$$(25)\qquad S_n(z;\,f)=S_n(z;\,g)+\sum_{k=1}^{N}S_n(z;\,g_k y_{m_k})$$
$$=\frac{1}{2\pi i}\int_{\Gamma_R}\frac{W_{n+1}(t)-W_{n+1}(z)}{W_{n+1}(t)}\frac{g(t)}{t-z}dt$$
$$+\sum_{k=1}^{N}Y_{m_k}\left(\frac{W_{n+1}(t)-W_{n+1}(z)}{W_{n+1}(t)}\frac{g_k(t)}{t-z};\,a_k\right).$$

By the method similar to the proof of Theorem 3, we have

$$n^{m_k}\left(\frac{\phi(a_k)}{w}\right)^{n+1}S_n(z;g_k y_{m_k})=n^{m_k}\left(\frac{\phi(a_k)}{w}\right)^{n+1}Y_{m_k}\left(\frac{W_{n+1}(t)-W_{n+1}(z)}{W_{n+1}(t)}\frac{g_k(t)}{t-z};\,a_k\right)$$
$$\sim n^{m_k}\phi^{n+1}(a_k)\frac{W_{n+1}(z)}{w^{n+1}}Y_{m_k}\left(\frac{1}{W_{n+1}(t)}\frac{g_k(t)}{t-z};\,a_k\right)$$
$$\sim n^{m_k}\phi^{n+1}(a_k)\lambda(\phi(z))Y_{m_k}\left(w^{-(n+1)}\frac{g_k(t)}{\lambda(\phi(t))(t-z)};\,a_k\right)$$
$$+\,n^{m_k}\phi^{n+1}(a_k)\lambda(\phi(z))Y_{m_k}\left[w^{-(n+1)}\left(\frac{1}{\lambda(w)}-\frac{t^{n+1}}{W_{n+1}(t)}\right)\frac{g_k(t)}{t-z};\,a_k\right]$$
$$\sim(-1)^{m_k}[\phi(a_k)]^{m_k}\lambda(\phi(z))\frac{g_k(a_k)}{\lambda(\phi(a_k))(a_k-z)}=B_k\neq 0,$$

for z exterior to Γ_R.

As a generalization of Theorem 4, a theorem follows by Lemma 3. That is,

Theorem 5. *Let D be a closed limited points set with the capacity Δ whose complement K with respect to the extended plane is connected and regular in the sense that K possesses a Green's function with pole at infinity. Let $w=\phi(z)$ map K onto the region $|w|>1$ so that the points at infinity correspond to each other. Let $W_n(z)$ be the polynomials of respective degrees, n which satisfy the condition (24) and $f(z)$ be a function such that represented by (23).*

Then the sequence of polynomials $S_n(z;f)$ of respective degrees n found by interpolation to $f(z)$ in all the zeros of $W_{n+1}(z)$ diverges at every point exterior to Γ_R. Moreover, we have

$$(26)\qquad \overline{\lim}_{n\to\infty}\left|n^p\left(\frac{R}{\phi(z)}\right)^n S_n(z;f)\right|>0;\quad |\phi(z)|>R>1,$$

where p is the minimum of real parts of m_k in (23).

Additions and Corrections to Tetsujiro Kakehashi: "The Divergence of Interpolations. I" (Proc. Japan Acad., 30, No. 8, 741–745 (1954))

Page 742, equation (5), for "$\dfrac{1}{2\pi i}$" read "$\dfrac{(-1)^m}{2\pi i}$".

Page 744, line 4, for "$\lim_{n\to\infty}\dfrac{1.2\cdots(n-1)}{z(z+1)\cdots(z+n-1)}$"

read "$\lim_{n\to\infty}\dfrac{1.2\cdots(n-1)}{z(z+1)\cdots(z+n-1)}n^z$"