two symbols of integration operate upon the same class of functions and give the same integral value for the same function. The other is in reality a pseudo-equivalence expressed in the fact that an integral of one kind may be transformed into an integral of another kind, the functions integrated in the two cases being different. A careful and instructive analysis of these equivalences is given by Hildebrandt.

To one result of this analysis it is desirable to have attention sharply directed. The Stieltjes integral seems destined to play in the future a rôle of central importance in processes of integration and summation. The Lebesgue integral when introduced received almost immediate attention and recognition and found its way rapidly into the main current of mathematical thought; but the Stieltjes integral has been singularly neglected notwithstanding its inherent simplicity and naturalness. Through the summary of its properties given by Hildebrandt and the applications mentioned one is convinced of its central importance and is led to expect it to assume a new place in mathematical thought. In this connection it is of particular interest to note also Hildebrandt's extension of the Stieltjes integral modelled on the Lebesgue extension of the Riemann integral.

We conclude with the following list of misprints in de la Vallée Poussin's monograph: page 20, last line, write $m(F_1 + F_2) = mF_1 + mF_2$; page 28, second theorem, write $(f \geqq A)$ instead of $(f \geqq a)$; page 34, line 16, write $\omega 2$ instead of $\omega_2$; page 96, end of second paragraph, write $Df$ instead of $DF$; page 126, line 9 below, write "Une" instead of "Uue"; page 133, line 2, write "de classe $\leqq \alpha$."

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## SHORTER NOTICES.

*Leçons de Mathématiques Générales.* Par L. ZORETTI. Paris, Gauthier-Villars, 1914. 8vo. xvi + 753 pp.

*Exercices numériques de Mathématiques.* Par L. ZORETTI. Paris, Gauthier-Villars, 1914. 8vo. xv + 125 pp.

THE author of this text and its accompanying set of exercises is well qualified for the task. Formerly instructor in the