

set determining  $\mathfrak{N}$ ; and moreover it is seen that the same result is true of  $\{\Psi_\mu^*\}$ .

Remark 2. It is found immediately from the method of the proof of Theorem A that, if the (one-dimensional or two-dimensional) measure of  $\Delta(N)$  is zero, the second member in the right-hand side of (1) vanishes and  $\{\varphi_\nu\}$  is a complete orthonormal set, and that, if, on the contrary, the point spectrum of  $N$  is empty,  $N$  is expressed by that second member in which the orthonormal set  $\{\psi_\mu\}$  is complete.

Corollary A. If, in Theorem A,  $f(z)$  is a function holomorphic on the closed domain  $D\{z: |z| \leq \|N\|\}$ , then  $\|f(N)\psi_\mu\|^2$ ,  $\mu=1, 2, 3, \dots$ , assume the same value, which will be denoted by  $\sigma'$ ; and if, in addition, we choose arbitrarily a complex constant  $c'$  with absolute value  $\sqrt{\sigma'}$  and put  $\Psi'_\mu = \sum_j u'_{\mu j} \psi_j$  where  $u'_{\mu j} = (f(N)\psi_\mu, \psi_j)/c'$  and  $\sum_j$  denotes the sum for all  $\psi_j \in \{\psi_\mu\}$ , then the equality

$$f(N) = \sum_\nu f(\lambda_\nu) \varphi_\nu \otimes L_{\varphi_\nu} + c' \sum_\mu \Psi'_\mu \otimes L_{\psi_\mu}$$

holds on  $\mathfrak{H}$  and the matrix  $(u'_{kj})$  associated with all the elements of  $\{\psi_\mu\}$  possesses the same characters as those of the matrix  $(u_{kj})$  described in Theorem A.

Proof. Since, by definition, we have  $f(N) = \int_D f(z) dK(z)$ , which implies that the adjoint operator  $f^*(N)$  of  $f(N)$  is given by  $f^*(N) = \int_D \overline{f(z)} dK(z)$ , and since, by hypotheses,  $f(z)$  is holomorphic on  $D$ , there is no difficulty in showing that

- 1°  $f(N)$  is a bounded normal operator in  $\mathfrak{H}$ ;
- 2° the point spectrum of  $N$  is given by  $\{f(\lambda_\nu)\}_{\nu=1,2,3,\dots}$ , and  $\varphi_\nu$  is an eigenelement of  $f(N)$  corresponding to the eigenvalue  $f(\lambda_\nu)$ ;
- 3° the continuous spectrum of  $f(N)$  also is given by the image of  $\Delta(N)$  by  $f(z)$ .

Accordingly the present corollary is a direct consequence of Theorem A.

Correction to Sakuji Inoue: "Functional-Representations of Normal Operators in Hilbert Spaces and Their Applications" (Proc. Japan Acad., Vol. 37, No. 10, 614–618 (1961)).

Page 614, line 17 from bottom: read " $\sum_{j=1}^{\infty}$ " in place of " $\sum_{j=1}^{\infty}$ ".

Page 615, line 1: read " $b_\mu$ " in place of " $b_\mu$ ".

Page 616, line 1: read " $\overline{L_{\varphi_\nu}(y)}$  and  $\overline{L_{\psi_\kappa}(y)}$ " in place of " $\overline{L_{\varphi_\kappa}(y)}$  and  $\overline{L_{\varphi_\nu}(y)}$ ".

Page 617, line 18: read "relations" in place of "velations".