

# Chaos (glossary)

From SEBoK  
chaos

*(1) A state of disorder or unpredictability. (Oxford English Dictionary)*

*(2) A chaotic system has elements which are not interconnected and behave randomly with no adaptation or control. (Oxford English Dictionary)*

*(3) Chaos theory is applied to certain types of dynamic system (e.g. the weather) which, although they have structure and relationships, exhibit un-predictable behavior. These systems are deterministic; their future behavior is fully determined by their initial conditions with no random elements involved. However, their structure is such that (un-measurably) small perturbations in inputs or environmental conditions may result in unpredictable changes in behavior. This behavior is known as deterministic chaos, or simply chaos. (Kellert, 1993)*

## Sources

(1) and (2) *Oxford English Dictionary*. s.v. "Chaos."

(3) Kellert, S. 1993. *In the Wake of Chaos: Unpredictable Order in Dynamical Systems*. Chicago, IL, USA: University of Chicago Press. p. 32. ISBN 0-226-42976-8.

## Discussion

(1) and (2) are the general usage definitions in which chaos means random and unconnected, e.g. not a system.

(3) is a mathematical definitions of a class of natural systems which appear chaotic, but have underlying mathematical order them.

## SEBoK v. 2.2, released 15 May 2020

Retrieved from "[https://sebokwiki.org/w/index.php?title=Chaos\\_\(glossary\)&oldid=58353](https://sebokwiki.org/w/index.php?title=Chaos_(glossary)&oldid=58353)"

- 
- This page was last edited on 7 May 2020, at 08:01.

