are fixed to the soluble globulines) are to be found back quantitatively in the filtrate. Thus the way has been paved to obtain an antitoxical solution, at the same time free from anaphylactic by-actions, — which might be of great use to the serum-therapy. Erelong I hope to be able to give further information about this subject.

Mathematics. — *"The types of bilinear ∞^r-complexes of M_{r-2}^n in Sp_r."* By Mr. LUCIEN GODEAUX, at *Liège*. (Communicated by Prof. SCHOUTE).

(Communicated in the meeting of January 30, 1909).

I have been recently [1]) investigating which were the essential characteristics of the most general type of the bilinear complex of conics in Sp_3; it is now my purpose to extend my work to the linear space Sp_r with r dimensions.

Let there be ∞^r varieties M_{r-2}^n with r—2 dimensions and of order n. Any one of these varieties is entirely situated in a linear space Sp_{r-1} of the fundamental space Sp_r. Let us say that these ∞^r varieties form a ∞^r-complex.

The characteristics of such a complex are:

1. The number μ of the M_{r-2}^n situated in a general Sp_{r-1} of Sp_r.

2. The number ν of the M_{r-2}^n passing through a fixed point and the Sp_{r-1} of which passes through a Sp_{r-2} containing the chosen fixed point.

The aim we have here in view is the determination of the essential properties of the most general ∞_r-complex L having the characteristics $\mu = 1$, $\nu = 1$.

Let us notice that all the varieties M_{r-2}^n of Sp_r are the sections by the Sp_{r-1} of the varieties V_{r-1}^n with $r-1$ dimensions and of order n of a linear system $\binom{n+r-1}{n}$ — 1-times infinite K.

The M_{r-2}^n of L are evidently situated on the V_{r-1}^n of an ∞^r-system K' contained in K.

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1) *Détermination des variétés de complexes bilinéaires de coniques.* Bull. de l'Acad. Roy. de Belgique 1908.

THEOREM I. — *The M^n_{r-2} of L situated in the Sp_{r-1} passing through a fixed Sp_{r-1} generate a variety V^{n+1}_{r-1} of $r-1$ dimensions and of order $n+1$.*

Let d be a linear space Sp_{r-2}. Each Sp_{r-1} passing through d contains a M^n_{r-2}. Space d belongs to the variety generated by these M^n_{r-2}, for $\nu = 1$. We deduce from it the above theorem.

THEOREM II. — *A V^n_{r-1} of the system K' contains generally but one M^n_{r-2} of L.* Let us suppose a V^n_{r-1} of K' containing two M^n_{r-2} of L and let us denote by α, β the Sp_{r-1} containing these two M^n_{r-2}. The M^n_{r-2} of which the Sp_{r-1} pass through the Sp_{r-2} common to α and β generate a V^{n+1}_{r-1} on which the points common to α, β and to the two M^n_{r-2} are multiple of order two.

From this ensues that through a point of the Sp_{r-2} common to α, β generally no M^n_{r-2} of L will pass of which the Sp_{r-1} would pass through this Sp_{r-2}, which is contrary to the hypothesis $\nu = 1$; hence the theorem.

CONCLUSION: We see that

1. An Sp_{r-1} contains a single M^n_{r-2} of L, thus to an Sp_{r-1} corresponds a single V^n_{r-1} of K'.

2. A V^n_{r-1} of K' contains a single M^n_{r-2} of L, thus to a V^n_{r-1} of K' corresponds a single Sp_{r-1}.

Hence:

A ∞^r-complex of M^n_{r-2} with characteristics $\mu = 1$, $\nu = 1$ is the intersection of the elements of two varieties in birational correspondence; one of these varieties is composed of the Sp_{r-1} of the space, the other is a homaloid system of V^n_{r-1} r-times infinite.

Liege, Oct. 1908.