

BOOK REVIEW

## Mackenzie Cooley, *The Perfection of Nature: Animals, Breeding, and Race in the Renaissance*

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In this study, Mackenzie Cooley traces one of the strands of thought that has informed modern thinking about race. She does this by offering a detailed study of both contemporaries' practice of, and the theoretical knowledge that they produced and possessed relating to, the breeding of plants, animals and humans. As the title suggests, the book deals with the Renaissance period, with the majority of the source material deriving from the sixteenth century. Geographically, Cooley's study centres on Spain and its empire, whether in the Americas or parts of Europe such as the Kingdom of Naples, offering possibilities for exploring how the relationship between metropole and colonies mediated the creation of new knowledge.

*The Perfection of Nature* is divided into four parts, 'Knowing and controlling animal generation', 'A divergence in breeding', 'A brave new natural world' and 'Difference in European thought', each consisting of two chapters. The opening chapter is primarily concerned with the practices of horse breeders, especially those connected to the courts of early modern Italy. Here Cooley discusses ideas that informed breeding practices and begins her discussion of the concept of *razza* – which in this context referred to the lineage and breeding of the horses – and the influence of environmental factors such as location, pasturage and climate. This theme is expanded in the second chapter, which investigates how noble families laid claim to specific *razze* through a process that Cooley likens to the modern branding of goods. It also begins to consider how this term gradually became used to describe human difference. These ideas are further explored in the book's second part. The third chapter discusses concepts of *razza* in European courts, situating breeding practices within the courtly culture of collecting and gift exchange. Cooley describes the fascinating, yet deeply unsettling, example of Isabella d'Este's efforts to breed a 'race of dwarves', whom she sent as gifts just as she would valuable animals or artefacts. The final chapter in this section uses a comparison with Meso-American ideas of breeding to contextualize and cast new light on the distinctively European idea of *razza*. A key theme in this chapter is the imposition of European ideas of selective breeding and heredity onto a culture already possessed of its own conceptual structures and language.

The book's third part develops Cooley's exploration of ideas of race and breeding in Spain's Central American colonies. Following the conquest of the Americas, Spaniards encountered animals that were recognizable to them, such as dogs, and those that were not, notably camelids. Spanish and Meso-American dogs were able to breed, thus forming *mestizaje* or mixed animals, a conceptual vocabulary later applied to humans.

Making sense of camelids caused Europeans conceptual problems, and they sought to understand these curious creatures by classifying them in relation to the functions performed by European animals such as sheep or mules. The final section looks at the efforts of two Europeans to deal with the conceptual problems raised by breeding. Chapter 7 provides a stimulating discussion of the Spanish Jesuit missionary José de Acosta's natural-historical studies. Drawing on the belief that the ancestors of all surviving animals and humans were carried in Noah's Ark, de Acosta sought to explain how the Americas could be settled by humans and how they could be populated by animals that were both different from and similar to those found in Europe. He explained this by positing the existence of land bridges between the New and Old Worlds that had enabled migration, but also a belief that animals that were unsuited to the environments of the region in which they arrived died out. The final chapter considers the work of Giambattista Della Porta on physiognomy, which sought to connect ideas of breeding and environmental influence with physical appearances and human character and behaviour.

As this brief overview of the content of Cooley's book suggests, in addition to matters of breeding and inheritance, the issue of the environment as an influence shaping diversity amongst plants, animals and humans is a recurring theme. It connects such diverse topic as horse breeding, explanations for the diversification of fauna in the post-Noachian era and the theoretical underpinning of physiognomy and related arts, including chiromancy. It is, therefore, surprising that early modern theoretical understandings of environmental influence do not warrant more sustained discussion in Cooley's book. In Chapter 1, for example, there is a section discussing theories of generation derived from Aristotle and Galen. Cooley acknowledges that these ideas had minimal influence on horse breeders' practice, but she makes no mention of the Hippocratic tradition of airs, waters and places that underpinned conceptions of environmental influence which, she shows, did.

Cooley's tendency to downplay ideas of environmental influence also has an impact on the work's historiographical framing. As scholars such as Claire Weeda have shown, these ideas – rather than notions of inheritance – formed the core of medieval explanations for ethnic variation among humans. They continued to be influential through the early modern period. Even if interest in the specific art of physiognomy waned during the seventeenth century, the theoretical constructs and natural-historical practices by which it was undergirded were not, as Cooley contends (p. 221), displaced by new mechanical philosophies. Indeed, as studies such as Suman Seth's work on race, colonialism and medicine have shown, these principles continued to be influential until the nineteenth century. Although Cooley does stress the importance of the interplay between nature and nurture, paying greater attention to contemporary ideas about environmental influence and its historiography might have served to contextualize and highlight the novelty of the concepts that she identifies and ably discusses.

Cooley's work explores an admirable range of topics, draws on a formidable array of sources and deploys diverse methods to produce its arguments. It also displays an admirable commitment to drawing on research from disciplines that rarely feature in historical studies, such as palaeozoology. The resulting book provides a valuable, readable and thought-provoking contribution to discussions of the origins of modern conceptions of heredity and race.