every $P_\nu^{(2)}$ differs in its νth transformation (i_ν, n_ν) for values of ν forming a series of type $> \omega$. Hence the terms in the corresponding polynomial $p^{(2)}$ are a set whose type is $> \omega$. But there are no such polynomials. Therefore the $P^{(2)}$ cannot be put into one-to-one correspondence with the $P^{(1)}$. The same reasoning holds for the $P^{(1)}$, so we have two proofs that this set is non-enumerable.

10. The process of § 7 applied to the permutations $P^{(2)}$ yields a new set $[P^{(3)}]$ and the reasoning of § 9 shows that this set is not equivalent to $[P^{(2)}]$. Therefore by strict induction from N to $N + 1$ we infer the existence of an ω-series of sets of infinite permutations no one of which can be put into one-to-one correspondence with its predecessor. Ordinally $[P^{(N+1)}] > [P^{(N)}]$ for $N = 0, 1, 2, \cdots$. In Cantor's terminology, the set of infinite permutations of a simple infinity of objects presents an ordinal type higher than any finite aleph.

McPherson, Kansas.

GEORGE WILLIAM HILL, 1838–1914.*

George William Hill was the son of John William Hill and Catherine Smith, and was born in New York City on March 3, 1838. Both his father and grandfather were artists and he himself was of English and Huguenot descent. His early education like that of most of the men of his time in America gave him few advantages. In 1846, when his father moved from New York to the farm at West Nyack, the country was too busy with material development to produce many teachers who could give any but the most elementary instruction, and the country school which he attended must have been inferior in this respect to those of the larger cities. Even at Rutgers College in New Jersey, to which Hill was sent owing to the exhibition of unusual capacity and from which he took his degree in 1859, the course probably went but little beyond that now found in secondary schools. There, however, he came under the influence of a man whose ideas on education were unusual. Dr. Strong, according to Hill's evidence, believed only in the classic treatises; but little published after

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