

Addendum: Noise-Induced Order, K. Matsumoto and I. Tsuda, *J. Stat. Phys.* **31**:87 (1983).

When our paper was in press, we discovered that the phenomenon of noise-induced order had been independently found in the literature. This was brought to our attention by G. Mayer-Kress.

Mayer-Kress and Haken studied a smooth perturbation of a logistic map which has a positive Schwarzian derivative, and there they also observed a noise-induced transition from positive to negative Lyapunov numbers.⁽¹⁾ However, the mechanisms are different between their phenomenon and ours, although both phenomena may be called noise-induced order (or noise-induced periodicity). Their observations are based on the multibasin. On the other hand, our observations are based on the steepness of the map.

Moreover, the phenomenon that poor precision can produce periodicity has also been described by Mayer-Kress and Haken,⁽²⁾ and Levy.⁽³⁾ Mayer-Kress and Haken observed this phenomenon in the paper on intermittency in the logistic map. Although we predicted this kind of phenomenon in our paper, our mentioning about that is not prediction but fact as they have already observed that.

All readers should appreciate their contributions on the phenomenon of noise-induced order. On the other hand, at the present our paper is only one systematic study of this phenomenon as far as we know.

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REFERENCES

1. G. Mayer-Kress and H. Haken, in *Evolutionary of Chaos and Order*, H. Haken, ed., Springer series in synergetics (Springer, New York, 1982); G. Mayer-Kress and H. Haken, to be published in *Physica D* (1983).
2. G. Mayer-Kress and H. Haken, *Phys. Lett.* **82A**:151 (1981).
3. Y. E. Levy, *Phys. Lett.* **88A**:1 (1982).