

Some Universal and Scaling Behaviors in Human Societies

Chin-Kun HU¹

¹Institute of Physics, Academia Sinica, Nankang, Taipei 11529, Taiwan

E-mail: ¹huck@phys.sinica.edu.tw

Abstract

Universality and scaling are important concepts in the study of critical many-body physical systems [1, 2, 3]. It is pointed out that such concepts are also useful for describing some activities in human societies. The discussed problems include crossover behavior of stock returns in US and Taiwan stock markets [4], universality and scaling in the statistical data of literary works [5], and universal pattern in the fall of historical dynasties.

Keyword: Universality, Scaling, Human Activities

References

- [1] H. E. Stanley, *Introduction to Phase Transitions and Critical Phenomena* (Oxford Univ. Press, New York, 1971).
- [2] H. Watanabe, N. Ito, and C.-K. Hu, *J. Chem Phys.* **136**, 204102 (2012).
- [3] For a recent review, see C.-K. Hu, *Chin. J. Phys. (Taipei)* 52, 1-76 (2014).
- [4] W.-J. Ma, S.-C. Wang, C.-N. Chen, and C.-K. Hu, *EPL* **102**, 66003 (2013).
- [5] C.-K. Hu and W.-C. Kuo, in in Dah-An Ho and Ovid J. L. Tzeng ed. *POLA Forever: Festschrift in honor of Professor William S. Y. Wang on his 70th birthday* (Institute of Linguistics, Academia Sinica, Taipei) (2005).