cordance with the mechanism proposed by Jahn, the temperature coefficient leads to a value for the heat of dissociation of ozone into molecular oxygen and atomic oxygen. Calculating by thermodynamic methods the concentration of monatomic oxygen at 100° and 1 atmosphere pressure in 5% ozone, and by kinetic theory methods the number of collisions between molecular ozone and atomic oxygen, it has been shown that these collisions are many times too small in number to account for the observed rate and hence that the Jahn mechanism cannot be regarded as tenable, at least in its original simple form.

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CONCERNING POINTS OF A CONTINUOUS CURVE THAT ARE NOT ACCESSIBLE FROM EACH OTHER

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The purpose of this paper is to establish the following theorem:

THEOREM. *If A and B are two distinct points of a continuous curve M and every simple continuous arc from A to B contains at least one point of M distinct from A and from B then there exists a simple closed curve which is a subset of M and which separates A from B.*

Proof. By a theorem due to Schoenflies,[1] A and B do not both belong to the boundary of the same complementary domain of M. Suppose that A does not belong to the boundary of the unbounded complementary domain of M. Let C denote a circle with center at A and not containing or enclosing B. Since M is regular there exists a circle C_1 with center at A and such that any point of M within C_1 can be joined to A by an arc of M lying within C. There are not[1] more than a finite number of complementary domains of M having A on their boundaries and containing points without C_1. If there be any, let $D_1, D_2, D_3, \ldots, D_n$ denote them, let $T_1, T_2, T_3, \ldots, T_n$ denote their respective boundaries and let H denote the set $T_1 + T_2 + T_3 + \ldots + T_n$. Let K denote the set of all points X of M such that X can be joined to A by a connected subset of M which contains no point outside of C and let E denote the sum of the sets H and K. Let D denote the complementary domain of E which contains B and let L denote the boundary of D. Since K is[2] a continuous curve and each T_i is[3] a continuous curve, therefore, E is a continuous curve. Hence L is[3] a continuous curve.

Now A does not belong to L. For suppose it does. Then since every point of L is[1] accessible from D there exists an arc AB which, except for A, is a subset of D. Let P denote the first point that the arc AB has in common with C_1. The interval AP of AB has only the point A in common with M and hence $AP-A$ lies in one of the complementary domains $D_1, D_2, D_3, \ldots D_n$. This, however, is impossible since the interval BP of AB contains no point of the boundary of any one of these domains. Hence A lies in one complementary domain of the continuous curve L and B lies in another one. Hence by a theorem of R. L. Moore[4] there exists a simple closed curve which separates A from B and which is a subset of L and, therefore, of M.

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RECENT PROGRESS OF INVESTIGATIONS BY SYMBOLICAL METHODS OF THE INVARIANTS OF BI-TERNARY QUANTICS

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The celebrated mathematical discipline, the symbolical theory of invariants of algebraical forms, has its roots in the inspired work of Clebsch. Up to recent times contributions by this method were largely a product of research in Germany.

In the problem determined by forms in two contragredient sets of three variables (x), (u), the object of study is the fundamental system, S, of the connex, $f = a_x^m \alpha_u^n$. As in the analogous theory of binary forms three objectives may be sought. The first is the method used for the generation of the concomitants, which must be definitive for the formation of all invariants of the existing infinitude. Second, finite expansions analogous to Gordan's series and an appropriate theory of symbolic moduli should be