Xevents, Complexity and Resilience

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What is an Xevent, Anyway?

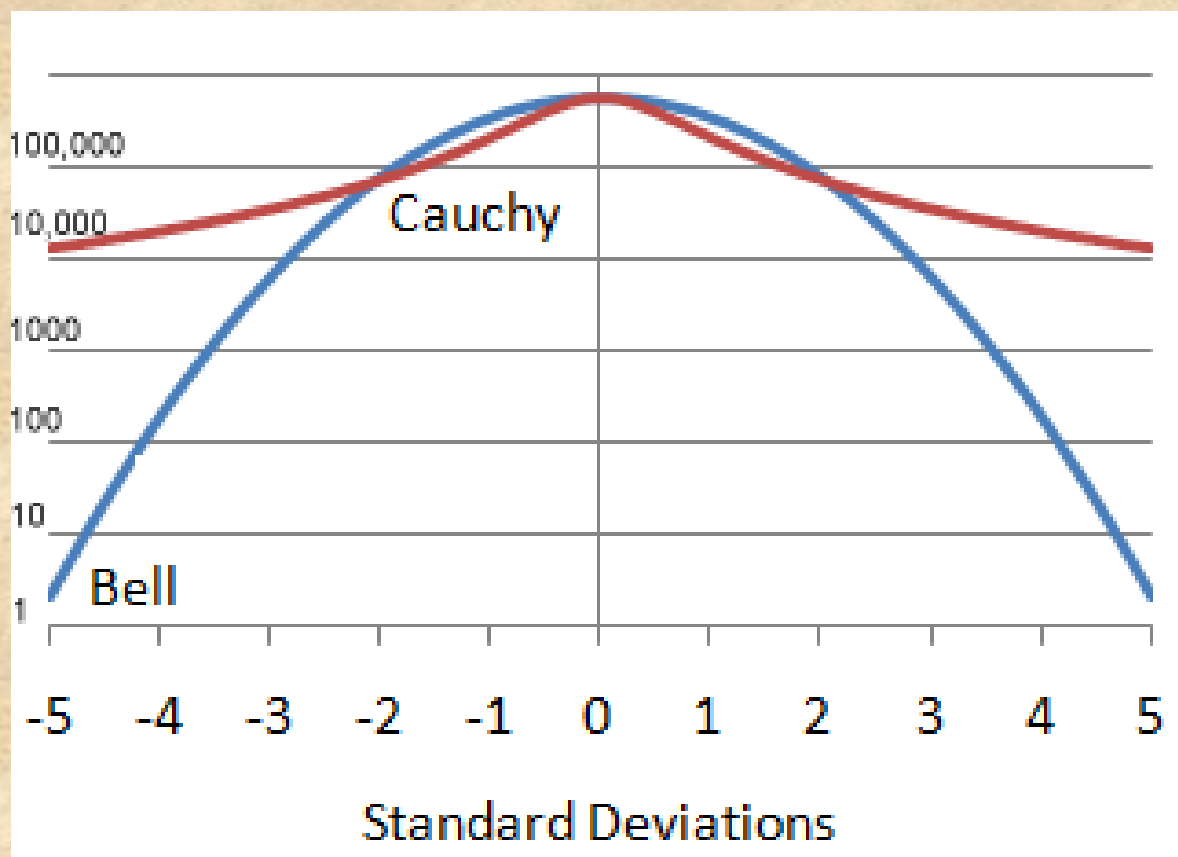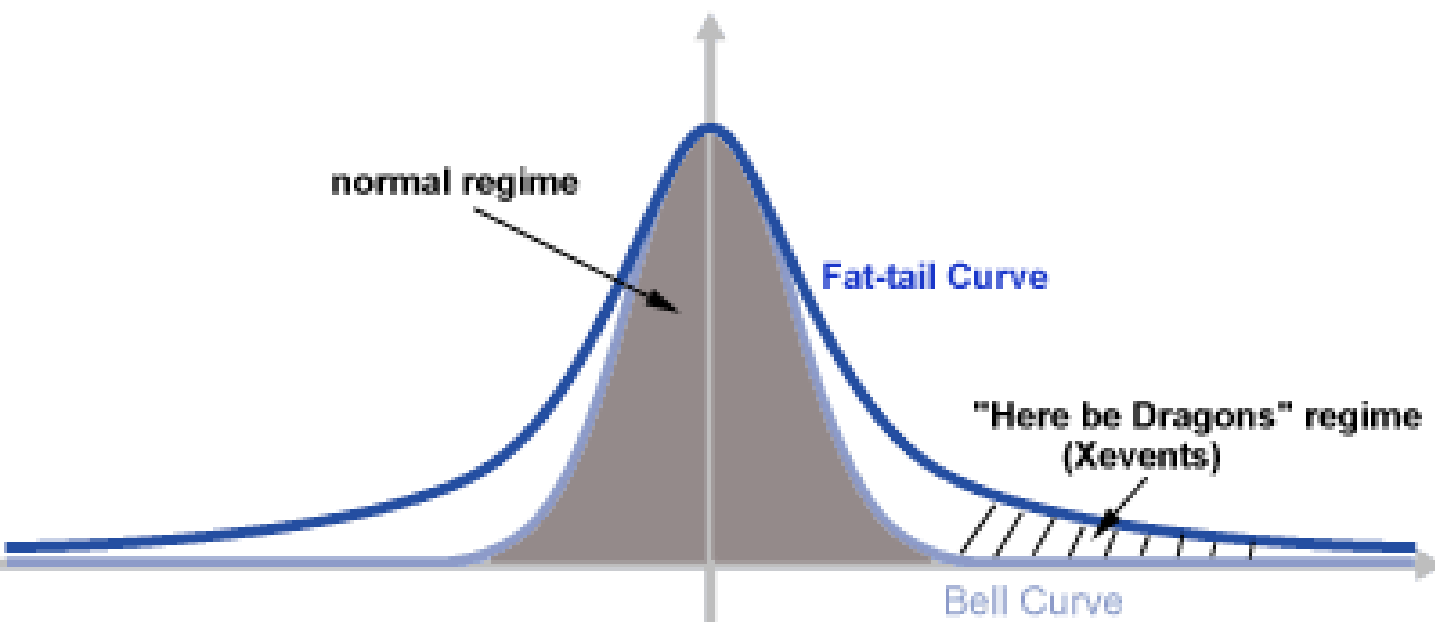## *The Conventional Wisdom*

- **Short time duration**
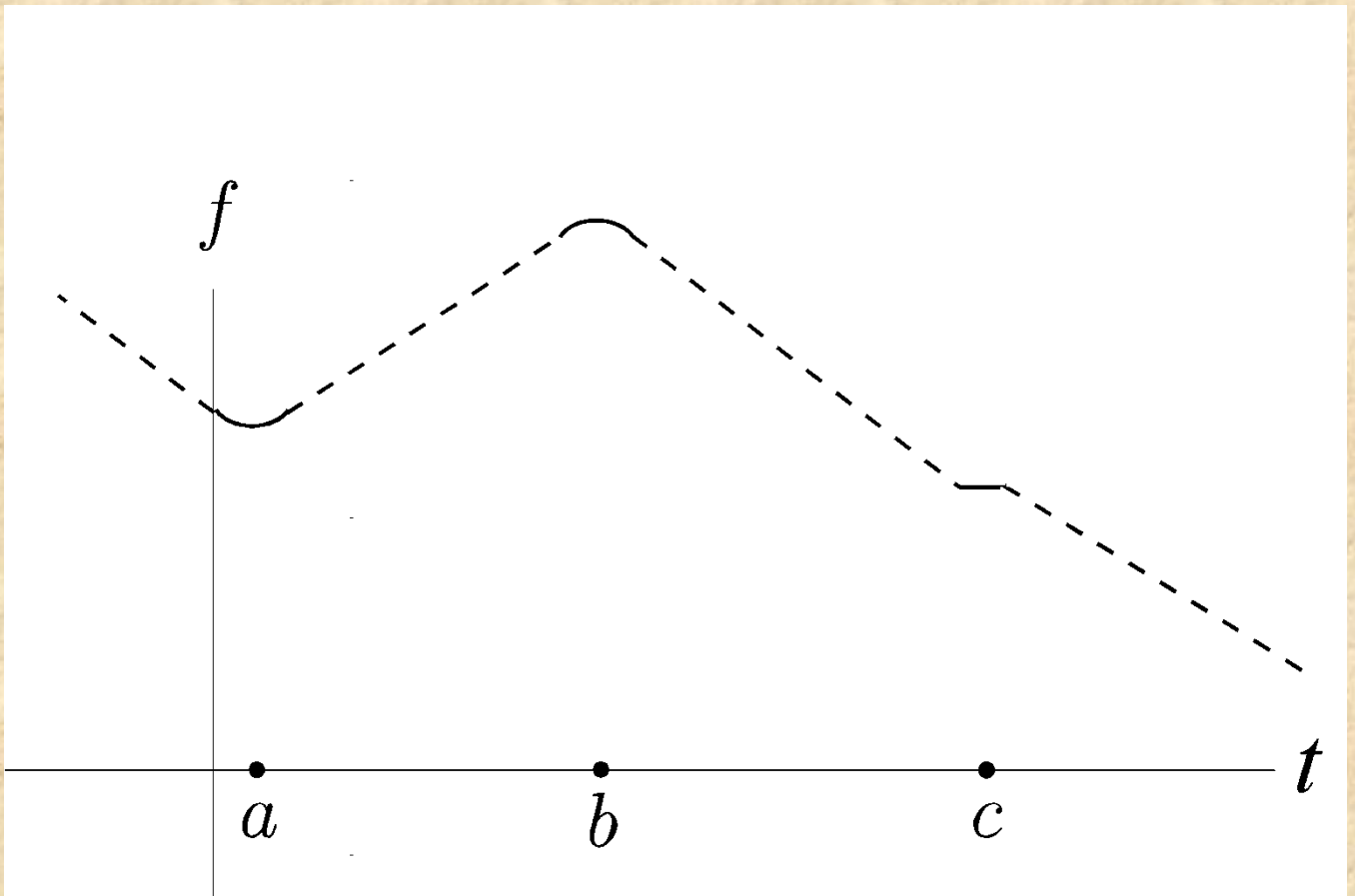- **Rare**
- **Catastrophic**

The Xevents View

- **Unfolding time (UT)**
- **Impact time (IT)**
- **Rare**
- **Good or bad**

The Xevents Regime

normal regime

Fat-tail Curve

"Here be Dragons" regime (Xevents)

Bell Curve

100,000

10,000

Cauchy

1000

100

10

Bell

1

-5 -4 -3 -2 -1 0 1 2 3 4 5

Standard Deviations

Xevents ≈ Critical Points

Complexity Mismatches

Law of Requisite Complexity:

"Only complexity can control/destroy complexity"

Examples of Complexity Mismatches

- Arab Spring (gov't vs public)

- Japanese earthquake (nature vs humans)

- Financial Crash of 2007 (financial services vs regulators)
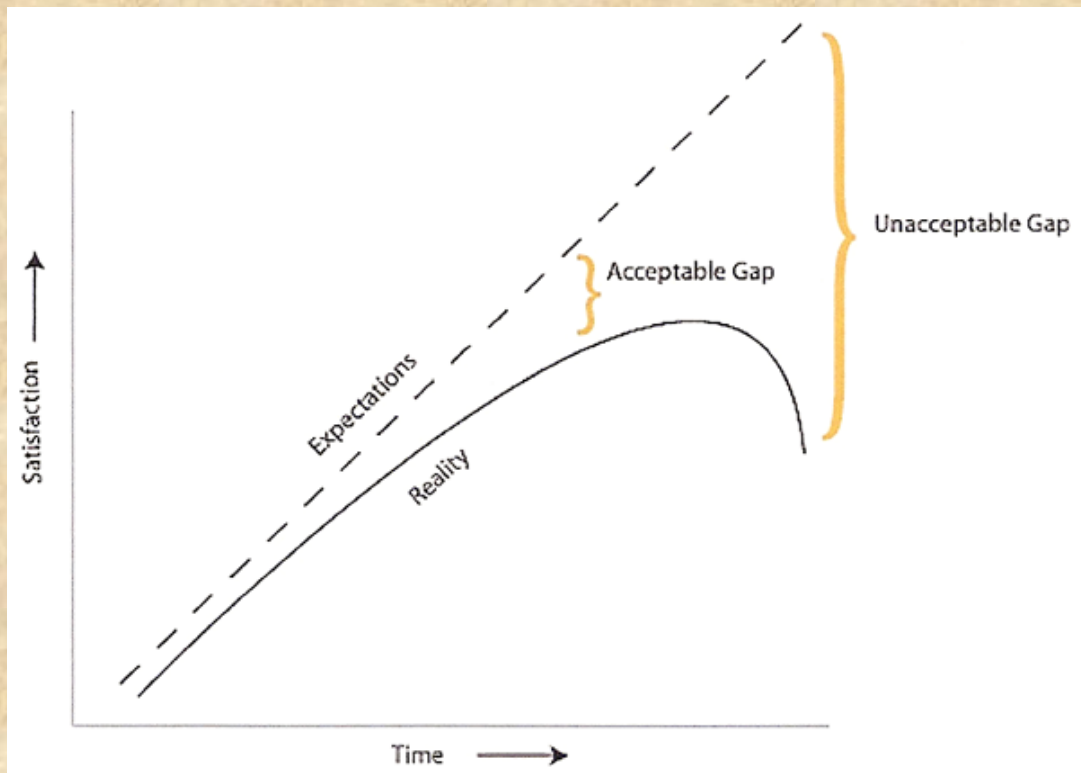
What is Social Complexity?

Answer: At present, nobody really knows

Idea: It's tied up with degrees freedom in a system

Socionomics and Social Complexity?

Conjecture

"Social complexity impacts expectations; hence, it impacts changes of social mood"

Complexity and Resilience

Key Observation

Resilience is a property of a system, ***together*** with its environment

Conjecture

greater resilience ≈ smaller gap

Research Questions

• How to measure social complexity?

• How to measure the complexity of social mood?

• What is the complexity gap of two (or more) systems?

• Timescales of change in complexity vs change in mood?