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# Persistent Exposure to Poverty During Childhood Limits Later Leader Emergence

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Increasing attention is being paid to the question of why some people emerge as leaders, and we investigated the effects of persistent exposure to poverty during childhood on later leadership role occupancy. We hypothesized that exposure to poverty would limit later leadership role occupancy through the indirect effects of the quality of schooling and personal mastery, and that gender would moderate the effects of exposure to poverty and personal mastery. Using the National Longitudinal Study of Youth provided multiwave and multisource data for a sample of 4,536 (1,533 leaders; 3,003 nonleaders). Both school quality and personal mastery mediated the effects of family poverty status on later leadership role occupancy. Although gender did not moderate the effects of poverty on leadership role occupancy, the indirect effects of early exposure to poverty on leadership role occupancy through personal mastery were moderated by gender. Conceptual and practical implications of these findings are discussed.

*Keywords:* leadership emergence, poverty, personal mastery, gender

Who emerges as a formal leader, and why, is an issue of considerable importance. First, becoming a leader is the initial step in what might be thought of as a leadership emergence process. Only after becoming a leader do questions of leadership style or behavior become relevant, and questions of leadership effectiveness are then largely dependent on leadership behaviors (Arvey, Rotundo, Johnson, Zhang, & McGue, 2006; Ilies, Gerhardt, & Le, 2004). Second, who emerges as a leader defines the pool from which organizations will draw their future leaders. Third, understanding who does not emerge as a leader might point to personal or contextual factors that limit the pool of future leaders.

Given this, one might expect that the issue of leader emergence would have been a primary focus in the considerable body of leadership research conducted over the past century, which now sees hundreds of articles published each year (Barling, 2014). Yet this is not the case. Most of this large body of research explores the nature and even more so, the consequences of transformational/charismatic leadership theories (Barling, 2014; Judge & Bono, 2000). Although invaluable in itself, the knowledge obtained from this research is of no help in understanding leadership emergence, and so in this study we turn our attention to understanding who becomes a leader, and why. In particular, we focus on the questions of whether and how persistent exposure to poverty during childhood and adolescence limits later leadership emergence.

Although less researched than other areas in the leadership domain, there was already substantial interest before and during World War II in predicting whom might most appropriately fill a leadership role, and successfully assume the responsibilities that role would entail. At the time, this was not merely a question of academic interest; selecting the right person to meet the challenges of war-time leadership could have very substantial consequences. In his extensive review of the available research, Stogdill (1948) identified more than 100 data-driven articles published by the end of World War II. Stogdill's early research showed that the most consistent correlates of leadership emergence were socioeconomic status (SES), different indicators of intelligence (e.g., school grades, practical knowledge, judgment and decision-making, and insight), and broad aspects of personality (e.g., extraversion, originality, adaptability, self-confidence and responsibility), and affect (emotional and mood control, and social skills). These early findings, especially with regard to the roles of family SES, current job status and education, were replicated in studies investigating unions (Sorokin et al., 1927), high school senior students (Remmler, 1938), and community samples (Smith, 1937), and in countries other than the United States (Gibb, 1947).

Interest in understanding who becomes a leader again resurfaced several decades later, and focused on three broad categories of predictors. First, researchers studied the link between traits and leader emergence. Perhaps the most consistent finding across time is the link between children's general overall cognitive ability and later leadership emergence (Daly, Egan, & O'Reilly, 2015). Broadening this focus, research in the 1970s investigated the role of personality, for example in isolating the role of self-monitoring (e.g., Garland & Beard, 1979). More recent research addressed the role of big five personality characteristics, with extraversion the most consistent personality predictor of leader emergence (e.g., Ensari, Riggio, Christian, & Carslaw, 2011; Reichard et al., 2011). Second, research has identified a consistent role for gender. Males

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are more likely to emerge as leaders than females (e.g., [Eagly & Karau, 1991](#)), a tendency that (a) is present upon assuming full-time employment, (b) increases over time ([Daly, Delaney, & Baumeister, 2015](#)), and (c) increases with the level of organizational hierarchy. Recent research also points to the importance of gender role orientation and social pressure toward gender role conformity as potential reasons for this phenomenon ([Barling, 2014](#)). Third, consistent with the growing interest in neuroscience, results from twin studies have shown that between 20% and 30% of the variance in leadership emergence is genetic (e.g., [Arvey et al., 2006](#); [Arvey, Zhang, Avolio, & Krueger, 2007](#)), substantially more than that explained by either personality factors or gender. Most recently, [De Neve, Mikhaylov, Dawes, Christakis, and Fowler \(2013\)](#) identified a specific gene (rs4950, an A allele rather than a G allele) that increased the likelihood that people will find themselves in a leadership position by 50%, and [E.-D. Li et al. \(2015\)](#) showed that a dopamine transmitter DAT1 indirectly influenced leader role occupancy through its negative effects on proactive personality, and its positive effects on moderate rule-breaking behavior.

### Conceptualizing Leader Emergence

Thus, there is a robust tradition of empirical research spanning the past 80 years on antecedents of leader emergence. A feature of this research is the wide variety of ways in which leadership emergence was conceptualized and operationalized. One approach was based on self-report data, asking participants about their desire to lead (e.g., [Brunell et al., 2008](#)) or what might be viewed as leadership self-efficacy ([Chaturvedi, Zyphur, Arvey, Avolio, & Larsson, 2012](#)), and then equating these measures with leadership emergence. A second, frequently used approach involves asking group members to identify or choose a leader following completion of a group task. Within this paradigm, group members might be asked (a) who they would prefer as their leader for any future imaginary group tasks ([Nevicka, De Hoogh, Van Vianen, Beerma, & McIlwain, 2011](#)), to (b) identify the group member who would be best at achieving the assigned task ([Garland & Beard, 1979](#)), (c) prioritize the group members they would prefer to have as the leader for the remainder of the group task ([Riggio, Riggio, Salinas, & Cole, 2003](#)), or (d) identify who they viewed as the informal leader after spending time working but without providing a definition of leadership ([Emery, Daniloski, & Hamby, 2011](#)).

A third approach has focused on “role occupancy,” namely, whether the focal individual holds the role of leader (or supervisor), but still no single conceptualization or operationalization exists. For example, role occupancy ranges from a binary measure of role occupancy (i.e., whether one holds a leadership position or not; [De Neve et al., 2013](#)), measures that reflect the scope of leadership (i.e., number of employees supervised; [W.-D. Li, Arvey, & Song, 2011](#)) or what is referred to either as role attainment ([Arvey et al., 2007](#)) or hierarchical position (i.e., “president,” “vice-president”; [Zhang, Ilies, & Arvey, 2009](#)). Last, meta-analytic investigations of leader emergence have combined these diverse indicators to form a single leader emergence measure (e.g., [Ensari et al., 2011](#); [Judge, Bono, Ilies & Garhardt, 2002](#)).

Reflecting on these different approaches, we suggest that leadership emergence is a process. The first necessary step in leadership emergence involves attaining a position that involves super-

visory or leadership responsibility, and this can occur in early adulthood. However, fully understanding leadership emergence requires that we go further, as not all leadership positions reflect equal levels of scope or responsibility. Stated somewhat differently, some individuals assume or go on to attain leadership positions loaded with more responsibilities than others do, and this can be reflected quantitatively and qualitatively. Quantitatively, the number of employees for whom a leader is directly responsible can vary widely; thus, the second dimension of leadership emergence is reflected in the scope or breadth of the leadership position. Qualitatively, the depth or responsibility assigned to the leader (e.g., decisions regarding pay, promotion, task assignment) constitutes the third dimension of leadership emergence.

Two features of this conceptual approach are noteworthy. First, the three aspects of leadership emergence are theoretically orthogonal. Attaining a leadership position in the first instance is unrelated either to the number of employees for whom the leader assumes responsibility, or to the depth of responsibility the leader holds over employees' work. Second, the scope and depth of responsibility are theoretically unrelated: It is possible to have limited responsibility over large numbers of employees, or considerable responsibility over a limited number of employees. In the current study, we investigate predictors of the first step in the leadership emergence process, namely leader role occupancy.

### Poverty and Leadership Emergence

Growing up in a family experiencing financial hardship or poverty has been the focus of extensive empirical research in the United States ([Elder, 1974](#)) and elsewhere ([Jahoda, Lazarsfeld, & Zeisel, 1971](#)), at least since the Great Depression. The results of this research are clear: Exposure to poverty early in one's life affects children's cognitive, behavioral and emotional development, stress responses, parent-child relationships, school behaviors and academic achievement, and health behaviors and physical well-being (e.g., [Bradley & Corwyn, 2002](#); [Duncan, Yeung, Brooks-Gunn, & Smith, 1998](#); [Yoshikawa, Aber, & Beardslee, 2012](#)).

Surveying this extensive body of research reveals that there is little consistency in the conceptualization of “financial hardship”; for example, SES, poverty, parental or family unemployment have all been used as proxies for financial hardship. In the present study, we focus specifically on the effects of *poverty* on leadership role occupancy. Poverty was chosen because unlike SES, which mostly reflects subjective judgments of one's relative position, poverty reflects an objective determination that takes account of family income after controlling for regional disparities, urban versus rural differences in standard of living, and family size. As well, of the three indicators of SES (family income, parental education, occupation), income (which forms the basis of the way in which poverty is conceptualized and measured) has the greatest impact on children's academic achievement ([McLoyd, 1998](#)), and the effects of low income on children's brain development is greatest among the most economically disadvantaged, that is, those living in poverty ([Noble et al., 2015](#)).

Several findings from research on how early exposure to poverty affects later development help to explain why poverty might influence leader emergence. First, any negative effects of persistent exposure to poverty cumulate over time; for example, persis-

tent childhood poverty predicts involvement in severe adolescent aggression, skipping school without permission, or becoming intoxicated (Jarjoura, Triplett, & Brinker, 2002). Moreover, as the length of time spent in poverty increases, so too do its negative effects (e.g., Brooks-Gunn & Duncan, 1997; Jarjoura et al., 2002; Macmillan, McMorris, & Kruttschnitt, 2004). Second, escaping from poverty is not the norm—so much so that Corcoran (1995) titled her review of poverty in the United States “Rags to Rags.” Third, early and persistent exposure to poverty exerts greater negative effects (e.g., on cognitive functioning) than current or periodic exposures (Brooks-Gunn & Duncan, 1997). Fourth, the effects of family income are not linear, and are disproportionately greatest for poor (vs. nonpoor) children (e.g., Duncan et al., 1998; Mistry, Biesanz, Taylor, Burchinal, & Cox, 2004; Noble et al., 2015).

More important, from the perspective of the current study, prior research has also investigated *how* poverty exerts its extensive effects. There is now widespread agreement that early exposure to poverty limits access to institutional and environmental resources, and to individual opportunities (e.g., Bradley & Corwyn, 2002; Gallo & Matthews, 2003), which we suggest will leave individuals reared in conditions of poverty less well-equipped with the resources required for the status competitions that typify adult life. Extending this, we suggest that growing up in poverty will leave individuals at a disadvantage in competitions for leadership positions in adulthood, and that (a) the quality of the high school an individual attends and (b) their personal mastery will mediate the effects of early exposure to poverty on later leadership emergence.

### The Mediating Role of School Quality

Poverty is a major determinant of the quality of the school environment in which children find themselves (Arthurs, Patterson, & Bentley, 2014). On an objective level, the resources and materials in many schools that predominantly serve poor children are often inadequate (McLoyd, 1998). Just as important, poorer children are more likely to find themselves in schools characterized by less privileged psychological environments, for example offering fewer Advanced Placement classes or opportunities to participate in team sports or extracurricular school-based activities (Putnam, 2015). Added to this, teacher quality is lower in schools in less privileged economic areas (Evans, 2004), teacher absenteeism is higher and teacher tenure is lower in these areas (Rutter et al., 1975). In addition, teachers generally perceive poorer children more negatively than those from higher SES families; poorer children are seen as less socially skilled, and teachers hold lower academic expectations for poorer children, a phenomenon that is most pronounced for high-status teachers (e.g., Alexander, Entwisle, & Thompson, 1987; McLoyd, 1998). Last, schools in low-income communities are less likely to benefit from parental involvement (e.g., lower attendance at school functions and parent-teacher meetings; lower levels of volunteering; Evans, 2004). Taken together, these findings help explain why economic hardship in general predicts poorer cognitive functioning (Kaplan et al., 2001) and school performance (Conger et al., 1992). It also helps to explain the diverse negative effects on indicators of children’s educational attainment (e.g., Bradley & Corwyn, 2002; McLoyd, 1998), such as the number of years of school completed, and both dropout and graduation rates (Duncan et al., 1998; McLoyd, 1998).

Compounding this effect, low family income predicts leaving home early and a greater chance of earlier parenthood, both of which could increase the likelihood of early school leaving (Berzin & De Marco, 2010).

Of course, making causal inferences about the role of poverty on school quality from nonexperimental data is complicated (a) by the cross-sectional nature of the data, and (b) the fact that poverty itself is confounded with other indicators of childhood disadvantage (e.g., unstable employment patterns and family stress; Conger et al., 1992). However, several field-based quasi-experimental policy intervention studies provide additional confidence about the causal role of poverty on school quality. First, a policy initiative within Canada enabled a quasi-experimental investigation of the effects of pay on school achievement. After the National Child Benefit was introduced in 1998, five provinces opted out of the program, and five remained in to various degrees. Using what was therefore a quasi-experimental design, Milligan and Stabile (2011) showed that the introduction of the benefits, and hence increased overall family income, was associated with higher test scores (especially among boys within lower educational households). Second, Dahl and Lochner (2012) analyzed the effects of increases in family income as a function of the Earned Income Child Credit in the United States. Using data from the National Longitudinal Survey of Youth (NLSY, 1979a) between 1993 and 1997, children in families benefitting from the income supplement showed increases in both math and reading test scores equivalent to a 6% increase of a standard deviation in the short term. Third, Akee, Copeland, Keeler, Angold, and Costello (2010) examined the effects of increased income to children of the Eastern Band of Cherokee Indians in North Carolina as part of the *Great Smoky Mountains Study of Youth*, whose families benefitted from distribution of a proportion of the profits from casinos owned and operated by their local band government. Using a sample of non-Indian children as the control group, Akee et al. (2010) showed that four additional years of an increased household income of \$4,000 significantly increased school attendance by approximately 2.5 days per semester, and the probability of completing high school by age 19 (by 15%). It is important to note that gains in achievement scores in the Dahl and Lochner analysis, and school attendance in the Akee et al. analysis were greatest for children from more disadvantaged families, where the standard income supplement would yield a greater proportionate increase in family income.

Findings from the studies by Salkind and Haskins (1982) provide greater support for the causal role of poverty because families were randomly assigned to income enhancement programs. In a series of studies initiated between 1968 and 1972 (Salkind & Haskins, 1982), comparisons were made between children of families whose income was boosted by involvement in an income maintenance program (based on negative income tax, or guaranteed income). School attendance and level of education completed were significantly higher in those children whose families had been involved in the income maintenance program. These outcomes, and those in the Akee et al. (2010) are especially consequential for the purposes of this study as they are indicators of school quality.

All this is important, because having access to high-quality schooling could in turn affect later leadership emergence both directly and indirectly. Children are likely to learn more in high-



quality schools, increasing the likelihood that they will be successful in leadership selection competitions (see Figure 1). Some support for this derives from the large number of studies showing that leadership emergence is positively associated with general intelligence (Ilies et al., 2004; Judge, Colbert, & Ilies, 2004). Even more important, however, are the findings showing that *perceived* intelligence is a stronger predictor of leadership emergence than *objective* intelligence (i.e., Judge et al. 2004). Rubin, Bartels, and Bommer (2002) showed that perceived intelligence mediates the effects of objective intelligence on leadership emergence. These findings are important, as they suggest that individuals are more likely to be given leadership positions when others, especially those charged with the responsibility for leader selection decisions, perceive them to be higher in terms of cognitive skills and intellectual abilities. In contrast, given information available to selection committee members (e.g., through CVs) that applicants attended relatively underresourced schools or colleges in poorer areas may leave the committee concerned about the quality of the education applicants had experienced.

Last, the benefits of high-quality schooling go beyond direct effects on learning and intelligence. Schools serve as one of the fundamental socializing agents to which children are exposed. High-quality schools are more likely to be staffed with stable and optimistic teachers and principals who serve as appropriate role models, for example in administering consequences consistently and fairly. In addition, positive peer relationships and fewer disciplinary issues are more likely to be evident in high-quality schools (Putnam, 2015), providing environments in which children can develop the social and cognitive skills and problem-solving behaviors that could help them succeed when competing for leadership positions.

*Hypothesis 1:* School quality will mediate the effects of childhood poverty on leader role occupancy.

### The Mediating Role of Personal Mastery

The considerable benefits conveyed by higher SES or economic privilege go beyond tangible resources (e.g., salary, property, neighborhood quality) and include psychological resources that play a core role in the development of individuals' sense of personal control, self-efficacy beliefs and personal mastery (Taylor & Seaman, 1999). In turn, the sense of personal mastery will

increase the likelihood of competing successfully for leadership positions (see Figure 1).

Early experiences associated with poverty undermine the development of personal mastery—the belief that failures can be overcome and success is not a function of chance, that they can successfully confront unexpected events and problems that may emerge, and have control over events in their environment, and their own future. Faced with persistent poverty, young children and adolescents realize that neither they personally, nor their parents, have adequate control over their socioeconomic circumstances, and learn directly and vicariously that personal control over other critical environmental factors is limited at best. Such lessons are reinforced, because even when their parents are employed, children are more likely to see them hold jobs that offer low levels of autonomy (Perry-Jenkins, Repetti, & Crouter, 2000), and that leave them exposed to negative characteristics such as physical hazards, low levels of skill use and poor pay. Moreover, parents who hold low-wage, low-skilled jobs are also at significantly greater risk of losing their jobs, and children raised in poverty would again see their parents unable to exert control over some of the most salient aspects of their jobs, or even affect whether they can hold on to their job, setting the stage for feelings of poor personal mastery.

Poverty would also affect personal mastery because children from lower SES backgrounds encounter more negative and troubling environmental challenges than their higher SES counterparts. At the same time, they have fewer resources with which to surmount these challenges, raising the possibility of more failure experiences (Kristenson, Eriksen, Sluiter, Starke, & Ursin, 2004). For example, low SES teenagers' increased work stress and declining parent-adolescent relationships slow the development of personal mastery (Falci, 2011), and result in lower self-control (Lee, McClernon, Kollins, Prybol, & Fuemmeler, 2013), and greater depression and feelings of hopelessness (Gallo & Matthews, 2003).

Lower SES individuals' diminished feelings of control are also manifested at the group level in ways that might affect their success in leadership selection competitions. For example, lower SES group members take the lead less frequently in (a) changing topics during group discussions (Okamoto & Smith-Lovin, 2001) and (b) influencing jury discussions and decisions (York & Cornwell, 2006). At the societal level, the SES-health relationship has

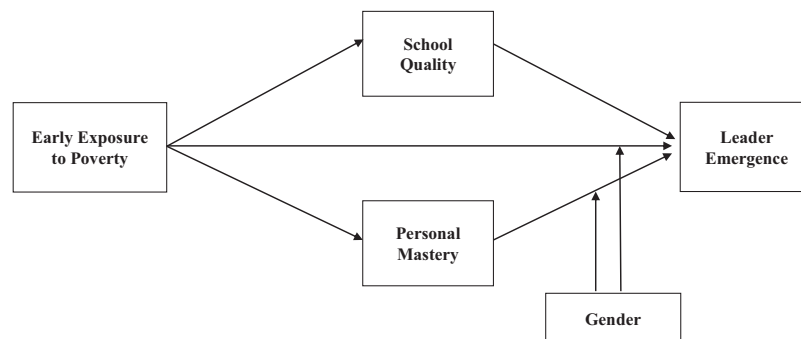


Figure 1. Indirect model linking early exposure to poverty with later leadership emergence.

been attributed to low SES individuals' relative lack of involvement in social institutions and decision-making (Marmot, 2004). Last, data from two different longitudinal databases in the U.K. show that children who experience poor self-control as early as seven years of age are more susceptible to unemployment throughout their adulthood (Daly et al., 2015). Extending this, individuals raised in poverty may be less likely to behave in workplace contexts in ways that reflect personal mastery, and thereby build up the idiosyncrasy credits that they can draw upon in leadership selection competitions.

In contrast, people with a sense of personal mastery are more likely to participate actively in issues over which they believe they have some control, both in the present and in the future. It should be no surprise, therefore, that personal mastery mediates the relationship between SES and physical and mental health (Bailis, Segall, Mahon, Chipperfield, & Dunn, 2001). Thus, people who are higher in personal mastery are more likely to enact the agentic behaviors over time that are perceived to be associated with effective management and leadership, and be more likely to succeed in leadership selection competitions.

*Hypothesis 2:* Personal mastery will mediate the effects of childhood poverty on leader role occupancy.

Elements of implicit leadership theory (e.g., Lord, de Vader, & Alliger, 1986) help explain *why* access to high-quality schooling on the one hand, and personal mastery on the other, would increase the likelihood of leadership emergence. First, implicit leadership theory suggests that individuals generally hold well-formed assumptions, beliefs and stereotypes of the traits, characteristics or behaviors that typify ideal or effective leaders (see Lord et al., 1986). Across time, intelligence has been seen as key to successful leadership (Epitropaki & Martin, 2004), as a result of which intelligence would be expected to be a major factor guiding leadership selection decisions, and indeed, intelligence is a consistent predictor of leadership emergence across time (e.g., Daly et al., 2015; Stogdill, 1948). Similarly, agentic behaviors which would be evident through assertion, determination, decisiveness and directness are seen as synonymous with effective leadership (Agho, 2009). Although not dismissing the role of formal selection procedures and techniques, implicit leadership theory would suggest that during leadership selection competitions, applicants' perceived to be high in intelligence, or who display agentic behaviors indicative of personal mastery, should benefit in all phases of the leadership selection competition, from initial decisions about whom to interview through to the actual selection decision.

Hollander's (1958) notion of idiosyncrasy credits, which posits that individuals accumulate credits in the workplace when they enact behaviors that are viewed as consistent with stereotypes of positive leadership, also explains why high-quality schooling and personal mastery will mediate any effects of poverty on leadership role occupancy. According to this theory, accumulated credits become critical when judgments are made about whom to select for leadership positions. With respect to leader emergence, individuals whose everyday behaviors reflect greater intelligence, and who enact the agentic and proactive behaviors that are held to reflect leadership (Agho, 2009) will have accumulated the credits necessary to influence the decisions of those involved in the selection process. Intelligence and personal mastery provide the

legitimacy that allows people to break from the norm, and be hired into a leadership position despite their being poor.

### The Moderating Role of Gender

Consistent with prior theorizing (Eagly & Karau, 2002) and research on leadership in general and leadership emergence in particular (Barling, 2014), we propose that the indirect effects of poverty on leadership role occupancy will be moderated by gender, as will the specific path between personal mastery and leadership role occupancy (see Figure 1).

Evidence documenting a bias against females with respect to leadership selection is not new. Eagly and Karau (2002) developed role (in)congruity theory to explain the general prejudice against women leaders. Their theory rests on two interrelated assumptions: First, women are generally perceived as more communally oriented, and men more agentic; and second, effective leadership is perceived to be a function of agentic rather than communal behaviors (Koenig, Eagly, Mitchell, & Ristikari, 2011). When there is a mismatch between gender-based stereotypes of the job applicant and the assumed demands of the job, selection becomes less likely (Brescoll, Dawson, & Uhlmann, 2010).

Based on this, we suggest that persistent exposure to poverty will jeopardize women's leadership emergence. Some support for this emerges from W.-D. Li et al. (2011), who found that family SES had a negative effect on women's (but not men's) leadership advancement. One explanation offered by W.-D. Li et al. (2011) is that women from higher SES backgrounds face greater pressures to succeed than their counterparts from lower SES backgrounds; implicit in their explanation is the idea that women might therefore choose to withdraw from leadership selection or promotional competitions. Extending this beyond familial expectations, we suggest that stereotype threat might also explain why some women might be less interested in seeking or attaining leadership positions. Davies, Spencer, and Steele (2005) showed that when young women were reminded of traditional gender stereotypes, they elected to avoid high status leadership positions in favor of lower status, nonleadership positions. When they were not explicitly reminded of gender stereotypes, there were no differences in interest in the higher status leadership position between females and males.

We also hypothesize that the path between personal mastery and leadership emergence will be moderated by gender; specifically, any benefits of personal mastery for later leadership role occupancy will be greater for males than females. As already noted, individuals higher in personal mastery would be characterized by a more proactive orientation, and more likely to engage in behaviors aimed at establishing control over events in their environment. Consistent with role incongruity theory (Eagly & Karau, 2002) and the "think manager—think male" phenomenon (Schein, Mueller, Lituchy, & Liu, 1996), male applicants who are seen to display agentic male-appropriate behaviors, which themselves are perceived to be associated with effective leadership, would accumulate idiosyncrasy credits and be rewarded for doing so in leadership selection competitions; in contrast, women would not accumulate idiosyncrasy credits for displaying the same agentic behaviors as they are inconsistent with gender role expectations. Support for this derives from research showing that more dominant

women are less likely to assume leadership roles than their less dominant male counterparts (e.g., Ritter & Yoder, 2004).

*Hypothesis 3a:* Gender will moderate the direct effects of poverty on leader role occupancy.

*Hypothesis 3b:* Gender will moderate the indirect effects of childhood poverty on leader role occupancy through personal mastery.

## Method

### Participants

The NLSY was launched in 1979 by the Bureau of Labor Statistics, which is part of the U.S. Department of Labor. The goal of the NLSY was to study a range of topics including education, employment, health, income, relationships and household variables. The original sample comprised 12,686 men and women between the ages of 14 to 22, who were representative of the U.S. population at the time. Within this sample there were three independent probability samples: the noninstitutionalized civilian population (6,111 individuals), a military sample (1,280 individuals), and a supplemental sample that was designed to oversample civilian Hispanic, Latino, African American, and economically disadvantaged youths (5,295 individuals). From the start of the study until 1994 participants were interviewed annually, and biannually since 1994. Currently 9,964 participants for whom data are available from 1979 to 2012 remain in the sample. The decrease in sample size over time is due to (a) normal sample attrition (less than 10% per year) and (b) two systematic reductions in participants due to funding constraints (1,079 individuals in 1984 and 1,643 individuals in 1990). Specific to our purposes, the NLSY includes socioeconomic data, labor force participation, and life experiences including childhood experiences.

In 1986 the NLSY was expanded into a new survey based around the children of the original female respondents, and is called the NLSY79 Children and Young Adults. This survey was created to collect more child-specific information. In 1986 the number of children born to interviewed mothers was 5,355 and in 2002 this number had increased to 7,467 children. Until children are 15, data are collected from both mothers and the children themselves; after the children turn 15, they are interviewed along with the original NLSY79. Interviews are conducted on a biannual basis. Data from the NLSY79 and the NLSY79 Children and Young Adults can be linked through the mothers' ID codes provided in both surveys. The NLSY has been used previously in the

study of work experiences (e.g., Judge & Cable, 2011; Judge & Hurst, 2008).

The data for the current study were taken from the NLSY79 (National Longitudinal Survey of Youth, 1979b). We systematically extracted data on respondents' poverty status, gender, and date of birth as reported in 1979, school quality in 1979, personal mastery in 1992 and leadership role occupancy in 1998. To ensure that our assessment of poverty status reflected the period of respondents' early childhood and adolescence, we only selected participants who were born in 1960 or later (21.8% were born in 1960, 20.1% in 1961, 21% in 1962, 20.4% in 1963, and 16.6% in 1964), as a result of which our sample were between 14 and 18 years old in 1978, the index year for our study inasmuch as poverty status reflects the family situation in 1978. Mean age of the sample when the poverty data were collected was 16.57 years, and 35.57 years when the leadership emergence data were collected. Given the way in which participants were initially selected for inclusion in the NLSY79, the gender composition of our sample was nearly equal (49% male). Our final sample comprised 1,533 people who held leadership positions, and 3003 who did not (a total of 4,536 people).

### Measures

**Family poverty status, 1978.** Family poverty status in 1978 was used as a proxy for persistent exposure to poverty, and was derived from the mother's report of the total family income from all sources (e.g., employment, government assistance, and others sources such as parental/other family support, rental income, interest/dividend accruals); the family poverty status variable was computed based on the Poverty Income Guidelines, an annual database issued by the US Department of Health and Human Services and used by the Center for Human Resource Research at Ohio State University. The determination as to whether the family was living within poverty or not adjusts total family income by respondents' state of residence, farm versus nonfarm residence, and family size (for the specific levels, see the Poverty Income Guideline Tables for the calendar year 1978 at [http://data.library.toronto.ca/datapub/codebooks/utm/us\\_nls/nlsy79/codesup/app2pov.htm#1979tab](http://data.library.toronto.ca/datapub/codebooks/utm/us_nls/nlsy79/codesup/app2pov.htm#1979tab)). This resulted in 32% of the full sample being classified as living in poverty (0 = *not in poverty*; 1 = *poverty*). The validity of the family poverty status variable is supported by its association (see Table 1) with several known factors that discriminate between those living in poverty and those who do not (Evans, 2004), namely self-esteem, neighborhood quality, alcohol, number of friendships at work, and the number of years their father

Table 1  
*Tests of Validity for Poverty Status, 1978*

Poverty status, 1978	Self esteem		Neighborhood quality		Alcohol		Work friendships		Years lived with father	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Poverty	21.00	4.07	2.35	0.55	0.42	0.90	3.12	1.23	9.97	5.2
Nonpoverty	22.23	3.97	2.59	0.44	0.29	0.71	3.28	1.16	11.33	5.53
	$t(6,813) = 11.80$		$t(2,775) = 11.67$		$t(4,271) = 4.82$		$t(2,629) = 3.06$		$t(2,064) = 5.57$	

*Note.* All  $t_s < .01$ . *Ns* for these analyses are based on all respondents born between 1960 and 1964 for whom data were available on the relevant variables.



had lived in the household. In addition, substantially more African American (46.56%) and Hispanic (38.98%) than White (12.51%) respondents were classified as living in poverty ( $\chi^2 = 382.51$ ,  $df = 2$ ,  $p < .01$ ).

Because the official family poverty status variable was only implemented in 1990, the family poverty status variable was created retrospectively (National Longitudinal Surveys of Youth, 1979a).

**School quality, 1979.** We used three items from the 1979 administration of the NLSY to assess the quality of the school environment to which respondents had been exposed. School administrators were asked the percentage of students classified as disadvantaged, the percentage daily average attendance, and the percentage of 10th grade students who drop out (all reverse coded). Empirical research validates the use of each of these as indicators of school quality. First, Betts (1995) has shown that a higher percentage of disadvantaged students, and a higher percentage of Grade 10 students who drop out prior to completion of Grade 12 are associated with subsequent lower earnings, a standard economic metric used to evaluate labor market success. Second, data on daily attendance levels show that daily attendance predicts children's expressive language growth, and exacerbates the effects of teacher quality (Logan, Piasta, Justice, Schatschneider, & Petrill, 2011). These three items form an index of school quality as they are not necessarily intercorrelated (Streiner, 2003). High schools reflect poor school quality.

**Personal mastery, 1992.** Survey participants responded to Pearlin and Schooler's (1978) 7-item personal mastery scale (e.g., "I can do just about anything I really set my mind to"; "What happens to me in the future mostly depends on me"; "I have little control over what happens to me"—reverse coded), all of which were anchored on a four-point scale (1 = *strongly agree*; 2 = *agree*; 3 = *disagree*; 4 = *strongly disagree*). Items were recoded before they were summed, as a result of which higher scores on this scale reflect greater levels of personal control. Participants responded to these 7 items in 1992 when the average age of the sample was 29.57 years. The internal consistency for the 7 items was .79.

**Leadership role occupancy, 1998.** Role occupancy was measured with a single dichotomous question (no = "0"; yes = "1"), which asked, "Does the respondent supervise other employees at the job?" Participants responded to this question in 1998, and 34% indicated that they supervised other employees. Some support for the validity of the role occupancy variable emerges as leaders ( $M = \$38,687.54$ ,  $SD = 29,384$ ) enjoyed a higher annual salary than nonleaders ( $M = \$25,565.39$ ,  $SD = 18,745$ ;  $t = 21.02$ ,  $p < .01$ ). In addition, far fewer African American (29.11%) and Hispanic (31.58%) than White (37.53%) respondents occupied a leadership role ( $\chi^2 = 29.81$ ,  $df = 2$ ,  $p < .01$ ). Last, like previous research (Tetrick, Slack, Da Silva, & Sinclair, 2000), those holding a supervisory/leadership position ( $M = 3.44$ ,  $SD = .65$ ) also experienced higher levels of job satisfaction than those who did not ( $M = 3.33$ ,  $SD = .72$ ;  $t = 5.03$ ,  $p < .01$ ).

## Data Analysis

Data analyses were performed using SPSS23. Taken together, our three primary hypotheses constitute a test of moderated mediation (also called a conditional indirect effect model; see Hayes,

2013; Preacher, Rucker, & Hayes, 2007). We tested these individual hypotheses and the overall conditional indirect effect model using procedures as implemented through the PROCESS program (<http://www.afhayes.com>; Hayes, 2013). The analyses were conducted in two stages. In the first stage, two linear regression equations were estimated in which each of the two proposed mediator variables (school quality and personal mastery) were regressed separately on the family poverty status measure (coded as 0 = not in poverty, 1 = in poverty). In the second stage, a logistic regression equation was estimated where leadership role occupancy (coded as 0 = not in a leadership position, 1 = in a leadership position) was regressed on family poverty status, gender, school quality and personal mastery, and the Family poverty status  $\times$  Gender, personal mastery  $\times$  Gender and School quality  $\times$  Gender interactions (with gender coded as 0 = male, 1 = female). Because the sampling distribution of indirect effects is nonnormal, statistical significance of the indirect effects was determined using bias-corrected 95% confidence interval (CI), which were based on 5,000 bootstrapped resamples (MacKinnon, Lockwood, & Williams, 2004). If the bias-correct CI for an indirect effect did not include zero, the indirect effect was significant at  $p < .05$ . Because the likelihood of attaining a supervisory or leadership position increases with experience, we controlled for year of birth (age) as a proxy for experience in the analysis involving role occupancy. Finally, unstandardized regression coefficients are reported for all analyses (Hayes, 2013), and in the case of logistic analyses, odds ratio (*OR*) are included for ease of interpretation.

## Results

Descriptive statistics and intercorrelations for all study variables appear in Table 2. Results of the regression analyses appear in Table 3. Family poverty status was significantly associated with poor school quality ( $b = 6.91$ , CI [5.694, 8.117]) and positively associated with personal mastery ( $b = -.34$ , CI [-.649, -.035]). In turn, after controlling for the effects of year of birth on leader role occupancy, logistic regression analyses showed that both school quality ( $b = -.01$ ,  $OR = .99$ , CI [.932, .997]) and personal mastery ( $b = .07$ ,  $OR = 1.073$ , CI [1.042, 1.10]) predicted leader role occupancy. Hypotheses 1 and 2 were supported as family poverty status exerted significant indirect effects on leader role occupancy through both school quality ( $b = -.072$ ,  $OR = .931$ , CI [.882, .974]) and personal mastery ( $b = -.023$ ,  $OR = .977$ , CI [.952, .996]), respectively.

Further examination (see bottom half of Table 3) showed that after controlling for the effects of year of birth on leader role occupancy, gender did not moderate the direct effects of family poverty status on leadership role occupancy ( $b = .311$ ,  $OR = 1.365$ , CI [-.882, 2.114]; Hypothesis 3a). However, Hypothesis 3b was supported as gender moderated the indirect effects of family poverty status on leadership role occupancy through personal mastery ( $b = .067$ ,  $OR = 1.069$ , CI [1.102, 1.129]): Although the relationship between personal mastery and leader role occupancy was significant for males (conditional indirect effect:  $b = -.033$ ,  $OR = .968$ , CI [.938, .995]), it did not achieve significance for females (conditional indirect effect:  $b = -.011$ ,  $OR = .989$ , CI [.965, 1.001]).

Table 2  
*Descriptive Statistics and Intercorrelations for All Study Variables (N = 2,381)*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Year of birth	61.81	1.32	—				
2. Gender	0.50	0.50	.011	—			
3. Family poverty status, 1978	0.23	0.42	.014	.002	—		
4. School quality	43.57	12.91	.092**	.002	.223**	—	
5. Personal mastery	22.34	3.19	.002	.038	-.045*	-.070**	—
6. Role occupancy	0.35	0.48	-.036	.077**	-.064**	-.080**	.108**

Note. Listwise deletion used.

\*  $p < .01$ . \*\*  $p < .001$ .

### Supplementary Analyses

One issue remains to be resolved. Our hypotheses specifically refer to the indirect effects of *persistent* exposure to poverty on later leader role occupancy. However, family poverty was first assessed in 1978 in the NLSY79, as a result of which we could not develop a cumulative measure of persistent exposure to poverty. Thus, family poverty status assessed in 1978 is a proxy for persistent exposure to poverty in our main analyses. To test the appropriateness of the proxy variable and to strengthen any conclusions about the effects of persistent exposure to poverty we conducted several supplementary analyses. For the supplementary analyses we selected all respondents in the NLSY79 Child and Young Adults born between 1978 and 1984 inclusive ( $N = 4306$ ), and focused on the experience of poverty over the 10-year period following their birth. The poverty variable was obtained from reports by the respondents' mothers and the personal mastery variable from respondents' self-reports. To generate the persistent poverty variable, we aggregated the binary poverty scores across the 10-year period (i.e., from 1978 to 1987 for a person born in 1978), thus scores ranged between 0 to 10 years of poverty.

First, the persistence of poverty among children of the NLSY79 Child and Young Adults is no different from the population as a whole. Although 37.4% of the children we studied never experi-

enced poverty 78% those who did experience poverty did so more than once (see Table 4).

Second, our model predicted a direct effect of persistent poverty on personal mastery, but in our primary analyses we were limited by the data available to operationalizing exposure to poverty as a binary variable reflecting whether the family was in poverty or not in 1978, when respondents were on average 16.57 years old. To Test Hypothesis 2 more directly we computed a linear regression using Hayes PROCESS model, this time using the calculated persistent exposure to poverty variable, and the mastery variable from the supplementary sample (we could not include school quality as the items making up school quality were not available in the NLSY79 Child and Young Adults). After again controlling for year of birth (in Step 1), respondents' personal mastery (measured in 2008) was regressed on persistent poverty (in Step 2). As can be seen from Table 5, persistent poverty significantly predicted subsequent personal mastery ( $\beta = -.085$ , 7% of the variance accounted for).

### Discussion

We set out to investigate whether persistent exposure to poverty would later limit one facet of leadership emergence, namely role occupancy. We predicted that this effect would be mediated by

Table 3  
*Effects of Poverty on Leader Role Occupancy Through School Quality and Personal Mastery (N = 2,381)*

Predictor	<i>b</i>	<i>SE</i>	<i>OR</i>	<i>CI OR</i>
Outcome: School quality				
Constant	42.02	0.29		
Family poverty status	6.91	0.62		
Outcome: Personal mastery				
Constant	22.41	0.07		
Family poverty status	-.34	0.16		
Constant	1.934	2.104		
Outcome: Probability of leadership role occupancy				
Year of birth	-.050	.033	.951	[0.891, 1.105]
Gender	-.853	.713	.426	[0.105, 1.724]
Family poverty status	-.421	.164	.656	[0.476, 0.905]
School quality	-.006	.005	.994	[0.984, 1.004]
Personal mastery	.031	.020	1.032	[0.993, 2.012]
Gender $\times$ Family poverty	.331	.223	1.365	[0.882, 2.114]
Gender $\times$ School quality	-.009	.007	.991	[0.792, 1.005]
Gender $\times$ Personal mastery	.067	.028	1.069	[1.102, 1.129]

Note. Listwise deletion used.  $-2LL = 3,011.24$ ; Nagelkerke pseudo  $R^2 = .040$ . *OR* = odds ratio; *CI* = confidence interval.

Table 4  
Likelihood of Children Experiencing Poverty in Their First 10 Years

Never	Percentage of children experiencing poverty									
	1	2	3	4	5	6	7	8	9	10
37.4	13.7	8.8	7.6	6.3	6.3	5.5	5.1	5.2	3.0	2.2

school quality and personal mastery, and that the indirect effect would be moderated by gender, such that any indirect effects of exposure to poverty would be worse for females. In doing so, we conceptualized leadership emergence as leadership role occupancy. Hypotheses regarding the mediating and moderating effects were supported. Despite its significant zero-order correlation, persistent exposure to poverty did not affect leadership role occupancy directly in the multivariate analysis. Instead, persistent exposure to poverty exerted indirect effects on leadership role occupancy through school quality and personal mastery; however, gender only moderated the indirect effect of poverty on leader role occupancy through personal mastery, such that the effects of personal mastery on leadership role occupancy was stronger for males than females. Thus, distal preemployment experiences help understand who attains a leadership position in the first instance.

**Strengths, Weaknesses, and Future Research Directions**

A major strength of the current study derives from the nature of the data available within the NLSY. First, measures with different item formats and different response scales were derived from different sources at different time periods. Specifically, poverty was assessed based on maternal self-reports of overall family income from all sources adjusted for region, urban-rural status and family size thereby providing a more nuanced perspective than income alone (Bane & Ellwood, 1989); information on school quality was obtained from school administrators in 1979, and personal mastery and leadership emergence were derived from participants’ self-report in 1992 and 1998, respectively. A second methodological advantage is the longitudinal nature of the data. We were able to examine the effects of exposure to poverty as a young child or adolescent on leadership emergence no less than 19 years later. These data enable robust inferences to be drawn about the indirect effects of poverty on leadership emergence, and the mediating and moderating effects of school quality and personal control, and gender respectively.

Despite these strengths, this study also has several weaknesses. First, although we used a longitudinal design, the poverty status variable used was a proxy for persistent exposure to poverty because poverty status was first collected within the NLSY 1978, when participants were between 14 and 17 years old. However, this approach likely poses little threat to the validity of these data, as longitudinal data sets available since the 1980s consistently show that poverty status is remarkably stable (Corcoran, 1995; Sharkey, 2008). For example, 56% of people who find themselves in poverty at any time are in the middle of a poverty spell of at least eight years (Bane & Ellwood, 1986), and even in those limited instances when families do manage to break out of poverty,

approximately one third find themselves in poverty again shortly afterward (Cantó, 2002). Moreover, the results from our Supplementary Analysis support the use of Family Poverty Status in 1978 as a proxy because (a) the experience of poverty is stable within the NLSY respondents (see Table 3), and (b) a cumulative measure of persistent exposure to poverty significantly predicted later personal mastery (see Table 4). Thus, although a majority of families will not experience poverty in any given year, the majority of those that do will do so two or more times. Second, data regarding leadership role occupancy were based on self-reports. However, although the validity of self-report responding could be verified against organizational reports, unless there are credible reasons to suspect that participants have meaningful motivation to provide false responses, role occupancy remains most appropriately assessed through self-report. Third, the effect sizes obtained in the current research would be considered low to modest. Although significant and derived from a large representative sample, family poverty status accounted for 5% of the variance in school quality, and only .2% of the variance in personal mastery. Similarly, the Pseudo Nagelkerke estimate of variance for the full model was 4%. Nonetheless, small effects can be meaningful in situations in which the outcome is “difficult-to-influence” (Prentice & Miller, 1992), and these estimates should be viewed in the context of a 20 year longitudinal study in which family poverty status predicted personal mastery at least 14 years later, and leadership role occupancy at least 20 years later, with the likelihood that other uncontrolled familial, social and environmental variables exerted meaningful effects on personal mastery and leadership role occupancy in the interim.

The findings of this study suggest several possible avenues for future research focused on further understanding the indirect path from early and persistent exposure to poverty to leadership emergence. First, future research should take a more nuanced perspective on the nature of both poverty and leadership emergence. In the current study, poverty was operationalized as a dichotomous variable. Based on their findings, Santiago, Wadsworth, and Stump (2011) suggested that the experience of poverty is not homogenous. Instead, frustration with one’s SES circumstances might be greater for poor people with higher educational levels, and a more precise explanation of the indirect effects of persistent poverty might be achieved by taking a more nuanced (as opposed to binary) view of the experience of poverty. At the same time, Heberle and Carter (2015) note that even preschool children have the cognitive abilities to enable them to identify social and economic disadvantage in their communities, and to understand how this affects their own personal experiences. One possible result of

Table 5  
Regression Analysis Predicting Personal Mastery From Persistent Poverty (N = 2,449)

Predictor	r	Model 1			Model 2		
		B	SE B	β	B	SE B	β
Age	-.03	.006	.005	.027	.008	.005	.033
Persistent poverty	-.08*				-.012	.003	-.085*
Total R <sup>2</sup>			.01			.08*	
Δ R <sup>2</sup>			.01			.07*	

\* p < .01.

this is that children who do experience poverty may experience socioeconomic-based stereotype threat (Odgers, 2015), inhibiting their motivation to seek leadership positions (Davies et al., 2005). Similarly, the effects of poverty are worse in countries with the highest levels of income inequality (Yoshikawa et al., 2012), and future research should take account of children's psychological experiences with poverty, and the context within which poverty occurs. Whatever the approach, the consequences of persistent exposure to poverty during childhood for subsequent occupational attainment is too important for parental income or family SES to be treated merely as covariates in future research.

Our results isolate distal, preemployment predictors of leader role occupancy. Taking the perspective that leadership emergence is a multidimensional construct, of which role occupancy is the necessary first step, research should now focus on the antecedents of initial scope and intensity of the leadership position. We suggest that these latter two aspects of leadership emergence are more likely to be a function of temporally and contextually proximal variables, inasmuch as distal factors might predict initial role occupancy, and more temporally proximal organizational experiences predict the initial breadth and depth of leadership responsibility attained.

Second, the full effects of poverty on leadership role occupancy were transmitted through institutional and individual resources, yet we only investigated one exemplar of each (school quality and personal resources respectively). As a result, the current findings might underestimate the indirect effects of distal personal experiences on leadership role occupancy. Future research should investigate other indicators of personal (optimism, resilience, self-esteem) and social/institutional (social support, neighborhood quality) resources. For example, recent research has isolated how the experience of poverty hurts cognitive functioning (Mani, Mullainathan, Shafir, & Zhao, 2013), a phenomenon that was unique to those in poverty which could not be explained by stress, work effort, time available, or inadequate nutrition. In addition, future research could investigate the moderating role of the quality of family relationships, because economic hardship leaves parents more vulnerable to depression, which affects the quality of parent-child behaviors (Conger et al., 1992), and prior research has shown that parental, relational or family resources mediate the effects of early exposure to poverty on later physical and psychological well-being (e.g., Yoshikawa et al., 2012). Children in poverty are also more likely to have parents who role model unstable work histories, which could later affect the quality of the children's work performance. Thus, including family and parenting mediating variables in future research might enhance our understanding of the effects of the antecedents of early exposure to poverty on leadership role occupancy.

Third, as predicted, gender moderated the effects of personal mastery on leadership role occupancy. This is consistent with a wealth of similar findings regarding gender and leadership (Barling, 2014), and it is now time for researchers to go beyond the narrow view of gender as a male-female dichotomy, which may have limited our understanding of gender and leadership (Fassinger, Shullman, & Stevenson, 2010). Instead, researchers should now examine the moderating effects of the full range of gender identities (e.g., bisexual or transgendered individuals) given that negative effects emerge when individuals enact gender roles that are inconsistent with socially prescribed roles (Brescoll

et al., 2010; Eagly & Karau, 2002). In addition, other moderators that may convey a disadvantage to some in leadership selection competitions, such as ethnicity, race, or religion, should also be investigated.

## Practical Implications

Ensuring that all individuals have an equal opportunity to rise to leadership positions is a worthy goal: Not only would it reflect a just society, but doing so would also increase and diversify the talent pool available to organizations. The findings of our study offer several thoughts for interventions. First and foremost, primary interventions that reduce poverty, such as initiatives to ensure all citizens are guaranteed a minimum income (Shingler, 2014) could be pursued with meaningful effects. The benefits of such approaches become evident from research showing that early intervention in the form of a \$10,000 increase in family income from birth to age five was projected to increase schooling by one year (Brooks-Gunn & Duncan, 1997). In addition, Duncan, Morris, and Rodrigues' (2011) post hoc analyses of intervention studies using instrumental variables estimation strategy suggests that an increase of \$1,000 in annual income for between 2 and 5 years would improve children's school achievement by 6% of a standard deviation. Given that this reflects an increase in achievement per child rather than per family, the benefits of an income increase are magnified, because poorer families generally have more children (U.S. Bureau of the Census, 1993).

Of most relevance to the current study, however, are the recent findings drawn from the *Great Smoky Mountains Study of Youth* (Akee et al., 2010). As mentioned earlier, the study by Akee et al. used a quasi-experimental design to investigate the effects of Native American families receiving additional annual income due to profit sharing from casinos owned and operated by their local band government. An unearned annual increase in family income of \$4,000 when the child was 9, 11, or 13 years old resulted in significant increases of 42.8% of a standard deviation in conscientiousness, and 30.6% in agreeableness. These findings are especially significant for several reasons. First, these effects were largest for children whose conscientiousness and agreeableness were initially lowest. Second, conscientiousness is highly implicated in career success (Judge, Higgins, Thoresen, & Barrick, 1999), and leadership emergence, and both conscientiousness and agreeableness are associated with leadership effectiveness (Judge et al., 2002). Third, given the predictive importance of conscientiousness, our findings suggest one way in which conscientiousness might be enhanced among children exposed to persistent poverty. The vast majority of children exposed to poverty will be employed in organizations in the future (Bane & Ellwood, 1991), and ameliorating poverty and/or its negative effects will make it more likely that they do so with the skills, personal mastery and personality, enabling them to contribute to organizational success and maximize personal opportunities.

However, because many governments lack the political will or financial resources for large scale social interventions that will directly reduce poverty, secondary interventions that focus on reducing any negative effects of poverty become more important, and more likely. Our findings suggest that enhancing the quality of schools in poorer neighborhoods, and paying greater attention to opportunities for the development of personal mastery among



schoolchildren from families suffering economic hardship could well thwart the indirect effects of poverty on leadership role occupancy. Findings from the effects of financial hardship more broadly (e.g., Conger et al., 1992) also point to other possible interventions, potentially targeting parents' job stability, parent-child relationships, and family functioning.

The fact that the negative, indirect effects of poverty on leader role occupancy was greater for young women than men also points to potentially effective secondary interventions. Davies et al. (2005) have shown the effectiveness of stereotype threat interventions in minimizing women's reluctance to take on leadership positions. Among young women who were personally discouraged from seeking leadership positions as a result of stereotype threat, merely noting that despite "controversy in psychology surrounding the issue of gender-based differences in leadership and problem-solving ability . . . our research has revealed absolutely no gender differences in either ability" (Davies et al., 2005, p. 281) was sufficient to suppress stereotype threat, ensuring no gender difference remained in their interest or motivation to lead. The importance of such information is supported anecdotally in the case of the "four Sullivan sisters," all of whom achieved senior corporate leadership positions despite the enormous statistical odds against this occurring, whose mother taught them during childhood that ambition was a part of being feminine (Hymowitz, 2007). Along similar lines, interventions aimed at enhancing self-affirmation among low-income individuals was sufficient to raise cognitive control and fluid intelligence (Hall, Zhao, & Shafir, 2014), which is especially important given the detrimental effects of poverty on cognitive functioning (Mani et al., 2013).

Successfully reducing stereotype threat targets women's own motivation to lead. Influencing leadership selection decisions involves more than making candidates more appealing; an equally proximal determinant of success in leadership selection decisions would be the attitudes and beliefs of those involved in the selection decision. In this respect, Morgan, Walker, Hebl, and King's (2013) study on discrimination against pregnant women is informative. They showed that providing limited counterstereotypic information to retail managers involved in hiring decisions involving pregnant women applicants was sufficient to significantly reduce any bias in their selection. Morgan et al. went further, showing specifically that it was the information provided to managers that pregnant women were neither less committed nor less flexible regarding schedules that were the effective ingredients in reducing discrimination. Similarly, routinely providing information about the lack of gender-based differences in leadership effectiveness to anyone involved in leadership selection decisions, or individuals interested in applying for leadership positions, may help limit any discrimination against women in the leadership selection process.

## Conclusion

Some 80 years ago, Smith (1937) noted correctly that "holding a position of leadership . . . is to a large degree the result of opportunities given to an individual by his family"; and by extension, that many people "are prevented from rising to prominent positions of leadership" (p. 535). Our results revisit his observation, and begin to show *why* this is the case. Early exposure to poverty limits later leadership role occupancy indirectly, by reducing access to high-quality schooling, and opportunities for the

development of personal mastery. Going forward, both social justice and organizational necessity require that holding a leadership position be something to which all young people can aspire. As research continues to identify the pathways through which poverty limits leadership role occupancy, evidence-based interventions that make such aspirations more realistic will be more readily available.

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