Editorial

Developmental Plasticity in a Biocultural Context

Some of the most persistent health disparities in the United States occur between African Americans and European Americans. The causes of those disparities are many and their roots are deep. They are entwined with the history of slavery and discrimination, with rural and inner city neglect, with differential wealth and differential access to health care, with cultural traditions and cultural biases. Given the complexity of their history, it is perhaps understandable that unraveling the etiology of these disparities and developing adequate responses is challenging. Yet even sophisticated analyses that take as many social, economic, and cultural characteristics as possible into account often seem to fall short of explaining differences in birth weight or the risk of hypertension. In the era of genome mapping and whole genome scans it is often tempting to think that the answer may lie in different genetic backgrounds. If current environmental factors cannot fully explain phenotypic differences, then it would seem reasonable to look to the genotype, or to gene-by-environment interactions. Yet when attention focuses on genetic factors it tends to shift away from the effects of society and history and to subtly diminish their significance and reduce the sense of urgency for social responses.

The papers by Kuzawa and Sweet and by Jasienska in this issue represent the important potential of human biology to contribute new insights to these difficult problems. It is a particular hallmark of our field that it strives to approach human biology as embedded in human culture and society and to focus attention on the reciprocal connections between these domains. The two Feature Articles in this issue exemplify this approach by bringing a new and expanding appreciation for the factors influencing human developmental plasticity to bear on the problem of persistent US health disparities, conceived as a biocultural phenomenon. The contributions in these papers are in the form of new hypotheses, new ways of thinking about the problem of persistent health disparities that, if pursued and validated, may suggest new approaches to treatment, intervention, and amelioration. The authors are brave to enter explicitly into an area of American culture and biology that is rife with the danger of misinterpretation. They are very careful in their use of terms, seeking to avoid an overly genetic characterization of "race" while simultaneously acknowledging the important impress that cultural understandings of "race" have made on human biology.

The two papers, written independently, also complement each other in thought-provoking ways. Kuzawa and Sweet focus on the links between disparities in birth weight and disparities in the risk of hypertension and cardiovascular disease. Jasienska focuses on the etiology of the birth weight disparity itself. Some contemporary commentators may wish to dismiss slavery and discrimination as past chapters of American history. These two papers suggest this history may continue to affect not only the social conditions of African American life, but biological and health conditions as well.

The hypotheses presented in these papers will ultimately be confirmed or refuted. Like all scientific hypotheses, they are mortal. But their significance is not restricted to tests of their specifics; it also lies in the new avenues of thought that they open up in an area where new light is desperately needed. They deserve to be widely read, not only by human biologists, but by epidemiologists and students of health policy as well.

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