3 sextactic points are contacts of tangents from the flexes P_3. *The* 6 *contacts of tangents from the sextactic points are the points* P_{12}. *The* 12 *contacts of tangents from* P_{12} *in turn are the points* P_{24}, *and so on ad infinitum.*

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RELATED INVARIANTS OF TWO RATIONAL SEXTICS.

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LET the parametric equations of the $R_3{}^6$, the rational curve of order six in three dimensions, be

$$x_i = \delta^6{}_{it} \equiv a_i t^6 + 6b_i t^5 + 15c_i t^4 + 20d_i t^3 + 15e_i t^2 + 6f_i t + g_i \quad (i = 1, 2, 3, 4), \tag{1}$$

and let the parametric equations of the $R_2{}^6$, the rational plane curve of order six, be of the form

$$\begin{aligned} x_1 &= \alpha_t{}^6 \equiv a + bt + ct^2 + dt^3 + et^4 + ft^5 + gt^6, \\ x_2 &= \beta_t{}^6 \equiv a' + b't + c't^2 + d't^3 + e't^4 + f't^5 + g't^6, \\ x_3 &= \gamma_t{}^6 \equiv a'' + b''t + c''t^2 + d''t^3 + e''t^4 + f''t^5 + g''t^6. \end{aligned}$$

It is well known that all plane sections of the $R_3{}^6$ are apolar to a doubly infinite system of binary sextics, and that all line sections of the $R_2{}^6$ are apolar to a triply infinite system of binary sextics. We shall let the four binary sextics $\delta_{it}{}^6$ of (1) be four linearly independent sextics of the apolar system of the $R_2{}^6$, and the $\alpha_t{}^6, \beta_t{}^6, \gamma_t{}^6$ of (2) be three linearly independent sextics of the apolar system of the $R_3{}^6$. Our purpose is to point out briefly the relation between the invariants of the $R_2{}^6$ and the invariants* of the $R_3{}^6$.

By means of the twelve equations

* This relation must not be confused with the correspondence between invariants of the $R_2{}^n$ and covariant surfaces of the $R_3{}^n$.