CORRECTION.

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Mr H. D. Ursell has drawn my attention to a mistake in my paper »Analysis of Conditions of Generalised Almost Periodicity».[1] To deduce the inequality (27) of p. 223 from the inequality (26) we have to prove that for a B^* *a. p.* function $f(t)$ and a satisfactorily uniform set of numbers τ_i

$$(1)\qquad \int_p^q \left\{ \overline{M}_i \int_x^{x+c} |f(t+\tau_i)-f(t)|\,dt \right\} dx \leqq \overline{M}_i \int_p^q \left\{ \int_x^{x+c} |f(t+\tau_i)-f(t)|\,dt \right\} dx.$$

This inequality does not follow from the Fatou theorem and is to be proved directly as it was done in the paper »Almost Periodicity and General Trigonometric Series»[2] by A. S. Besicovitch and H. Bohr for the case of $\overline{B}$ *a. p.* functions. However in the present case the proof is incomparably simpler.

Assuming that (1) is false we write

$$(2)\qquad \overline{M}_i \int_p^q \left\{ \int_x^{x+c} |f(t+\tau_i)-f(t)|\,dt \right\} dx = \int_p^q \left\{ \overline{M}_i \int_x^{x+c} |f(t+\tau_i)-f(t)|\,dt \right\} dx + a$$

where $a > 0$.

Then, given ε, $(0 < \varepsilon < \frac{1}{6} a)$, there exist values of n as large as we please for which

[1] Acta mathematica, vol. 58, pp. 217—230.

[2] Acta mathematica, vol. 57, pp. 203—292.

$$(3)\qquad \int_p^q \left\{ \frac{1}{n}\sum_1^n \int_x^{x+c} |f(t+\tau_i) - f(t)|\,dt - \overline{M}_i \int_x^{x+c} |f(t+\tau_i) - f(t)|\,dt \right\} dx > a - \varepsilon .$$

Denoting by E the set of values of x for which the integrand is greater than $\frac{\varepsilon}{q-p}$ we have

$$(4)\qquad \int_E \left\{ \frac{1}{n}\sum_1^n \int_x^{x+c} |f(t+\tau_i) - f(t)|\,dt - \overline{M}_i \int_x^{x+c} |f(t+\tau_i) - f(t)|\,dt \right\} dx > a - 2\,\varepsilon .$$

Obviously $m\,E$ is small for large values of n. The functions $f(t)$ and $\overline{M}_i \int_x^{x+c} |f(t+\tau_i) - f(t)|\,dt$ being assumed integrable (L) we conclude that for sufficiently small $m\,E$

$$(5)\qquad \int_E \left\{ \frac{1}{n}\sum_1^n \int_x^{x+c} |f(t+\tau_i)|\,dt \right\} dx > a - 3\,\varepsilon > \frac{a}{2}.$$

Hence there exists an x_0 belonging to E and a fortiori to (p, q) such that

$$(6)\qquad \frac{1}{n}\sum_1^n \int_{x_0}^{x_0+c} |f(t+\tau_i)|\,dt > \frac{a}{2\,m\,E}.$$

From this inequality we easily conclude that

$$\overline{M}_x \{ |f(x)| \} = \infty .$$

But it is easy to see that this equation is impossible on account of the definition of B^* *a. p.* functions and thus the inequality (1) is proved.