measurable sets in such a way that the indefinite integrals (in the D-K-Y sense) are absolutely continuous on each of these, then the conditions of Theorem 9 are satisfied when $J(a, b)$ denotes the D-K-Y integral of $f(x)$, E is any everywhere dense set on X, M is X_0, and $F(x) \equiv f(x)$ on X_0.*

It is a very simple matter to extend the results of the present paper to cases where the interval of definition X is replaced by any measurable point set E on X. The definition of $f(x)$ is extended to points of $X-E$ by letting $f(x)$ be zero at such points. The integral of $f(x)$ on E is then described in terms of the integral of the extended function on X. One could define a simple function on a point set by saying that it is a function which takes on only a finite number of values on this set. This definition is not needed in the present adaptation.

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REFLECTIONS IN FUNCTION SPACE†

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1. *Introduction.* The purpose of this paper is to point out an error,‡ giving the corrected form of the incorrect theorem referred to below as Delsarte's theorem, also to prove a generalization. However, the contribution made to the geometry of function space may be interesting to some on its own account.

We shall consider only functions of one or two variables defined on the interval (a, b) or the corresponding square. All such functions are to be bounded and integrable on the range of definition. We shall denote the continuous arguments on (a, b) by the letters x, s, t, u, written as subscripts or superscripts and shall imply integration on (a, b) with respect to any argument that occurs twice in the same term.

* See Khintchine, Comptes Rendus, vol. 152 (1916), p. 290.

† Presented to the Society, February 28, 1931.

‡ See §3 below.