

# Northumbria Research Link

Citation: Stamos, Angelos, Altsitsiadis, Efthymios and Dewitte, Siegfried (2019) Investigating the effect of childhood socioeconomic background on interpersonal trust: Lower childhood socioeconomic status predicts lower levels of trust. *Personality and Individual Differences*, 145. pp. 19-25. ISSN 0191-8869

Published by: Elsevier

URL: <https://doi.org/10.1016/j.paid.2019.03.011>  
<<https://doi.org/10.1016/j.paid.2019.03.011>>

This version was downloaded from Northumbria Research Link:  
<http://nrl.northumbria.ac.uk/id/eprint/44292/>

Northumbria University has developed Northumbria Research Link (NRL) to enable users to access the University's research output. Copyright © and moral rights for items on NRL are retained by the individual author(s) and/or other copyright owners. Single copies of full items can be reproduced, displayed or performed, and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided the authors, title and full bibliographic details are given, as well as a hyperlink and/or URL to the original metadata page. The content must not be changed in any way. Full items must not be sold commercially in any format or medium without formal permission of the copyright holder. The full policy is available online: <http://nrl.northumbria.ac.uk/policies.html>

This document may differ from the final, published version of the research and has been made available online in accordance with publisher policies. To read and/or cite from the published version of the research, please visit the publisher's website (a subscription may be required.)

1 **Investigating the Effect of Childhood Socioeconomic Background on Interpersonal**  
2 **Trust: Lower Childhood Socioeconomic Background Predicts Lower Levels of Trust**

3

4 **Angelos Stamos, Efthymios Altsitsiadis, Siegfried Dewitte**

5

6 **Abstract:** Trust is the foundation of human relationships, therefore, understanding its  
7 determinants is of utmost importance. In line with recent findings we predict that one factor  
8 influencing the individual levels of trust is childhood socioeconomic background. Childhood  
9 socioeconomic background has been found to be a key determinant  
10 of various behaviors in adulthood as it directs individuals to adopt specific large clusters of  
11 behavioral traits often referred to as life-history strategies. In two studies, we show that  
12 childhood socioeconomic background is associated with social trust through the adoption of  
13 different life-history strategies. In the first study, we establish the link between childhood  
14 socioeconomic background and trust and we show that the relationship is mediated by the  
15 adoption of different life-history strategies. In the second study, we analyze the data of  
16 General Social Survey to replicate the finding in a large sample and provide some initial  
17 evidence of two potential moderators of the relationship, sense of control and resource  
18 scarcity.

19

20 **1. Introduction**

21 Trust constitutes the fundamental basis for relationships in human societies. It plays a  
22 key role in the initiation and maintenance of social connections between people (Mcknight,  
23 Cummings, & Chervany, 1998). Trust is essential for the functioning of organizations and  
24 families and it is an important element for economic exchange and politics (Coleman, 1990).  
25 Trust bolsters cooperation (Gaechter, Herrmann and Thoeni, 2004) and it can contribute to  
26 social, political and economic success (Knack and Keefer, 1997; Zak and Knack, 2001). A

1 general lack of trust may trigger the collapse of social bonds (Lewicki & Bunker, 1996). Trust  
2 has been proved to be a key concept for understanding behavior in groups (Yamagishi &  
3 Cook, 1993) and the functioning of institutions and markets (McEvily, Perrone, & Zaheer,  
4 2003). As a result, investigating the drivers of trust has received a lot of attention by research  
5 in social sciences (for a review see Campbell et al., 2010).

6       Recent findings show that trust can be calibrated from early life events. For instance,  
7 Petersen and Aarøe (2015) argue that birth weight is associated with different levels of social  
8 trust. Specifically, they show that low birth weight reduced social trust in adulthood. An  
9 important factor of early life experiences is childhood socioeconomic background (SES).  
10 Socioeconomic status is one of the main elements shaping human behavior in early life stages  
11 and adulthood (Belsky, Schlomer, & Ellis, 2012; Simpson, Griskevicius, Kuo, Sung, &  
12 Collins, 2012). We argue that childhood SES will be associated with different levels of trust  
13 of individuals during adulthood. We rely on the theory of life-history strategies to show that  
14 growing up in harsh environments can tune the levels of trust individuals place on other  
15 people.

16       The act of trusting requires individuals to pay costs in the present in order to reap future  
17 benefits (Michaelson, de la Vega, Chatham, & Munakata, 2013; Trivers, 1971). Research  
18 shows that this kind of motives are components of larger clusters of personality traits often  
19 referred to as life-history strategies. Findings show that the adoption of these strategies  
20 depends on early childhood experiences (e.g., Griskevicius et al., 2013; Simpson,  
21 Griskevicius, Kuo, Sung, & Collins, 2012). Extending these findings, we investigate the  
22 association of childhood socioeconomic background (SES) with trust. In two studies, we draw  
23 insights from Life history theory to explore whether people growing up poor trust other  
24 individuals less (when they reach adulthood) than people growing up rich.

25

## 1 **2. Life-History Theory**

2 Life-history theory constitutes an evolutionary framework of individual differences. The  
3 theory identifies some fundamental tradeoffs that organisms have to resolve when allocating  
4 limited resources to various aspects of their lives (e.g. investing in the quality or the quantity  
5 of offspring). Moreover, the theory highlights the ecological conditions that favor particular  
6 resource allocations (see Kaplan & Gangestad, 2005). These fundamental trade-offs have  
7 important consequences for many behaviors in diverse areas of individuals' lives such as  
8 health, diet, romantic and social relationships and economic investments (Kaplan &  
9 Gangestad, 2005; Ellis et al., 2009; Griskevicius et al. 2011; Griskevicius et al., 2013).  
10 Therefore, life-history theory provides the background for understanding how, why, and when  
11 these trade-offs influence people's behavior (Griskevicius et al. 2011).

12 Life-history strategies vary along a slow-to-fast continuum, in accordance with how  
13 individuals resolve life-history trade-offs (Ellis et al., 2009). Slow and fast strategies are  
14 linked to a distinct cohort of features. At the physiological level, faster strategies are  
15 associated with earlier physiological development and sexual maturity, while slower strategies  
16 are linked to more delayed physiological and sexual development. With regard to  
17 psychological reactions, fast strategies are associated with preference towards immediate  
18 gratification, short-term opportunism and risk-seeking. Slow strategies are associated with  
19 preference towards long-term planning and decisions that increase future payoffs  
20 (Griskevicius et al. 2013).

21 The adoption of fast or slow strategies is heavily influenced by the conditions individuals  
22 experience in early childhood (Belsky, Steinberg, & Draper, 1991). Childhood environments  
23 that are characterized by harshness and unpredictability lead individuals to adopt fast life-  
24 history strategies, which result in early sexual maturity and accelerated development (Belsky,  
25 Houts, & Fearon, 2010). For instance, recent findings show that harsh environments lead  
26 individuals to give birth to their first child at an earlier age than mild environments

1 (Griskevicius et al., 2011; Low et al., 2008). Adopting fast strategies characterized by earlier  
2 reproduction provides evolutionary advantages to organisms living in harsh and unpredictable  
3 environments where life span is shorter (Griskevicius et al., 2013; Chisholm et al., 1993).  
4 However, in environments involving less unpredictability and harshness the adoption of  
5 slower strategies is favored (Ellis et al., 2009). In those environments life span is longer,  
6 which allows organisms to invest more in their physical and social development, which  
7 increases the chances that they can rear fit offspring.

8

### 9 **3. Childhood socioeconomic background, Life-history strategies and Trust**

10 One of the main characteristics of individuals who grew up in harsh environments, is  
11 the relative lack of self-control and the focus on immediate gratification (Griskevicius et al.  
12 2011; Griskevicius et al., 2013). Harsh environments are characterized by resource scarcity  
13 and lack of safety. In those environments, forgoing immediate rewards for future pay-offs is  
14 not an optimal strategy as the future is uncertain. Therefore, individuals growing up in harsh  
15 and unpredictable environments usually prefer to engage in behaviors that reap the present  
16 benefits. For example, as explained in the previous section, individuals growing up in harsh  
17 environments drive people's focus on immediate rewards and early reproduction rather than  
18 wait to develop and reproduce later (Belsky et al., 1991; Chisholm, 1993, 1999; Ellis,  
19 Figueredo, Brumbach, & Schlomer, 2009). Recent findings have shown that people who grew  
20 up in low socioeconomic backgrounds engage less in behaviors involving inhibition than  
21 people who grew up in high SES backgrounds (Mittal et al., 2014) and show preferences for  
22 more immediate monetary rewards (Griskevicius et al., 2013). This focus on the present can  
23 influence individual's tendencies to trust. Trust as an act involves elements of self-control,  
24 delayed gratification and future investment (Michaelson, de la Vega, Chatham, & Munakata,  
25 2013; Petersen and Aarøe, 2015; Trivers, 1971), as it is the bases of more long-term and  
26 cooperative relationships (Delton, Krasnow, Cosmides and Tooby, 2011). In general, people

1 do not trust other individuals if they expect that the trustees will exploit them for short-term  
2 benefit (Righetti and Finkenauer, 2011). Furthermore, findings showed indeed that taking a  
3 broader perspective in interpersonal relations increases trust (Evans & Krueger, 2010;  
4 Ainsworth et al. 2014).

5         Furthermore, individuals living in harsh environments are surrounded by more threats  
6 and dangers. This might make them more careful, suspicious and vigilant to external stimuli.  
7 Low socioeconomic status has been linked to heightened vigilance and threat reaction (Kraus  
8 et al., 2011). This heightened general vigilance might also influence their tendencies to trust  
9 other people. Fast strategists have been found to score lower than slow strategists in the  
10 Extraversion and Agreeableness dimension of the Big Five scale (Gladden, Figueredo &  
11 Jacobs, 2009) which signifies (among others) reduced sociability and lower tendencies to  
12 cooperate and increased suspicion towards other individuals. In general, underprivileged  
13 childhood environments and fast strategies have been linked with social deviance and anti-  
14 social behavior (Bogaert & Rushton, 1989; Ellis, 1988; Geary, 2002; Figueredo et al., 2005;  
15 Thornhill and Palmer, 2004). Based on these two lines of reasoning (less future orientation  
16 and less social orientation), we expect that childhood socioeconomic will be negatively  
17 associated with trust.

18         In addition to testing the relationship, we also aim at understanding the relationship  
19 between childhood SES and trust. As mentioned in the previous sections, life history strategies  
20 are large clusters of personality traits (acquired from young age) that influence people's  
21 behavior in various ways (Griskevicius et al., 2013; Simpson, Griskevicius, Kuo, Sung, &  
22 Collins, 2012). Previous findings show that a significant part of the effect of childhood  
23 socioeconomic background on adult behavior can be explained by the adoption of different  
24 life history strategies (Belsky, Schlomer, & Ellis, 2012; Simpson, Griskevicius, Kuo, Sung, &  
25 Collins, 2012; Griskevicius et al. 2013). Life history strategies have been associated with

1 different levels of patience, vigilance and sociability which in turn can influence trust. Fast  
2 (slow) strategies have been linked with immediate patience (Griskevicius et al. 2011;  
3 Griskevicius et al. 2013), heightened vigilance and sociability (Gladden, Figueredo & Jacobs,  
4 2009). Therefore, we expect that the adoption of different life history strategies will mediate  
5 the relationship between childhood SES and trust.

6 We test our prediction in two ways. We measure life-history strategies and test for  
7 statistical mediation. We also test two environmental stressors variables (resource scarcity and  
8 sense of control) for potential moderation of the relation between childhood SES and trust.  
9 Environmental stressors have been shown to be crucial for the manifestation of life-history  
10 strategies. Environmental stressors make people growing up poor behave differently than  
11 people growing up rich, as a function of the different life-history strategies that they adopted  
12 in their childhood (Griskevicius et al. 2012). Recent findings have showed that sense of  
13 control might be one of the main psychological implications of environmental stressors. These  
14 findings show that a low sense of control magnifies the effect of life-history strategies on  
15 behaviors (Mittal and Griskevicius, 2014). For example, Mittal and Griskevicius (2014)  
16 showed that low sense of control makes the difference in delay of gratification between poor  
17 and rich childhood SES individual larger. Another important environmental stressor is the  
18 lack of resources. Several studies have shown that feelings of resource scarcity magnify the  
19 effects of life-history strategies (eg. Griskevicius et al. 2013). For instance, the feeling of  
20 resource scarcity heightens the difference in delaying gratification between poor and rich  
21 childhood SES individuals (Griskevicius et al. 2011; Griskevicius et al. 2013). Therefore, we  
22 expect that sense of control people feel over their lives and the feeling of resource scarcity  
23 will moderate the relationship between childhood SES and trust.

24 Last, literature has suggested that gender may play a role in the levels of general trust  
25 (Buchan, Croson and Solnick, 2008; Haselhuhn et. al., 2015) and both gender and age may

1 play a role in several facets of the expression of life-history strategies (Troisi, 2001; Kenrick  
2 and Keefe, 1992; Leimar 1996). Because of these links, we decided to measure age and  
3 gender and test the potentially moderating effect of them in our predicted relation between  
4 childhood SES and trust. We chose not to posit strong predictions because of the lack of  
5 relevant findings and theorizing.

6 We test our hypothesis in two studies. In study 1, we investigate the relationship  
7 between childhood SES and trust, assess to what extent this relationship is statistically  
8 mediated by life-history strategies and test the moderating effect of age and gender. In study 2  
9 we replicate the results using a larger sample and assess to what extent the resource scarcity,  
10 sense of control, age and gender moderate the relationship between childhood SES and trust.

11

## 12 **4. Study 1**

13 In the first study, we set out to test the link between childhood SES and trust and assess  
14 the mediating role of life-history strategies in this link. Therefore, we included a scale  
15 assessing an individual's position on the fast-to-slow continuum of life-history theory. We  
16 used this measure to assess whether life-history strategies mediate the link between childhood  
17 SES and trust.

18

### 19 **4.1. Method**

#### 20 **4.1.1. Participants and Procedure**

21 Two hundred participants were recruited from Amazon Mechanical Turk (55.5%  
22 Female,  $M_{age}=36.02$ ,  $SD=12.25$ ). Participants were USA citizens, were selected to have an  
23 approval rating higher than 95% and were paid US\$1 each.



1           *Trust:* To measure trust we used the Interpersonal Trust Scale (Rotter, 1967). The  
2 Interpersonal Trust Scale (ITS) is a 25-item scale that assesses the extent to which individuals  
3 place trust in others. Respondents were invited to rate on a 5-point scale (1=Strongly Disagree  
4 – 5= Strongly Agree) the extent to which they agreed or disagreed with statements such as  
5 “Most people can be counted on to do what they say they will do” and “Most repairmen will  
6 not overcharge, even if they think you are ignorant of their specialty”. The scale measures a  
7 rather general level of trust which does not distinguish possible facets of trust (Rotter 1967,  
8 1980). High (low) scores indicate high (low) trust. For the present sample ITS showed a  
9 Cronbach's  $\alpha$  coefficient of 0.803 ( $M_{ITS}=2.76$ ,  $SD=0.46$ ).

10           *Life-history Strategies:* To assess to what extent participants have adopted fast or slow  
11 history strategies, we used Mini-K. Mini-K (Figueredo et al., 2005, 2006) is a 20-item  
12 questionnaire with a 7-point Likert-type scoring developed to measure the various cognitive  
13 and behavioral aspects of life-history strategies. This questionnaire is a short form of the  
14 Arizona Life-history Battery (ALHB). Participants are invited to answer questions such as “I  
15 often make plans in advance”, “I avoid taking risks” and “I would rather have one than  
16 several sexual relationships at a time”. The lower (higher) people score on the scale the faster  
17 (slower) strategies they adopt. Cronbach's  $\alpha$  coefficient of Mini-K for our sample was 0.85.

18           *Childhood and Current SES:* To assess childhood SES we used established measures  
19 (Griskevicius, Tybur, et al., 2011; Griskevicius et al., 2013). Participants were asked to  
20 indicate their agreement with three statements ( $\alpha = 0.85$ ) on a 9-point scale (1 = strongly  
21 disagree - 9 = strongly agree): “My family usually had enough money for things when I was  
22 growing up,” “I grew up in a relatively wealthy neighborhood,” and “I felt relatively wealthy  
23 compared to the other kids in my school.”. The mean of childhood SES was 4.52 ( $SD=2.20$ ).  
24 We also assessed current SES used in the same study to use it as control variable. Participants  
25 had to respond to three other items ( $\alpha = 0.91$ ,  $M_{CURSES}=4.64$ ,  $SD=2.44$ ): “I have enough

1 money to buy things I want,” “I don’t need to worry too much about paying my bills,” and “I  
2 don’t think I’ll have to worry about money too much in the future.”. Childhood and current  
3 SES were moderately correlated ( $r=0.26$ ).

4

## 5 **4.2. Results**

6 The correlation between childhood SES and trust was significant and positive ( $r=0.16$ ,  
7  $p=0.023$ , 95% CI [0.011, 0.139]), which means that lower levels of childhood SES led to  
8 lower trust. Furthermore, we regressed childhood SES against trust including as control  
9 variables current SES, age and gender (0=Male, 1=Female). The link between childhood SES  
10 and trust became weaker but remained marginally significant ( $p=0.080$ ) (see table 1). The  
11 interaction between childhood and current SES was not significant ( $t(196)=1.074$ ,  $p=0.284$ ,  
12  $\beta=0.006$ , 95% CI [-0.005, 0.016]). Neither was the interaction between childhood SES and  
13 age ( $t(196)=0.586$ ,  $p=0.559$ ,  $\beta=0.001$ , 95% CI [-0.002, 0.003]). However, the interaction  
14 between childhood SES and gender was significant ( $t(196)=2.976$ ,  $p=0.003$ ,  $\beta=0.087$ , 95% CI  
15 [0.029, 0.144]). The simple slope analysis showed that the effect of childhood SES on trust  
16 was significant for female participants ( $t(196)=2.976$ ,  $p=0.003$ ,  $\beta=0.072$ , 95% CI [0.034,  
17 0.110]) but not for male participants ( $t(196)=-0.677$ ,  $p=0.499$ ,  $\beta=-0.015$ , 95% CI [-0.058,  
18 0.028]).

19 We followed a mediation bootstrapping procedure to test whether the relationship  
20 between childhood SES and trust is mediated by life-history strategies. We used 5,000  
21 bootstrap resamples and a 95% bias-corrected confidence interval (CI) (Preacher & Hayes,  
22 2008). The mediation analysis revealed that Mini-K mediates the relationship between  
23 childhood SES and trust (CI [0.002, 0.02],  $b=0.008$ ,  $SE=0.005$ ). When we entered the current  
24 SES, age and gender as covariates, the indirect effect became weaker but still indicated that

1 MINI-K mediates the link between childhood SES and trust (CI [0.0008, 0.02],  $b=0.007$ ,  
2  $SE=0.005$ ).

3 In the first study we provide some initial evidence for the relationship between  
4 childhood SES and trust. We also connect this relationship with life-history strategies. We  
5 show that the effect of childhood SES on trust is mediated by life-history strategies. However,  
6 this evidence becomes weaker when controlling for age, gender and current SES. Last, we  
7 found initial evidence of a moderating effect of gender.

**Table 1:**  
Summary of multiple regressions predicting trust

Trust1	B (and SE)
Childhood SES	0.131 (0.016)
Current SES	0.103 (0.014)
Age	0.032 (0.003)
Gender	-0.009 (0.065)

N=199,  $\beta$  =standardized regression coefficient

\* $p<0.05$

\*\* $p<0.01$

\*\*\* $p<0.001$

8

## 9 **5. Study 2**

10 In study 2 we wanted to investigate whether our results replicate in larger samples. We  
11 also sought to test two mediators which are elements of life-history strategies (age at first  
12 child and number of children) and two moderators of the relationship between childhood SES  
13 and trust, resource scarcity and sense of control. These two variables have been found to  
14 moderate expression of life-history strategies, and as a result their impact on individuals'  
15 behavior.

16

### 17 **5.1. Method**

#### 18 **5.1.1. Participants and Measures**

1 Study 2 consisted of respondents from the General Social Survey (GSS). The GSS  
2 has been administered annually or semiannually since 1972 and consists of nationally  
3 representative samples of American adults.

4 *Childhood SES measure:* To assess childhood SES we used two proxies: mother's  
5 socioeconomic background by using the revised version of the Duncan Socioeconomic Index  
6 (SEI; Duncan, 1961; Stevens & Featherman, 1981) and mothers' educational attainment.  
7 Previous research has shown that mothers socioeconomic background and education are a  
8 reliable and valid measure for assessing early life background that affects the adoption of  
9 specific sets of life-history strategies (Szepeswol et al., 2015). A composite early-SES  
10 measure was then created by computing SES-based z scores of the available items and  
11 combining them.

12 *Trust measure:* To measure trust we used two different items found in the survey that  
13 have been administered in several years. The first one (trust1="Generally speaking, would  
14 you say that people can be trusted or that you can't be too careful in dealing with people?" –  
15 1= You almost always can't be too careful in dealing with people, 2= You usually can't be too  
16 careful in dealing with people, 3= People can usually be trusted, 4= People can almost always  
17 be trusted, recoded), was found (together with our childhood SES proxy) in years 1998, 2004,  
18 2008, 2014 (N=3133; M<sub>age</sub>=43.41, SD=15.52; 44.3% Female). The other item  
19 (trust2="Generally speaking, would you say that most people can be trusted or that you can't be  
20 too careful in dealing with people? – 1= Can't be too careful, 2= Depends, 3= Most people can  
21 be trusted, recoded) was found in years 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008,  
22 2010, 2012 and 2014 (N=10560; M<sub>age</sub>=42.83, SD=15,50; 44.2% Female). We conducted two  
23 different analyses using childhood SES as predictor and a different trust item every time.

24 *Age at First Child and Number of Children:* A very important element of life-history  
25 strategy is sexual behavior as many of the fundamental trade-offs with regard to the allocation

1 of the limited resources of humans are linked with reproduction. Two very important  
2 decisions all humans have to make with respect to reproduction is whether they will focus on  
3 early or late reproduction and whether they will invest in high or low number of offspring  
4 (Kaplan & Gangestad, 2005). Low SES backgrounds and fast strategies have been found to be  
5 associated with a focus on early reproduction and a high number of offspring. High SES  
6 backgrounds and slow strategies have been associated with late reproduction and a low  
7 number of offspring (Ellis et al. 2009). Therefore, we expect that age of giving birth of the  
8 first child and the number of children will mediate the relationship between childhood SES  
9 and trust, as indicators of the adoption of different life-history strategies. To test our  
10 prediction we utilized two items found in the survey in the same years as the two trust items:  
11 “Participant’s age at first child”, “Number of children”.

12 *Sense of Control:* To test our prediction about the moderating effect of the feeling of  
13 sense of control, we utilized an item used in the 2000 version (N=510;  $M_{\text{age}}=41.72$ ,  
14  $SD=14.67$ ; 56.1% Female) in which participants had to rate how much control they felt they  
15 had over their lives (1=No choice and control – 7= Great choice and control).

16 *Resource Scarcity:* The moderating effect of the feeling of resource scarcity was  
17 assessed by using an item where participants had to state how their financial situation has  
18 changed over the last years (1=Getting Better, 2= Stayed the Same, 3= Getting Worse,  
19 recoded). The resource scarcity item found in years 1998, 2008, 2014 for trust1 measure  
20 (N=2282,  $M_{\text{age}}=43.75$ ,  $SD=15.56$ ; 55.4% Female) and in years 1994, 1996, 1998, 2000, 2002,  
21 2004, 2006, 2008, 2010, 2012 and 2014 for trust2 item (N=10526;  $M_{\text{age}}=42.82$ ,  $SD=15.49$ ;  
22 44.1% Female). The change of financial situation has been used by previous studies as a  
23 measure of the feeling of resource scarcity. Individuals experience feelings of resource  
24 scarcity when comparing their current financial states to their previous states during more

1 wealthy times. Note that even wealthy people can experience the feeling of relative resource  
2 scarcity when their financial situation deteriorates (Sharma and Alter 2013).

3

## 4 **5.2. Results**

5 Simple correlations showed a significant correlation between childhood SES and the two trust  
6 items (trust1:  $r=0.114$ ,  $p<0.001$ , 95% CI [0.061, 0.115]; trust2:  $r=0.145$ ,  $p<0.001$ , 95% CI  
7 [0.123, 0.160]). Moreover, to account for the nested structure of the data we run additional  
8 two-level hierarchical model analysis of the data. The results were similar. The relationship  
9 between childhood SES and the two trust items was significant (trust1:  $\beta=0.088$ ,  $p<0.001$ ,  
10 95% CI [0.061, 0.114]; trust2:  $\beta=0.141$ ,  $p<0.001$ , 95% CI [0.116, 0.165]). Furthermore, we  
11 conducted an ordinary least squares (OLS) regression controlling for age, gender (Male=0,  
12 Female=1) and current socioeconomic status (Duncan Socioeconomic Index of the  
13 participants). The association of childhood SES with the trust measure remained significant  
14 (see table 2). For both trust measures the interaction between childhood and current SES was  
15 insignificant (trust1:  $t(3120)=-1.585$ ,  $p=0.113$ ,  $\beta=-0.001$ , 95% CI [-0.002, 0.0002]; trust2:  
16  $t(10170)=-1.469$ ,  $p=0.142$ ,  $\beta=-0.0006$ , 95% CI [-0.001, 0.0002]), as was the interaction  
17 between childhood SES and gender this time (trust1:  $t(3129)=1.117$ ,  $p=0.264$ ,  $\beta=0.031$ , 95%  
18 CI [-0.023, 0.085]; trust2:  $t(10556)=1.035$ ,  $p=0.301$ ,  $\beta=0.019$ , 95% CI [-0.017, 0.057]).  
19 However, the interaction between childhood SES and age was significant (trust1:  
20  $t(3121)=3.129$ ,  $p=0.002$ ,  $\beta=0.003$ , 95% CI [0.011, 0.046]; trust2:  $t(10529)=3.831$ ,  $p<0.001$ ,  
21  $\beta=0.002$ , 95% CI [0.001, 0.004]), reflecting that the effect was weaker for lower ages (trust1:  
22  $t(3121)=4.047$ ,  $p<0.001$ ,  $\beta=0.077$ , 95% CI [0.039, 0.114]; trust2:  $t(10529)=10.942$ ,  $p<0.001$ ,  
23  $\beta=0.143$ , 95% CI [0.117, 0.168]) than for higher ages (trust1:  $t(3121)=7.814$ ,  $p<0.001$ ,  $\beta=$   
24  $0.170$ , 95% CI [0.1277, 0.2132]; trust2:  $t(10529)=15.247$ ,  $p<0.001$ ,  $\beta=0.219$ , 95% CI [0.191,  
25 0.247]).

1

**Table 2:**  
Summary of multiple regressions predicting trust

Trust1	B (and SE)
Childhood SES	0.102*** (0.025)
Current SES	0.198*** (0.001)
Age	0.156*** (0.001)
Gender	0.005 (0.430)
<hr/>	
Trust2	
Childhood SES	0.121*** (0.100)
Current SES	0.199*** (0.000)
Age	0.141*** (0.001)
Gender	-0.026** (0.018)

N1=3133, N2=10560,  $\beta$  =standardized regression coefficient

\*p<0.05

\*\*p<0.01

\*\*\*p<0.001

2

3

*Age at First Child and Number of Children:* For both of the items we followed a

4

mediation bootstrapping procedure. We used 5,000 bootstrap resamples and a 95% bias-

5

corrected confidence interval (CI) (Preacher & Hayes, 2008). Age at first child and number of

6

children have been found to be highly related with gender and age. Women have more

7

incentive to start the reproductive effort earlier than men as their age plays a significant role

8

in their successful reproduction (Kenrick and Keefe, 1992). Furthermore, women have been

9

found to have a lower variance than men when it comes to the number of offspring they

10

produce (Leimar 1996). Last, age is a significant predictor of the number of children, in both

11

genders. The higher the age the higher the possibilities a person to have given birth of higher

12

number of children. Therefore, we run the mediation analysis controlling for both gender and

13

age.

14

With regard to the age at first child, mediation analysis items confirmed first a

15

significant positive relationship between childhood SES and both trust items (trust1: N=2194,

16

$\beta=0.111$ ,  $p<0.001$ , 95% CI [0.077, 0.146]; N=6949, trust2:  $\beta=0.137$ ,  $p<0.001$ , 95% CI

17

[0.113, 0.165]) and, more importantly, that age at first child mediates the relationship between

18

childhood SES and trust (trust1: CI [0.012, 0.032],  $\beta=0.021$ , SE=0.005; trust2: CI [0.033,

1 0.047],  $b=0.040$ ,  $SE=0.003$ ). Age at first child mediated the relationship also after inserting  
2 current SES as an additional control variable in the analysis (trust1: CI [0.001, 0.014],  
3  $b=0.008$ ,  $SE=0.003$ ; trust2: CI [0.014, 0.024],  $b=0.018$ ,  $SE=0.003$ ).

4 With respect to the number of children, mediation analysis revealed again a significant  
5 link between childhood SES and both trust items (trust1:  $N=3122$ ,  $\beta=0.114$ ,  $p<0.001$ , 95% CI  
6 [0.086, 0.141];  $N=10513$ , trust2:  $\beta=0.166$ ,  $p<0.001$ , 95% CI [0.147, 0.185]) and, more  
7 importantly, that the number of children mediates the association of childhood SES and trust  
8 (trust1: CI [0.0008, 0.006],  $b=0.003$ ,  $SE=0.001$ ; trust2: CI [0.006, 0.012],  $b=0.009$ ,  
9  $SE=0.001$ ). Entering current SES as an additional controlling variable showed that mediation  
10 held only for one trust item (trust1: CI [0.000, 0.004],  $b=0.001$ ,  $SE=0.001$ ; trust2: CI [0.003,  
11 0.007],  $b=0.005$ ,  $SE=0.001$ ).

12 *Sense of Control:* To assess the moderating role of sense of control we regressed  
13 childhood SES, sense of control item and their interaction against trust. The correlation  
14 between childhood SES measure and sense of control item was small ( $r=0.045$ ) and no multi-  
15 collinearity issues were detected in this model ( $VIF=1.002$ ). The interaction of the two  
16 independent variables was significant ( $t(506)=-2.714$ ,  $p=0.007$ ,  $\beta=-0.095$ , 95% CI [-0.164, -  
17 0.026]). We conducted a simple slopes analysis (Aiken & West, 1991) one standard deviation  
18 below and above the mean of the sense-of-control item. The results showed that for low levels  
19 of sense of control the association of childhood SES with trust was stronger and significant  
20 ( $t(506)=3.831$ ,  $p=0.001$ ,  $\beta=0.251$ , 95% CI [0.122, 0.378]), while for high levels of sense of  
21 control the link was negligible and not significant ( $t(506)=-0.078$ ,  $p=0.985$ ,  $\beta=-0.011$ , 95% CI  
22 [-0.121, 0.119]). This means that the link of childhood SES with trust is strong and significant  
23 only when people feel that they do not control their lives. Furthermore, we conducted a simple  
24 slope analysis one SD above and below the mean of childhood SES to investigate which part  
25 of the population is influenced most by the effect of sense of control. The analysis showed



1 that sense of control had a significant effect on the part of the population with the poorest  
2 childhood background. Lack of sense of control made people who grew up poor trust other  
3 people less ( $t(506)=2.642$ ,  $p=0.008$ ,  $\beta=0.111$ , 95% CI [0.0281, 0.191]). However, sense of  
4 control did not have an effect on the part of the population who grew up rich ( $t(506)=-1.437$ ,  
5  $p=0.151$ ,  $\beta=-0.072$ , 95% CI [-0.171, 0.027]). All the effects remained similar when we  
6 controlled for current SES, age and gender. All variables in the model were weakly to  
7 moderately correlated (see table 3 in appendix 1) and no multi-collinearity problems were  
8 detected.

9 *Resource Scarcity:* Last, we regressed childhood SES and resource scarcity item against  
10 trust1 item. Childhood SES measure was correlated with the resource scarcity item ( $r=-$   
11 0.122), however, multi-collinearity analysis showed no problems (VIF=1.015). The results  
12 showed that the interaction was significant ( $t(2278)=2.437$ ,  $p=0.014$ ,  $\beta=0.051$ , 95% CI [0.010,  
13 0.092]). Simple slopes analysis showed that the association of childhood SES with trust was  
14 more pronounced for participants who stated that their economic situation has been getting  
15 worse over the past years ( $t(2278)=5.530$ ,  $p<0.001$ ,  $\beta=0.132$ , 95% CI [0.085, 0.178]) than for  
16 the participants that experienced improvement in their economic situation ( $t(2278)=2.226$ ,  
17  $p=0.025$ ,  $\beta=0.051$ , 95% CI [0.006, 0.096]). Furthermore, a simple slope analysis 1 SD below  
18 and above childhood SES showed that resource scarcity feeling only significantly affected the  
19 poorest part of the population. It made people coming from poor childhood SES backgrounds  
20 to trust other people less ( $t(2278)=-2.764$ ,  $p=0.005$ ,  $\beta=-0.078$ , 95% CI [-0.134, -0.022]).  
21 However, it did not have an effect on the richest part of population ( $t(2278)=0.668$ ,  $p=0.503$ ,  
22  $\beta=0.018$ , 95% CI [-0.036, 0.074]). All the effects remained similar when we controlled for  
23 current SES, age and gender. All the variables in the model were weakly to moderately  
24 correlated (see table 4 in appendix 1) and no multi-collinearity problems were detected.

1           However when we regressed childhood SES and resource scarcity item against trust2  
2 item we found no significant interaction between childhood SES and resource scarcity  
3 ( $t(10522)=-1.127$ ,  $p=0.259$ ,  $\beta=-0.013$ , 95% CI [-0.037, 0.010]).

4           In the second study we replicate the results using larger sample size, different measures  
5 of childhood SES and trust. We show that the relationship is mediated by the age at first child  
6 and number of children, two indicators of the adoption of different life-history strategies. We  
7 also provide some initial evidence for two potential moderators of the effect of childhood  
8 SES on trust. The results with regard to resource scarcity showed some inconsistency.  
9 Although for one measure of trust resource scarcity moderated significantly the relationship  
10 between childhood SES and trust, for the other trust measure failed to reach levels of  
11 significance. Therefore, these results should be interpreted cautiously.

12

## 13 **6. General Discussion**

14           Putting trust in other people can have several beneficial consequences in modern human  
15 society. It stimulates co-operation, commercial transaction and overall social, political and  
16 economic success (Knack and Keefer, 1997; Zak and Knack, 2001). In the present article we  
17 show that trust can be calibrated by early life experiences. More specifically, we provide  
18 some initial evidence that childhood SES correlates with trust. Our results suggest that  
19 growing up in low SES environments makes people less trusting than the ones that grew up in  
20 high SES environments.

21           Our results also suggest that the effect of childhood SES on trust is a connected to the  
22 adoption of larger clusters of personality traits often referred to as life-history strategies. Life-  
23 history strategies are a set of tactics organisms adopt that allows them to optimize their  
24 limited energy and resources in order to maximize their fitness in different environmental  
25 conditions. Recent findings suggest that differences in the environments where people grow

1 up make them adopt differences sets of life-history strategies that allow them to adapt better  
2 in those environments (e.g Griskevicius et al. 2013). Therefore, what these findings suggest is  
3 that the effect of childhood SES on trust is adaptive, in the sense that the reduced trust people  
4 of low childhood SES adopt helps them to maximize their fitness in the environments they are  
5 growing up in. Future endeavors can try to test whether this lack of trust is indeed an adaptive  
6 mechanism that allows people growing up in under-privileged environments to increase their  
7 fitness.

8         However adaptive might be, a steady and continuous lack of trust can be harmful both  
9 on the individual and the collective level in several occasions (Lewicki & Bunker, 1996;  
10 Knack & Keefer, 1997; Poortinga, 2006). For example, distrusting health and medical  
11 information can be dangerous. Therefore, minimizing the gap in trust between low and high  
12 childhood SES individuals can be considered important in a modern context. Our findings  
13 provide some initial evidence that this gap can be minimized when people live in more benign  
14 environments which create feelings of resource availability and higher sense of control.  
15 However, these results should be interpreted cautiously, as at least for resource scarcity the  
16 findings were inconsistent. Future research could test further whether cues of resource  
17 availability or higher sense of control can increase the trust that low childhood SES people put  
18 in other individuals and as a result the positive effects of enhanced trust. Furthermore, future  
19 research could investigate the moderating effect of some different variables (such as mortality  
20 cues) that literature has shown to be impactful for the use of life-history strategies  
21 (Griskevicius et al. 2012).

22         Future research could test the effect of childhood SES on variables that are closely  
23 related or influenced by trust. Future endeavors could test the effect of childhood SES on the  
24 “trust” individuals put on information coming from others. For example, do low childhood  
25 SES individuals trust and use product ratings coming from other consumers? Another

1 example of potentially interesting variable closely related with trust is the attitude and the  
2 intention of engaging in transaction with strangers as trust is essential for the initiation of  
3 transactions and exchanges (Coleman, 1990).

4 Our results further suggest that gender and age might possibly play a role in the  
5 relationship between childhood SES and trust. We found some evidence pointing to a  
6 substantial interactive effect between childhood SES and both of the demographic variables,  
7 although the evidence were not consistent. The interaction effect between childhood SES and  
8 gender was significant in study 1 but not in study 2, while the interaction effect between  
9 childhood SES and age was significant in study 2 but not in study 1. Future research should  
10 further investigate these interaction effects.

11 The present study comes with some shortcomings. Firstly, in study 2 the variables were  
12 measured with one or two items. Although, in study 1 variables were measured with multi-  
13 items scales and the literature has shown that our focal constructs such childhood SES and  
14 trust can be adequately measured by single or two items scales (Szepeswol et al., 2015 and  
15 Glaeser et al., 2000 respectively), the limited numbers of items to measure the constructs in  
16 study 2 can raise a concern about the reliability and validity in Study 2. We assume that this  
17 is partially offset by the large sample, but future research may want to address the issue by  
18 replicating the results of our study with additional multi-item scales to measure the focal  
19 variables. Secondly, although the majority of our results showed significance the effects were  
20 mostly small. Therefore, a careful interpretation should be done about how strong the  
21 association between childhood SES and trust is. Future endeavors can explore further the  
22 strength of the association, as well as search for additional moderating variables on the  
23 strength of the relationship between childhood SES and trust.

24

25

1 **Literature**

- 2 Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*.  
3 Newbury Park: Sage.
- 4 Ainsworth, S. E., Baumeister, R. F., Ariely, D., & Vohs, K. D. (2014). Ego depletion  
5 decreases trust in economic decision making. *Journal of Experimental Social Psychology*,  
6 54, 40–49.
- 7 Baker, M. D., Jr., & Maner, J. K. (2008). Risk-taking as a situationally sensitive male mating  
8 strategy. *Evolution and Human Behavior*, 29, 391–395.
- 9 Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal  
10 development, and reproductive strategy: An evolutionary theory of socialization. *Child*  
11 *Development*, 62, 647–670.
- 12 Belsky J, Houts RM, Fearon RMP. Infant attachment and the timing of puberty: Testing an  
13 evolutionary hypothesis. *Psychological Science*. 2010;21:1195–1201.
- 14 Belsky, J., Schlomer, G. L., & Ellis, B. J. (2012). Beyond cumulative risk: Distinguishing  
15 harshness and unpredictability as determinants of parenting and early life-history  
16 strategy. *Developmental Psychology*, 48, 662–673.
- 17 Buss DM & Schmitt DP. (1993) Sexual strategies theory: an evolutionary perspective on  
18 human mating. *Psychol. Rev.* 100:204–32
- 19 Buchan, N. R., Croson, R. T., & Solnick, S. (2008). Trust and gender: An examination of  
20 behavior and beliefs in the Investment Game. *Journal of Economic Behavior &*  
21 *Organization*, 68(3-4), 466-476.
- 22 Bianchi, E. C., & Vohs, K. D. (2016). Social class and social worlds: Income predicts the  
23 frequency and nature of social contact. *Social Psychological and Personality Science*. 7,  
24 479-486

1 Bogaert, A. F., & Rushton, J. P. (1989). Sexuality, delinquency and r/K reproductive  
2 strategies: Data from a Canadian university sample. *Personality and Individual*  
3 *Differences*, 10, 1071–1077.

4 Byrnes, James P., David C. Miller, and William D. Schafer. (1999). Gender Differences in  
5 Risk-Taking: A Meta-analysis. *Psychological Bulletin*, 125(3): 367-83.

6 Campbell, L., Simpson, J. A., Boldry, J. G., & Rubin, H. (2010). Trust variability in  
7 relationship evaluations, and relationships processes. *Journal of Personality and Social*  
8 *Psychology*, 99,

9 Coleman, J. *Foundations of Social Theory* 91–118 (Belknap Press of Harvard Univ. Press,  
10 Cambridge, 1990).

11 Delton AW, Krasnow MM, Cosmides L, Tooby J. (2011). Evolution of direct reciprocity  
12 under uncertainty can explain human generosity in one-shot encounters. *Proceedings of the*  
13 *National Academy of Sciences*.108, 13335–13340.

14 Delgado, M.R., Frank, R.H. & Phelps E.A. (2005). Perceptions of moral character modulate  
15 the neural systems of reward during the trust game. *Nature Neuroscience*, 8 (2005), 1611–  
16 1618

17 Doremus-Fitzwater, T.L.,Varlinskaya, E.I.,Spear, L.P., (2010). Motivational systems in  
18 adolescence: possible implications forage differences in substance abuse and other risk-  
19 taking behaviors.*Brain Cogn*.72,114–123.

20 Duncan, O. (1961). A socioeconomic index for all occupations. In A. J. Reiss, Jr., (Ed.),  
21 *Occupations and social status* (pp. 109–138). New York, NY: Free Press.

22 Ellis, L. (1988). Criminal behavior and r/K selection: an extension of gene-based evolutionary  
23 theory. *Personality and Individual Differences*, 9, 697–708.

24 Ellis, B. J., Figueredo, A. J., Brumbach, B. H., & Schlomer, G. L. (2009). Fundamental  
25 dimensions of environmental risk: The impact of harsh versus unpredictable

1 environments on the evolution and development of life-history strategies. *Human Nature*,  
2 20, 204–268.

3 Evans, A. M., & Krueger, J. I. (2010). Elements of trust: Risk and perspective-taking. *Journal*  
4 *of Experimental Social Psychology*, 47, 171–177.

5 Fareri, D. S., Chang, L. J., and Delgado, M. R. (2012). Effects of direct social experience on  
6 trust decisions and neural reward circuitry. *Frontiers in Neuroscience*, 6, 148.

7 Fehr, E. & Fischbacher U. (2003). The nature of human altruism. *Nature* 425, 785-791.

8 Figueredo, A. J., Vásquez, G., Brumbach, B. H., & Schneider, S. M. R. (2005). The  
9 heritability of life-history strategy: The K-factor, covitality, and personality. *Social*  
10 *Biology*, 51, 121-143.

11 Gaechter, S., Herrmann, B. and Thoeni, C. 2004. Trust, voluntary cooperation, and socio-  
12 economic background: survey and experimental evidence. *Journal of Economic Behavior*  
13 *and Organization*, 55(4): 505–531.

14 Geary, D. C. (2002). Sexual selection and human life-history. *Advances in Child*  
15 *Development and Behavior*, 30, 41–101.

16 Gladden, P. R., Figueredo, A. J., & Jacobs, W. J. (2009). Life-history strategy, psychopathi  
17 attitudes, personality, and general intelligence. *Personality and Individual Differences*,  
18 46, 270–275.

19 Glaeser, E. L., D. I. Laibson, J. A. Scheinkman, C. L. Soutter. (2000). Measuring trust. *The*  
20 *Quarterly Journal of Economics*, 115, 811-846

21 Griskevicius, V., Delton, A. W., Robertson, T. E., and Tybur, J. M. (2011). Environmental  
22 contingency in life-history strategies: The influence of mortality and socioeconomic  
23 status on reproductive timing. *Journal of Personality and Social Psychology*, 100, 241–  
24 254.

1 Griskevicius, V., Ackerman, J. A., Cantu, S. M., Delton, A. W., Robertson, T. E., Simpson, J.  
2 A., Tybur, J. M. (2013). When the economy falters, do people spend or save? Responses  
3 to resource scarcity depend on childhood environment. *Psychological Science*, 24, 197–  
4 205.

5 Haselhuhn, M. P., Kennedy, J. A., Kray, L. J., Van Zant, A. B., & Schweitzer, M. E. (2015).  
6 Gender differences in trust dynamics: Women trust more than men following a trust  
7 violation. *Journal of Experimental Social Psychology*, 56, 104-109.

8

9 Hill SE, Prokosch ML, DelPriore DJ, Griskevicius V, Kramer A. (2016) Low childhood  
10 socioeconomic status promotes eating in the absence of energy need. *Psychological*  
11 *Science*, 27, 354-364.

12 Kaplan, H. S., & Gangestad, S. W. (2005). Life-history theory and evolutionary psychology.  
13 In D. M. Buss (Ed.), *The handbook of evolutionary psychology* (pp. 68–95). Hoboken,  
14 NJ: John Wiley & Sons.

15 Kenrick, D. T., & Keefe, R. C. (1992). Age preferences in mates reflect sex differences in  
16 reproductive strategies. *Behavioral and Brain Sciences*, 15, 75–91.

17 King-Casas, B., Tomlin, D., Anen, C., Camerer, C. F., Quartz, S. R., & Montague, P. R.  
18 (2005). Getting to Know You: Reputation and Trust in a Two-Person Economic  
19 Exchange. *Science*, 308(5718).

20 Knack, S. & Keefer, P. Does social capital have an economic payoff? A cross-country  
21 investigation. *The Quarterly Journal of Economics*, 112, 1251–1288.

22 Kraus, M. W., Horberg, E. J., Goetz, J. L., & Keltner, D. (2011). Social class rank, threat  
23 vigilance, and hostile reactivity. *Personality and Social Psychology Bulletin*, 37, 1376–  
24 1388.



1 Leimar, Olof (1996), "Life-History Analysis of the Trivers and Willard Sex-Ratio Problem,"  
2 Behavioral Ecology, 7 (Fall), 316–25.

3 Low, B. S., Hazel, A., Parker, N., and Welch, K. B. (2008). Influences on women's  
4 reproductive lives: Unexpected ecological underpinnings. *Cross-Cultural Research*, 42,  
5 201–219.

6 Mata, R., Josef, A. K., & Hertwig, R. (2016). Propensity for risk taking across the life span  
7 and around the globe. *Psychological Science*, 27, 231-243.

8 Marteau, T.M., & Bekker, H. (1992). The development of a six-item short form of the state  
9 scale of the Spielberger State-Trait Anxiety Inventory. *British Journal of Clinical*  
10 *Psychology*, 31, 301-306

11 McEvily, B., Perrone, V., & Zaheer, A. (2003). Trust as an Organizing Principle.  
12 *Organization Science*, 14(1), 91–103. <http://doi.org/10.1287/orsc.14.1.91.12814>

13 McEvily, B., Radzevick, J. R., & Weber, R. A. (2012). Whom do you distrust and how much  
14 does it cost? An experiment on the measurement of trust. *Games and Economic Behavior*,  
15 74(1), 285–298

16 Mcknight, D. H., Cummings, L. L., & Chervany, N. L. (1998). Initial Trust Formation in New  
17 Organizational Relationships. *The Academy of Management Review*, 23(3), 473–490.

18 Mittal C, & Griskevicius V (2014). Sense of control under uncertainty depends on people's  
19 childhood environment: a life-history theory approach. *Journal of Personality and Social*  
20 *Psychology*, 107:621-637.

21 Petersen M. B., Aarøe L. (2015). Birth weight and social trust in adulthood evidence for early  
22 calibration of social cognition. *Psychological Science*, 26, 1681–1692.

23 Righetti F. and Finkenauer C. (2011). If you are able to control yourself, I will trust you: the  
24 role of perceived self-control in interpersonal trust. *Journal of Personality and Social*  
25 *Psychology*. 100(5):874-86.

1 Rotter, Julian B. (1967), "A New Scale for the Measurement of Interpersonal Trust," *Journal*  
2 *of Personality*, 35 (4), 651- 65.

3 Rotter, J. B. (1980). Interpersonal trust, trustworthiness, and gullibility. *American*  
4 *Psychologist*, 35, 1–7.

5 Schmitt, D. P., Alcalay, L., Allik, J., Ault, L., Austers, I., Bennett, K.L., et al. (2003).  
6 Universal sex differences in the desire for sexual variety: Tests from 52 nations, 6  
7 continents, and 13 islands. *Journal of Personality and Social Psychology*, 85, 85-104.

8 Stevens, G., & Featherman, D. L. (1981). A revised socioeconomic index of occupational  
9 status. *Social Science Research*, 10, 364–395.

10 Simpson, J. A., Griskevicius, V., Kuo, S. I., Sung, S., & Collins, W. A. (2012). Evolution,  
11 stress, and sensitive periods: The influence of unpredictability in early versus late  
12 childhood on sex and risky behavior. *Developmental Psychology*, 48, 674–686.

13 Szepeswol O, Simpson JA, Griskevicius V, Raby KL. (2015). The effect of unpredictable  
14 early childhood environments on parenting in adulthood. *Journal of personality and social*  
15 *psychology*. 109, 1045–1067.

16 Thielmann, I., & Hilbig, B. E. (2014). Trust in me, trust in you: A social projection account of  
17 the link between personality, cooperativeness, and trustworthiness expectations. *Journal*  
18 *of Research in Personality*, 50, 61-65

19 Thornhill, R., & Palmer, C. T. (2004). Evolutionary life-history perspective on rape. In C.  
20 Crawford & C. Salmon (Eds.), *Evolutionary psychology, public policy and personal decisions*  
21 (pp. 249–274). Mahway, NJ: Lawrence Erlbaum.

22 Troisi, A. (2001). Gender differences in vulnerability to social stress: a Darwinian  
23 perspective. *Physiology & behavior*, 73(3), 443-449.

24 Yamagishi, T., & Cook, K. S. (1993). Generalized Exchange and Social Dilemmas. *Social*  
25 *Psychology Quarterly*, 56(4), 235–248.

1 Zak, P. J. & Knack, S. Trust and growth. *Economic Journal*, 111, 295–321 (2001).  
 2 Zhao, J., Cheng, J., Harris, M. and Vigo, R. (2015) ‘Anxiety and intertemporal decision  
 3 making: the effect of the behavioral inhibition system and the moderation effects of trait  
 4 anxiety on both state anxiety and socioeconomic status’, *Personality and Individual  
 5 Differences*, 87, pp. 236–41. Appendix 1

6

**Table 3**

Pearson Correlations between BAS, BIS and ITS

	Correlation Matrix					
	1	2	3	4	5	6
1) Trust2	-	0.124***	0.054	0.185***	0.067	-0.064 <sup>†</sup>
2) Childhood SES	0.124***	-	0.032	0.201***	-0.310***	-0.173***
3) Sense of Control	0.054	0.032	-	0.145***	0.031	0.032
4) Current SES	0.185***	0.201***	0.145***	-	0.047	-0.061 <sup>†</sup>
5) Age	0.067	-0.310***	0.031	0.047	-	0.147***
6) Gender	0.064	-0.173***	0.032	-0.061 <sup>†</sup>	0.147***	-

N=510

\*p<0.5

\*\*p<0.01

\*\*\*p<0.001

7

**Table 4**

Pearson Correlations between BAS, BIS and ITS

	Correlation Matrix					
	1	2	3	4	5	6
1) Trust1	-	0.113***	-0.051**	0.204***	0.114***	-0.013
2) Childhood SES	0.113***	-	-0.135***	0.263***	-0.222***	-0.070***
3) Res Scarcity	-0.051**	-0.135***	-	-0.138***	0.184***	0.045*
4) Current SES	0.204***	0.263***	-0.138***	-	0.114***	-0.077***
5) Age	0.114***	-0.222***	0.184***	0.114***	-	0.008
6) Gender	-0.013	-0.070***	0.045*	-0.077***	0.008	-

N=2282

\*p<0.5

\*\*p<0.01

\*\*\*p<0.001

8

9

10

11

12

13