With only a relatively small portion devoted to human biological or cultural evolution, this is not your ordinary book on human evolution. Rather, it is about much larger, interdisciplinary questions surrounding both the theory of evolution and science in general.

For theorists, these are lively times in both evolution and science. A long-simmering dispute has risen to a full boil. For some scientists, a few basic laws should suffice to explain everything. For others, this reductionist approach fails to explain emergent phenomena and, in evolution, the importance of unique historic events. Corning, an anti-reductionist, argues that evolution involves the coming together of genes, environmental circumstances, behaviors, and intentions into “synergies” that are more than the sum of all the parts, and that it is upon these synergies that natural selection operates.

This is not an easy book to read, and not because it is written for both specialists and the general public. Corning does not provide concise statements of his theses and then elaborate on them. Instead, he provides the elaboration and expects the reader to distill his core ideas from them. Thus, for example, the general theoretical stances he disputes are presented only in chapter nine, and one critical concept he introduces, “Neo-Lamarckian selection,” is never clearly defined.

However, for the intellectually curious reader who already knows something about evolution, is interested in scientific ideas that transcend disciplinary boundaries, and is willing to do a little work, this book will provide a great deal of food for thought.

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For decades, the First Americans were pictured as small groups of hunter-gatherers whose primary source of subsistence was large mammals. They were thought to have used Clovis lithic points to hunt the local megafauna and, in the process, help lead these species to extinction. Crossing into the New World from Beringia, they moved through a deglaciated region of North America around 13,350 cal yr BP (calibrated years before present), and rapidly expanded into the American continents, reaching South America by ~12,000 cal yr BP.

However, in recent years, this scenario has come under considerable fire. Both the pathway by which ancestral Native Americans first came to the New World and the estimated time of their arrival have been debated vigorously. A major
breakthrough was the recent acceptance of the Monte Verde site in southern Chile as a ‘real’ pre-Clovis site by adherents of the Clovis First paradigm. Their acceptance of this site effectively negated the view that the Clovis lithic culture demarcated the initial presence of humans in the Americas. Other evidence, such as the uniqueness of the craniofacial features of Paleoindians compared to later Amerindians and the extent of linguistic diversity in the Americas, has also pointed to the antiquity and complexity of the peopling of the New World.

For investigators trying to piece together human migrations into the Americas, the key issue has been the timing of the appearance of the ice-free corridor after the Last Glacial Maximum (LGM). Based on current geological data from the LGM, this corridor was available for passage by modern human population before ~20,000 cal yr BP and after ~14,000 cal BP. These dates pose a problem for the Clovis First model because Clovis sites span a range of 13,350-12,895 cal yr BP. By contrast, Monte Verde has been dated at 14,675 cal yr BP, and other non-Clovis sites in South America are only slightly younger than this. Thus, if access to North America via an interior route was not available until ~14,000 cal yr BP, and if the Monte Verde site was occupied before this date, then human populations must have arrived in the New World prior to the LGM in order to have inhabited this site. In this case, if one rejects a very early entry of ancestral Amerindians some 35,000-22,000 years ago, then the only way that they could have reached South America by this time is by taking a coastal route.

This is where Koppel’s story really begins. His book focuses largely on research whose goal has been to find evidence for a coastal migration into the Americas. These efforts have been greatly aided by recent advances in Geographic Information System (GIS) mapping, sonar and submersible technology, and sediment coring methodology. The data resulting from these studies have provided a new perspective on what life was like during the LGM when human groups first made their way into the Americas. These data have revealed stretches of the Northwest Coast that were ice-free and capable of sustaining plant and animal life when humans first entered this region, as well as riverine areas that were probably occupied by human groups before being submerged under the waters of the Bering Sea.

Koppel provides a rich account of the archaeologists and geologists who are engaged in this research, including his own experiences working with them at On Your Knees Cave and other locations around the Northwest Coast of North America. He effectively conveys the excitement, difficulty, and importance of their work and the extent to which, in many respects, it is still a labor of love. In doing so, he allows investigators to speak for themselves about the trials and tribulations of their investigations, and the ways in which they have dealt with the skepticism about their findings. Koppel also describes the important contributions that local Native Americans have made to these studies and highlights the ways in which academics and native people can productively collaborate on projects of significance to both communities.

Unfortunately, Koppel did not interview researchers currently utilizing the study of genetics in their work in relation to issues concerning the peopling of the New World. Compared to archaeological data, genetic data are essentially dismissed as being unreliable despite their growing abundance. While the very early entry times proposed by some genetic studies may not ultimately be correct, these studies have nevertheless played an important role in raising questions about the antiquity of New World colonization and the route(s) by which the first colonists reached the Americas. In this regard, Koppel seemingly fails to recognize that advances in laboratory and computational methods may permit investigators to reanalyze and reinterpret genetic data coming from Native American populations, just as new oceanographic and GIS methods have allowed archeologists to visualize the submerged coastline and river topography that were once occupied by their ancestors.

This is the only significant shortcoming of a book that otherwise does an admirable job of piecing together the story of the Lost World that the earliest colonizers encountered as they made their way across the Bering Strait into the Americas via a coastal route. It will appeal to specialists in the field, as well as general readers with interests in the peopling of the New World and modern human prehistory.

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