

Editorial comment: From global to regional landscape ecology

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Reflecting on my recent attendance at the US-IALE conference (Oak Ridge, Tennessee, 24–27 March, 1993), in the context of other US-IALE meetings and the forthcoming European IALE meeting, I feel that the discipline has arrived at a crossroads between regionalization and globalization. Few landscape ecologists have the opportunity or the obligation to cross the Atlantic Ocean regularly. As Secretary General of IALE I find such travel both a pleasure and a need. Flying back to Italy from the last American meeting, my mind went over the papers and discussions I had at Oak Ridge. As a consequence I have had the desire or aim to share some of my perceptions about landscape ecology derived from comparisons of these meetings across time and space.

Robert O'Neill began the Oak Ridge conference with a lecture on the Future of Landscape Ecology, in which he expressed the hope that we might 'have the wisdom to incorporate more socio-economic theory' in our discipline. O'Neill's hope undoubtedly stems from frustration at the rate of environmental deterioration globally and locally and from recognition that collection of more and more scientific information is not contributing significantly to improving either the environment or the human condition. As scientists we look, first, more broadly at the problem, to get above or beyond it, where we can reduce the problem to its parts and treat these parts mechanistically. And, then secondly, we look for other experts, sociologists and economists, who may have a more direct knowledge about the events that cause the environmental and cultural

problems and we seek to join forces with them. IALE's interest in global and regional scales and its development of cultural landscape ecology reflects these strategies. If this work is done well, we may, with O'Neill, have some hope that landscape ecology will contribute to sustainable development and improved human welfare.

Yet, when I listen to the papers in these IALE meetings I have a distinct impression that another process of dynamic change is taking place. IALE seems to be dividing into a European and a North American form. The European form is more practical, seeking to build integrated social-economic-landscape systems in the sense of Naveh, which can directly contribute to problem solving. In contrast, the North American landscape ecology is involved with machinery and abstract models (GIS technology, satellites and remote sensing, fractals, and neutral models). In the sense of positivist science, American landscape ecology is striving for an advance in theory, as John Wiens described in his earlier editorial (Wiens, 1992, *Landscape Ecology* 7(3): 149). Obviously there are individual landscape ecologists who do not fit this general schema and indeed, my impression is unfair to these individuals. But, I sense a division, nevertheless.

It seems to me that we need to bridge this growing gap between landscape ecologists both for practical and theoretical reasons. For example, we are concerned about the loss of biological diversity and we contribute knowledge to the design of natural reserves to preserve diversity. Data from Caribbean islands, for example, suggest that disturbance, such

as hurricanes, increases diversity. But, this observation can only be true to a point. If the species pool is small and restricted, as it is in parts of Europe, then a wide scale disturbance could seriously undermine diversity. The scale of the species pool and the scale of disturbance are two variables which are interacting and we do not adequately understand these interactions to feel very confident about design of landscapes to preserve diversity. This is merely one example where we need a combination of both theory and practice to be successful.

The regional issues also forces us to pay attention to scale and pattern in a cross cultural perspective. European and American landscapes are very different at broad and local scales. Why do we not have a project of cross national comparisons so that the nature and significance of these differences can be explored? After all, the same races and tribes of people created both landscapes and in a gross sense the biota and environment is similar too. The scale and history is not similar, however, and as landscape ecologists our attention will be drawn to these

kinds of differences. Both practice and theory would be advanced by such a joint effort.

Finally, I have enjoyed speaking with the graduate students in these America and Europe meetings. These younger scholars are excited about landscape ecology but they are also not being provided adequate exposure to landscape applications and principles across nations. IALE needs to have summer courses, field study experiences, and academic courses which would attract students from many countries to advance the subject. If we could develop model courses and training programs they could be used in different places, stressing the unique local opportunities but in a common theoretical framework. Could we not cooperate to carry out such an educational program?

I feel that IALE has more and greater opportunity before it, than at any time in the past. Our broad perspective is needed and is widely recognized as relevant in society. There is a great deal to do. Our task is to respond to these needs in a timely and effective way both regionally and globally.