Original Article

Childhood harshness predicts long-lasting leader preferences

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ABSTRACT

Understanding the origins of political authoritarianism is of key importance for modern democracies. Recent works in evolutionary psychology suggest that human cognitive preferences may be the output of a biological response to early stressful environments. In this paper, we hypothesized that people's leader preferences are partly driven by early signals of harshness. We experimentally elicited children's (Study 1) and adults' (Study 2) political preferences using faces controlled for dominance and trustworthiness and showed that early childhood harshness has an enduring effect on adult political attitudes. Importantly, this effect was further confirmed using self-reported extreme authoritarianism (Study 2) and by the analysis of the large database of the European Value Survey (Study 3). We discuss the potential political implications of this early calibration of leader preferences.

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For decades, empirical works have demonstrated that political preferences vary systematically with environmental harshness. Perceived threat to safety and dangerous worldviews indeed correlates with right-wing authoritarianism (Onraet, Dhont, & Hiel, 2014; Sibley, Wilson, & Duckitt, 2007), and threatening or war scenarios are associated with a preference for taller, more masculine, more dominant and less trustworthy leaders (Laustsen & Petersen, 2015; Little, Roberts, Jones, & DeBruine, 2012; Re, DeBruine, Jones, & Perrett, 2013). Importantly, this authoritarianism shift also appears in response to non-political threats. For instance, pathogen- and disease-avoidance, a major issue in human evolution, correlate with the degree of authoritarianism at the country level (Murray, Schaller, & Suedfeld, 2013; Thornhill, Fincher, & Aran, 2009) and at the individual level (see Terrizzi, Shook, & McDaniel, 2013 for a meta-analysis). Taken together, these studies suggest that the preference for strong leaders is a deeply rooted evolutionary response to external stressors.

However, cues from individuals' current environment are not the only signals affecting behavior. Signals perceived during childhood are indeed crucial to calibrate current and future behaviors (Bateson et al., 2004; Del Giudice, Ellis, & Shirtcliff, 2011; Nettle, Frankenhuis, & Rickard, 2013). Environmental childhood provides cues about the kind of environment individuals will likely face as adults or the kind of somatic resources they can rely on for their development (Nettle et al.,

2013). In line with this idea, empirical research shows that phenotypes are adjusted to early conditions through multiple developmental mechanisms (Frankenhuis, Panchanathan, & Nettle, 2016). For instance, non-human animals who experience a period of high stress in the juvenile period go on to be more present-oriented, and to prioritize immediate survival and reproduction over long-term benefits (Bateson et al., 2004). Similarly, people born with low birth-weight or who experience psychosocial stress and family disruption in childhood mature earlier and have their first child sooner than control populations (Adair, 2001; Nettle, Coall, & Dickins, 2011; Sloboda, Hart, Doherty, Pennell, & Hickey, 2007). Harshness in early stages of development also induces important changes in social cognition. For example, independently of their socioeconomic status later in life, adults who grew up in stressful environments are more sensitive to social threats and negative emotions, which may be adaptive in more competitive and violent environments (Javanbakht et al., 2015; Kim et al., 2013). The goal of the present paper is to study whether leader preferences are also influenced by cues of childhood harshness, independently of individuals' current circumstances. To test this hypothesis, we relied on a robust measure of harshness in childhood: resource deprivation. Childhood resource deprivation indeed reflects both lower levels of resources and increased instability and exposure to adverse events (Evans, 2004). In other words, resource deprivation constitutes an interesting proxy for the level of external stress experienced during childhood. Therefore, we assess the association between deprivation during childhood and children's leader preferences (Study 1). We then evaluate the persistence of this effect in adulthood (Studies 2 & 3).

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To measure leader preferences consistently in children and adults, we relied on participants' perception of faces. Extensive research in psychology has indeed shown that facial cues are used for leader choice both in adults and children, and that their use reliably predicts election outcomes (Antonakis & Dalgas, 2009; Olivola & Todorov, 2010; Todorov, Mandisodza, Goren, & Hall, 2005). In addition, cross-national studies and experimental manipulations have shown that the importance granted to specific facial cues such as trustworthiness or dominance is sensitive to environmental factors (Laustsen & Petersen, 2015; Little et al., 2012). Similarly, real-life political differences between Democrats and Republicans have been linked with stable differences in facial preferences when choosing a leader (Laustsen & Petersen, 2015; Olivola, Sussman, Tsetsos, Kang, & Todorov, 2012). These results suggest that people's reliance on specific facial cues to choose a leader is a reliable proxy for their actual political preferences.

In the present project, we exploited the differential impact of dominance and trustworthiness in social judgments (Oosterhof & Todorov, 2008) to investigate the relationship between childhood deprivation and the preference for authoritarian leaders. More precisely, we used faces controlled for both dominance and trustworthiness to measure how early adverse experience may shape the use of these two facial cues for choosing a leader. Finally, we confirmed the association between leader preferences and childhood deprivation by analyzing the effect of self-reported extreme authoritarianism in a nationally representative sample of French adults (Study 2) and in a large-scale survey on 46 European countries (Study 3, European Values Study Longitudinal Data File 1981–2008 (EVS 1981–2008), 2015).

1. Study 1

The aim of this first study was to investigate the immediate effect of childhood poverty on children's preference for strong leaders. To do so, we adapted an existing experimental design that successfully elicits political preferences in children (Antonakis & Dalgas, 2009).

1.1. Materials and methods

1.1.1. Participants

41 children from the city of Slatina, Romania, aged 6 to 8 years (M = 6.85 ± 0.13 years; results are given in the standard form: mean ± 95% confidence intervals) were recruited in two schools situated in a deprived neighborhood and in a working-class neighborhood, about 1 km away from the city center. A minimum target of 20 participants per group was pre-planned based on the number of 6 to 8 year-olds in the lower-SES school; the exact number was determined by scheduling constraints and by the number of parental consent forms we received. The study was approved by the schools' management team and by the School Inspectorate. Parents signed a written informed consent form and children provided verbal assent at the start of the procedure. All study procedures complied with the Declaration of Helsinki. Children received a small gift to thank them for their participation.

Two Childhood Deprivation Groups (Deprived and Not Deprived) were formed based on children's neighborhood. Because neighborhood status may interact with children's status, we excluded children whose parental income did not match their neighborhood's status. With this goal in mind, we asked parents whether their income was above or below the legal minimum wage in Romania (i.e. 850 lei per month, which corresponds approximately to 216$). One participant was excluded in the Deprived Group and one was excluded in the Not Deprived Group resulting in 20 participants in the Deprived Group and 19 in the Not Deprived Group. The two groups were further characterized by lack of material possessions and lower access to cultural activities, they had younger and less educated parents, more siblings and more crowded houses and more unstable families (all $ps < 0.035$; Table S1). Children in the Deprived and Not Deprived Childhood Groups were matched on

age ($t(37) = 0.19$, $p > 0.250$) and gender ratio ($\chi^2(1, N = 39) = 0.62$, $p > 0.250$; Table S1).

1.1.2. Procedure and analysis

Following Antonakis and Dalgas (2009), we asked children to choose the individual they would prefer as the captain of their team to go on a mountain trip. They had to repeat this choice five times, on five different pairs of faces. Each pair included two versions of a single avatar identity: a more dominant one and a more trustworthy one (Fig. 1A). The identities were selected by a native Romanian to match the most common types of faces in Romania. Morphs were created with the XxMorphs freeware and using the Facegen 3.1 open database (Oosterhof & Todorov, 2008). The more dominant faces corresponded to a 50% morph between a 3-point dominant and a 1-point trustworthy face. Theoretically, the obtained average faces were 1.5-point dominant and 0.5-point Trustworthy. Symmetrically, the more trustworthy faces corresponded to a morph between a 1-point dominant and a 3-point trustworthy face, resulting in 0.5-point dominant and 1.5-point trustworthy faces.

Validation of the stimuli by 60 Amazon MTurkers (MTurk, http://www.mturk.com) confirmed that the more dominant faces were judged as more dominant and less trustworthy than the more trustworthy faces (mean of participants' correct identification rate: most dominant face: 86% ± 6%; most trustworthy face: 79% ± 6%; mean percentage of correct identification for each face: most dominant face: 86% ± 4%; most trustworthy face: 79% ± 13%). The pairs were presented in a random order and the position of the more dominant face (on the right or on the left of the more trustworthy face) was counterbalanced between pairs. The task lasted approximately 5 min.

The effect of Childhood Deprivation on the probability of choosing the more dominant face was investigated using a logistic regression taking Childhood Deprivation as a predictor. All the results obtained with this model were confirmed using Parental income status instead of Childhood Deprivation as the predictor (See Supplementary information).

1.2. Results

In line with our hypotheses, children experiencing deprivation were more likely to choose the more dominant and less trustworthy face as the captain for their team (logistic regression: $b = 0.68 ± 0.57$, $z = 2.33$, $p = 0.020$). This difference was explained by a preference for strong leaders in the, most deprived group only ($M = 0.62 ± 11$, $t(19) = 2.30$, $p = 0.033$; Least deprived group: $M = 0.45 ± 10$, $t(18) = -0.99$, $p = 0.337$).

1.3. Conclusions

This first study demonstrates that children's leader preferences are sensitive to their environment and that deprivation biases these preferences towards strong leaders. Thus, in a second study, we investigate the long-lasting effect of early exposure to stressors on a nationally representative sample of adults with diverse socio-economic backgrounds.

2. Study 2

Adult participants had to choose whom they would vote for in a national election between avatar faces parametrically varying on trustworthiness and dominance. Participants also reported their preference for authoritarian leaders to investigate the relationship between childhood deprivation and explicit authoritarian attitudes.

2.1. Materials and methods

2.1.1. Participants

The number of subjects was fixed a priori with IPSOS polling institute to constitute a sample that was representative of the French population