

# FOREWORD

I am pleased to have been asked by Dr. Willie Pearson, Jr., to write the foreword to *Beyond Small Numbers: Voices of African American Ph.D. Chemists*. The field of chemistry has held particular appeal to African Americans since the early twentieth century. The lives of the first African American doctoral chemists provide a backdrop on the African American experience of the time. Dr. Pearson has interviewed a notable number of African American Ph.D. holders and gained considerable insight into the factors that shaped their professional experiences.

To assist the reader in understanding careers of African American doctoral degree holders in chemistry, Dr. Pearson has separated the interviewees into groups based on when the Ph.D. was awarded. The delineation of the groupings was dictated by periods of significant change in legislation affecting African Americans. From my vantage point as a “Cohort II” member (see text), it is my belief that the most important legislation that led to a significant increase in the number of African American Ph.D. chemists made possible access to better educational opportunity and employment alternatives. These were the civil rights laws that promoted affirmative action. Before affirmative action, there were very few opportunities for an African American doctorate holder in chemistry as contrasted to the range of alternatives available to white counterparts.

The basis for choice and type of college at the undergraduate level, i.e., historically black college or university or predominantly white college or university, reasons for attending graduate school, and sector of employment following the doctorate are cohort dependent and say much about opportunities for African Americans during the various cohort periods. The importance of historically black colleges and universities for the early cohorts is described. Historically black colleges and universities have served not only as places for education, but as places of employment for those individuals seeking teaching opportunities. The absence of opportunity in predominantly white colleges and universities for the early cohorts and the small number even today of African Americans holding tenured positions in these institutions is a major concern especially in view of the comparatively large number of African Americans who have earned Ph.D.s in the past decade.

The professional experiences of the subject group in historically black colleges and universities and predominantly white colleges and universities were found to

differ notably owing to the availability of resources leading to, for example, lighter teaching loads in the major research predominantly white colleges and universities as contrasted to historically black colleges and universities requirements. The predominantly white colleges and universities professional experience carried its own burden for some that included feelings of isolation, and lack of collegial support that led, in some instances, to the decision to leave academe.

Some of the individuals in later cohorts who had the option of choosing industrial and government employment also encountered difficulties of not being valued and recognized for their contributions. This is reflected in descriptions of not easily remedied employment dissatisfaction.

As an aside, I found it interesting as an indicator of the variation in the subject group that many of my experiences were atypical for the chemists interviewed. I was born in the Midwest – most were born in the South. I attended a predominantly white university as an undergraduate – most attended a historically black college or university, and I worked in all sectors of the economy – academia, industry, and government – most remained in one sector for their careers. Like many of those interviewed, however, I was encouraged by my parents to attend college and decided on chemistry as a career direction based on my enthusiasm for the subject. I experienced many of the challenges described in the book in a number of environments in which on occasion, similar to others, I was the only African American. The experiences described call attention to the instances of support that some found and, in some instances, the lack of support in other circumstances that appear to have their origin in race.

Dr. Pearson has written a compelling volume on the careers of African American doctorate holders in chemistry. He provides documentation that makes possible a critical assessment of the circumstances that governed the experiences of those African Americans who obtained the Ph.D. in chemistry since the beginning of the twentieth century. The information he gathered goes beyond simply statistics to indepth interviews that yield information not previously available in demographic studies of Black scientists. From such data, Dr. Pearson is able to provide new insight on factors that influenced the choice of chemistry as a career. He includes discussion of the variability of these factors as they impacted the lives of the individuals interviewed for this volume.

Dr. Pearson has made a major contribution to the understanding of the issues that have confronted Ph.D. African Americans in chemistry that I feel certain will have value for persons in other disciplines. There are key findings and resultant policy implications that arise from his analysis. For example, clearly identified is the importance of early education in mathematics and science, which calls attention to the need for excellence in teaching these subjects at the elementary school level. Another aspect that emerges is the impact of mentoring by a teacher or some other

individual. The significant benefit is the reinforcement in the young person's mind that he/she is good at chemistry and therefore that it could be a field for further study or even one's life work. There are also policy implications that Dr. Pearson presents that have value for all sectors of employment in chemistry and other areas where technical capability at the highest level is needed. This volume should be required reading for decision-makers in industry, government, academe, and the science organizations. It also has significant historical value.

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