0.29)
R ²	0.07		0.04		0.14		
Adj. R ²	0.07		0.04		0.12		
Num. obs.	2188	2440	2073	2149	373	410	402
RMSE	0.20		0.22		0.25		
AIC		381.62		2386.04		320.91	413.92
BIC		410.62		2420.07		345.01	437.90
Log Likelihood		-185.81		-1187.02		-154.46	-200.96
Deviance		371.62		2374.04		308.91	401.92

*** p < 0.001, ** p < 0.01, * p < 0.05

Narcissism sub-facets and Participatory Behaviors

Sub-facets as predictors of Participatory Behaviors, model results

General Notes: Standard errors in parentheses. All continuous predictors were centered and standardized with 2 SD. For non-turnout related models, we report linear regression coefficients (OLS estimates), where the outcomes range from 0 (min) to 1 (max). For turnout (including midterm) we report logit coefficients (maximum likelihood estimates) a logistic regression (voted = 1).

Table SI6.3 Regression results, sub-facets (7-factor model)

(Appendix) 7-factors of Narcissism, political participation, and turnout

	DK11 Participation	DK11 Turnout	US13 Participation	US13 Turnout	US15 Participation	US15 Turnout	US15 Midterm
Intercept	0.41*** (0.01)	4.05*** (0.27)	0.46*** (0.01)	0.71*** (0.08)	0.44*** (0.02)	2.26*** (0.31)	1.09*** (0.23)
Authority	0.07*** (0.01)	-0.12 (0.38)	0.07*** (0.01)	0.19 (0.14)	0.16*** (0.04)	0.95* (0.46)	0.94* (0.38)
Superiority	0.08*** (0.01)	-0.27 (0.44)	0.05*** (0.01)	0.01 (0.13)	0.05 (0.03)	0.49 (0.39)	0.43 (0.32)
Exploitativeness	0.02* (0.01)	-0.46 (0.35)	0.01 (0.01)	-0.20 (0.12)	0.01 (0.03)	0.54 (0.38)	0.09 (0.32)
Entitlement	-0.00 (0.01)	-0.12 (0.33)	-0.01 (0.01)	-0.30* (0.13)	-0.06 (0.03)	-0.20 (0.36)	-0.21 (0.30)
Self-sufficiency	-0.04*** (0.01)	0.14 (0.35)	-0.03* (0.01)	0.28* (0.13)	-0.03 (0.03)	-0.35 (0.36)	-0.11 (0.30)
Exhibitionism			-0.00 (0.01)	0.18 (0.13)	0.02 (0.03)	-1.34*** (0.38)	-0.47 (0.32)
Vanity	-0.01 (0.01)	0.40 (0.40)	-0.01 (0.01)	-0.16 (0.12)	0.03 (0.03)	0.61 (0.39)	0.25 (0.29)
Female	-0.01 (0.01)	0.20 (0.35)	0.01 (0.01)	0.33** (0.11)	-0.04 (0.03)	-0.72* (0.34)	-0.33 (0.27)
Age (2SD)	-0.02** (0.01)	0.49 (0.35)	0.03** (0.01)	0.65*** (0.12)	0.05* (0.03)	1.61*** (0.38)	1.50*** (0.30)
Higher education	0.08*** (0.01)	0.22 (0.38)	0.04*** (0.01)	0.78*** (0.11)	0.07* (0.03)	0.84* (0.37)	1.27*** (0.31)
Not Caucasian			-0.06*** (0.01)	-0.50*** (0.11)	-0.11*** (0.03)	-0.21 (0.37)	-0.63* (0.31)
R ²	0.10		0.06		0.17		
Adj. R ²	0.10		0.05		0.15		
Num. obs.	2188	2440	2072	2148	361	395	389
RMSE	0.20		0.22		0.24		
AIC		388.11		2381.86		298.31	396.86
BIC		446.10		2449.93		346.05	444.42
Log Likelihood		-184.05		-1178.93		-137.15	-186.43
Deviance		368.11		2357.86		274.31	372.86

***p < 0.001, **p < 0.01, *p < 0.05

Table SI6.4 Regression results, sub-facets (3-factor model)

(Appendix) 3-factors of Narcissism, political participation, and turnout

	DK11	DK11	US13	US13	US15	US15	US15
	Participation	Turnout	Participation	Turnout	Participation	Turnout	Midterm
Intercept	0.42*** (0.01)	3.99** (0.25)	0.46** (0.01)	0.71*** (0.08)	0.43*** (0.02)	1.86*** (0.27)	0.99*** (0.22)
Leadership/Authority	0.07*** (0.01)	-0.37 (0.34)	0.09*** (0.01)	0.24 (0.13)	0.15*** (0.03)	0.74* (0.37)	1.16*** (0.32)
Entitlement/Exploitativeness	-0.01 (0.01)	0.01 (0.33)	-0.03** (0.01)	-0.40*** (0.11)	-0.04 (0.03)	-0.69* (0.29)	-0.69** (0.26)
Grandiose exhibitionism	-0.01 (0.01)	0.38 (0.40)	0.00 (0.01)	0.03 (0.12)	0.02 (0.03)	-0.24 (0.33)	-0.13 (0.29)
Female	-0.01 (0.01)	0.19 (0.35)	0.00 (0.01)	0.32** (0.11)	-0.05 (0.03)	-0.58 (0.31)	-0.28 (0.26)
Age (2SD)	-0.03** (0.01)	0.58 (0.34)	0.02* (0.01)	0.65*** (0.12)	0.06* (0.03)	1.64*** (0.37)	1.43*** (0.29)
Higher education	0.08*** (0.01)	0.24 (0.38)	0.05*** (0.01)	0.77*** (0.11)	0.08** (0.03)	1.08** (0.35)	1.28*** (0.30)
Not Caucasian			-0.06*** (0.01)	-0.49*** (0.11)	-0.09** (0.03)	0.17 (0.35)	-0.53 (0.29)
R ²	0.08		0.06		0.16		
Adj. R ²	0.08		0.05		0.14		
Num. obs.	2188	2440	2073	2149	373	410	402
RMSE	0.20		0.22		0.24		
AIC		384.14		2376.09		316.64	403.22
BIC		424.74		2421.47		348.77	435.19
Log Likelihood		-185.07		-1180.04		-150.32	-193.61
Deviance		370.14		2360.09		300.64	387.22

*** p < 0.001, ** p < 0.01, * p < 0.05

Model results with additional Political Interest control included

General Notes: As above. As seen in the sample size reduction, Political Interest question was only included in one of the US13 Mturk waves. In all three studies, the respondent's level of Political Interest was measured with a commonly used 4-point Likert scale item ("How interested are you in politics" with response from "very interested" to "not interested"). The predictor has been mean centered and divided by 2 standard deviations for comparability.

Table SI6.5 Regression results, overall Narcissism

(Appendix) Narcissism, political participation, and turnout (with interest)

	DK11 Participation	DK11 Turnout	US13 Participation	US13 Turnout	US15 Participation	US15 Turnout	US15 Midterm
Intercept	0.41*** (0.01)	4.27*** (0.26)	0.46*** (0.01)	0.77*** (0.13)	0.44*** (0.02)	2.11*** (0.31)	0.98*** (0.24)
Narcissism (full)	0.03** (0.01)	-0.55 (0.33)	0.05*** (0.02)	0.15 (0.16)	0.10*** (0.03)	-0.04 (0.35)	0.46 (0.30)
Female	0.00 (0.01)	0.43 (0.35)	0.02 (0.02)	0.50** (0.16)	-0.03 (0.03)	-0.58 (0.34)	-0.14 (0.28)
Age (2SD)	-0.06*** (0.01)	0.13 (0.37)	0.04* (0.01)	0.57*** (0.17)	0.01 (0.03)	1.38*** (0.39)	1.16*** (0.31)
Higher education	0.06*** (0.01)	0.00 (0.39)	0.04** (0.02)	0.76*** (0.16)	0.05 (0.03)	0.80* (0.38)	1.20*** (0.32)
Political interest (2SD)	0.33*** (0.02)	2.86*** (0.66)	0.03** (0.01)	0.02 (0.10)	0.24*** (0.03)	1.67*** (0.39)	1.95*** (0.37)
Not Caucasian			-0.07*** (0.02)	-0.60*** (0.16)	-0.08** (0.03)	0.06 (0.37)	-0.55 (0.31)
R ²	0.20		0.06		0.23		
Adj. R ²	0.19		0.05		0.22		
Num. obs.	2188	2440	946	977	360	390	383
RMSE	0.18		0.23		0.23		
AIC		365.28		1039.90		277.37	355.81
BIC		400.08		1074.09		305.13	383.44
Log Likelihood		-176.64		-512.95		-131.68	-170.90
Deviance		353.28		1025.90		263.37	341.81

*** p < 0.001, ** p < 0.01, * p < 0.05

Table SI6.6 Regression results, overall Narcissism (subset of items, maximum 25)

(Appendix) Narcissism, political participation, and turnout (25 NPI items, with interest)

	DK11 Participation	DK11 Turnout	US13 Participation	US13 Turnout	US15 Participation	US15 Turnout	US15 Midterm
Intercept	0.41*** (0.01)	4.25*** (0.26)	0.46*** (0.01)	0.77*** (0.13)	0.43*** (0.02)	1.89*** (0.29)	0.94*** (0.23)
Narcissism (subset)	0.03*** (0.01)	-0.45 (0.33)	0.05** (0.02)	0.13 (0.16)	0.11*** (0.03)	-0.13 (0.33)	0.44 (0.29)
Female	0.00 (0.01)	0.44 (0.35)	0.01 (0.02)	0.50** (0.16)	-0.03 (0.03)	-0.42 (0.32)	-0.07 (0.27)
Age (2SD)	-0.06*** (0.01)	0.18 (0.37)	0.03* (0.01)	0.56*** (0.17)	0.01 (0.03)	1.36*** (0.38)	1.08*** (0.30)
Higher education	0.06*** (0.01)	0.00 (0.39)	0.04** (0.02)	0.76*** (0.16)	0.06* (0.03)	0.96** (0.37)	1.16*** (0.30)
Political interest (2SD)	0.33*** (0.02)	2.84*** (0.66)	0.03** (0.01)	0.02 (0.10)	0.24*** (0.03)	1.52*** (0.37)	1.89*** (0.35)
Not Caucasian			-0.07*** (0.02)	-0.60*** (0.16)	-0.07* (0.03)	0.21 (0.36)	-0.61* (0.31)
R ²	0.20		0.06		0.24		
Adj. R ²	0.20		0.05		0.23		
Num. obs.	2188	2440	946	977	372	405	396
RMSE	0.18		0.23		0.23		
AIC		366.22		1040.13		293.97	375.76
BIC		401.02		1074.32		322.00	403.63
Log Likelihood		-177.11		-513.06		-139.99	-180.88
Deviance		354.22		1026.13		279.97	361.76

*** p < 0.001, ** p < 0.01, * p < 0.05

Table SI6.7 Regression results, sub-facets (7-factor model)

(Appendix) 7-factors of Narcissism, political participation, and turnout (with interest)

	DK11	DK11	US13	US13	US15	US15	US15
	Participation	Turnout	Participation	Turnout	Participation	Turnout	Midterm
Intercept	0.41*** (0.01)	4.27*** (0.29)	0.47*** (0.01)	0.80*** (0.13)	0.43*** (0.02)	2.33*** (0.33)	1.05*** (0.24)
Authority	0.05*** (0.01)	-0.37 (0.39)	0.07** (0.02)	0.34 (0.23)	0.10** (0.04)	0.49 (0.51)	0.36 (0.41)
Superiority	0.06*** (0.01)	-0.42 (0.44)	0.04 (0.02)	0.05 (0.21)	0.06 (0.03)	0.52 (0.42)	0.56 (0.36)
Exploitativeness	0.01 (0.01)	-0.53 (0.36)	0.01 (0.02)	-0.47* (0.20)	-0.00 (0.03)	0.51 (0.41)	0.06 (0.34)
Entitlement	-0.01 (0.01)	-0.13 (0.33)	-0.03 (0.02)	-0.23 (0.20)	-0.04 (0.03)	0.04 (0.38)	0.18 (0.34)
Self-sufficiency	-0.04*** (0.01)	0.17 (0.36)	-0.02 (0.02)	0.30 (0.20)	-0.03 (0.03)	-0.35 (0.39)	-0.16 (0.33)
Exhibitionism			-0.01 (0.02)	0.28 (0.22)	0.02 (0.03)	-1.43*** (0.40)	-0.49 (0.34)
Vanity	-0.01 (0.01)	0.40 (0.41)	-0.00 (0.02)	-0.19 (0.19)	0.03 (0.03)	0.72 (0.42)	0.34 (0.32)
Female	0.00 (0.01)	0.41 (0.36)	0.01 (0.02)	0.48** (0.16)	-0.02 (0.03)	-0.53 (0.36)	-0.09 (0.29)
Age (2SD)	-0.06*** (0.01)	0.17 (0.38)	0.03* (0.02)	0.47** (0.17)	0.01 (0.03)	1.27** (0.40)	1.14*** (0.32)
Higher education	0.06*** (0.01)	0.01 (0.39)	0.04** (0.02)	0.76*** (0.16)	0.04 (0.03)	0.72 (0.40)	1.14*** (0.33)
Political interest (2SD)	0.32*** (0.02)	2.94*** (0.66)	0.03** (0.01)	0.01 (0.11)	0.23*** (0.04)	1.66*** (0.42)	1.99*** (0.39)
Not Caucasian			-0.06*** (0.02)	-0.63*** (0.17)	-0.09** (0.03)	-0.19 (0.40)	-0.71* (0.33)
R ²	0.22		0.07		0.26		
Adj. R ²	0.22		0.06		0.24		
Num. obs.	2188	2440	946	977	360	390	383
RMSE	0.18		0.23		0.23		
AIC		371.35		1040.43		273.26	362.49
BIC		435.14		1103.93		324.82	413.81
Log Likelihood		-174.67		-507.21		-123.63	-168.24
Deviance		349.35		1014.43		247.26	336.49

***p < 0.001, **p < 0.01, *p < 0.05

Table SI6.8 Regression results, sub-facets (3-factor model)

(Appendix) 3-factors of Narcissism, political participation, and turnout (with interest)

	DK11	DK11	US13	US13	US15	US15	US15
	Participation	Turnout	Participation	Turnout	Participation	Turnout	Midterm
Intercept	0.41*** (0.01)	4.19*** (0.28)	0.47*** (0.01)	0.79*** (0.13)	0.43*** (0.02)	1.92*** (0.29)	0.95*** (0.23)
Leadership/Authority	0.05*** (0.01)	-0.65 (0.35)	0.08*** (0.02)	0.24 (0.20)	0.11*** (0.03)	0.53 (0.40)	0.90** (0.34)
Entitlement/Exploitativeness	-0.01 (0.01)	0.01 (0.33)	-0.05** (0.02)	-0.38* (0.18)	-0.02 (0.03)	-0.62* (0.31)	-0.55 (0.28)
Grandiose exhibitionism	-0.01 (0.01)	0.36 (0.40)	0.01 (0.02)	0.14 (0.19)	0.03 (0.03)	-0.29 (0.33)	-0.08 (0.30)
Female	0.01 (0.01)	0.38 (0.35)	0.01 (0.02)	0.47** (0.16)	-0.02 (0.03)	-0.41 (0.33)	-0.04 (0.28)
Age (2SD)	-0.06*** (0.01)	0.27 (0.37)	0.03 (0.01)	0.51** (0.17)	0.01 (0.03)	1.35*** (0.39)	1.07*** (0.31)
Higher education	0.06*** (0.01)	0.05 (0.39)	0.04** (0.01)	0.76*** (0.16)	0.05 (0.03)	0.94* (0.37)	1.14*** (0.31)
Political interest (2SD)	0.33*** (0.02)	2.90*** (0.67)	0.03** (0.01)	0.00 (0.10)	0.23*** (0.03)	1.35*** (0.38)	1.70*** (0.36)
Not Caucasian			-0.06*** (0.02)	-0.61*** (0.16)	-0.07* (0.03)	0.26 (0.37)	-0.53 (0.31)
R ²	0.20		0.07		0.25		
Adj. R ²	0.20		0.06		0.23		
Num. obs.	2188	2440	946	977	372	405	396
RMSE	0.18		0.23		0.23		
AIC		368.11		1038.93		292.81	372.30
BIC		414.51		1082.89		328.85	408.13
Log Likelihood		-176.06		-510.47		-137.41	-177.15
Deviance		352.11		1020.93		274.81	354.30

***p < 0.001, **p < 0.01, *p < 0.05