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ON NUMERALS

IN AMERICAN INDIAN LANGUAGES, AND THE INDIAN MODE OF COUNTING.

THAT "all numerals are derived from the fingers"¹ is as generally true for languages of the new world as for those of the old. The North American Indians have, with comparatively few exceptions, adopted *decimal* systems, reckoning the fingers of *both* hands. Some South American tribes have not advanced beyond a *quinary*; and a few are said to be poorer even than this. The Brazilian Tupis had, at one time, no names for numbers higher than 3,² and the Abipones of Paraguay, as Dobrizhoffer states,³ could not count beyond 4, giving to that number the name of 'the ostrich's toes,' *geyènknute*. Some nations, particularly those of Mexico and Central America, and the Eskimos, have reckoned by twenties instead of tens or ~~fives~~, counting toes with fingers for the base of their numeral system. The Tule Indians of Darien reckon in this way: 20 is 'a man,' i. e. all his fingers

¹ "Alle Zahlwörter gehn aus von den Fingern der Hände." — Grimm's Gesch. der deutschen Sprache, i. 167.

² The fact that the Tupis *lost* their names for 4 and 5, after the coming of Europeans, is worth noting. J. de Léry, who was in Brazil in 1557, writes that the "Tououpenambaults usque ad numerum *quinque* verbis notare, hoc modo: *augepé* 1, *mocouein* 2, *mossaput* 3, *oioicoudic* 4, *ecoinbo* 5." — Hist. Navig. in Brasiliam, 1586, p. 272. (In the 5, we recognize *po* 'hand.') Jos. de Anchieta, in his Tupi Grammar, 1595, says: "Os numeraes não chegao mais que até numero de *quatro*: ut *oiepé* 1, *mocóí* 2, *moçapír* 3, *oyoirundic* 4." Eckart, a Jesuit missionary in Brazil, 1753-57, gives the same names for 1, 2, and 3, adding: "Non plus ultra Brasili *hodie* numerant," though he had seen names for 4 and 5 (*monherondye*, *ambó*) in 'an ancient grammar by Father Anchieta'; "sed uterque hic numerus modo jam exolevit." — Specimen Ling. Brasiliæ, 1778.

³ Dobrizhoffer's account of the Abipones, ii. 168.