

# An Acknowledgement.

By

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Professor M. Fréchet has kindly called my attention to the fact that Theorems 1—3 of my paper „Concerning the relation between separability and the proposition that every uncountable point set has a limit point“<sup>1)</sup> are not new. The following theorems (which I will number for convenience of reference) are given on pp. 805—806, p. 812, and p. 805 respectively of an article by W. Gross<sup>2)</sup>, published in 1914.

I. „Die notwendige und hinreichende Bedingung dafür, dass sich aus einer Menge eine abzählbare Teilmenge  $A$  derart herausgreifen lässt, dass jedes Element der Menge entweder  $A$  angehört oder Häufungselement von  $A$  ist, besteht darin, dass die Menge  $\alpha$ -kompakt ist“<sup>3)</sup>.

II. „Jede nicht abzählbare  $\alpha$ -kompakte Menge mindestens ein Verdichtungselement<sup>4)</sup> enthält“.

III. „Jede Teilmenge einer  $\alpha$ -kompakten Mengen ist wiederum  $\alpha$ -kompakt“.

My Theorem 1 is equivalent to Gross's I. My Theorem 2 is an immediate consequence of his I and II. My Theorem 3 is an immediate consequence of his I and III and my Theorem 4 is a consequence of his II.

<sup>1)</sup> *Fund. Math.*, t. VIII, p. 189.

<sup>2)</sup> *Zur Theorie der Mengen, in denen ein Distanzbegriff definiert ist*, Sitzungsberichten d. k. Akad. der Wissenschaften, Math. Naturw. Kl., Wien, Bd. 123, 1914, pp. 801—819.

<sup>3)</sup> A point set is said to be  $\alpha$ -kompakt (cf. Gross, p. 805) if every uncountable subset of it has at least one limit point.

<sup>4)</sup> A Verdichtungselement is an element of condensation.

As to (1) the relation between the argument given by Gross to establish his I and an argument employed in an earlier (1910) paper <sup>1)</sup> of Fréchet's to establish a less general result, and (2) the question whether Gross completely proves I and for an indication of how his argument may be made complete, see p. 353 of Fréchet's paper *Sur les ensembles abstraits* <sup>2)</sup>. In this paper Fréchet extends and completes certain results of Gross. On pp. 352—353 he gives a proposition equivalent to my Theorem 3.

I regret having overlooked these results of Gross and Fréchet and I wish to thank Professor Fréchet for calling my attention to them.

<sup>1)</sup> M. Fréchet, Les ensembles abstraits et le Calcul Fonctionnel, Rendiconti del Circolo matematico di Palermo, vol. 30 (1910), p. 3.

<sup>2)</sup> Annales scientifiques de l'Ecole Normale Supérieure, 3<sup>e</sup> série, vol. 38, 1921, pp. 341—388.

Austin, Texas, U. S. A., May 1, 1926.

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