

The Grandest Genetic Experiment Ever Performed on Man? – A Y-Chromosomal Perspective on Genetic Variation in India

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ABSTRACT We have analysed Y-chromosomal data from Indian caste, Indian tribal and East Asian populations in order to investigate the impact of the caste system on male genetic variation. We find that variation *within* populations is lower in India than in East Asia, while variation *between* populations is overall higher. This observation can be explained by greater subdivision within the Indian population, leading to more genetic drift. However, the effect is most marked in the tribal populations, and the level of variation between caste populations is similar to the level between Chinese populations. The caste system has therefore had a detectable impact on Y-chromosomal variation, but this has been less strong than the influence of the tribal system, perhaps because of larger population sizes in the castes, more gene flow or a shorter period of time.