vague and indeterminate; it virtually asserts that, if two infinite magnitudes be equal, the addition of any finite magnitude to either of them will destroy the equality.

In closing this note I desire to guard against the danger of leaving a false impression. The mere correctness of the Lucretian concept of infinity by no means accounts for the immense rôle of the concept in the author's work. The secret lies in the fact that the concept so powerfully stimulated the imagination of a great thinker and poet as to cause him to express and to preserve in immortal form a body of ideas which he had acquired from the then still extant works of Epicurus and which after the long lapse of centuries are found to be among the most fruitful scientific ideas of our time.

COLUMBIA UNIVERSITY,
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ON THE INVARIANT NET OF CUBICS IN THE STEINERIAN TRANSFORMATION.

BY PROFESSOR ARNOLD EMCH.

(Read before the American Mathematical Society September 4, 1917.)

1. BY Steinerian transformation* we understand an involutorial quadratic Cremona transformation, defined as the one-to-one correspondence between the points of a plane (with the exception of the points of a certain trilateral) and the points of concurrence of their polars with respect to the conics of a pencil. If we use the base points A_1, A_2, A_3, E of the pencil as the vertices and the unit point of a system of projective coordinates, the Steinerian transformation may easily be established in the form

$$
\begin{aligned}
\rho x_1' &= x_1(x_2 + x_3 - x_1),\\
\rho x_2' &= x_2(x_3 + x_1 - x_2), \qquad (1)\\
\rho x_3' &= x_3(x_1 + x_2 - x_3).
\end{aligned}
$$

The base points $A_1(1, 0, 0)$; $A_2(0, 1, 0)$; $A_3(0, 0, 1)$; $E(1, 1,$

* See *Annals of Mathematics*, vol. 14 (1912), pp. 57–71.