

While the description of the methodology and data sources are somewhat vague and confusing, Carter does use two important and comprehensive data sources to frame his results and conclusions. The first sources of data are interviews with retired NHS African Caribbean nurses, interviews with the present staff of two hospitals managed by a health trust (Unicorn Trust), and 1,400 respondents to a quantitative questionnaire about the issues of discrimination in the NHS. The second data set of 97,000 cases collected from 1996 to 1997 comes from the Higher Education Statistics Agency's examination of ethnic and gender diversity of U.K. universities staff (i.e., lecturers, professors, and researchers). In addition, Carter uses excerpts from U.K. government correspondence between the Ministry of Health, Labor, and the Colonial Office to substantiate his claims. Overall, the book has a good balance of qualitative and quantitative research that supports many of Carter's conclusions.

This book contains two clear sections of discussion. Using social closure as a theoretical template in his first section, Carter explains the salience of race, gender, and class in determining hiring and promotion decisions. This section also includes an insightful discussion defining equal opportunity and affirmative action policies. Throughout this section, Carter compares the U.S. and U.K.'s treatment of racism and discrimination, suggesting that hiring practices formulate around the same issues in both countries: race and gender. While this discussion could have benefited from using other U.S. theoretical discussions about race and gender issues concerning labor markets (e.g., Lieberson and Reskin and Roos), these first chapters do an adequate job of setting up Carter's presentation and examination of discrimination in U.K. professions.

The second section presents his best argument about how a structural agent, such as government foreign labor recruitment policies, creates and perpetuates issues of inequality. As he points out, the government's drive to wrangle cheap and docile labor explains why many African Caribbean women acquired many of the lower paying and menial hospital jobs throughout the NHS. Using the stories of retired African Caribbean women nurses and correspondence between government agencies con-

cerning labor recruitment provides an excellent example of institutional racism at-work.

The last three chapters of this book would benefit from some elaboration. In these chapters, Carter discusses findings that suggest ethnic minorities lose better jobs and promotions in comparison to native-born white males and females. In fact, native-born whites have a better chance of getting promotions and more prestigious positions in health services and the university system. Although Carter suggests that much of this research can be viewed in other publications, this book offered a perfect opportunity to fully explain and discuss these trends, especially with the large amount of data he employed. Put simply, I wanted to read more comments from the respondents on hiring preferences and issues of discrimination, and view statistics that inescapably showed differences between these ethnic groups. Nonetheless, this book is an excellent addition to the research on hiring discrimination and its consequences for an ever-growing global economy. Finally, this book provides an important link between U.S. and U.K. issues of discrimination.

Knowledge and Competitive Advantage: The Coevolution of Firms, Technology, and National Institutions, by **Johann Peter Murmann**. Cambridge, UK; New York: Cambridge University Press, 2003. 294 pp. \$60.00 cloth. ISBN: 0-521-81329-8.

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By comparing the growth dynamics of synthetic dye firms in Germany, Britain, and the United States, Johann Murmann offers a theoretically and empirically rich account of how German firms such as Bayer came to dominate the global market in the late nineteenth and early twentieth centuries. His investigation of dye firms' successes and failures over time uses a comparative approach that simultaneously addresses significant variation in the making of German, British, and U.S. national institutions, and in the performance of firms not only across but within the countries. Despite Britain's early lead in dyestuffs, Germany was able to catch up and

pull ahead by capitalizing on its increasingly science-oriented universities and highly marketing-driven firms.

Central to Murmann's coevolutionary view on industrial development is that the strengths of German national institutions and firms did not merely coexist as the ingredients of the national economic success, but exerted "a significant causal impact on each other's ability to persist" (p. 210, italics in original) and coevolved. For example, while the author identifies the evolution of the national university system as a single most important factor explaining the leadership position German firms came to hold in the synthetic dye industry, he emphasizes that the relationship between universities and firms was a causally interactive one. On the one hand, firms with strong ties to the university research community, a group of leading professors of organic chemistry in particular, were able to apply the dye innovations to stay at the forefront of the industry. On the other hand, academic chemists could count on a group of leading firms in the industry to provide them with expensive chemicals for their laboratories and employment opportunities for their prospective graduates. Moreover, this mutual relationship facilitated the firms effectively to lobby the government to enforce regulations (e.g., patent laws) in favor of their industry, and the academe to secure public funding for its research and training.

No similar alliance between the university research community and firms was formed in either of the other two countries. Lacking solid government support for higher education, British universities and colleges were underfunded (especially in natural science) and fragmented, resulting in the overall low quality of training and research opportunities available. Firms in Britain were also slow to see the potential economic benefit of gaining access to college trained chemists, and thus, with some exceptions, rarely took the initiative in upgrading the nation's education system. In the United States, just like in Germany, firms in strong or growing industries exerted significant influence on research and teaching priorities at higher education institutions. In the time period of Murmann's study, however, synthetic dye production was not one of the strong industries in the United States, which made it impossible for

American dye firms to persuade educational institutions to create training and research programs in organic and dye chemistry. Comparing these British and U.S. situations with that of Germany, Murmann argues that in order to understand a nation's competitive advantage in a particular industry, we must consider not only how strong national institutions help firms with their performance, but also how firms can actively reshape the surrounding institutions to their advantage.

Murmann's study draws on a variety of sources, including chemistry journals, trade magazines, letters, and memoirs. It also utilizes the database on all synthetic dye firms (1850–1914) that he created with his collaborator. Although his descriptive analyses are both qualitative and quantitative in kind, his key causal analysis is a case study couched more or less exclusively in verbal terms. It would be interesting to see future studies that test his causal model in a quantitatively rigorous manner. As the author himself mentions toward the end of his book, while studying just a few firms allows a researcher closely to observe causal processes at work, one may never be certain whether or not the firms included in his study are representative of the population of firms in the industry.

The book is well written and organized in a way that allows readers with no background at all in dye industry or chemistry to grasp the author's national- and firm-level analyses of synthetic dye production and marketing, and to appreciate his coevolutionary analysis. *Knowledge and Competitive Advantage* will be a book of great interest for anyone interested in looking at industrial leadership and comparative management systems from a historical comparative perspective.