Response to Comments by William M. Bowen and Kingsley E. Haynes*

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In their response to my 1998 article, Bowen and Haynes (2000) imply that my research lacks scientific credibility. According to them, I (1) do not “give appropriate and systematic consideration to space” (2000:887); (2) move from a smaller unit of analysis to a larger one because I am unable to find statistically significant relationships using the smaller unit; (3) define the terms *environmental racism* and *institutional racism* in the pre-theoretical stage of knowledge development; and (4) give these terms false legitimacy “through explicit reference to spatial units that are entirely inappropriate for the issue at hand” (2000:888). These claims are not only misleading, they are factually incorrect.

In my 1998 article, I examined the distribution of Toxic Release Inventory (TRI) releases and transfers in Michigan, Michigan’s urban areas, and Detroit. I was interested in determining whether environmental inequality existed in those areas in 1989 and whether the pattern of inequality would be the same in Michigan’s urban areas as it was for the state as a whole. Because I wanted to compare the results for Michigan with the results for Michigan’s urban areas, *I used the same unit of analysis throughout the paper*. I noted (Downey, 1998:771):

> [T]he proper unit of analysis for environmental justice studies is a hotly debated topic. . . . I chose zip codes for two reasons. First, they provide us with a smaller unit of analysis than Bowen et al. [1995] used in their statewide study of Ohio. Second, in order to make a valid comparison of the results obtained in the statewide and urban analyses, the unit of analysis must be the same for all statistical tests. Otherwise, we do not know if variation in the regression results is due to a change in the unit of analysis or to a change in the geographic area analyzed. Since census tracts were not defined for the entire state of Michigan in the 1990 census, I chose zip codes instead [emphasis added].

Although I do not employ multiple units of analysis in my work, Bowen and Haynes do (Bowen et al., 1995). Bowen et al. examine TRI emissions

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and transfers throughout Ohio, using counties as their unit of analysis, and Cuyahoga County, Ohio emissions and transfers, using census tracts as their unit of analysis. If I understand them correctly, they use census tracts as a unit of analysis, as well as counties, because (1) "counties dwarf the size of toxic release facilities" (Bowen et al., 1995:645), (2) using different units of analysis in a single study might help us to determine which unit of analysis is preferable, (3) state-level findings are questionable because "industry, minority populations, and toxic releases are concentrated in urban areas" such as Cuyahoga County (Bowen et al., 1995:656), and (4) unlike counties, census tracts are designed to represent neighborhoods.

Understandably, Bowen and Haynes are quite concerned about spatial issues, using the smallest unit of analysis possible, and comparing different units of analysis. However, they cannot compare their statewide and Cuyahoga County analyses in any meaningful way since we do not know if their Cuyahoga County results differed from their statewide results because the two analyses used different analysis units or because the two analyses focused on different geographic areas. Moreover, they do not use the smallest unit of analysis possible in their statewide study. Zip codes may "dwarf" TRI facilities, but they are considerably smaller than counties. Finally, it makes little sense to argue, as they do (1995), that we should look for evidence of environmental racial inequality by focusing solely on regions where minorities and emissions are overrepresented. Such a practice is tantamount to selecting on the dependent variable and suppresses important variation in our variables of interest.

Contrary to Bowen and Haynes' (2000) claims, I do not ignore the importance of space in my 1998 article. In addition to using zip codes because they are smaller than counties and exist throughout Michigan, I note that a facility that is located near a zip code boundary may actually be farther from residents in its own zip code than from people living in adjacent zip codes. I also readily acknowledge that I use the TRI as a proximity indicator. Bowen and Haynes fault me for doing this without giving proper consideration to space. However, I cannot fathom why my use of proximity indicators is suspect when theirs (1995) is not, since I was at least as careful as they were in my choice of spatial analysis units. I agree with them that census tracts provide researchers with greater confidence in their results than do counties or zip codes, but the use of zip codes was necessary given the goals of my study, while their use of counties was not.

Finally, I do not simply make up the terms environmental racism and institutional racism; nor do I use my research findings or an inappropriate unit of analysis to establish these terms' credibility or meaning. In my article, I list two definitions of environmental racism that have been set forth in the literature and argue that the difference between these definitions is "the difference between intentional racism and institutional racism" (Downey, 1998:769) [emphasis added]. Intentional and institutional racism
are terms that are well established in the sociological literature on race and racism and can be found in any introductory textbook on race and ethnic relations. These terms were not defined pre-theoretically and were granted legitimacy long before I first used them.

The main difference between the conclusions I drew in my article and the conclusions that Bowen et al. reached in their article is that I disagreed with their contention that in environmental justice research, urban analyses are more appropriate than statewide analyses. Unlike Bowen et al., I argued that statewide analyses are preferable because they allow researchers to compare the demographic composition of environmentally impacted and non-impacted regions. This is crucial if we are to address one of the field’s central questions: “How do communities impacted by environmental hazards compare to the population at large?” (Downey, 1998:770).

REFERENCES


