the volume of water, and, evaporation keeping pace with the inflow, a concentration of the salts held in solution took place. An examination of the present sources of inflow shows that these do not contain the sodium, potassium, calcium and magnesium in the relative proportions which are found in the lake. Gilbert estimates that it would take only eighteen years to give the lake through its fresh water inflow, all the calcium it now contains and that 850 years would to this end be required for magnesium. He does not deal with the case of the potassium of which the analyses he reports show only traces in the inflow water, but this also may have been due to faulty methods of determining that element. These latter seem to be the only explanation for the great discrepancy between the amounts of potassium found by Talmage* in 1889 and Bassett† in 1873‡.

Short as is the extreme period required by Gilbert's calculations to affect all the changes in the composition, it has epitomized the history of the ocean. Even if we postulate that the primitive rock crust of the globe in pre-Cambrian times contained more sodium chloride than what is found now in Archæan formations, there is also more of this salt in the strata of later geological periods which cover the drainage area of Utah Salt Lake. Of course there is not a complete parallel between the latter and the ocean, for the relative proportions are not exactly the same, but their approximate similarity is striking, and, it may be added, very convincing as to the extreme probability of the thesis maintained above.§

TABLE A.

RIVERS.

	Na.	*K.*	*Ca.*	*Mg.*	*SO3.*	*Cl.*	*Si.*	*Fe.*
1. St. Lawrence ...	100	22.9	638.0	143.4	136.0	223.0	343.0	....
2. Ottawa	100	64.2	416.7	82.5	67.3	224.3	402.0	....
3. Mississippi	100	35.5	462.0	82.0	17.1	8.4	86.4	17.0
4. Amazons.....	100	72.6	1,089.0	135.6	36.0	90.0	....	....
5. Nile	100	22.2	75.1	41.5	18.5	16.0	44.4	....
6. Assinaboine.....	100	10.5	122.0	69.4	127.9	50.0	....	....
7. Red River	100	12.3	133.3	83.2	190.0	91.4	....	....
8. Nineteen Rivers (Murray)	100	38.6	590.9	134.2	197.6	53.5	145.3	37.9

*Science, Vol. 14, 1889, p. 445.

†Chemical News, Vol. 28, 1873, p. 256.

‡See Table B, Utah Salt Lake, 26 and 27.

§ In Lake Shirwa, according to J. E. S. Moore, ("The Tanganyika Problem," 1902, p. 22,) we have a lake which was once fresh, but has become salt through the loss of its outlet. So far as I know no analyses have been made of its waters.