1067-03-750   **Henry P Towsner*** (`htowsner@gmail.com`), Department of Mathematics, University of California, Box 951555, Los Angeles, CA 90095. *Beyond the Correspondence Principle.*

The Correspondence Principle gives a means for translating problems in combinatorics to problems in ergodic theory, and vice-versa. While Furstenberg's original proof was purely combinatorial, we will discuss the variant proof using nonstandard analysis. Recent work, most notably by Hrushovski, has shown that far more information can be preserved by the correspondence, making it possible to obtain combinatorial information from more subtle arguments on the analytic side. (Received September 14, 2010)