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**Peter Wade, *Degrees of Mixture, Degrees of Freedom: Genomics, Multiculturalism, and Race in Latin America* (Durham, NC, and London: Duke University Press, 2017)**

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What potential do genomic knowledge and technologies hold to transform concepts of race, and offer new inspiration for democratic and anti-racist practices? These questions are at the heart of Peter Wade's most recent book, which draws on rich data collected over three years through the interdisciplinary project 'Race, Genomics and Mestizaje in Latin America' (2010-2013). Following on from the collected volume *Mestizo Genomics* (2015, Duke University Press), which provided detailed ethnographic accounts of scientific practices observed in genetic laboratories in Colombia, Brazil and Mexico, *Degrees of Mixture* offers a comprehensive overview of how 'mixture' (*mestizaje/mestiçagem*) has figured in science and society in these three Latin American countries, from the early twentieth century to the present. The work is organised into three parts: the first providing an summary of the development of concepts of race and mixture in human genetics internationally, and a brief history of genetic science in Latin America; the second, an in-depth analysis of genetic programmes led by scientists in Colombia, Brazil and Mexico, drawing on examples from evolutionary, medical and forensic genetics; and the third, an examination of how genetic studies are used to interpret the racial and sexual dynamics of colonial histories, and the extent to which genetic narratives have come to shape public conceptions of race and mixture in these societies.

Over the past two decades, social scientists as well as geneticists have raised concerns about whether new genomic practices have caused a rebiologisation of race, by allowing socially constructed racial categories to seep 'back' into the realm of the laboratory. Here, as in his previous works, Wade takes a slightly different angle by setting out from the premise that race (and, for that matter, racial mixture) is best understood not as a 'social construct'—a lingering myth derived from the debunked 'race sciences'—but as an intrinsically bio-cultural phenomenon that continues to undergo constant processes of re-articulation, always blurring the boundaries between nature/culture and body/behaviour. This approach is developed here through Wade's use of the concepts of 'racialising assemblages'—defined as overlapping, interpenetrating and structured networks of people, objects, signs and utterances, which interact to materialise components such as 'the mestizo' differently in various contexts (pp.46–47)—and 'topology', a concept used here to account for how seemingly unrelated technologies and circumstances are brought together to contribute to processes of 'race-making' (p.49). These sophisticated tools allow Wade to move beyond static dichotomies by showing, for instance, that mixture and purification are not polar opposites, but components that nestle infinitely within one another. Thus, as Wade consistently shows, any attempt to engage with the concept of racial mixture, whether politically or genetically, inevitably causes the phantom of (relatively) 'pure' races to loom back into focus.

This framework also enables Wade to reject the idea of an *a priori* separation between science and society. Instead he deftly weaves together accounts, for example, of how national

politics has shaped genomic agendas, and how, conversely, scientists have occasionally used genomic data to challenge public policies; how foundational myths of race, mixture and nationhood can influence the collection and interpretation of genetic data, and in which cases genetic data have produced new narratives of biological diversity; and, finally, how genetic discourses have filtered unevenly into the public consciousness, sometimes offering novel ways of thinking about human diversity, or simply new idioms to express familiar racial ideas. In each case, the symmetries and divergences among the three countries are examined carefully and in detail.

Wade situates these scientific developments among key political events in each country, notably the introduction of multicultural agendas in the 1980s and 90s, which promoted the respect and recognition of the cultural differences of indigenous and black populations, previously regarded as ‘problem’ groups to be absorbed into the nation through processes of mixture. The multicultural emphasis on ‘difference’ finds a parallel in human genetics, a discipline focused on seeking out genetic distinctions in the form of population ‘isolates’, habitually aligned in these cases with indigenous and black Latin American populations. Generally, this search for genetic ‘purity’ is tempered by the discipline’s acknowledgment that all individuals and populations are, to different degrees, genetically mixed. In Latin American genomics, however, mixture (defined almost exclusively as the combination of European, Amerindian, and African genetic components) becomes an object of specific scientific interest. The *mestizo* is envisioned variously as a generic body, or a racial exception; as a sickly population (thanks to defective ‘Amerindian’ or ‘African’ genetic variants linked to diabetes or sickle cell anaemia), or as the future of democratic societies—all figures that resonate with longstanding racial tropes and ideologies in the region. As Wade signals, although genomics has certainly complicated ideas of race in each of these three countries, there is still much continuity with older modes of race-thinking. This includes a marked tendency to racialise black and indigenous populations, in ways that sometimes (but not always) feed directly back into multicultural political agendas.

Overall, Wade creates a remarkably even-handed account, which is neither alarmist nor evangelistic about the potential for genomics to transform or reinforce racial ideologies. While he unequivocally identifies the anti-racist character of the work of certain Latin American geneticists (notably the Brazilian scientist Sérgio Pena), Wade notes that in other ways genomic data can end up reproducing conservative—even regressive—narratives about race, gender and sexuality (chapter 8). It is worth noting that while Wade’s account is comprehensive, it is not exhaustive; a discussion of the UNAM’s Afro-Mexico Genomics Project, or of Brazilian geneticist Fabricio Santos’s coordination of the National Geographic’s Genographic Project for South America, for instance, might have added additional wrinkles to his analysis, offering detail about the impact of broader scientific collaborations with laboratories and researchers from outside of Latin America. Nonetheless, the clear and concise descriptions of genetic theory and practices will serve as an excellent introduction to these concepts for uninitiated readers, and the book makes important contributions to existing social science discussions about the anti-racist and democratising potential of mixture and genomics in contemporary societies.