

# Mind-Body-Chaos

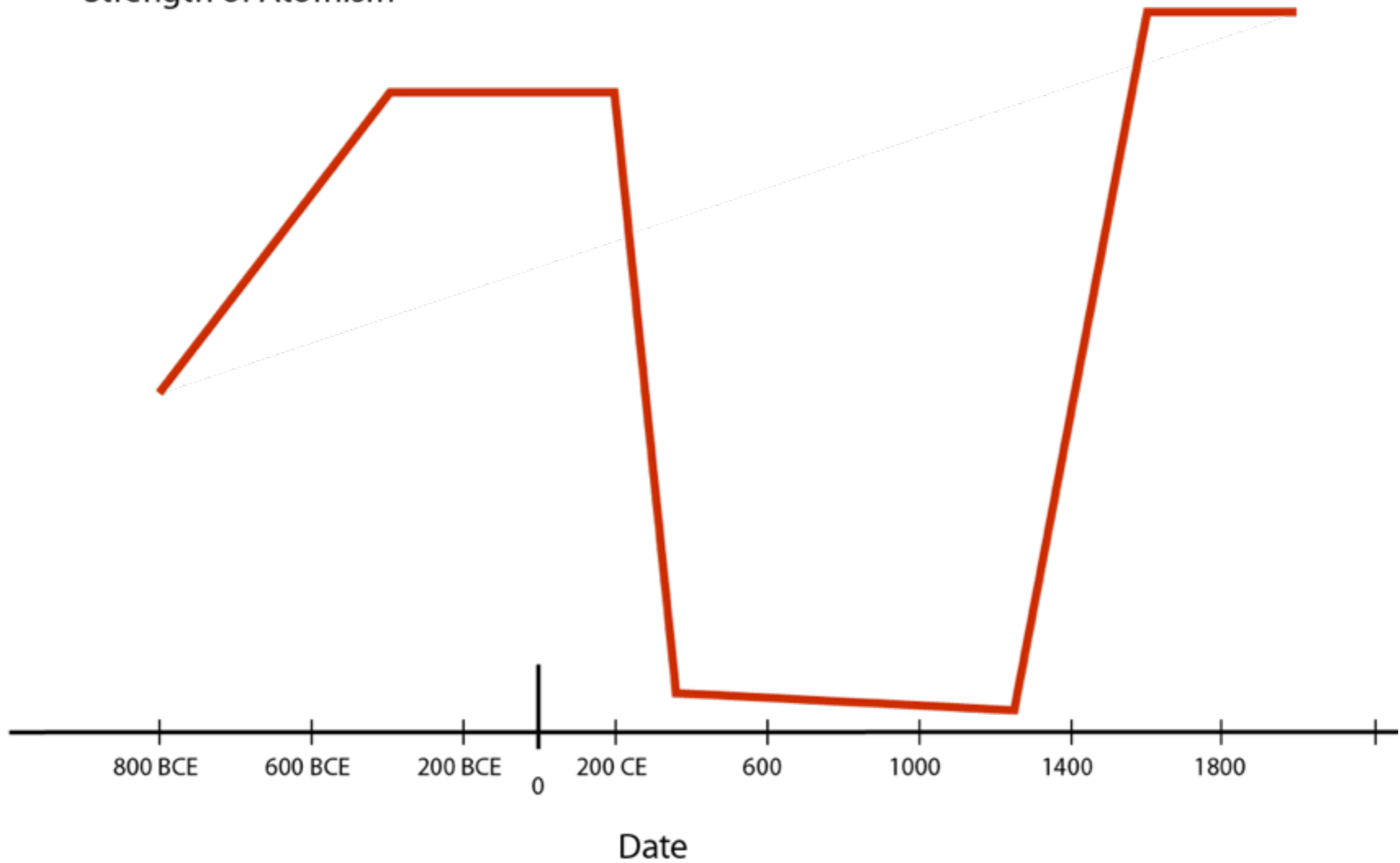
Ralph Abraham  
Esalen Institute, Saturday AM  
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# Outline

- Atomism of Giordano Bruno
- Dynamic Cellular Networks
- Mind-Body-Chaos

# Atomism of Giordano Bruno

Strength of Atomism



# Atomism over Time

## Chronographic of Life Bars

The most important figures, in order of birthdate.

Renaissance	1300	1700	
Lull	1232	1315	
Cusanus	1401	1464	
Ficino	1433	1499	
Pico	1463	1494	
Copernicus	1473	1543	
Dee	1527	1602	
Digges	1546	1595	
Bruno	1548	1600	
Galileo	1564	1642	
Kepler	1571	1630	
Fludd	1574	1637	
Descartes	1595	1650	
Kircher	1602	1680	

Revised by Ralph Abraham 09 August 2011

# Renaissssance of Atomism

# Bruno (1548-1600)

- Six Italian Dialogues, London, 1584-85
- Three Latin Poems, Frankfort, 1591
  - On the triple minimum
  - On the monad
  - On the immense

# Bruno's Atomism

- Atoms = Minima = small spheres
- Each atom has a soul (mind, intelligence, energy)
- Souls order the form-making of matter
- Souls are associated to divine intelligence

# Descartes (1595-1650)

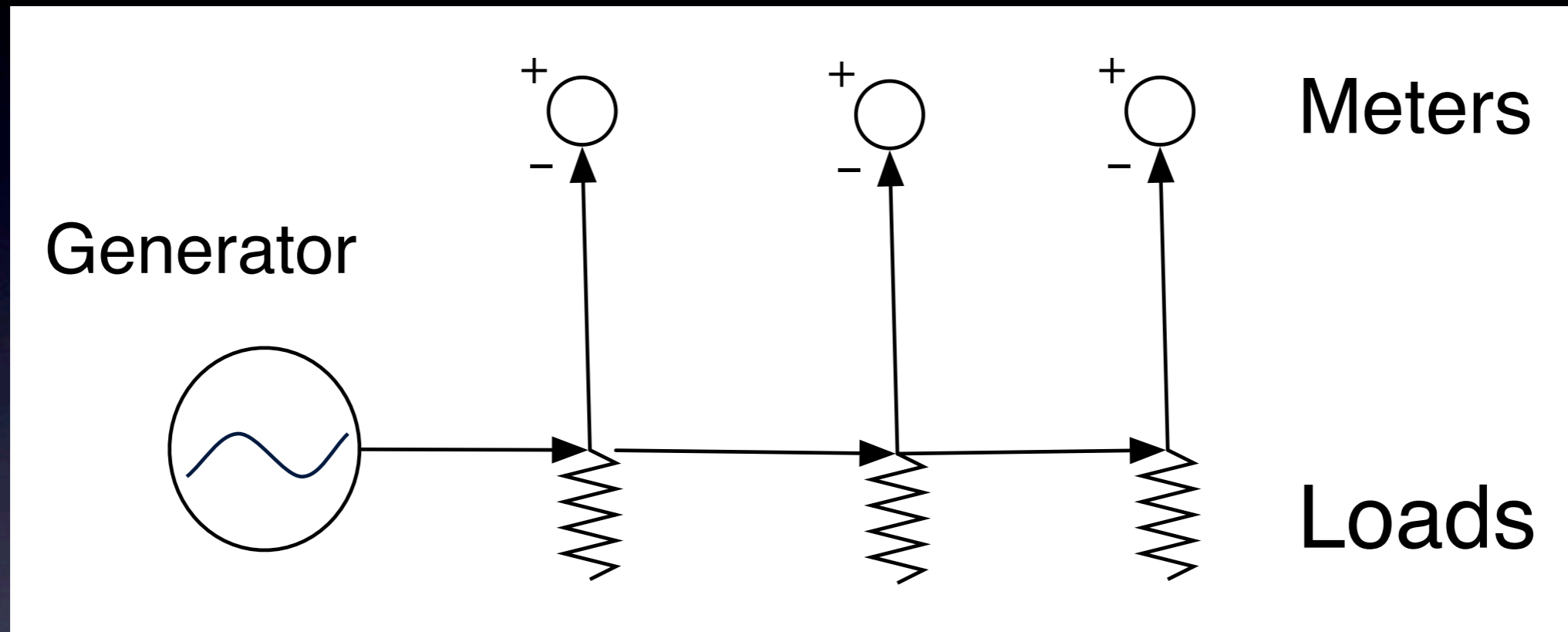
- *The Passions of the Soul*, 1646 (212 articles)
- Part I. About the Passions in General (50 art.)



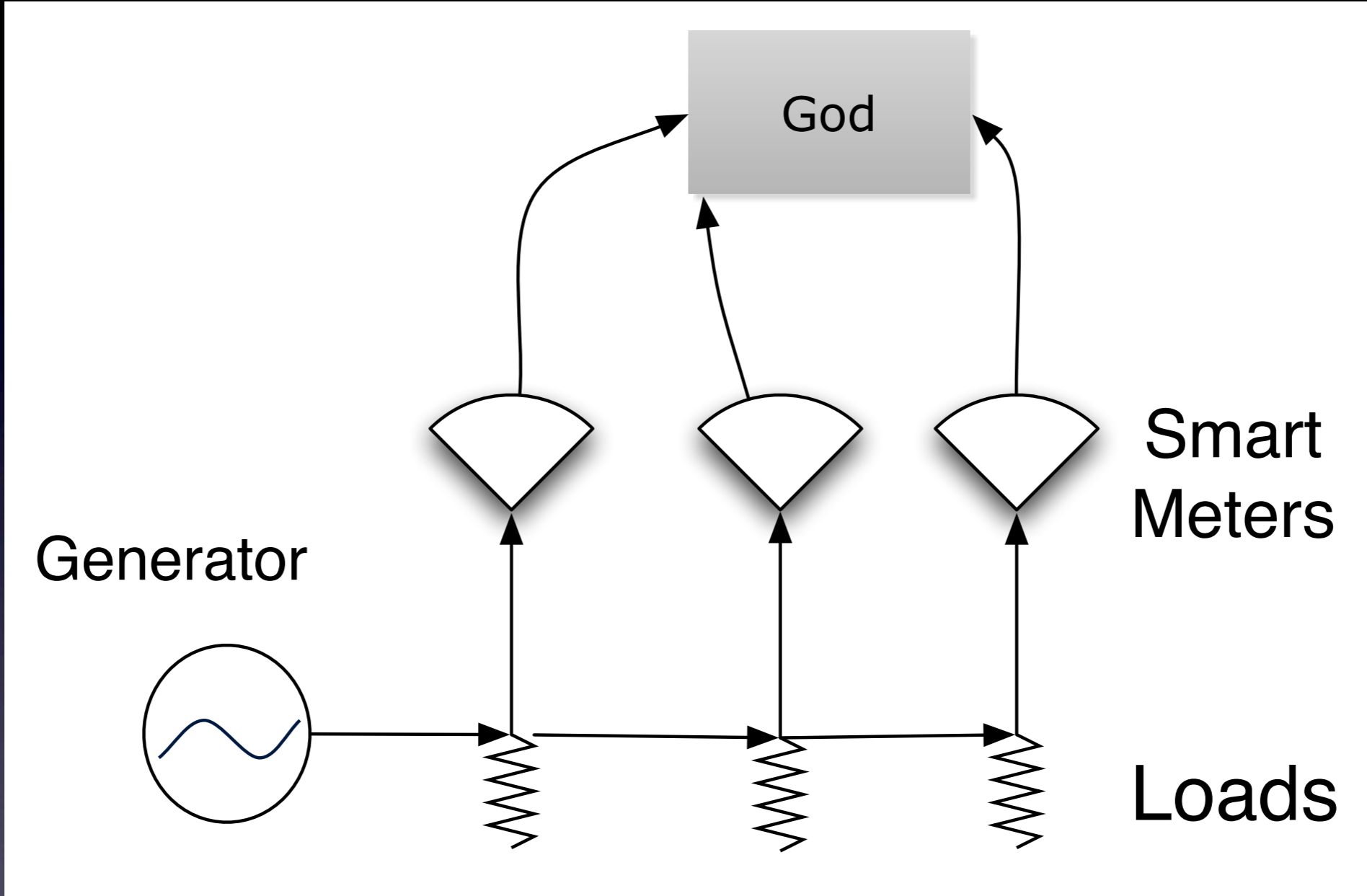
# Descartes' Atomism

- Article 20. About imaginations and other thoughts that are formed by the soul
- Article 30. That the soul is jointly united to all parts of the body.
- Article 34. How the soul and the body act on one another.
- Article 43. How the soul can imagine, be attentive, and move the body.

# Dynamical Cellular Networks



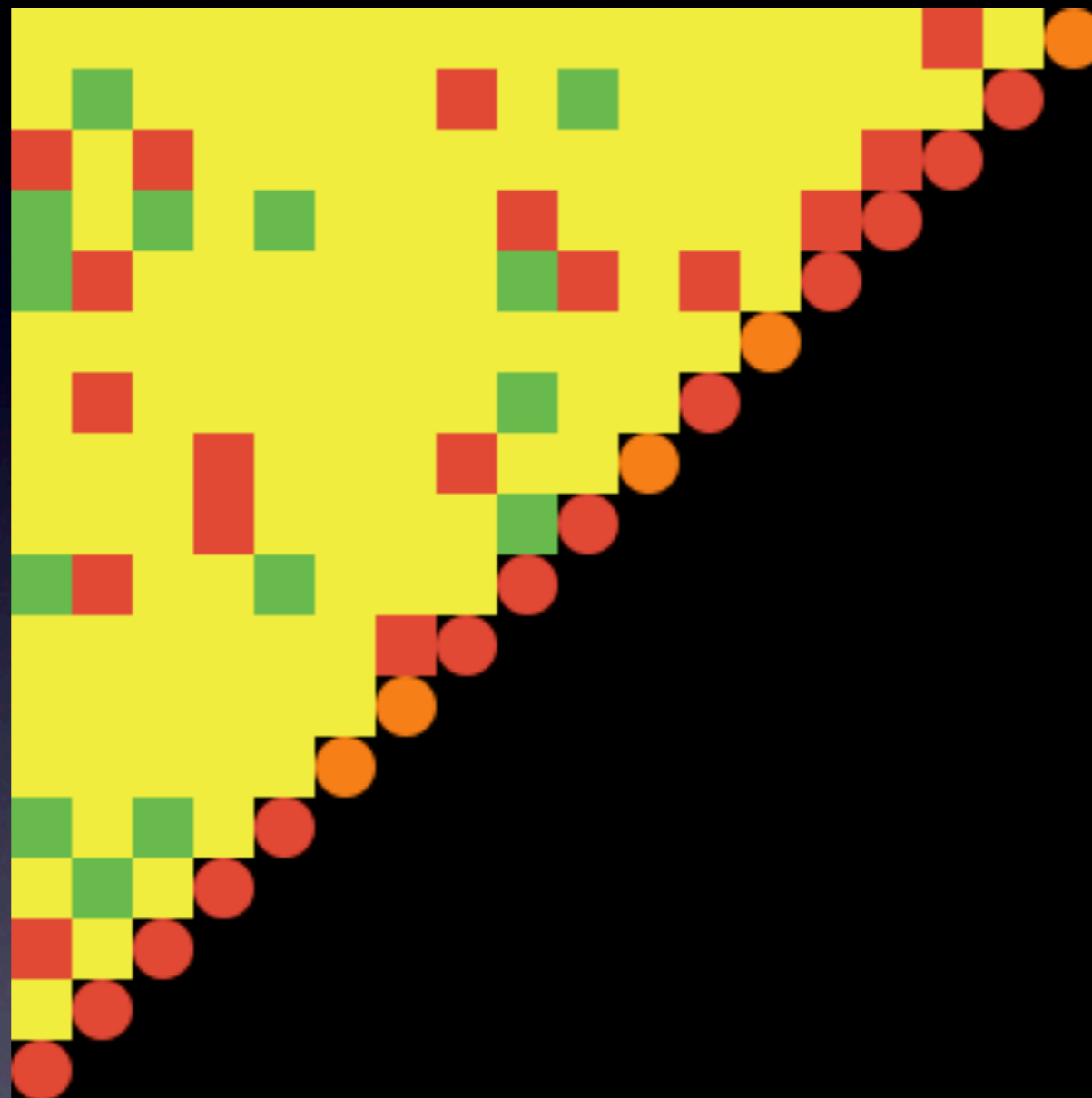
# A Power Grid



# A Smart Grid

# A Dynamical Cellular Network (DCN)

- A finite set of nodes (points with states)
- Each pair of nodes has a bond (a directed link with a state:  $-1$ ,  $0$ , or  $+1$ )
- A counter which ticks
- Rules determining how each state changes with each tick



# Graph of a DCN

# Mind-Body-Chaos

# A Chaos Model for Mind and Body

- Mind=Soul:A DCN of “mind atoms”
- Body:A DCN of “body atoms”
- Each atom may also be a DCN
- All atoms linked by morphic resonance



The End