

**Mathematics.** — *Demonstration that the concept of spreads of higher order does not come into consideration as a fundamental notion in intuitionistic mathematics.* By Prof. L. E. J. BROUWER\*

(Communicated at the meeting of September 26, 1942.)

In my note, "*Concerning the free development of spreads and functions*",<sup>1)</sup> the process  $M_\sigma$  was considered, through which the fundamental sequence  $F'$ , which is enumerated in an arbitrary, predetermined way, is associated one-to-one with finite choice sequences of numbers and likewise an arbitrary element  $\sigma$  of the spread<sup>2)</sup>  $M$ . We want to call this process  $M_\sigma$  a spread of *second order*, and the successions of figure-sequences thus associated to the unrestricted choice sequences of numbers [we shall call] *the elements of the second-order spread*  $M_\sigma$ .

The assertion stated in my quoted note, that  $M_\sigma$  acts as a subspecies of a spread  $M_1$  which is derivable from  $M$ , and that the union of all  $M_\sigma$  generated from  $M$  is identical with this  $M_1$ , shall be demonstrated as follows. First, we will deal with the construction of the spread  $M_1$ .

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\* Translated from the original German by Jon Sterling.

<sup>1)</sup> Proc. Ned. Akad. v. Wetensch. Amsterdam, **45**, 322 (1942).

<sup>2)</sup> For the sake of simplicity, we restrict ourselves in this note to such spreads, in the process of whose creation neither inhibition nor termination occurs. This restriction is inessential.