equal to the normal upon the corresponding principal directrix plane. And the normal to the surface at the point bisects the exterior angle of the two lines.

In an hyperbolic paraboloid, for any point on the surface, the difference between the focal distances to the foci of the two focal parabolas is a constant. And the normal to the surface at the point bisects the exterior angle of the two lines.

The reader of this book will hope with Professor Staude "that the focal properties of the conicoid will attain the same recognition that the corresponding properties in the plane have long since enjoyed."

H. D. THOMPSON.

PRINCETON,
February 25, 1898.

NOTE ON THE THEORY OF CONTINUOUS GROUPS.

IN a "Note on the fundamental theorems of Lie's theory of continuous groups," contributed to the BULLETIN in November, 1897, by Dr. Lovett, attention is drawn to an error or misapprehension in a paper which I had the honor of contributing to the *Proceedings of the London Mathematical Society* (vol. 23, p. 381–390).

The theorem to which objection is taken is: "If $x_1', \cdots, x_n'$ is a point obtained from the point $x_1, \cdots, x_n$ by the operation

$$1 + X + \frac{X^2}{2\,!} + \cdots;$$

and $x_1'', \cdots, x_n''$ is a point obtained from the point $x_1', \cdots, x_n'$ by the operation

$$1 + Y' + \frac{Y'^2}{2\,!} + \cdots,$$

where $$X \equiv \lambda_1 X_1 + \cdots + \lambda_r X_r,$$

and $$Y \equiv \mu_1 X_1 + \cdots + \mu_r X_r,$$

X_k denoting the linear operator

$$\sum_{i=1}^{i=n} \xi_{ki} (x_1, \cdots, x_n) \frac{\partial}{\partial x_i};$$

then $x_1'', \cdots, x_n''$ can be directly derived from the point $x_1, \cdots, x_n$ by the operation