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Project Title: **Racial Gaps in Cognitive Performance and Academic Achievement in Childhood: Implications for Adult Cognitive, Physical, Social, and Psychological Outcomes**

Racial disparities in cognitive performance (CP) and academic achievement (AA) in childhood are some of the most consistent and alarming findings of the National Center for Education Statistics.¹ A recent report indicates that African American kindergarteners score nearly one standard deviation lower than non-Hispanic whites in reading, mathematics, and science.¹ Importantly, social and biological exposures which put children at risk for poor performance are more common among African Americans. For example, African American babies are twice as likely to be born low birth weight,² and are three times more likely to live in poverty when compared to non-Hispanic whites.³ However, it is unclear the extent to which disparities in early life risk factors account for the racial gap in CP and AA, as few longitudinal studies have prospective data on prenatal risks and social conditions in early life.⁴⁻⁶ Furthermore, low childhood CP and AA have been associated with poor adult outcomes such as low adult socioeconomic status, higher rates of smoking, mental illness, and overall mortality.⁷⁻¹⁰ Therefore, the extent to which racial disparities in CP and AA in childhood account for racial disparities in adult outcomes also remains unclear. Ecosocial theory provides a framework for examining how membership in important social groups (such as race) may affect early life CP and AA and subsequent adult outcomes. Put forth by Nancy Krieger, ecosocial theory proposes that well-being or ill-health reflects the embodiment of social conditions from conception until death.¹¹ Using this theoretical framework as a guide, this project seeks to answer the following important questions:

- To what extent is the racial gap in cognitive performance and academic achievement explained by biological (i.e. low birth weight) and social (i.e. low socioeconomic status) risk factors that are more common among African Americans when compared to non-Hispanic whites?
- To what extent are trajectories of cognitive performance and academic achievement in childhood predictive of racial disparities in adult cognitive, social, psychological, and physical outcomes?

These research questions will be examined using data collected in the National Collaborative Perinatal Project (NCPP). This project represents 50,000 African American and White children followed from pregnancy yielding extensive information about prenatal, perinatal, and sociodemographic conditions in childhood. A subset of these individuals were followed up in adulthood, providing detailed accounts of their mental and physical health, cognitive performance and academic achievement, as well as indicators of social well-being such as occupational status.

Contributions to Understanding the Achievement Gap:

The proposed study offers an unparalleled opportunity to understand the racial gap in cognitive performance and academic achievement by examining social and biological risk over the life course. Not only does the NCPP offer an enormous amount of detailed, prospectively collected data on prenatal, perinatal, and social risks, but also allows us to examine how disparities in early life trajectories impact a wide range of adult outcomes. Guided by ecosocial theory and a public health approach to racial disparities, this study promises to shed light on race related gaps in childhood cognitive performance and academic achievement, and the extent to which these gaps are predictive of racial disparities in adult health.

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