For decades, the origin of the Tewa, one of the culturally affiliated groups in the Northern Rio Grande region of New Mexico, has fascinated Southwestern anthropologists and archaeologists. It has long been postulated that the Northern Rio Grande was an important area of immigration after the depopulation of the Mesa Verde region in Southwestern Colorado (ca. A.D. 1300). The initial line of evidence for this interpretation was an apparent decrease in population density in the Mesa Verde region alongside a corresponding increase in the Northern Rio Grande at roughly the same time. This interpretation, however, has been questioned due to a lack of distinct Mesa Verde material culture in the Northern Rio Grande after A.D. 1300. Understanding what happened to the people of Mesa Verde after depopulation is important for ethnobiology for a number of reasons. One major, though broad, reason is to understand past human response to environmental uncertainty, which characterized this time period in the American Southwest. Undoubtedly, this issue is increasingly relevant in the context of contemporary worldwide environmental change.

In the book *Winds from the North: Tewa Origins and Historical Anthropology*, Scott Ortman’s objective is to sort out the “puzzle of Tewa origins” (p. 1) using new lines of historic and prehistoric evidence. To initiate this process, Ortman describes the three leading hypotheses concerning Tewa origins: 1) the *in situ* development hypothesis, 2) the immigration hypothesis, and 3) the population movement hypothesis. The *in situ* hypothesis is characterized by intrinsic growth among the people that already occupied the Northern Rio Grande before A.D. 1300. The immigration hypothesis claims that small bands of Mesa Verde people immigrated into the Northern Rio Grande and were slowly incorporated into endemic culture. The population movement hypothesis envisions a rapid large-scale migration from Mesa Verde into the Northern Rio Grande. Ortman sets out to assess which hypothesis is best supported by the new lines of historic and prehistoric evidence that are revealed throughout the book.

*Winds from the North* is comprised of 14 chapters that progressively lead the reader through each line of evidence that informs Ortman’s final conclusion. Chapter 1 is dedicated to situating the reader within the existing body of knowledge on Tewa origins. It is, therefore, a valuable compendium of resources for anyone researching Tewa culture. Chapter 2 orients the reader with regard to the theoretical underpinnings of the rest of the book. Ortman describes the evolutionary perspective he uses to research genes, language, and culture. He draws from Durham (1991) to set up the prerequisites needed to assume that each one of these human systems produces descent with modification. Ortman is abundantly clear that each line of evidence—genes, language, and culture—must be evaluated on its own merits and must not be bundled with the other systems. He then goes on to delineate the three hypotheses of Tewa origins mentioned above and sets up expectations for each (Table 2.3).

In Chapter 3 the author begins evaluating each hypothesis and situates the reader into a body of literature on modeling past populations in the Tewa Basin. Strengths and weaknesses of past approaches are assessed and are used in Chapter 4 to build a new model that utilizes a regional stratified sampling technique. That is, Ortman uses topography, historical...
accounts, and the archaeological record to break the Tewa Basin into five unique geographic regions. This is significant because each region exhibits population trends that differ from the overall Tewa Basin trend, especially in the Pajarito and Cochiti regions. Regarding migration from Mesa Verde, the population history model Ortman uses for the Pajarito and Cochiti areas aligns with the population movement hypothesis because populations started increasing there, largely in previously unsettled areas, before increasing in the rest of the Tewa Basin.

Chapter 5 assesses and utilizes craniometric data to model past genetic relationships of people in the Four Corners region through time. First, Ortman seeks to understand past genetic distances within populations of the Four Corners. Close genetic distance is established between Mesa Verde and post-A.D. 1275 Pajarito and Chama populations. Then, Ortman explores the patterns of gene flow within populations of the Tewa Basin. His results indicate that there was little gene flow among the Pajarito, Chama, and Tano populations and a greater amount of gene flow between the Cochiti and Santa Fe populations. In other words, post-1275 populations in the Pajarito and Chama areas are closely related to inhabitants of the Mesa Verde region and had received little genetic input from other Northern Rio Grande populations. Importantly, he concludes that genetic drift does not account for the observed patterns in these areas. Lastly, Ortman is interested in understanding the relative genetic contribution of possible migrants and existing populations to post-abandonment populations in the Tewa Basin. Through admixture analysis, he shows that the genetic structure of post-abandonment populations meets the expected genetic contribution of migrants and locals based off of modeled population sizes.

Chapters 6 through 8 address three questions about the linguistic history of the Kiowa-Tanoan language family (of which Tewa is one): “How long has Tewa been a distinctive language? How long can this language be documented as having been spoken in the Tewa Basin? And what aspects of the Tewa language might one expect to see expressed in material culture of ancestral Tewa speakers, and where and when do we see them” (p. 125)? Briefly, Ortman’s results, based on animal names, plant names, object names, place names, place lore, and oral tradition, indicate that Tewa became a distinct language between A.D. 920 and 980, but not necessarily within the Northern Rio Grande. Ortman favors the population movement hypothesis and sees Mesa Verde as the primary location of Tewa ethnogenesis; thus his approach is to analyze the presence or absence of names related to places either in the Northern Rio Grande or in Mesa Verde. He determines that there is an absence of Northern Rio Grande place-related terms, suggesting that Tewa did not originate there. He postulates that Tewa language was not situated geographically in the Northern Rio Grande until A.D. 1240 to 1280. To further this argument, Ortman moves beyond the previous “standard approaches” (p. 204) to introduce the contemporary cognitive science theory of conceptual metaphor. According to Ortman, identifying conceptual metaphors in past societies can illuminate their worldviews, constructed in particular times and places. Ortman argues that given certain aspects of Mesa Verde material culture (i.e., architectural plans and pottery designs) archaeologists can infer conceptual metaphors that framed everyday Tewa life. He refers to the remnants of these metaphors as dead metaphors and analyzes the Tewa language accordingly.

Chapters 11 through 13 address material culture directly. Chapter 11 serves to situate the reader into the current literature of population movement and ultimately reframes how archaeologists can pick up on these signals. Chapter 12 addresses the material culture of the Mesa Verde region and explicates the “push factors” that are associated with people leaving this region at A.D. 1300. Chapter 13 introduces new ways of looking at material culture, derived from Chapter 11 but with particular reference to the Tewa Basin. One salient example is that of smeared-indented-corrugated utility ware. Ortman shows that around A.D. 1050 to 1200 corrugated pottery was similar in the Mesa Verde and Tewa Basin. However, in the mid 1200’s the same corrugated pottery process was being done in the Tewa Basin but with an extra step; the exterior of corrugated pottery was being smeared away. Therefore, the question becomes why would people take extra steps in the pottery making process only to erase what those extra steps accomplished?

Finally, Chapter 14 serves to quickly summarize results from the previous chapters and then assesses them with regard to the expectations elicited in Chapter 2. Ortman explains that his analysis best supports the population movement hypothesis and least supports the in situ development hypothesis.
Though he is clear in this chapter (and throughout the book) that his conclusions are not irrefutable, he argues that population movement away from Mesa Verde was integral to the ethnogenesis of the Tewa people. He suggests that the collapse of the Mesa Verde society elicited a largely religious migration into the Northern Rio Grande to escape the hegemonic structures and institutions to the west. Ortman terms this the “religious revolution model of Tewa ethnogenesis” (p. 361). Ortman also advances the historical account of the Pueblo Revolt to bolster his argument. Using this example, he suggests that, “The ideology of the Pueblo Revolt can thus be characterized as one of a return to a state of bodily satisfaction through the overthrow of the dominant fraction, destruction of items related to the religion of that fraction, the abandonment of villages in which the religion of the dominant fraction had been practiced, and the re-adoption of the way of life of an earlier period” (p. 363). By analogy, Ortman uses this example to explain the absence of Mesa Verde material culture in the Tewa Basin after A.D. 1300, by suggesting that the Mesa Verde people would revert to the “old ways” of making materials as a way to distance themselves from their more recent past. Smearing the exterior of corrugated pottery represents such distancing.

The scope of Ortman’s book is immense and reifies what a modern four field approach toward anthropological inquiry looks like. Overall, questions are framed in the context of the most relevant bodies of literature needed to understand them, the importance of most questions are explicitly underscored, results are clearly discussed, and duplicitous results are usually highlighted. This book is a great example of a weight of evidence approach towards answering research questions. However, there are some inherent drawbacks to the large scope of this work. Data quality is rarely addressed. Some holes in data (i.e., craniometric data) are smoothed over, so as to fit them into more “robust” models. And the classic question of, “Are we measuring what we think we are?” (Kerlinger 1964) is never directly addressed. As the topics and questions of each chapter shift from biological, to linguistic, to cultural, the presence of discussions related to equifinality diminish. These criticisms aside, there is little doubt that the work Ortman has done has furthered research in archaeology and historical anthropology. It has, without a doubt, set a precedent for future anthropological and archaeological research in the Northern Rio Grande region. Further, for the ethnobiologist, Ortman’s work allows one to contemplate the utility of population movement in the face of severe environmental and societal crisis (sensu Spielmann et al. 2011).

References Cited
