

is a derivative; therefore\* there exists on  $[s_0 - \epsilon, s_0 + \epsilon]$  a set of positive measure for which  $\phi(s) > 1 - \delta$ , "... , which contradicts the theorem quoted above."

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## A CORRECTION AND AN ADDITION

BY G. E. RAYNOR

1. *A Correction.* In a former paper† by the author the minus sign on the right side of equation (4), page 888, makes the notations of equations (4) and (5) for the function  $G$  inconsistent. This difficulty may be removed by changing the sign of  $G$  throughout the paper wherever the first argument of  $G$  has  $r_1$  in the denominator. This change makes the first footnote on page 888 superfluous and it should be deleted. The second argument of  $G$  in equations (9) and (20) should be 0 instead of  $\theta$ .

2. *An Addition.* The mean value of the function  $\Phi$  over the circle  $C_2$  was considered, in the paper, for the case of the singular point  $P$  outside of  $C_2$  and for the case of  $P$  inside of  $C_2$ . The question naturally arises as to what the situation is in case  $P$  lies on  $C_2$ . This third case is not, however, of much interest since the integral

$$\int_{C_2} \Phi ds,$$

which is now in general improper, will not in general exist. This may readily be verified for the function

$$\Phi = \left( \frac{r^2}{r_1^2} - \frac{r_1^2}{r^2} \right) \cos 2\theta$$

integrated over the circle  $C_2$ , whose equation is  $\rho = r_1 \sin \theta$ . It will be found that even the principal value of the above integral is infinite while of course the value of  $\Phi$  at the center of  $C_2$  is finite.

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\* Hobson, *Theory of Functions of a Real Variable*, vol. 1, §403.

† On the extension of the Gauss mean-value theorem to circles in the neighborhood of isolated singular points of harmonic functions, this Bulletin, vol. 36 (1930), pp. 887-893.