CORRECTION TO "ON THE FIX-POINTS OF COMPOSITE FUNCTIONS AND GENERALIZATIONS"

By

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The proof of Lemma 4.2 is incomplete. However, Theorems 4.2 and 4.4 as well as a version of Theorem 4.1, in which

$$K \log M(r - 7\eta, f(g)) < N\left(r, \frac{1}{f(g) - P}\right)$$

is replaced in (50) by

$$K \log M(r, f(g)) < \bar{n}\left(r + \eta, \frac{1}{f(g) - P}\right),$$

remain valid according to the following new result.

Lemma ([2]). *Let $H(z)$ be holomorphic in $|z| \le R$ and let*

$$N := \bar{n}\left(R, \frac{1}{H}\right) + \bar{n}\left(R, \frac{1}{H - 1}\right),$$

where $\bar{n}(R, h)$ denotes the number of distinct poles of h in $|z| < R$. Then for $0 < r < R$, we have

$$\log M(r, H) < \frac{20R}{R - r}\left(2N \log \frac{80eR}{R - r} + 195 + 4 \log^+ |H(z_0)| + 12 \log^+ \frac{5R}{R - r}\right),$$

for all z_0 in $|z| < (R - r)/5$, except possibly for points in the union of exceptional disks, the sum of whose radii does not exceed $(R - r)/20$.

In fact, the following result is proved in [2]: *Let $f(z)$ be a transcendental meromorphic function and $Q(z)$ a rational function. Then for an arbitrary transcendental entire function $g(z)$ we have*

$$\limsup_{r \to \infty} \frac{N\left((1 - o(1))r, \frac{1}{f(g) - Q}\right)}{T(r, g)} = \infty.$$

REFERENCES

[1] C. C. Yang and J. H. Zheng, *On the fix-points of composite meromorphic functions and generalizations*, J. Analyse Math. **68** (1996), 59–93.

[2] J. H. Zheng, *On the value distribution of composite meromorphic functions*, preprint.

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