deciphering. This is never difficult, but can be annoying. The terms "ω-chain" and "$\omega^* + \omega$-chain" are awkward and could be avoided by having some pictures. Indeed, the addition of pictures, particularly of orbits, would be very helpful. Considerably more attention could have been given to the notion of conjugacy. And one wishes that the book had been set in type, with justified margins, rather than being reproduced directly from typescript.

But these cavils are minor. Professor Targonski has done a great service for all of us interested in iteration theory, and we can thank him by seeing to it that his book sells out as quickly as possible.

REFERENCES

1. N. H. Abel, *Détermination d'une fonction au moyen d'une équation qui ne contient qu'une seule variable*, Oeuvres, Tome II, pp. 36–39.
2. U. Burkart, *Zur Charakterisierung diskreter dynamischer Systeme*, Inaugural-Dissertation, Phillips-Universität Marburg/Lahn, 1981.
3. R. Graw, *Über die Orbitstruktur stetiger Abbildungen*, Inaugural-Dissertation, Philips-Universität Marburg/Lahn, 1981.
4. R. Isaacs, *Iterates of fractional order*, Canad. J. Math. **2** (1950), 409–416.
5. L. Jonker, *A monotonicity theorem for the family* $f_a(x) = a - x^2$, Proc. Amer. Math. Soc. **85** (1982), 434–436.
6. M. Kuczma, *Functional equations in a single variable*, Monograf. Mat. Tom 46, PWN, Warsaw, 1968.
7. R. M. May, *Simple mathematical models with very complicated dynamics*, Nature **261** (1976), 459–467.
8. R. E. Rice, B. Schweizer, and A. Sklar, *When is* $f(f(z)) = az^2 + bz + c$?, Amer. Math. Monthly **87** (1980), 252–263.
9. A. N. Sharkovskiĭ, *Co-existence of cycles of a continuous mapping of the line into itself*, Ukrain. Mat. Zh. **16** (1964), 61–71. (Russian)
10. R. Tambs Lyche, *Sur l'équation fonctionnelle d'Abel*, Fund. Math. **5** (1924), 331–333.
11. G. Zimmermann, *Über die Existenz iterativer Wurzeln von Abbildungen*, Inaugural-Dissertation, Philipps-Universität Marburg/Lahn, 1978.

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0273-0979/83 $1.00 + $.25 per page

Birkhoff interpolation, by G. G. Lorentz, K. Jetter and S. D. Riemenschneider, Encyclopedia of Mathematics and its Applications, vol. 19, Addison-Wesley, Reading, Mass., 1982, lv + 237 pp., $32.50. ISBN 0-2011-3518-3

When I learned that G. G. Lorentz was writing a book on Birkhoff interpolation, I was hardly surprised. After all, no one has done more than Lorentz to develop and popularize this topic over the past fifteen years. On the other hand, I had the feeling that perhaps it was premature to commit the subject to book form. For despite considerable progress in understanding the basic problem, the general solution is not in sight and loose ends remain almost everywhere. It was thus with some misgivings that I agreed to write this review. When the copy of the book (coauthored by K. Jetter and S. D. Riemenschneider) arrived, however, I was pleased to find a good deal more