1139-11-83 **Michael Tobin*** (`m.tobin@gmail.com`), 1700 Bolton Street, Baltimore, MD 21217. *Advances in Transcendental Number Theory Since the Proof of the Gelfond-Schnieder Theorem.*

A survey of the literature of transcendence theory since the proof of the Gelfond-Schnieder Theorem (1934) reveals two divergent tendencies manifested in the work of Alan Baker and Boris Zilber and presaged by the work of Hermite and Cantor, respectively. The first "school," embodied in the work of Baker, uses auxiliary functions to approximate transcendental numbers to natural numbers. The second, represented by Zilber and, distantly, Cantor, seeks to approximate transcendental numbers to complex numbers. The evolution of these somewhat divergent techniques is observed in the ensuing literature and analyzed. The synthetic ramifications of a turn toward computer science modeling and thinking are accounted for and evaluated, especially the research that was sparked by the appearance of Daniel Richardson's (1968) "Some Undecidable Elementary Functions of a Real Variable." An ambient assessment of the current state of transcendence theory is made on this basis, specifically in regard to the synthetic implications of computer science applications in the field. (Received January 30, 2018)