

ties of the conic, of the range or pencil of conics, of conics "harmonically circumscribed," or apolar, to a given conic; of the quadric, of the range or pencil of quadrics, and of quadrics and cubic curves "harmonically circumscribed" to a quadric.

The remaining transformations are handled in the last chapter (Chapter VI.) in briefer fashion; and the book ends with seventy exercises whose sources are not stated. The author has carried out his intention artistically and, given that he is addressing *intelligences d'élite*, excellently.

The actual titles of foreign journals should be given. "Ann. de Math." might be an American, a German, or an Italian periodical.

I see no reason for calling a circle discovered by La Hire "cercle de Monge" (p. 64). On the other hand the orthoptic sphere of p. 107 might fairly be called "Sphère de Monge." On this latter page the reference of the footnote should be to No. 86, not No. 80.

The "transformation par rayons vecteurs réciproques" of p. 11 is finally called inversion. It is attributed to Bellavitis (1836). Some assign it to Plücker (1831).

A smaller point of history may also be raised. An interesting theorem occurring three times in the book under different forms (pp. 116, 132, 138) is in effect as follows: that the tangents at the points where a tangent of an asteroid (hypocycloid of class 4) meets the curve again meet on the cusp circle. This theorem is attributed to Laguerre. R. A. Roberts once told me that the theorem stated in the correlative form for the lemniscate, was well known in Dublin and was there attributed to Casey. It would be worth while to ascertain whether Casey anticipated Laguerre.

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Opinions et Curiosités Touchant la Mathématique d'après les Ouvrages Français des XVI^e, XVII^e et XVIII^e Siècles. Par GEORGES MAUPIN. Paris, Carré et Naud, 1898. 199 pp.

THE book seems to be addressed, not to the mathematician, nor to the historian of mathematics, but to the general reader, with the view of entertaining him and creating in him a love for the history of the science. In twenty-seven chapters there has been gathered together from old French writers, mostly unknown to our time, a miscellaneous mass of material relating to the squaring of the circle, the value of mathematical studies, pleas for the study of this science in