Linking Extraversion to Collective and Individual Forms of Political Participation: The Mediating Role of Political Discussion

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Objectives. Scholars are increasingly investigating the role of citizens' personality in activating political behavior. We test whether extraversion is associated to collective political activities (i.e., activities that include social interaction) and individual ones (i.e., activities that do not include social interactions). *Methods.* We use originally collected survey data from five countries (Brazil, Korea, Russia, United States, United Kingdom). *Results.* We found that extraversion is positively and directly related to collective political activities in Brazil, Korea and Russia. Results show no direct relationship between individual forms of political activities and extraversion. However, political discussion fully mediates the relationship between extraversion and individual forms of political activities in all five countries. *Conclusion.* This study contributes to growing discussions on the role of personality traits in explaining political participation across countries, arguing that the relationship between extraversion and diverse forms of political participation are also context-driven and nourished by political discussion.

As political participation is at the heart of democracy, understanding what makes people engage in politics is a key issue for political scientists and communication scholars alike (Verba, Schlozman, and Brady, 1995). In the related literature, there is an ongoing scholarly debate on the role of personality traits as determinants of political and prosocial behavior (Cooper, Golden, and Socha, 2013; Bloeser et al., 2015; Dinesen, Nørgaard, and Klemmensen, 2014; Jennstål, Uba, and Öberg, 2020; Kline et al., 2019; Lindell and Strandberg, 2018; Margetts et al., 2015; Rasmussen and Hebbelstrup, 2016). These effects have been studied at different geographic contexts, including the Netherlands (Bekkers, 2005), Finland (Mattila et al., 2011), Venezuela and Uruguay (Mondak et al., 2011), South Korea (Ha, Kim, and Jo, 2013), India and Pakistan (Oskarsson and Widmalm, 2016), Italy (Caprara et al., 2006), and Germany (Schoen and Steinbrecher, 2013).

Thus far, extant research has extensively revealed that the effects of extraversion on political behavior may hinge on the country of scrutiny (Mondak et al., 2011; Bekkers, 2005; Mattila et al., 2011) and the forms of participation (Mondak and Halperin, 2008). More specifically, Mondak and Halperin (2008) argue that extraversion may be related to all aspects of group-based political participation. We test this assumption by examining the

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potential association between extraversion and political activities that include social interaction (e.g., participating in protests) vis-à-vis those that do not include social interaction (e.g., boycotting). By doing so, we expand the existing literature in two meaningful ways: First, since most of former studies focus on single national data (except Fatke, 2017; Weinschenk, 2017), there is a need for cross-cultural studies. We address this research gap by investigating the relationship between extraversion and different forms of political participation in five different countries. Second, Cawvey et al. (2017) emphasize that the goal of examining personality and political behavior is not to claim that personality traits offer the only explanation whereby some citizens become politically active. Instead, they should be seen as an additional set of relevant variables to explain political attitudes and behavior. Accordingly, there is an empirical need to investigate indirect paths through which personality traits may shape people's behavior regarding politics (Weinschenk, 2017). In this study, we include political discussion as mediator in our empirical analysis, as it has been found to be vital antecedent of political participation both at individual and country levels (Valenzuela, Arriagada, and Scherman, 2012; Gil de Zúñiga et al., 2019).

Specifically, drawing upon representative survey data from five countries worldwide (Brazil, Korea, Russia, United Kingdom, and United States), this study tests the relationship between extraversion and two forms of political participation (i.e., collective vs. individual). Additionally, we implement mediation analysis to test whether political discussion mediates the relationship between extraversion and the two different forms of political participation. The study sheds a unique and valuable light on the way individual personality traits and political discussion contour different paths to become actively involved in democracy.

Antecedents and Forms of Political Participation

In the related literature, different concepts of political participation have been extensively discussed. Initially, research focused on electoral participation, that is, voting (Milbrath, 1965), but the Internet has opened new possibilities for citizens to engage in politics (Chadwick and Howard, 2008; Mossberger, Tolbert, and McNeal, 2008) and various forms of social media and online political participation activities have evolved (Kim and Hoewe, 2020; Reichert, 2021; Waeterloos, Walrave, and Ponnet, 2021). By now, the forms of political participation are continuously expanding, including activities such as boycotting, attending street parties, guerilla gardening, posting political blogs, joining flash mobs, signing petitions, or buying fair-trade products (Deth, 2016); these activities are typically conceived as unconventional forms of participation, while voting is often pondered as a conventional one (Ardèvol-Abreu, Gil de Zúñiga, and Gámez, 2020). In this study, we include a wide array of these activities and divide them hinging on their individual or collective nature.

According to Mondak and Halperin (2008), citizens may engage in politics through collective or individualist forms of participation. Collective activities require interaction with other participants and, therefore, are group-based, while individual activities can be accomplished or performed by citizens alone. Citizens may, for instance, participate in political meetings/demonstrations and speak at such events. On the opposite, citizens can also donate money or buy a certain product or service due to the social or political values of the company, engaging in individualist political activities. We argue that this theoretical division may play a crucial role when accounting for personality differences and, specifically, for the effects of extraversion.

Resource theory (Brady, Verba, and Schlozman, 1995) suggests that people need certain resources to participate in politics, and this include, above all, time, money and civic skills. This explains why SES has been found to positively predict political participation (Cho, Gimpel, and Wu, 2006). Additional factors that have been found to influence political participation are, among others, age and gender (Beauregard, 2014; Kittilson, 2016; Schlozman et al., 1995; Zukin et al., 2006), ethnicity (Potochnick and Stegmaier, 2020), sociopolitical antecedents (e.g., political knowledge, interest, efficacy, and trust; for an overview, see Blais, 2010; Gil de Zúñiga et al., 2019), political discussion (Kim, Wyatt, and Katz, 1999; McClurg, 2003; Shah et al., 2005), and news use (Choi, 2016; Bakker and de Vreese, 2011; Gil de Zúñiga, García, and McGregor, 2015; Kim, Chen, and Wang, 2016). We include these variables as controls in our study. Since also macro variables such as the age of democracy matters (Kitanova, 2020), we include countries with different democratic antecedents in our study. Recently, scholars started to consider genetic influence (Chance, 2019) and personality traits in their research on political participation (Mondak and Halperin, 2008), as we elaborate in the following section.

Personality and Political Participation

A widely used approach to classify personality traits falls within the five-factor theory of personality (McCrae and Costa, 1999). The "Big Five" personality traits include extraversion, agreeableness, conscientiousness, emotional stability, and openness to new experience. Personality traits have increasingly attracted the attention from scholars interested in investigating issues revolving political ideology (Alford and Hibbing, 2007; Carney et al., 2008; Jost et al., 2003; Mondak and Halperin, 2008; Riemann et al., 1993; Van Hiel and Mervielde, 2004) and political behavior (Dawkins, 2017; Gerber et al., 2011b; Ha, Kim, and Jo, 2013; Mondak and Halperin, 2008; Vecchione and Caprara, 2009; Weinschenk, 2017). Especially, extraversion has been shown to predict a wide array of different behavioral variables (Bowden-Green, Hinds, and Joinson, 2020). Building on these lines of research, we theorize about the potential relationship between extraversion and political participation.

Extraversion and Forms of Political Participation

Research suggests that extroverted citizens are more prone to engage in civic matters (Mondak et al., 2010), and are more likely to get mobilized by their peers due to their high sociability (Ha, Kim, and Jo, 2013). Costa and McCrae (1992) showed that extroverted citizens are overall more likely to participate in political and civic activities, such as volunteering and communitarian interactions. Likewise, Gerber et al. (2011b) found that extraversion is a statistically significant predictor of an index measuring participation in political campaigns.

Mondak and Halperin (2008) argue that extraversion may be related to all aspects of group-based political participation. In our study, we test this assumption empirically. Because individuals who exhibited higher levels of extraversion are more prone and enjoy the participation in activities that involve social contacts (Mondak and Halperin, 2008), we presume that they will be more likely to engage in collective forms of political participation. Citizens who are extroverted and open to human-to-human socializing opportunities are more interested in the breadth of activities than the depth (Dynes, Hassell, and Miles, 2019), enjoying the interaction with others and harnessing high sociability (Ha, Kim, and Jo, 2013). In groups, extroverts tend to be the leading voice and have high participation

(Dynes, Hassell, and Miles, 2019). In short, we presume that extroverted citizens like forms of political participation that include social interactions (Mondak et al., 2010). Therefore, extroverts should be more inclined to engage in collective political activities such as participating in protests or demonstrations. Accordingly, we formulate the following hypothesis:

H1: Extraversion is positively related to collective forms of political participation.

Exhibiting higher levels of extraversion and collective political activities does not preclude citizens to engage in individual political activities to a similar extent. Prior studies have suggested that extroverted people enjoy the interaction with others (Ha, Kim, and Jo, 2013), especially in participatory political activities (Mondak and Halperin, 2008). As a result, extraversion is, in principle, related to participation in group-oriented political activities (Gallego and Oberski, 2012). However, a number of scholars found inconsistent results for the relationship between extraversion and individual political activities (Mondak and Halperin, 2008; Gerber et al., 2011b). For instance, Mondak and Halperin (2008) probed the ways in which extraversion is unrelated to activities that do not require social interaction such as voting or wearing stickers, while Gerber et al. (2011b) and Pruysersa et al. (2019) found a significant association between extraversion and voting, an individual activity. Hence, due to inconsistent findings and the lack of a clear theoretical explanation to elucidate the association between extraversion and individual political activities, we pose the following research question:

RQ1: How is extraversion related to individual forms of political participation?

Extraversion and Political Discussion

Extraversion sets forward an energetic approach with respect to the world (John and Srivastava, 1999). Extraverted people have high social skills and hold many friendships (McCrae and Costa, 1999). They are characterized by activeness, enthusiasm, outgoingness, and talkativeness (McCrae and John, 1992). Research on personality traits and political behavior has shown that extraverted citizens are more open to new experiences and are also more interested in politics (McCrae and Costa, 2008). Research also found a positive relationship between extraversion and offline political activities (Kim, 2015; Vecchione and Caprara, 2009). For instance, Weinschenk (2017) argues that extravert people like expressing themselves and can be expected to engage in activities that allow them to express their opinion like political talks, conversations, or discussions. Extroverted individuals are, for instance, more likely to be members in online groups (Ross et al., 2009) and to use social media for making new ties and staying in contact with existing ties (Yiyan et al., 2021). Since extraverts are typically embedded in large social networks (Gallego and Oberski, 2012), and due to the more frequent interaction with others (Vecchione and Caprara, 2009), they should be more prone to be involved in interpersonal political discussions (Hibbing, Ritchie, and Anderson, 2011). In fact, Mondak and Halperin (2008) show that extraversion is associated with more frequent political talks (Mondak and Halperin, 2008). Song and Boomgaarden (2019) found a positive relationship between extraversion and frequency of discussion about economy. Similarly, Gronostay's (2018) study indicates that extrovert students are more likely to approach arguments, which in turn increased the likelihood to take part in discussions. Finally, Zhang et al. (2021) found that extrovert individuals are more likely to post thoughts about current events or politics on social media. Accordingly, we expect that extroverted citizens will engage in political discussions more frequently. In a more formal hypothesis:

H2: Extraversion is positively related to political discussion.

Political Discussion and Participation

Political discussion has always been at the heart of democracy (Delli Carpini, Cook, and Jacobs, 2004). According to Schmitt-Beck, political discussions are episodes of political conversations "that take place between the non-elite members of a political community" (2008:341). A growing score of studies have theorized about the different mechanisms that account for political discussion, both online and offline (Valenzuela, Arriagada, and Scherman, 2012). Traditional offline measures include citizens' discussions with acquaintances, friends or family, while new digital technologies and social media platforms enable new opportunities to engage in political conversations between people with strong or weak social ties (Boulianne, 2018).

The reason why deliberative democratic theories consider citizens' political discussions important is because they ponder citizens as rational agents who engage in purposive deliberations aiming at civically communicating with each other (Fishkin, 1995). This purposive and functional orientation toward civic discussions is generally driven by the desire of exchanging opinions and information with others (Guerrero, Andersen, and Afifi, 2010). In the political realm, the different interpersonal mechanisms for citizens' communication foster political discussions and public deliberations about social reality, triggering citizens interest and knowledge about public affairs and politics (Eveland and Hively, 2009).

Prior research has focused on examining the potential role of political discussion in engendering an informed and participatory citizenship (Chan, 2016). As a result, a growing number of scholars have focused, and provided strong empirical evidence for the connection between political discussion and political participation, especially on the online realm, where social media platforms became crucial avenues for civic and political engagement (Holt et al., 2013; Yamamoto and Nah, 2018). For instance, Valenzuela, Arriagada, and Scherman (2012) examining the relationship between citizens' discussions and online political participation found that larger online networks and weak-tie discussion frequency are positively related to online participation. However, not all forms of political discussion exert similar effects. According to Lupton and Thornton (2017), exposure to disagreeing opinions yields a negative association with political participation, while exposure to diversity has null effects. Likewise, on social media, discussion disagreement inhibits both offline and online political participation, while frequency of political discussion partially mediates this relationship (Lu, Heatherly, and Lee, 2016).

Despite the negative association between discussion disagreement and political participation, a number of scholars suggested that political discussions involving citizens who hold and exchange dissimilar perspectives are beneficial for individuals and society at large (Delli Carpini, Cook, and Jacobs, 2004). Other scholars, however, have suggested that the digital realm lays out the path for social interactions with like-minded peers (Sunstein, 2007). Despite these specifications, previous work has yielded strong correlational and experimental demonstrations in relation to the use of social media for interactive communication and participatory behaviors (Shah et al., 2005; Gil de Zúñiga, García, and McGregor, 2015).

Research has suggested that citizens who engage in political talks and conversations are prone to mobilize and to be involved in political activities, especially during elections (Shah et al., 2005). In fact, discussion frequency leads to a more informed and participative citizenship (Holbert et al., 2002). This relation has been justified by information processing

explanations (Eveland, 2004), by which citizens involved in political discussions not only exchange information "but also interpretative frameworks that help to process that information" (Valenzuela, 2013:924). This means that by discussing about politics, citizens elaborate about the information and arguments exchanged and problematize the opinions and counterarguments of such discussions (Eveland, 2004). In addition, higher political discussions increase citizens' knowledge about public affair and politics, increasing their interest and thus their likelihood of participating on certain political activities (Gallego and Oberski, 2012). Accordingly, we expect that political discussions will positively affect citizens' political participation, regardless of the nature (individual/collective) of such political activities. Thus, we hypothesize:

H3: Political discussion is positively related to (a) collective and (b) individual forms of political participation.

Indirect Effect of Extraversion on Participation: Political Discussion as Mediator

Despite the fact extant empirical research has yielded robust findings over the effects of personality traits on political behavior (Dawkins, 2017; Gerber et al., 2011b), less attention has been paid to identifying the underlying mechanisms by which personality may indirectly exert influence on participation. Indeed, recent research explicitly calls for studies that explore indirect effects of personality traits on political participation (Weinschenk, 2017). This study provides a grounded theoretical account to explain how extraversion relates to political participation through political discussion.

A growing number of studies have focused on examining the indirect effects of personality traits on participation. For instance, Vecchione and Caprara (2009) found that political efficacy positively mediates the relationship between personality traits (including extraversion) and political participation. Likewise, Blais and St-Vicent (2011.) analyzing the effects of specific personality traits (i.e., altruism, shyness, efficacy and conflict avoidance) on voter turnout found that political interest and civic duty mediates the relationship between altruism/efficacy and voter turnout. The formal theoretical explanation is based on the assumption that personality is developed at the early age and therefore is typically more constant and stable than attitudes toward politics (Gallego and Oberski, 2012), a determinant antecedent of political behavior (Evans and Stoker, 2016). Personality traits shape citizens behavioral and cognitive responses of their daily situations, which fundamentally impact their acquisition of political attitudes (Gallego and Oberski, 2012). Political attitudes are in fact formed as citizens are exposed to political information or interpretations about public affairs (Eveland, 2004; Kim et al., 2018). For instance, when citizens watch a political TV program, read a newspaper or discuss politics with friends or acquaintances, their interest about a particular issue may increase or decrease according to their perceptual, cognitive, emotional or behavioral responses (Gil de Zúñiga, Diehl, and Ardèvol-Abreu, 2018). Through all these mechanisms citizens form and develop a particular political attitude, which is also subject to change virtue of further exposition and cognitive elaboration on political talks, conversations, or readings. As a result, the effect of personality traits on political outcomes (attitudes and behaviors) is fundamentally mediated (Mondak et al., 2010) by individual or contextual factors. We argue that one of such individual factor is political discussion.

As stated, resource theory (Brady, Verba, and Schlozman, 1995) explains that citizens need a number of resources for participate in politics - including time, money, and civic skills. Extroverts are typically described as enthusiastic, sociable, embedded in large social

TABLE 1

Descriptive and Reliability Statistics for Collective Political Activities and Individual Political Activities

Country	N	Collective Activities M(SD)	Spearman–Brown Coefficient ρ	Individual Activities M(SD)	Cronbach's alpha α
Brazil	1,086	2.29(1.67)	0.91	3.48(1.14)	0.71
South Korea	944	1.58(1.18)	0.93	2.95(1.07)	0.71
Russia	1,145	1.68(1.22)	0.88	2.73(1.08)	0.73
United Kingdom	1,064	1.50(1.11)	0.88	3.01(1.08)	0.69
United States	1,161	1.55(1.16)	0.87	3.15(1.17)	0.73
Total	5,400	1.73(1.32)	0.90	3.07(1.14)	0.72

networks and therefore with a high number of friendships (Ha, Kim, and Jo, 2013; Dynes, Hassell, and Miles, 2019). They also enjoy the interaction with others and are more prone to participate in group-oriented political activities (Mondak and Halperin, 2008; Gallego and Oberski, 2012). Due to the open and sociable character of extroverts, they may discuss more about politics that introverts, both offline and online. Such political discussions foster their interpretative repertoires, enabling them to process such informational stimuli and increasing their likelihood of engaging in political activities as a result. Moreover, the frequent discussions and exchanges of information may also increase their chances to participate in political activities, both individual and collective. Accordingly, we formulate the following hypothesis:

H4: The relationship between extraversion and (a) collective and (b) individual political activities is positively mediated through political discussion.

Method

Sample and Data

This study is part of an international project ("World Digital Influence") where other papers have been published (Author, 2017, 2018). Following the aim of this study to investigate the impact of personality on political behavior from a cross-national perspective, we used data collected in Brazil, Korea, Russia, United Kingdom, and United States (see Table 1). By selecting countries from different continents, this study not only seeks to overcome the Western bias in communication research (Hanitzsch, 2019), but also to take into account countries with varying political background, media systems, and cultural norms. The study was fielded online in September 2015. The sample size is 5,400. The online survey was distributed by Nielsen, which curates a worldwide online panel with more than 10 million potential participants. Stratified quota sampling techniques were applied to build samples whose demographics closely match those reported by official census agencies in each country (see Callegaro et al., 2014). Nielsen partners with companies that employ a combination of panel and probability-based sampling methods. Thus, the limitations of web-only survey designs are minimized in this case (Bosnjak, Das, and Lynn, 2016). For more details on the sample and data, see Author (2017).

Measures

Building on Mondak and Halperin (2008), we differentiate between political activities that include social interaction with others and those that do not.

Collective Political Activities. This variable captures political activities that include social interaction. We asked respondents how often in the past three months they have engaged in the following activities (1 = never; 7 = all the time): "attended a political rally, participated in any demonstrations, protests, or marches"; "participated in groups that took any local action for social or political reform" (Spearman–Brown coefficient = 0.90, $M = 1.72$, $SD = 1.32$).

Individual Political Activities. This variable encompasses political activities that do not include interaction with others. We asked respondents about their engagement in the following activities (1 = never; 7 = all the time): "bought a certain product or service because of the social or political values of the company"; "boycotted a certain product or service because of the social or political values of the company"; "posted a political sign, banner, button or bumper sticker"; "donated money to a campaign or political cause"; "voted in local or statewide elections"; "voted in national or presidential elections" (Cronbach's alpha = 0.72, $M = 3.07$, $SD = 1.14$).

In this study, personality traits were captured by including several instruments used to measure the Big Five (Costa and McCrae, 1992; Gosling, Rentfrow, and Swann, 2003; Greaves, Cowie, and Fraser, 2015; John and Srivastava, 1999).

Extraversion. We asked respondents how much they agree or disagree with the following statements (1 = strongly disagree; 7 = strongly agree): "like to start conversations," "don't like to speak in front of groups" (recoded), "comfortable introducing themselves to new people," "being shy around strangers (recoded)," "talk to a lot of different people at events," and "find it difficult to approach to others" (recoded). The six items were averaged to build the final variable (Cronbach's alpha = 0.83, $M = 4.15$, $SD = 1.30$).

Political Discussion. Respondents were asked how often they talk about politics or public affairs online and offline with "spouse or partner," "family, relatives, or friends," "acquaintances," and "strangers" (1 = never; 7 = all the time). The eight items (four for online and four for offline) were averaged to create the final variable (Cronbach's alpha = 0.89, $M = 2.78$, $SD = 1.31$).

Controls. We control for sociopolitical variables (political knowledge, political interest, political efficacy, strength of political ideology), news use (social media news use and traditional media news use), personality traits, and demographics.

Political Knowledge

We used three items to measure political knowledge: "Do you happen to know, who is the current Secretary-General of the United Nations?" "What international organization is in charge of monitoring the use of nuclear energy throughout the world?" and "You might have heard some people talking about global warming. In your mind, global warming is?" For each question, respondents had the choice between five answering options. The

responses were recoded (0 = Incorrect or Don't know, 1 = Correct). The scores were added together to create the final variable ($M = 1.73$, $SD = 0.97$, Min. = 0, Max. = 3).

Political Interest. Two survey items asked respondents how closely they pay attention to information about "what is going on in politics and public affairs" and "how interested they are in information about what is going on in politics and public affairs." The two scores were averaged to create the final variable (Spearman–Brown coefficient = 0.93, $M = 4.53$, $SD = 1.50$).

Internal Political Efficacy. We asked people how much they agree or disagree with following statements about public life (1 = strongly disagree, 7 = strongly agree): "People like me can influence government" and "I consider myself well qualified to participate in politics." The two items were averaged to create the final score (Spearman–Brown coefficient = 0.72, $M = 3.92$, $SD = 1.22$).

Strength of Partisanship. We asked respondents to place themselves on the partisan spectrum in terms of party identification (0 = strongly liberal, 10 = strongly conservative) on (a) political issues, (b) economic issues, and (c) social issues. These three items were averaged and then folded in the following way: Scores farther away from the midpoint (5) took higher values and those closer to the midpoint took smaller values (Cronbach's alpha = 0.91, $M = 2.83$, $SD = 1.54$).

Social Media News Use. Based on prior research (Gil de Zúñiga, Molyneux, and Zheng, 2014; Valenzuela, Arriagada, and Scherman, 2012), four questionnaire items asked how often respondents use social media to "get news," "stay informed about current events and public affairs," "get news about their local communities," and "get news about current events from mainstream media (e.g., professional news services)". These four items, which were measured on 7-point scales (1 = never, 7 = all the time), form a reliable scale (Cronbach's alpha = 0.89, $M = 3.98$, $SD = 1.67$).

Traditional News Use. Three items measured on seven-point scales (1 = never, 7 = all the time) asked respondents how often they get news from "television news (cable or local network news)," "printed newspapers," and "radio" (Cronbach's alpha = 0.60, $M = 4.43$, $SD = 1.36$).

Agreeableness. Respondents were asked how much they "sympathize with others' feelings," "whether or not they feel little concern for others (recoded)," "to what extend they are indifferent to others' feelings (recoded)," if they "love children," if they "try their best to comfort others," and if they "find it tiresome when others ask for help (recoded)" (Cronbach's alpha = 0.75, $M = 5.11$, $SD = 1.02$).

Conscientiousness. We asked whether respondents "get chores done right away," "if they don't like to pay attention to detail (recoded)," "if they like order," "to what extend they do things according to a plan," if they "are always prepared," if they "like making plans and stick to it" (Cronbach's alpha = 0.74, $M = 4.82$, $SD = 0.96$).

Emotional Stability. We asked respondents whether they "have frequent mood swings (recoded)," "get upset easily (recoded)," "are obsessed over problems (recoded)," "rarely

get irritated," "don't get upset when problems arise," and "are calm most of the time" (Cronbach's alpha = 0.75, $M = 4.28$, $SD = 1.09$).

Openness to New Experiences.   We used the following items to assess openness: "having difficulty imagining things (recoded)," "not being interested in new ideas (recoded)," "do not like to try new things (recoded)," "being full of ideas," "taking a long time to learn anything new (recoded)," and "being quick to understand" (Cronbach's alpha = 0.71, $M = 4.99$, $SD = 0.99$).

Demographics.   We control for the following demographic variables: age ($M = 42.77$, $SD = 15.41$), gender (52.5 percent female), education (measured on an 8-point scale where 1 = none and 7 = postgraduate degree; $M = 3.98$, $SD = 1.11$), income (annual household income, $M = 2.92$, $SD = 1.1$), and ethnic or race (86 percent majority).

Results

The aim of this study is to test the relationship between extraversion and two different forms of political participation: engaging in collective activities (i.e., activities that include social interaction) versus engaging in individual activities (i.e., activities that do not include social interaction). Before testing our hypotheses, we provide an overview of descriptive statistics in the five countries analyzed. Table 1 shows that in all five countries, individual political activities ($M = 3.07$, $SD = 1.14$) such as buying or boycotting, posting a political banner, donating money to a campaign or political cause, or voting are more common than engaging in collective activities ($M = 1.73$, $SD = 1.32$) such as attending a political rally, participating in demonstrations, protests, or marches, or participated in groups that took any local action for social or political reform. Moreover, findings in Table 1 indicate that Brazil is the country showing the highest level of collective political activities ($M = 2.29$, $SD = 1.67$), and United Kingdom the one with the lowest level ($M = 1.55$, $SD = 1.16$). When it comes to individual political activities, again Brazil is the country with the highest score ($M = 3.48$); the lowest score is shown in Russia ($M = 2.73$; $SD = 1.08$).

Next, we tested our hypotheses. H1 dealt with the association between extraversion and collective political activities. Results in Table 2 show that extraversion is positively related to collective political activities in three out of five countries: Brazil ($ß = 0.088$, $p < 0.05$), Korea ($ß = 0.097$, $p < 0.05$), and Russia ($ß = 0.074$, $p < 0.05$). That is, in these three countries extraverted citizens tend to engage in political activities that include social interaction more often than people scoring low on this trait. Hence, our data provide support for H1 in three countries. In the other two countries—in the United States and United Kingdom—we found no significant relationship between extraversion and collective political activities. That is, in these countries extraverts are not more likely to engage in collective political activities. Thus, H1 is only partly confirmed.

RQ1 asked if extraversion is related to individual political activities. Results in Table 2 reveal no significant association between extraversion and engaging in individual political activities in any of the five countries: Brazil ($ß = 0.028$, n.s.), Korea ($ß = −0.002$, n.s), Russia ($ß = 0.028$, n.s.), United Kingdom ($ß = −0.024$, n.s.), and United States ($ß = 0.050$, n.s.). H2 assumed a positive relationship between extraversion and political discussion. As Table 3 shows, our data provide support for H2 in all five countries: Brazil ($ß = 0.145$, $p < 0.001$), Korea ($ß = 0.154$, $p < 0.001$), Russia ($ß = 0.099$, $p < 0.001$), United Kingdom ($ß = 0.157$, $p < 0.001$), and US ($ß = 0.125$, $p < 0.001$).

TABLE 2
Political Discussion and Extraversion Predicting Political Participation

	Brazil		Korea		Russia		United Kingdom		United States	
	COL	IDV	COL	IDV	COL	IDV	COL	IDV	COL	IDV
Block 1: demographics										
Age	-0.125***	-0.027	-0.119**	0.007	-0.134***	-0.068*	-0.129***	0.078*	-0.139***	0.110***
Gender (female = 1)	-0.025	0.031	-0.047	0.032	-0.065*	-0.017	-0.078*	0.003	-0.021	0.046
Education	0.038	0.103**	-0.022	0.029	-0.006	-0.006	-0.040	-0.023	0.050	0.127***
Income	-0.024	0.103***	-0.036	0.078*	-0.006	0.007	-0.0122	0.007	-0.006	0.027
Race (majority = 1)	-0.049	0.014	0.008	0.023	0.017	-0.036	-0.016	0.032	-0.038	0.069**
ΔR^2	5.5%	8.2%	1.1%	6.4%	3.5%	1.6%	8.6%	3.1%	5.6%	11.8%
Block 2: political antecedents										
Political knowledge	-0.029	-0.027	-0.045	-0.028	-0.061	-0.031	-0.077*	0.058	-0.046	0.037
Political interest	-0.025	0.052	0.101**	0.220***	-0.010	0.050	-0.008	0.213	0.036	0.224***
Political efficacy	0.029	0.040	-0.013	0.122***	0.154***	0.227***	0.112***	0.109***	0.115***	0.107***
Strength of partisanship	0.028	0.040	-0.016	0.062*	0.054	0.088***	-0.010	0.060	-0.053	0.129***
ΔR^2	4.7%	7.0%	8.3%	19.3%	8.5%	17.5%	5.9%	18.5%	8.5%	25.4%
Block 3: news use										
Social media news use	0.037	0.041	0.104**	0.042	0.057	0.065*	0.126***	0.053	0.026	0.042
Traditional news use	0.022	-0.016	0.086*	0.080*	0.030	0.069*	-0.001	-0.016	0.076*	0.029
ΔR^2	2.6%	1.6%	6.7%	3.3%	2.6%	3.3%	5.5%	2.1%	2.8%	1.9%
Block 4: personality traits (controls)										
Agreeableness	-0.105**	-0.069	-0.174***	-0.092**	-0.070*	0.044	-0.071*	0.051	-0.114***	-0.083**
Conscientiousness	-0.052	-0.009	0.019	-0.001	-0.029	-0.036	-0.031	-0.084**	-0.017	-0.018
Emotional stability	0.016	0.039	0.085*	0.053	-0.019	0.007	0.023	-0.001	0.049	0.003
Openness	-0.140**	-0.095*	-0.127***	-0.020	-0.169***	-0.132***	-0.150***	-0.054	-0.126***	-0.032
ΔR^2	4.7%	2.3%	4.8%	1.4%	3.9%	1.9%	2.8%	1.7%	3.7%	0.9%
Block 5: variables of interest										
Political discussion	0.503**	0.405***	0.386***	0.338***	0.375***	0.319***	0.394***	0.340***	0.407***	0.308***
Extraversion	0.088*	0.028	0.097*	-0.002	0.074*	0.028	0.052	-0.024	0.029	0.050
ΔR^2	17.1%	10.4%	11.9%	8.1%	10.1%	6.9%	10.4%	7.2%	10.1%	6.1%
Total R^2	34.6%	29.6%	32.7%	38.5%	28.6%	31.2%	33.2%	32.6%	30.6%	46.1%

Note: Cell entries are final-entry ordinary least squares (OLS) standardized coefficients (β).
* $p < 0.05$
** $p < 0.01$
*** $p < 0.001$.

TABLE 3

Extraversion Predicting Political Discussion

	Brazil	Korea	Russia	United Kingdom	United States
Block 1: demographics					
Age	−0.051	0.046	−0.082**	−0.125***	−0.098**
Gender (female = 1)	−0.13	−0.053	−0.016	−0.073*	0.002
Education	0.098***	0.030	−0.004	0.006	0.004
Income	0.093**	0.048	0.030	0.088**	0.049
Race (majority = 1)	0.004	−0.029	0.016	−0.003	−0.005
ΔR^2	7.6%	5.1%	2.0%	8.3%	4.3%
Block 2: political antecedents					
Political knowledge	−0.007	−0.034	−0.034	−0.066*	0.029
Political interest	0.315***	0.235***	0.317***	0.322***	0.367***
Political efficacy	0.102***	0.054	0.136***	0.077*	0.074*
Strength of partisanship	0.076**	0.010	0.082**	0.049	0.113***
ΔR^2	22.2%	14.1%	24.1%	18.5%	27.2%
Block 3: news use					
Social media news use	0.222***	0.236***	0.243***	0.282***	0.308***
Traditional news use	0.096**	0.140***	0.069*	0.082**	0.052
ΔR^2	7.5%	9.2%	7.3%	9.0%	9.0%
Block 4: personality traits (Controls)					
Agreeableness	0.002	−0.086*	0.028	0.043	−0.016
Conscientiousness	0.006	0.039	0.040	−0.037	−0.028
Emotional stability	0.002	−0.023	−0.070*	−0.082*	−0.013
Openness	−0.134***	−0.097*	−0.081**	−0.070*	−0.072*
ΔR^2	0.7%	0.7%	0.6%	0.6%	0.2%
Block 5: variable of interest					
Extraversion	0.145***	0.154***	0.099***	0.157***	0.125***
ΔR^2	1.5%	1.4%	0.7%	1.6%	1.1%
Total R^2	39.4%	30.5%	34.8%	38.0%	41.9%

Note: Cell entries are final-entry ordinary least squares (OLS) standardized coefficients (β)
*$p < 0.05$
**$p < 0.01$
***$p < 0.001$.

Next, we expected political discussion to be positively related to both forms of political participation (H3). Results in Table 2 reveal a positive association between political discussion and collective political activities in all five countries—supporting H3a: Brazil (ß = 0.503, $p < 0.001$), Korea (ß = 0.386, $p < 0.001$), Russia (ß = 0.375, $p < 0.001$), United Kingdom (ß = 0.394, $p < 0.001$), and United States (ß = 0.407, $p < 0.001$). Results in Table 2 also provide support for H3b stating a positive association between political discussion and individual political activities in all five countries: Brazil (ß = 0.405, $p < 0.001$), Korea (ß = 0.338, $p < 0.001$), Russia (ß = 0.319, $p < 0.001$), United Kingdom (ß = 0.340, $p < 0.001$), and United States (ß = 0.308, $p < 0.001$).

Before moving to the final step of analysis, the mediation analysis, we give an overview of important predictors beyond the variables of interest in Tables 2 and 3. Demographics are not the best predictors of political participation and political discussion; the only demographic variable that is associated with political participation in all five countries is age. Table 2 shows that younger people are more likely to engage in collective political activities in all five countries: Brazil (ß = −0.125, $p < 0.001$), Korea (ß = −0.119, $p < 0.001$), Russia (ß = −0.134, $p < 0.001$), United Kingdom (ß = −0.129, $p < 0.001$), and

TABLE 4

Indirect Effect Tests of Extraversion over Collective Political Activities via Political Discussion

Country	Indirect Effects	Point Estimate	95% Confidence Interval
Brazil	Extraversion → Political Discussion → Collective Political Activities	0.098	0.0547–0.1438∗∗∗
Korea	Extraversion → Political Discussion → Collective Political Activities	0.066	0.0331–0.1032∗∗∗
Russia	Extraversion → Political Discussion → Collective Political Activities	0.038	0.0155–0.0623∗∗∗
United Kingdom	Extraversion → Political Discussion → Collective Political Activities	0.047	0.0253–0.0726∗∗∗
United States	Extraversion → Political Discussion → Collective Political Activities	0.043	0.0217–0.0657∗∗∗

NOTE: The table reports unstandardized coefficients. Indirect effect based on bootstrapping to 5,000 samples with biased corrected confidence intervals. The effect of demographic variables (age, gender, education, income, race), political antecedents (political knowledge, political interest, political efficacy, strength of partisanship), media use (social media news use, traditional news use), and personality traits (agreeableness, conscientiousness, emotional stability, openness to new experiences) were included as control variables. $N_{Brazil} = 818$; $N_{Korea} = 749$; $N_{Russia} = 1,006$; $N_{UK} = 836$; $N_{US} = 958$.

United States (ß = −0.139, $p < 0.001$). For individual activities, the picture is less clear: one country shows a negative relationship (Russia: ß = −0.068, $p < 0.05$), and two countries a positive relationship (United Kingdom: ß = 0.078, p < 0.05; US: ß = 0.110, $p < 0.001$). When looking at political antecedents, political interests is a significant predictor of political discussion in all countries (see Table 3).

Also, news use matters—especially social media news use is a consistent predictor of political discussion in all five countries. Interestingly, traditional news use (TV, radio, newspapers) matters in all countries except the United States. Finally, when it comes to personality traits, openness to new experiences is a significant predictor of collective political activities (Table 2) and political discussion in all five countries.

Finally, we were interested to investigate the mediating effect of political discussion over the relationship between extraversion and collective and individual political activities (H4). Results from mediation analysis show that the positive relationship between extraversion and collective political activities is partially mediated by political discussion in Brazil, Korea, and Russia and fully mediated in United Kingdom and United States (H4a; see Table 4). That is, extroverted people tend to discuss politics more which, in turn, fosters their engagement in collective political activities.

Results in Table 5 indicate that political discussion fully mediates the relationship between extraversion and individual political activities in all five countries (H4b). That is, while there is no direct association between extraversion and individual political activities, there is an indirect one through political discussion. Thus, H4a and H4b were empirically supported.

Discussion

Prior research has underscored the importance of individual level characteristics in predicting a thriving and politically active democracy. Demographic variables (e.g., age,

TABLE 5

Indirect Effect Tests of Extraversion over Individual Political Activities via Political Discussion

Country	Indirect Effects	Point Estimate	95% Confidence Interval
Brazil	Extraversion → Political Discussion → Individual Political Activities	0.054	0.0295–0.0802∗∗∗
Korea	Extraversion → Political Discussion → Individual Political Activities	0.051	0.0255–0.0800∗∗∗
Russia	Extraversion → Political Discussion → Individual Political Activities	0.025	0.0111–0.0476∗∗∗
United Kingdom	Extraversion → Political Discussion → Individual Political Activities	0.039	0.0210–0.0591∗∗∗
United States	Extraversion → Political Discussion → Individual Political Activities	0.033	0.0176–0.0489∗∗∗

NOTE: The table reports unstandardized coefficients. Indirect effect based on bootstrapping to 5,000 samples with biased corrected confidence intervals. The effect of demographic variables (age, gender, education, income, race), political antecedents (political knowledge, political interest, political efficacy, strength of partisanship), media use (social media news use, traditional news use), and personality traits (agreeableness, conscientiousness, emotional stability, openness to new experiences) were included as control variables. $N_{Brazil} = 818$; $N_{Korea} = 749$; $N_{Russia} = 1,006$; $N_{UK} = 836$; $N_{US} = 958$.

gender, income), sociopolitical antecedents (e.g., political efficacy, knowledge, trust), and communicative practices (e.g., news use, political discussion) have all been linked as explanatory antecedents to political participation (Beauregard, 2014; Kittilson, 2016; Schlozman et al., 1995; Zukin et al., 2006; Potochnick and Stegmaier, 2020; Gil de Zúñiga et al., 2019). Considerably less explored, however, remains the role of individuals' personality traits and its political discussion and participatory implications in a cross-cultural context. Drawing upon representative survey data from five countries worldwide, this study attempts to modestly palliate this gap.

Results of the study showed that people's personality traits directly relate to political discussion, and directly and indirectly to political participation. Specifically, extraversion is positively related to collective forms of political participation that include higher levels of social interaction in three different countries: Brazil, Korea, and Russia. Yet, it was not statistically associated with individual forms of political participation at all. Hence, the results lend support to the notion that social features of political activities actually matter. For instance, extroverts are more likely to engage in political activities that include social engagement with others, including discussing relevant issues about public affairs and currents events. This is also significant because discussion is a consistent precursor of political behavior, whether collective or individual (Delli Carpini, Cook, and Jacobs, 2004). Individual personality traits are linked to both types of political participation across all five countries of the study through the means of political discussion. That is, extroverted people tend to discuss more politics, which in turn, positively predicts both collective and individual political activities.

These results point toward three main theoretical contributions: First, it shows that Mondak and Halperin, 2008) approach to theoretically distinguishing between different forms of political activities (i.e., individual or collective ones) is a fruitful one. As our findings indicate, extroverts are more likely to engage in group-based political activities in three out of the five countries under scrutiny, suggesting that the relationship between extraversion and collective forms of political participation is context-driven and thus dependent on the country of exploration. More specifically, while in Brazil, Korea, and Russia we found

a positive direct relationship, for the United States and United Kingdom this positive relationship only was established once introducing political discussion as mediator. Different levels of democracy, political culture, institutional context, and Internet penetration might play a role here. For instance, in countries where social media platforms have been found to be of high relevance for mobilizing people to engage in collective activities such as participating in protests (Valenzuela, Bachmann, and Bargsted, 2019), extroverts might have higher chances to get mobilized than in countries where social media are less relevant. Further research is needed to explain these country differences; especially multilevel mediating analysis examining how these type of mechanisms function between individual level variables and macro variables (Gil de Zúñiga et al., 2019).

Second, our study highlights the vital role of political discussion in explaining and fostering pro-social democratic behaviors. Indeed, political discussion was the strongest and most consistent predictor in explaining the two forms of political participation, individual, and collective, across different countries. The key role of political discussion has been previously identified in mediating political participatory processes in other contexts such as cognitive reflection and elaboration (e.g., Chen, 2019, Yoo and Gil De Zúñiga, 2019). Personality traits may also contribute to cast a strong light on this type of communication mediation models. Additional research is needed to better understand this connection. Extroverts may not only be inclined to discuss politics more frequently but also those conversations may contain different attributes when compared to more introverted people. For instance, future research should consider the implications for like-minded and cross-cutting talk (Cargnino and Neubaum, 2021; Barnidge, Ardèvol-Abreu, and Gil de Zúñiga, 2018), or between political conversations maintained with strong and weak ties (Lu and Lee, 2021). In this vein, this study also neglected to look deeper into the mediating mechanism by distinguishing between online and offline forms of political discussion (Liu, 2019; Yamamoto and Nah, 2018). We belief these are all fruitful and worthwhile lines of inquiry for the future.

Third, our findings emphasize that research on personality traits and political behavior should not be restricted on testing direct relationships, but rather aim at exploring indirect pathways (Weinschenk, 2017). Otherwise, relevant mechanisms at play might remain undetected. In our case, we found that political discussion is a strong mediating mechanism to account for the relationship between extraversion and both forms of political participation (individual and collective). Therefore, despite the fact that extraversion exert a positive or nonsignificant influence on forms of political participation depending on the country of scrutiny, when introducing political discussion as a mediator, such relationship turned positive in all five countries. Future studies should further this line of research and include additional variables as mediators in the model, such as political efficacy (Vecchione and Caprara, 2009) or political interest (Wang, Weng, and Tsai, 2019).

As revealing as these findings are, this study does not come without limitations. The study develops a sound cross-cultural theoretical testing, but it relies on cross-sectional data and, therefore, it does not strictly allow for causal inferences. Likewise, our study distinguished between collective and individual political activities, but we do not differentiate online and offline activities. Further studies investigating the relationship between personality traits and political behavior should specifically look at online and offline individual and collective political activities, given that introverts might show different behavior online and offline (McKenna and Bargh, 2000; Kim, Hsu, and Gil de Zúñiga, 2013). Similarly, future studies should also consider rapidly changing ways of discussing politics on a wide array of social media platforms, ranging from Facebook and Twitter to newer platforms,

such as Telegram or TikTok. These platforms are gaining traction and becoming more relevant for political discussion – especially for younger citizens.

Despite these limitations, our results provide important insights into the relationship between personality and political participation by linking extraversion to political activities that include social interaction such as partaking on political marches, protest, or attending group political meetings, versus political activities that are performed alone such as donating money to a political campaign, or voting. Hence, the findings of this study highlight the needs to not only investigate direct but also have a closer look at indirect mechanisms that help explaining the complex relationship between personality traits and political behavior. By delivering important insights into the relationship between extraversion and different forms of political participation across cultures, this study provides a solid basis for future studies interested in the psychology of political behavior.

ACKNOWLEDGMENTS

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