1078-37-167 **Stephen R Muir*** (muirst@ucr.edu). *Thermodynamical formalism for a modified shift map.*

Some typical results in the thermodynamical formalism (specifically in the applications of transfer operators to Gibbs/equilibrium measures) are reproduced in a novel setting: the "alphabet" E is a compact metric space equipped with an *apriori* probability measure ν and an endomorphism T. The "modified shift map" is defined on the product space $E^{\mathbb{N}}$ by the rule $(x_1x_2x_3\dots) \mapsto (T(x_2)x_3\dots)$. The greatest novelty is found in the variational principle, where a term must be added to the entropy to reflect the transformation of the first coordinate by T after shifting. Our motivation is that this system, in its full generality, cannot be treated by the existing methods of either rigorous statistical mechanics of lattice gases (where only the true shift action is used) or dynamical systems theory (where the apriori measure is always implicitly taken to be the counting measure). (Received December 05, 2011)