**Political engagement's non-political roots:
Examining the role of need-supportive parenting in the political domain**

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Abstract
For the functioning of democratic societies, it is a crucial question why some citizens value or even enjoy political engagement while others hardly bother about politics at all. However, despite scholarly agreement on the relevance of childhood experiences, the early causes of varying inclinations for volitional political engagement remain largely unidentified. Arguing for the relevance of non-political factors, this study theorizes the role of basic psychological needs in shaping proclivities for political engagement. Specifically, this study hypothesizes that children who grow up in need-supportive parental homes will be more inclined to engage with politics decades later. Findings from two independent representative cohort studies (N = 5927, N = 6158) suggest that need-supportive parenting stimulates the development of curiosity and appreciation towards politics. Moreover, need-supportive parenting interacts with social learning processes in stimulating political engagement. Providing insights into the promotion of political engagement, these findings underscore the importance of factors seemingly remote to the political domain but deeply engrained in human processes of psychosocial functioning.

Political engagement's non-political roots:
Examining the role of need-supportive parenting in the political domain*[1]

Why some people value political engagement or even find pleasure in engaging with politics while others hardly bother about the political domain, is a crucial question for the functioning of democratic societies. Still, although scholars largely agree on the importance of childhood experiences in shaping individuals' political orientations later in life (Sapiro, 2004; Sears & Brown, 2013), political socialization research has made surprisingly little headway in systematically examining the origins of inter-individual differences in political engagement (i.e. attention and activities that are directed towards the polity, Berger, 2009). I propose that the seemingly non-political concept of basic psychological needs helps explaining varying inclinations for engaging with politics. More specifically, in this research, I theorize how need-supportive parenting during socialization's formative phase stimulates endorsement of and curiosity towards the political domain. This proposition is investigated using longitudinal cohort studies, which show that the seeds of political engagement and related social attainments are planted early in life and prosper in need-supportive environments.

To some degree situational circumstances explain whether citizens act on a specific opportunity for political participation (e.g., Wuttke, 2017). However, large-scale longitudinal studies show that a person's level of curiosity towards politics is malleable until around 18 years of age yet remains remarkably stable afterward (Prior, 2019; Russo & Stattin, 2017). Hence, adult individuals differ in the dispositional propensity to engage with the political domain. In shaping varying proclivities for political engagement, political participation scholars unanimously attribute

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[1] Replication material (data and Stata-syntax) is available at: http://dx.doi.org/10.17605/OSF.IO/TNAX4

a substantial role to experiences in early developmental phases. Yet, factors that promote political engagement later in life have received remarkably little attention for several decades (Amnå, Ekström, Kerr, & Stattin, 2009, p. 27). Recently, there has been a re-emerging interest into the developmental origins of political orientations (e.g., Prior, 2019; Shani, 2009), but the majority of these studies proceed on the narrow theoretical paths of the earlier literature. First, socialization studies usually investigate politics-related contextual influences, i.e., explaining political engagement in adulthood by early political experiences (e.g., Brady, Schlozman, & Verba, 2015; Jennings, Stoker, & Bowers, 2009; Miklikowska & Hurme, 2011). Accordingly, the dominant theoretical framework remains social learning theory (Bandura, 1977), according to which children approach the political domain by modeling parental behavior (e.g., Jennings et al., 2009). Yet, observational panel studies repeatedly demonstrated at best moderate correlations between parents' and their offspring's political engagement (Prior, 2019; Sapiro, 2004; Sears & Brown, 2013). Second, because children are often viewed as incapable of understanding political content, scholars still devote little attention to experiences during the first years of life (Abendschön, 2017, p. 164). Third, because previous research focused on concrete acts of participation (i.e., voting in particular), relatively little is known about the origins of dispositional differences of identifying with or developing curiosity towards the political domain which has only recently attracted scholarly attention (Bougher, 2017; Prior, 2019; Shani, 2009). Thus, the early predictors of individuals' *volitional political engagement*, i.e., engaging with politics for its perceived inherent pleasure or the self-endorsed conviction of its importance, remain largely unidentified. Hence, investigating early ontogenetic phases on the grounds of theoretical perspectives that look beyond parental imitation is a prospect for a better understanding of why some people enjoy or value engaging with politics whereas others do not.

To get a grasp of the roots of dispositional political orientations in early socialization experiences, we can draw from classical participation literature. Reminiscent of the "positive manifold" (Spearman, 1904), we know that political engagement is associated with other, commonly appreciated attainments of social life. Individuals who grow into politically active citizens are also more trustful (Flanagan, 2003), more satisfied with their lives (Pirralha, 2017), have higher incomes (Schlozman, Brady, & Verba, 2018) and higher degrees of formal education (Smets & van Ham, 2013). Thus, politically engaged individuals who resemble the ideal of good citizens (Dalton, 2008) also thrive in other domains of life. Interestingly, research in developmental psychology suggests that many indicators of optimal functioning and social adjustment share joint ontogenetic origins (Sears & Brown, 2013, 72f; Steinberg, 2001, p. 8). Specifically, research on various life domains revealed the *satisfaction of basic psychological needs* as common influence of those outcomes that also go along with political engagement (i.e., pro-social behavior and social trust, see: Bougher, 2017; Padilla-Walker, 2014; moral reasoning capacities, see: Grolnick, Deci, & Ryan, 1997, 153f; cognitive capabilities, see: Grolnick & Ryan, 1987; Ryan, Connell, & Plant, 1990; social adaptability, see: Kasser, Koestner, & Lekes, 2002; Laurin & Joussemet, 2017 and occupational performance, see: Deci, Olafsen, & Ryan, 2017). Despite an upsurge of research highlighting the importance of non-political experiences for the development of political engagement (e.g., Galais, 2018; Holbein, 2017; Shani, 2009), political socialization research has not considered the concept of basic psychological needs in examining the origins of political engagement so far. Considering the ubiquitous influence of basic needs for attainments in various life domains and their association with political participation, need-related experiences may also play a role in shaping political engagement.

Need-supportive contexts and political engagement

Our understanding of political engagement's developmental origins may benefit from self-determination theory (Ryan & Deci, 2017, for applications on politics see, e.g., Losier & Koestner, 1999), which posits that human beings strive for the basic needs of autonomy, competence, and relatedness. The theory argues that individual attainment and social adjustment often result from the satisfaction of these psychological needs because need-satisfaction enables individuals to carry out their inherent tendencies at the fullest potential. Studies in the tradition of SDT have repeatedly shown that deprivation of these needs undermines psychosocial functioning (Ryan & Deci, 2017; Vansteenkiste & Ryan, 2013), which entails two organismic processes: the inherent inclination towards exploring the environment (*intrinsic motivation*) and the propensity for adapting to it (*internalization of external demands*). By stimulating psychosocial functioning, growing up (Laurin & Joussemet, 2017), working (Deci et al., 2017), or learning (Grolnick & Ryan, 1987; Ryan et al., 1990) in contexts which nurture one's psychological needs thus helps to realize these organismic processes at the fullest potential.

Contextual influences on need satisfaction matter throughout the entire lifespan but having one's basic needs fulfilled during early years of childhood was shown to exert lasting impact in later decades of life (e.g., Bougher, 2017; Kasser et al., 2002; Soenens, Deci, & Vansteenkiste, 2017). As principal caregivers and most salient source of socializing efforts (Verba, Schlozman, & Burns, 2008), parents play a central role in shaping need-satisfaction. Specifically, existing SDT-literature has shown that three social-contextual dimensions of parenting styles can be distinguished, each referring to the satisfaction of a basic psychological need (e.g. Grolnick et al., 1997; Joussemet, Landry, & Koestner, 2008; Soenens et al., 2017). Autonomy-supportive parenting promotes a child's independence and, more importantly, volitional functioning (Laurin & Joussemet, 2017; Soenens, Vansteenkiste, Petegem, Beyers, & Ryan, 2018). It involves taking

the children's frame of reference, minimizing excessive control, and providing choices and opportunities for self-initiated action. Involvement satisfies the needs for relatedness and involves caring about the child, taking interest in and having knowledge about his or her activities, spending time together and establishing a warm relationship. The provision of structure satisfies the need for competence and involves communicating age-adequate expectations, providing feedback and rationales for one's own actions. Altogether, growing up with parents who are excessively controlling, over-challenging or rejecting thwarts need satisfaction and, thereby, hinders the development of propensities for psychosocial functioning later in life (Deci & Ryan, 2000, p. 229; Soenens & Vansteenkiste, 2010).

Need satisfaction –facilitated by the socialization environment that the parents provide– stimulates intrinsic motivation and the internalization of values in various life domains such as delinquent behavior (Brauer, 2011), education (Joussemet et al., 2008) and morality (Kasser et al., 2002; Padilla-Walker & Carlo, 2014). There are several reasons to believe that a person's dispositional orientation towards the political domain is ultimately rooted in the same need-related and seemingly non-political origins that also affect behavior in other domains.

Considering the specific characteristics of the political domain it is apparent that both organismic processes (intrinsic motivation and the internalization of extrinsic demands) associated with psychosocial functioning may determine a person's propensity to value and enjoy political engagement. Regarding the first process, individual differences in one's inclination towards intrinsic motivation may have ramifications for volitional political engagement due to a general and a domain-specific mechanism. According to the hierarchical model of motivation (Guay, Mageau, & Vallerand, 2003), individuals differ in their general level of curiosity, and these differences spill over to specific domains. As a rising tide lifts all boats, citizens with a curious personality are also more likely to regard engagement with the political domain as stimulating. In

other words, because some people are interested in many things, they are more likely to also include politics in their lists of interests, compared to individuals with lower inclinations towards intrinsic motivation (for empirical evidence for this tenet see: Prior, 2019). Concerning the potential domain-specific mechanism, scholars describe politics as the "authoritative allocation of values" (Easton, 1953). Thus, by definition political affairs concern generalized considerations. Consequently, many citizens perceive politics as abstract and complex (Niemi, Craig, & Mattei, 1991). Hence, individual differences in the inclination towards intrinsic motivation may have a particular impact on the political realm: Individuals who generally refrain from spending energy on cognitive tasks may avoid domains they perceive as demanding whereas curiosity-inclined individuals who find pleasure in dealing with complex issues might engage with politics particularly because it entails abstract and complex issues (for empirical evidence, see: Sohlberg, 2016).

Regarding the second process, individual differences in the propensity for the internalization of extrinsic demands may have ramifications for volitional political engagement due to the social and moral nature of the political domain. Political decisions always bind the community as a whole, thus have bearings on concrete and abstract others. Due to the generalized nature of political decisions, the impetus of political engagement not always but often transcends pure egocentric concerns. This other-concerning component suggests a link between political engagement and the endorsement of intrinsic values such community orientations and their behavioral manifestations (e.g., empathic thinking, pro-social behavior) both of which are known to prosper in need-supportive environments (Flanagan, 2003; Padilla-Walker & Carlo, 2014). Moreover, political engagement represents a collective action problem in which participation runs against private self-interests although it enhances the greater good for all (Olson, 1971). In these social dilemmas, norms are powerful motivators even when the behavior itself has no instrumental

value (Kollock, 1998). Accordingly, pro-participatory norms are pervasive features of democratic societies (Dalton & Welzel, 2014) and effective in ensuring the active participation of the citizenry in public affairs (Blais, 2000). Research has also shown that those who integrate pro-participatory norms into their sense of selves instead of merely perceiving them as external pressures are more likely to orient their political behavior to these normative standards (for empirical evidence, see: Blais & Galais, 2016). Hence, individual differences in the capacity to internalize social demands have particular relevance for the political realm as they may distinguish individuals who reject or accept pro-participatory norms but social adaptability may also impact the quality of internalization: individuals with weak capacities for internalization might give in into social pressure to comply with pro-participatory demands without making them their own, hence, without valuing politics as a matter of principle.

The interaction of need-supportive contexts and social learning

There is reason to believe that need-supportive environments promote motivational propensities for volitional political engagement particularly if need-supportive influences co-occur with frequent and positive experiences with the political domain. Awareness of its existence is a prerequisite for developing interest towards any subject. Exposure to politics is therefore crucial for the promotion of political interest. The likelihood and frequency of exposure to politics reflect the level of involvement of peers and parents. Moreover, how individuals in one's context think about politics also matters because human beings long for relatedness, thus individuals are likely to consider the values their significant others endorse. Hence, growing up around politically engaged citizens raises awareness of political affairs and stimulates contemplating reasons for the political engagement exhibited by significant others. The person-object theory of interest (Krapp, 2013) and Dweck's (2017) unified theory of motivation suggest that need satisfaction moderates how individuals process environmental influences. Hence, we may expect an interaction of need-

satisfaction and social learning (Figure 1). Specifically, individuals from need-supportive contexts who developed psychosocial dispositions that are favorable for political engagement are more likely to imitate the political involvement of significant others. In reverse, stronger psychosocial predispositions towards political engagement are more likely to materialize in behavior if individuals grow up in contexts that facilitate frequent exposure to the political domain.

- Figure 1 about here -

The current study

The goal of this study is to examine whether need-satisfying experiences in early developmental phases shape volitional political engagement later in life. Using parents as the principal caregivers as the illustrative case of need-supportive influences, this study makes use of two longitudinal cohort datasets to follow individuals throughout the lifespan and to survey parenting experiences during childhood and political engagement later in life. By measuring explanatory and outcome variables years or decades apart, cohort analyses avoid biased recall questions. Also, the representative sampling frames enable wide generalizability of the empirical findings. On the downside, secondary analyses of cohort data make it necessary to use imperfect indicators that were not tailored for study-specific needs. Yet, the insights drawn from each study supplement each other in order to examine the basic proposition that growing up in supportive contexts promotes political participation decades later.

H1: *Experiencing need-supportive parenting in childhood is associated with higher levels of volitional political engagement in adulthood.*

It was argued that need-satisfaction promotes psychosocial functioning, thereby facilitating attainments in various life domains. This suggests a positive correlation matrix of need-supportive experiences, volitional political engagement, psychosocial functioning and individual attainments in other domains of life.

H2: *Politically engaged citizens exhibit higher levels of psychosocial functioning and social adjustment, and each of these outcomes is associated with need-supportive parenting experiences in childhood.*

Besides direct effects, it was argued that need-satisfaction and exposure to the political domain moderate the other's influence on political engagement.

H3: *Need-supportive parenting interacts with the parents' orientation towards politics in shaping the offspring's level of political engagement.*

Study 1: BCS

Procedures

The British Cohort Study (Centre For Longitudinal Studies, 2016) is a longitudinal panel study that follows the lives of all children born in the United Kingdom in a specific week in April 1970. Data has been collected using several different sources (the midwife present at birth, parents of the cohort members, head and class teachers, school health service personnel and the cohort members themselves) in various ways (paper and electronic questionnaires, clinical records, medical examinations, physical measurements, tests of ability, educational assessments and diaries). Data was collected in eights sweeps immediate after the birth of the cohort members and when they were 5, 10, 16, 26, 30, 35, 38 and 42 years old.

Sample

In the first survey wave, data on 17,287 newborns from the United Kingdom were collected. The following waves of data collection were subject to modest panel attrition and in the second survey wave at age 5 of the child, data was collected on 13,135 cohort members, including maternal self-reports and child assessments. In 2012, when adult cohort members were surveyed on various aspects of citizenship, 9,841 interviews were conducted. Male respondents from lower SES

background had higher probabilities of panel attrition but differences between sociodemographic groups in systematic unit non-response are small (Mostafa & Wiggins, 2015). Because the analyses require information from sweeps at the ages 0, 5, 10, 16 and 42, the sample size shrinks to 5,927 observations with a small under-representation of men from parents in lower occupational classes (see supplement 1 for descriptive information on the sociodemographic distributions and supplement 3, table 3 for analyses on panel attrition).

Measures

Structural equation modeling is used to assess the main explanatory and outcome variables (see supplement 2, Figure 1 for a visualization of the measurement model). The dataset contains various indicators of involved and autonomy-supportive parenting but only weak measures on structure-providing parenting and on exposure to politics. Even though data availability impairs the diagnostic reliability on structure-providing parenting and on the interaction between need-supportive parenting and domain-specific exposure, all measures are included in the model to transparently report the empirical findings. All variables range from 0 to 1.

      Volitional political engagement. Encompassing a motivational component of self-endorsed interaction with the political domain, volitional political engagement reflects the extent to which individuals value or find pleasure in engaging with politics. It was measured at age 42 using self-reported answers to three questions, which were aggregated into a summary score: "*How interested would you say you are in politics?*" and whether the respondent "*usually reads factual books on politics*" and "*usually watches TV news*". The reliability coefficient H (McNeish, 2018) is 0.82.

      Autonomy-supportive parenting. Autonomy-supportive parenting reflects the degree to which parents favor parenting styles that promote the satisfaction of the child's need for autonomy. It was measured using eleven attitudinal questions on parenting behaviors answered by the parents

when the child was five years old (sample items "*Unquestioning obedience is not a good thing in a young child*," "*A child should not be allowed to talk back to his parents*," Coefficient H: .66).

Involvement. The degree to which parental behavior promotes the satisfaction of the need for relatedness is measured with ten exogenous indicators and three additional latent variables. The latent variable *mother's perception of family activities* measured with seven indicators at child's age 10 (sample item: "*As a family how often do you do any of the following with your child: Have breakfast or tea together*", Coefficient H: .69), the *child's perception of family activities* measured with twelve indicators at age 16 (e.g. "*How often do you go to cinema or theatre with your parents?*" Coefficient H: .74) and *the time spent with each parent* is measured with three child responses at age 16 (Coefficient H: .84). The additional manifest indicators include teacher reports (e.g. "*With regard to the child's education, how concerned or interested do the parents appear to be?*"), parent reports (e.g. "*On how many days has N been read to at home in the past 7 days?*") and reports from the child at ages 5 and 16 (e.g. "*how much time do you spend talking to your parents each day?*").

Provision of structure. Acknowledging that BCS contains few indicators on the promotion of self-regulation (need for competence), the measure of structure-providing parenting is impaired. Yet, two single indicators were included: The mother's willingness to provide explanations for her demands to the child at age 5 and a summary index of age-adequate expectancies measured when the respondent was 10 and 16 (e.g. "*Parents expect help in house when asked*").

Politics at home. Acknowledging that BCS contains no direct measures of parental involvement with the political domain, I follow previous studies (Shani, 2009, p. 242) and measure the likelihood of exposure to politics using the quality of the newspaper read at the respondent's household at age 16 as a proxy.

Psychosocial adaptation. As indicators of psychosocial functioning, I employ single item self-reports on general health and a validated 14-item measure on positive mental health (Warwick-Edinburgh Mental Well-Being Scale). Moreover, I include several measures on attainments and social adaptability: income (the cohort member's total take-home income from all sources), education (highest nvq level from an academic or vocational qualification up to 2012), social class derived from the occupational status (NS-SEC analytic categories) and results from a 20-word vocabulary assessment.

Control variables. To minimize unobserved heterogeneity, I control for established concepts from the political socialization literature that might confound with need-supportive parenting in shaping political engagement. The indicator of parental political involvement covers the social learning approach (Bandura, 1977). To account for the status transmission approach (Brady et al., 2015), educational attainment of father and mother, quality of the neighborhood, and social class at birth were included. To account for cognitive resources, the Peabody Picture Vocabulary Test, the Human Draw Test, and the Copying Designs Test are included.

Further details. Supplement 2 contains a visualization of the measurement model. Supplement 5 lists question wordings. More detailed coding decisions are reported in the commented analysis syntax.

Analytical strategy

I estimated factor loadings for the main outcome variable and explanatory variables using structural equation measurement modeling (see supplement 2, Figure 1 for factor loadings; N=12,640; $Chi^2(967)= 6817.525$, $p < .000$). Absolute fit indices (RMSEA = 0.022 [0.021; 0.022]; SRMR = 0.041) suggest good to excellent model fits. Indices which depend on the average size of correlations in the data perform less well (TLI = 0.857; CFI = 0.867), possibly reflecting the conscious choice to measure a broad concept with different measurement instruments at different

points in time. For ease of interpretation throughout this study, Stata 15.1 was used to predict variables from the measurement model. The regression analysis in the main text used the predicted variables but structural models using latent variables are reported in supplement 2, Figure 2. To test hypotheses 1 and 2, I compute bivariate correlations between need-related experiences during the cohort members' early developmental phases and various attainments at age 42. To control for potential confounders of need-satisfaction in influencing political engagement (hypothesis 1), I conduct multivariate regression analyses.

Results

Children whose parents provide a need-supportive environment during early developmental phases are more engaged politically in adulthood and achieve higher levels of psychosocial functioning and various indicators of social attainments (table 1). Even though decades apart, volitional political engagement at age 42 correlates with autonomy-supportive parenting ($r = .16$; $p < .001$) and parental involvement ($r = .23$; $p < .001$), lending preliminary support for hypothesis 1. Likewise, more politically engaged citizens show higher levels of well-being (psychosocial functioning) and achieve higher levels of educational and economic attainments. Hence, in line with hypotheses 2, there is a joint association between need-satisfaction, attainments and psychosocial functioning, and volitional political engagement, all of which correlate with each other.

- Table 1 about here -

For a more robust test of the association between need-satisfaction in a child's early years and the main outcome of interest, multivariate regression analyses on volitional political engagement were conducted (Table 2). Model I shows that autonomy-supportive ($b = .09$; $p < .001$) and involved parenting ($b = .47$; $p < .001$) remains significantly associated with political engagement when controlling for the other parenting dimensions. The coefficients of all parenting

indicators point in the expected direction, and even though these indicators of parenting styles were measured very early in life, they explain 14.4% of the statistical variance in volitional political engagement decades later. To assess effect sizes, regression coefficients can be inspected which denote the change in political engagement when the explanatory variables change from the scale minimum to the maximum. Children who grow up among parents with highest levels of involvement will exhibit political engagement with levels half the entire scale (0.47 scale points on a 0-1 scale) above individuals whose need for relatedness is entirely thwarted. Potentially reflecting the more exhaustive list of involvement-measures, the effect is much larger for involved parenting, but still substantial for autonomy-supportive parenting. Because unstandardized coefficients denote extreme changes at the endpoints of the scales, I conducted further analyses which take the variable distribution into account (see supplement 2 for standardized regression coefficients and visualizations): One standard deviation increase in involved parenting is associated with an increase of volitional political engagement by $\beta=0.33$ standard deviations (effect of autonomy support, $\beta=0.08$ SD).

- Table 2 about here -

The effect of need-supportive parenting is robust and remains present when parents' engagement with politics is included in the analysis (model II). The political climate in the parental home shapes participation in adulthood but accounting for social leaning only slightly attenuates the effect of need-supportive parenting styles on political engagement. The effect of non-political influences persists when controlling for other potentially confounding variables and competing explanations (status transmission and cognitive resources, model III). In line with hypothesis 1, growing up with parents who promote autonomous development and satisfy the child's need for relatedness stimulates curiosity towards and self-endorsed engagement with the political domain in adulthood.

Study 2: NLSY 79

Study 2 employs a representative cohort study from the United States which complements Study 1 by offering more comprehensive measures on political exposure and a more extensive list of corollary outcomes and control variables, at the expense of fewer indicators on need-supportive parenting. Efforts were made to harmonize variable operationalization for comparability across studies for ease of interpretation.

Procedures

Data from the National Longitudinal Survey of Youth 1979: Children and Adults was used. NLSY 79 is a longitudinal panel study that follows the lives of a representative sample of American youth born between 1957 and 1964 and their biological children. These children ('respondents' in the following) were the focus of a separate survey, which began in 1986. Data was collected using several different sources (interview of the respondents and their mothers, teacher reports, interviewer observations, assessments). The data were collected in bi-annual waves.

Sample

The survey contains all children (N=11,152) of the mothers in the original NLSY79 sample. These children were born between 1970 and the most recent survey wave, but the analyses only include respondents who were eligible for the questionnaire on political attitudes in the 2006 or 2008 survey waves (over 18 years of age in 2008). Across survey waves, respondents from ethnic minorities and from families with higher family income were more likely to attrite, but the effects were small and did not have any influence on several effect measures (Aughinbaugh, 2004). I use survey weights that adjust for the initial over-sampling of blacks. Because the analyses require data from several survey waves, the sample size shrinks to 6,158 observations. As a consequence, respondents born in poor families are under-represented in the analyzed sample (see supplement 3

for analyses on panel attrition and supplement 4 for descriptive information on the sociodemographic distributions).

Measures

Volitional political engagement. Volitional political engagement was measured using three self-reports asked in 2006 and 2008 when respondents were between 18 and 36 years old: interest in politics ("*How interested are you in information about what's going on in government and politics?*"), attention to politics ("*How often do you follow what's going on in politics?*") and frequency of political conversation ("*Do you ever talk with friends, family, co-workers, or other people about political events?*", Yes: "*During a typical week, on how many days do you talk with anyone about political events?*"). The reliability coefficient H (McNeish, 2018) is 0.81.

Politics at home. Exposure to politics was measured in 2008 using three mother reports on her level of political involvement: attention to politics ("*How often do you follow what's going on in politics?*"), turnout at presidential election and strength of party identification. Coefficient H: .85.

Need-supportive parenting styles. Indicators of parenting styles were surveyed at respondent's ages 3 to 14. Most indicators were collected in multiple waves. In these cases, counts of need-supportive parenting instances were averaged across all observed surveyed waves.

Involvement. Eight indicators measure the degree to which parental behavior promotes the satisfaction of the need for relatedness. Two interviewer observations on mother-child interactions at ages 0 to 5 (e.g. "*Mother caressed, kissed, or hugged child at least once*") and two reports from the mother on the frequency of reading to the child and on the frequency of joint cultural activities (at child ages 3 to 10). From the respondents' questionnaire administered 14 years of age, I use a summary index of joint activities with the parents, self-reported closeness to

the parents and perceptions of whether the parents spent enough time with their child or missed important events. Coefficient H: .61.

Autonomy-supportive parenting. NLSY does not provide item batteries reflecting a single dimension of autonomy-supportive parenting (Brauer, 2011, p. 37). Hence, I separately include three distinct constructs all of which tap into the satisfaction of the child's need for autonomy by promoting self-initiated decisions and volitional action. If not stated otherwise, the indicators were measured recurrently between ages 3 and 14. *Autonomy-supportive communication* is a summary index of child-reported indicators of whether parents are perceived as listening to the child's side of arguments and share important ideas with the child. *Autonomy-supportive rule setting* is a summary index of four child-reported indicators on how much say the child has in setting household rules (e.g. "*watching television*"). *Autonomy-supportive encouragement* combines two mother reports on whether the parents encourage and facilitate extracurricular activities of the child and two interviewer observations measured from child's ages 3 to 9 on whether the mother encourages the child to take part in the interview.

Provision of structure. Again, the degree to which parents facilitate the satisfaction of a child's need for competence cannot be measured in a single dimension and three separate constructs tapping into the provisions of structure were included. All indicators were measured recurrently between ages 6 and 14. *Structure-providing rule setting* entails child-reports on whether it is expected to help with different age-adequate tasks (e.g. "*wash dishes*"). *Structure-providing discussions* entails mother reports on whether the parents discuss the TV program with the child and on the likelihood of reacting to a low grade by talking with the child. *Structure-providing feedback* is one item from the mother's questionnaire on the self-reported frequency of praising the child for doing something worthwhile.

Psychosocial functioning and social attainments. As separate indicators of psychosocial functioning I employ a self-reported 1-item self-report on *general health*, a validated 7-item measure on *mental well-being* (CE depression scale), the 7-item Pearlin mastery scale on *internal locus of control*, 10-item Rosenberg self-esteem scale and *interest in others* using two items of the mini-IPIP agreeableness scale (sample item: "I am not really interested in others") and *interest in abstract thinking* using two items from the mini-IPIP intellect scale ("I am not interested in abstract ideas"). I include several measures assessed in adulthood on adaptability and attainments: income, education (high school degree), four cognitive assessments (reading comprehension, reading recognition, vocabulary test, memory for digit span test) and the level of social trust ("Generally speaking, how often can you trust other people?") and internal political efficacy ("How often is politics so complicated that you don't really understand what's going on?").

Control variables. Mirroring study 1, I account for the social learning approach by including the parents' involvement in politics and for the status transmission approach by controlling for the mother's education level, neighborhood, poverty status, family wealth and total family income (all measured at birth of the child). To account for cognitive resources, I include cognitive tests assessed in early childhood (reading comprehension, reading recognition, vocabulary test, memory for digit span test). I also include perceived inter-parental conflict using two items ("*How often do you feel caught in the middle of your parents*", "*How often do your biological parents argue*") to control other aspects of parenting behavior, which do not directly tap into the target concept of need-supportive parenting, but affects various life outcomes (Zemp, Bodenmann, & Cummings, 2016), including one's sense of political efficacy (Šerek, Lacinová, & Macek, 2012).

Further details. Supplement 3 contains a visualization of the measurement model. Supplement 5 lists question wordings.

Analytical strategy

Using structural equation modeling I estimated factor loadings for involved parenting, volitional political engagement and political involvement in the parental home (see supplement 2, Figures 1 and 2 for factor loadings; N=5,378). The model resembles the data well, surpassing conventional goodness of fit thresholds (Chi²(70)= 398.26, p < .000, RMSEA = 0.030 [0.027; 0.032]; SRMR = 0.041, TLI = 0.947; CFI = 0.959).[2] Because the analysis requires weighting and the estimation of interaction effects, I use predicted variables from the measurement model and report structural models on political engagement using latent variables in supplement 4. In addition to replicating the analysis from study 1, the availability of comprehensive measures on parental political involvement enables testing the moderation between need-supportive parenting and exposure to politics, suggested in hypothesis 3.

Results

- Table 3 about here -

Table 3 shows that volitional political engagement is strongly aligned with factors close to the political domain (political exposure, *r* = .32; political efficacy, *r* = .37) but citizens' engagement with politics also correlates with non-political childhood experiences and with indicators of psychosocial functioning and social attainments measured in adulthood. Albeit not with all, political engagement is positively associated with most indicators of need-supportive parenting (H1).[3] Moreover, children who grow up in need-supportive homes also achieve a higher level of

2 The reported goodness of fit indices relate to models without weights (see supplement 3, Figure 1). To calculate manifest variables, models with adjustment weights were used for which fewer goodness of fit indices are available (see supplement 3, Figure 2). Results are similar.

3 Both indicators related to rule-setting do not promote political engagement but the fact that these items are not associated with other corollary outcomes suggests that they may be weak indicators of the target concept.

formal education and cognitive skills. These attainments, in turn, correlate positively with political engagement. The pattern repeats with indicators of psychosocial adjustment. For instance, to 'feel in control of one's own life' correlates with political engagement and correlates with autonomy-supportive, structure-providing and involved parenting. Likewise, the correlative pattern of "interest in others" and "interest in abstract thinking" conforms with the theoretical proposition that need-supportive environments foster inclinations towards intrinsic motivation and other-concerning empathy and that, in turn, these traits go along with volitional political engagement. Altogether, the data support hypothesis 2 as it demonstrates the expected correlative triangle between need-supportive environments, volitional political engagement and various indicators of social adaption and psychosocial functioning.

- Table 4 about here -

Table 4 shows that need-supportive parenting predicts political engagement in adulthood even when controlling for an extensive list of potential confounders (model I & III). However, the effect is only robust for involved parenting, for which the dataset provides the most reliable measures. Underscoring the presence of social learning in the political domain, the explanatory power greatly improves when accounting for the parents' degree of political involvement (model II). Importantly and consistent with hypothesis 3, whether adult citizens value and find joy in engaging with politics results from the interactive influence of exposure to the political domain and need-supportive parenting. The left panel of Figure 2 visualizes the proclivity for political engagement among respondents with levels of parents' political participation one standard deviation above and one standard deviation below the sample mean and demonstrates that involved parenting stimulates political engagement much more strongly when the child was exposed to the

political domain. Likewise, the inter-generational transmission of political engagement is more likely when the parental homes satisfied the offspring's basic need for relatedness.[4]

- Figure 2 about here –

Discussion

Even though most scholars acknowledge the importance of early life phases in shaping a person's proclivity to engage with politics later in life, political socialization research has made limited headway in identifying the developmental factors that explain why some citizens value or enjoy engagement with politics whereas others do not. This study argues that early non-political experiences, namely a family environment that promotes the satisfaction of a child's basic psychological needs help explain volitional political engagement in the following decades of life. Data from two independent, representative cohort studies reveal a link between need-supportive parenting and various indicators of well-functioning and valued life achievements, all of which are also associated with political engagement. Empirical evidence in support of the theorized link between parenting styles and political outcomes is stronger for involved parenting than for the other dimensions of need-supportive parenting. Still, these findings provide initial evidence for political ramifications of need-thwarting or -supportive influences, which are seemingly remote to the political domain but deeply engrained in human processes of psychosocial functioning. Hence, individual differences in need-supportive influences during socialization may present a valuable addition to scholarly explanations of individual differences in political engagement.

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4 At much smaller effect sizes, interaction of need-satisfaction and social learning replicates with regards to the provision of structure (see supplement 3, Fig. 5). I also tested for interaction effect using BCS data. The interaction coefficient of involvement and political exposure is large and statistically significant. The results are shown in supplement 2, Table 1.

To solidify the suggested relevance of need-supportive environments for political engagement, this study employs several strategies to isolate parenting effects from potential confounders. First, I explain outcomes in adulthood with measures collected during childhood. This approach safeguards against confounders that may have exerted unobserved influences throughout a persons' life span after childhood. Second, using childhood measures avoids biases in recall and rationalization. Third, to further minimize artifacts of specific instruments I relied on indicators from different measurement types. Moreover, controlling for various economic, social, personal and political characteristics of the parents minimizes unobserved heterogeneity among the parents.

As the analysis relies on existing cohort surveys, limitations result from the use of measures which were not tailored specifically for the assessment of SDT-constructs. First, the available measures do not capture each need-related dimension of parenting equally well, leaving unclear, for instance, to which degree the weak effects of competence-satisfying parenting are substantively informative or merely represent measurement artifacts. Second, it is conceivable that other than the need-satisfying aspects of parenting underlie the demonstrated associations. Hence, while the presented findings are compatible with the advanced theory of need-supportive influences on political engagement, we should be aware that the measures' limited discriminant validity does not exhaustively preclude different interpretations suggested by other theoretical approaches (cf. Bougher, 2017; Miklikowska & Hurme, 2011). More generally, the usual limitations of observational research in detecting causal relationships also apply to this study. For instance, this study could not rule out biological heritage as confounding variable (Harris, 2014). Yet, analogous findings from different contexts such as education may alleviate worries of spurious relationships of parenting due to genetic heritability (Galais, 2018). Moreover, analyzing a large-scale schooling intervention, Holbein (2017) provides first field-experimental causal evidence for

non-political influences on political engagement. In this vein, manipulating need-supportive environments and examining their effects on political outcomes is a promising avenue for further research.

The presented findings are subject to constraints on generality (Simons, Shoda, & Lindsay, 2017). Considering the centrality of parents as socializing agents for children, this study examined need-related influences in the parental home, even though in reality, children are subject to a myriad of different need-related influences. With recent findings suggesting deeper internalization of voting as a civic duty in autonomy-supportive schools (Galais, 2018), further research may extend the proposed nexus of political engagement and psychological needs to other socializing contexts. Context-dependence also needs to be considered with regards to the sampling strategy of this study. First, the analyzed survey data was confined to two selected birth cohorts and affected by panel attrition. Thus, the realized sample deviates from the target sample of this study: western, industrialized and liberal democracies (Henrich, Heine, & Norenzayan, 2010). The restricted sample consisting of two birth cohorts may impair representativeness because accepted notions of good parenting practices and political orientations may evolve across generations. Second, differences in the functional significance of parenting practices may constrain generalizability (Smetana, 2018). Even though basic psychological needs may have universal relevance for psychosocial functioning (Chen et al., 2015), the reported associations of need-supportive parenting cannot be expected to replicate universally without tailoring their operationalizing to the cultural context under investigation (Grolnick, Levitt, & Caruso, 2018; Smetana, 2018). Generalizability is more complex regarding the outcome variable. On the one hand, several characteristics appear inherent in the nature of the political domain (e.g., its degree of abstraction). Importantly, however, the theorized mechanisms for the development of political engagement depends on the meaning that citizens attach to the political domain. These mechanisms would

unfold differently if the explicated assumptions about the perceived nature of the political domain would not apply. For instance, politics plays a different role in non-democratic countries. In addition, what this study described as the essence of politics essence may not apply in societies which formally uphold popular rule but where exclusionism and hostility characterize the *res publica*. Similarly, the proposed mechanisms would also need refinement for societies or societal subgroups, in which democratic participation is not the descriptive norm or even considered deviant behavior. Hence, understanding the meaning of politics as perceived in a given context is crucial for understanding the origins of political engagement.

The finding that political engagement shares common origins with other social attainments raises questions about the causal order of political engagement and its various antecedents, including psycho-social functioning, which calls for mediation analyses. However, mediation analyses in the absence of experimental designs require strong assumptions on the data (Green, Ha, & Bullock, 2010), which become even more demanding when repeated observations of the explanatory and outcome variables are unavailable (Bullock, Green, & Ha, 2010). As the data did not allow for full-fledged mediation analyses, the demonstrated mutual associations between need-supportive environments, psychosocial functioning, political involvement, and other attainments should be understood as a first step towards understanding the complex pathways that foster political engagement. Future research may investigate processes such as the development of intrinsic values that potentially mediate the link between needs and political engagement (Miklikowska & Hurme, 2011). Moreover, the reported findings relate to current scholarly discussions disputing the causal status of classical predictors of political participation as they may be driven by unobserved common causes (Kam & Palmer, 2008; Sondheimer & Green, 2010). Hence, along with experimental evidence on the mediating role of psychosocial functioning (i.e.

grit, see Holbein, 2017), this study suggests to consider in these discussions basic psychological needs as a potential common cause of political participation and its various correlates.

Another avenue for further research is examining more closely differential effects of need satisfaction. First, each psychological need and each aspect of need satisfaction may differ in relevance for political outcomes. For instance, relatedness may be particularly important in facilitating norm internalization (i.e., voting as a civic duty) and autonomy may have a particular role in promoting intrinsic motivation (i.e., participation for inherent pleasure). Second, socialization research on need-supportive parenting practices may contribute to the growing literatures in political (Inglehart, 2018) and psychological science (Kasser, 2016) which employ need concepts to explain the content of political views and often link need satisfaction to liberal value orientations. In particular, the distinction between a lack of need fulfillment on the frustration of needs (Vansteenkiste & Ryan, 2013) may prove fruitful to advance insights into the development of self-centered and self-defensive political orientations. Hence, the arguments presented in this paper may stimulate further research into the development of volitional political engagement but may also be generalized to understand curiosity and appreciation towards other social domains.

Beyond its theoretical import, the notion of political engagement's non-political origins involves practical implications for educational and political institutions. Practitioners and scholars long acknowledged the importance of parents in stimulating political engagement but saw their (and other socializing agents') primary role in domain-specific familiarization, i.e., explaining political processes and emphasizing their importance. In this vein, it seems straightforward to tackle a lack of political interest among young people by expanding civic education. However, this study suggests that politics-specific interventions need to be accompanied by holistic approaches to achieve their full potential. Such holistic approaches consider the various large and small need-

supportive stimuli that equip children with the psychological nutrients they require to thrive in social life, including the political domain.

Conclusion

Developmental psychologists in the tradition of SDT have not paid much attention to the explanation of political engagement and political socialization researchers have largely neglected basic psychological needs. Connecting these lines of literature, this study examined why, and under which conditions the seemingly non-political aspect of need-supportive socialization environments may promote a person's inclination to endorse and enjoy political engagement. Evidence from two representative cohort studies aligns with the notion that factors seemingly remote to the political domain foster volitional political engagement. Growing up in need-supportive homes –in particular, growing up with involved and caring parents– is associated with a positive manifold of better psycho-social functioning which seems to facilitate attainments and adaption in various life domains, including politics. Identification with and curiosity towards politics is most likely to develop in contexts that expose the child to politics and that also provide the necessary psychological nutrients for developing predispositions conducive to political engagement. Hence, there is reason to believe that the roots of political engagement are deeply engrained in human processes of psychosocial functioning.

Tables

Table 1

Bivariate correlations between volitional political engagement and variables of interest (BCS)

Variable	M	SD	1	2	3	4	5	6	7	8	9	10
Volitional pol. engagement	0.40	0.20										
Autonomy-support	0.49	0.18	0.21***	1.00								
Involvement	0.64	0.14	0.33***	0.42***	1.00							
Str.-prov. rules	0.68	0.24	0.02	0.11***	0.11***	1.00						
Str.-prov. explanations	0.57	0.36	0.09***	0.28***	0.16***	0.04*	1.00					
Education	0.59	0.29	0.26***	0.18***	0.23***	0.09***	0.09***	1.00				
Vocabulary test	0.67	0.18	0.34***	0.24***	0.25***	0.12***	0.14***	0.39***	1.00			
Income	0.63	0.20	0.20***	0.13***	0.19***	0.05**	0.07***	0.27***	0.25***	1.00		
Social class	0.68	0.27	0.24***	0.16***	0.20***	0.07***	0.08***	0.38***	0.36***	0.40***	1.00	
General health	0.67	0.26	0.06***	0.08***	0.12***	0.03	0.04*	0.13***	0.12***	0.17***	0.16***	1.00
Mental well-being	0.63	0.15	0.14***	0.07***	0.17***	0.02	0.05*	0.13***	0.11***	0.18***	0.15***	0.33***

Note: Minimum of all variables: 0, Maximum of all variables: 1, (Minimum auf aut.-sup. Parenting: 0.02, Min of involvement: 0.03, Max of involvement: 0.97). Number of observations for all reported coefficients is 1,313 (listwise deletion); *p < .05; **p < .01;***p < .001 (two-tailed).

Table 2

Determinants of volitional political engagement (BCS)

	Model I	Model II	Model III
Non-political influences			
Autonomy support	0.09***	0.10***	0.07**
	(0.02)	(0.02)	(0.02)
Involvement	0.47***	0.43***	0.37***
	(0.02)	(0.02)	(0.03)
Str.-prov. rules	0.00	-0.01	-0.01
	(0.01)	(0.02)	(0.02)
Str.-prov. explanations	0.01	0.00	0.00
	(0.01)	(0.01)	(0.01)
Political influences		0.07***	0.05***
Politics at home		(0.01)	(0.01)
Control variable Picture			0.13***
Vocabulary Test			(0.02)
Human Draw Test			0.04
			(0.03)
Copying Designs Test			0.03
			(0.02)
Neighborhood			0.00
			(0.01)
Father: occupation			0.02*
			(0.01)
Mother: education			0.01
			(0.08)
Father: education			0.24**
			(0.08)
Constant	0.05***	0.06**	-0.08*
	(0.01)	(0.02)	(0.04)
Adjusted R^2	0.144	0.137	0.155
Observations	5927	3615	3151

Notes: Reported are linear regression coefficients with standard errors in parentheses; *: $p<0,05$, **: $p<0,01$, ***: $p<0,001$.

Table 3

Bivariate correlations between volitional political engagement and variables of interest (NLSY)

Variable	M	SD	1	2	3	4	5	6	7	8
Volitional pol. engagement	0.39	0.18								
Involvement	0.55	0.15	0.27***							
Aut.-sup. communication	0.54	0.29	0.05***	0.32***						
Aut.-sup. encouragement	0.71	0.20	0.14***	0.46***	0.11***					
Aut.-sup. rule setting	0.44	0.21	-0.00	-0.04**	0.04**	-0.04**				
Str.-prov. rules	0.63	0.23	-0.00	-0.09***	-0.03*	-0.11***	0.09***			
Str.-prov. discussions	0.87	0.17	0.10***	0.38***	0.16***	0.30***	-0.06***	-0.06***		
Str.-prov. feedback	0.27	0.19	0.11***	0.35***	0.09***	0.27***	-0.04**	-0.02	0.24***	
Politics at home	0.59	0.29	0.32***	0.47***	0.06***	0.24***	-0.04**	-0.02	0.23***	0.17***
Int. pol. efficacy	0.55	0.27	0.37***	0.14***	0.07***	0.09***	-0.04*	-0.03*	0.05**	0.03
Interest in others	0.69	0.26	0.09***	0.18***	0.04	0.13***	-0.03	0.01	0.06*	0.12***
Interest in abstraction	0.66	0.24	0.13***	0.13***	0.05	0.11***	0.01	0.01	0.09***	0.06*
Self-esteem	0.49	0.10	0.13***	0.10***	0.05***	0.06***	0.02	0.05***	0.05***	0.03
Mastery	0.48	0.10	0.12***	0.11***	0.06***	0.09***	0.00	0.02	0.07***	0.05**
General health	0.71	0.20	0.10***	0.21***	0.13***	0.11***	0.02	-0.05***	0.07***	0.04**
Social trust	0.47	0.24	0.09***	0.23***	0.06***	0.16***	-0.03*	-0.09***	0.12***	0.11***
Formal education	0.72	0.45	0.11***	0.14***	0.03*	0.11***	0.01	0.06***	0.07***	0.07***
Reading Comprehension	0.46	0.20	0.17***	0.29***	0.06***	0.29***	-0.07***	-0.10***	0.23***	0.19***
PPVT	0.53	0.15	0.17***	0.34***	0.06***	0.32***	-0.07***	-0.12***	0.26***	0.23***
Memory for Digit Span	0.49	0.18	0.12***	0.18***	0.03*	0.20***	-0.03*	-0.03*	0.13***	0.09***

Note: Minimum of all variables: 0, Maximum of all variables: 1. Correlation which could not be shown due to limitations of space are reported in supplement 2. Numbers of observations for all reported coefficients is 6,158. Because mini-IPIP was only administered to a random subsample, correlations with interest in others/abstraction are based on 948/940 observations; *p < .05; **p < .01;***p < .001 (two-tailed).

Table 4

Determinants of volitional political engagement (NLSY)

	Model I	**Model II**	**Model III**	**Model IV**
Non-political influences				
Involvement	0.38***	0.23***	0.27***	0.15**
	(0.02)	(0.02)	(0.03)	(0.05)
Aut.-sup. communication	-0.02*	-0.00	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Aut.-sup. encouragement	0.01	0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.02)	(0.02)
Aut.-sup. rule setting	0.01	0.01	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Str.-prov. rules	0.01	0.01	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Str.-prov. discussions	0.00	-0.01	-0.02	-0.01
	(0.02)	(0.02)	(0.02)	(0.02)
Str.-prov. feedback	0.01	0.01	0.02	0.01
	(0.01)	(0.01)	(0.02)	(0.02)
Political influences				
Politics at home		0.16***	0.14***	0.03
		(0.01)	(0.01)	(0.04)
Control variables			-0.00	-0.00
Parental Conflict 1			(0.01)	(0.01)
Parental Conflict 2			0.00	0.00
			(0.01)	(0.01)
Peabody Picture Vocabulary Test			0.00	0.00
			(0.00)	(0.00)
Memory for Digit Span			0.00	0.00
			(0.00)	(0.00)
Reading Recognition			-0.00	-0.00
			(0.00)	(0.00)
Reading Comprehension			0.00**	0.00**
			(0.00)	(0.00)
Neighborhood			-0.02	-0.02
			(0.01)	(0.01)
Education mother			0.00	0.00
			(0.00)	(0.00)
Poverty			0.01	0.01
			(0.01)	(0.01)
Family wealth			-0.00	-0.00
			(0.00)	(0.00)
Family income			-0.00	-0.00
			(0.00)	(0.00)
Politics at home # Involvement				0.20**
				(0.08)
Constant	0.16***	0.16***	0.05	0.11**
	(0.02)	(0.02)	(0.03)	(0.04)
Adjusted R^2	0.097	0.141	0.159	0.160
Observations	6158	6158	4146	4146

Notes: Reported are linear regression coefficients with standard errors in parentheses; *: p<0,05, **: p<0,01, ***: p<0,001.

Figures

Figure 1

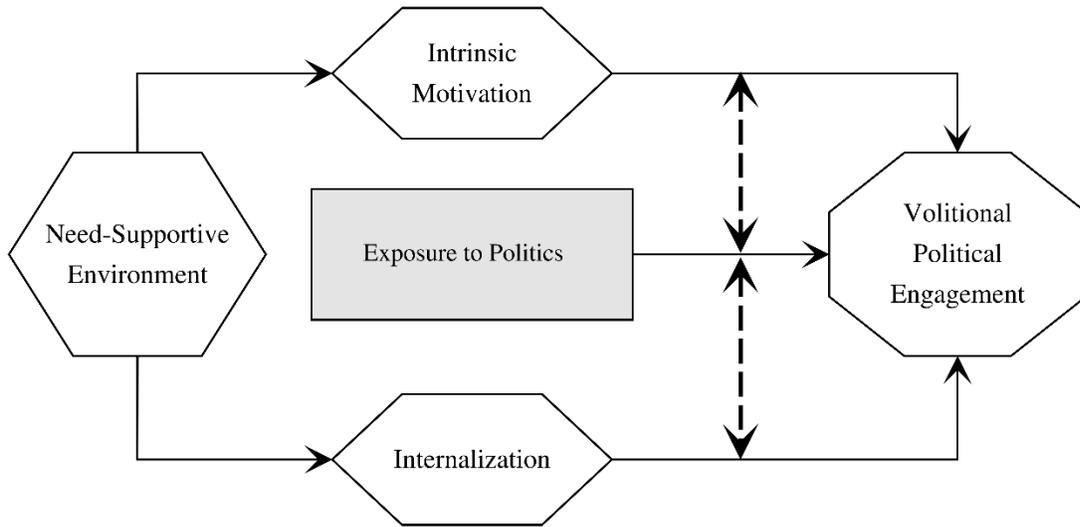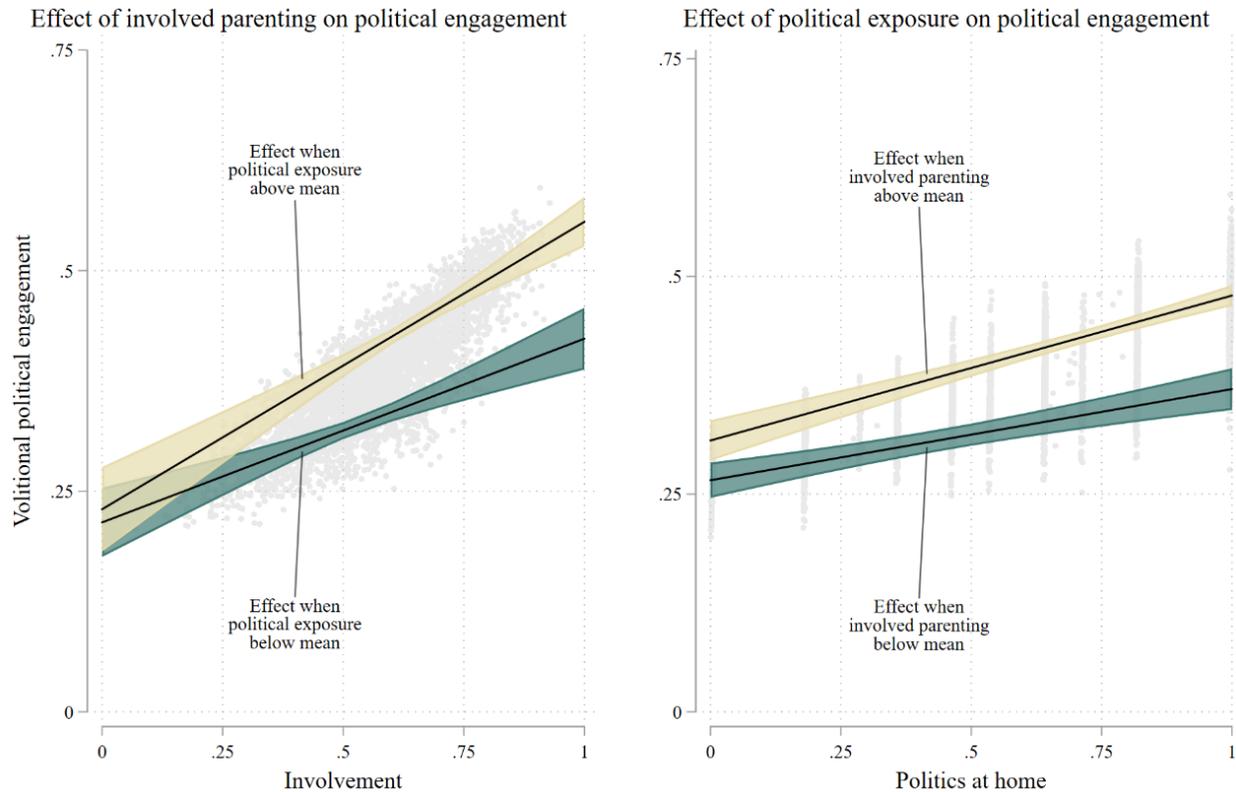The origins of volitional political engagement

Figure 2

Interactive effects of exposure to politics and parental involvement during childhood on volitional political engagement in adulthood

Note: Visualization of the interaction effect from model IV in table 4 on volitional political engagement. Left panel: the upper black line with yellow 95%-confidence interval shows political engagement at different levels of parental involvement for respondents whose level of political exposure is one standard deviation above the mean. The lower black line with green CI reports the association between engagement and involvement for respondents whose level of political exposure is 1 SD below the mean. Right panel: association between engagement and political exposure for respondents whose level of parental involvement is 1SD or 1SD below the mean. Scatterplot in background shows joint distribution of political engagement and involvement (background, left panel) and of political engagement and political exposure (background, right plot).

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