

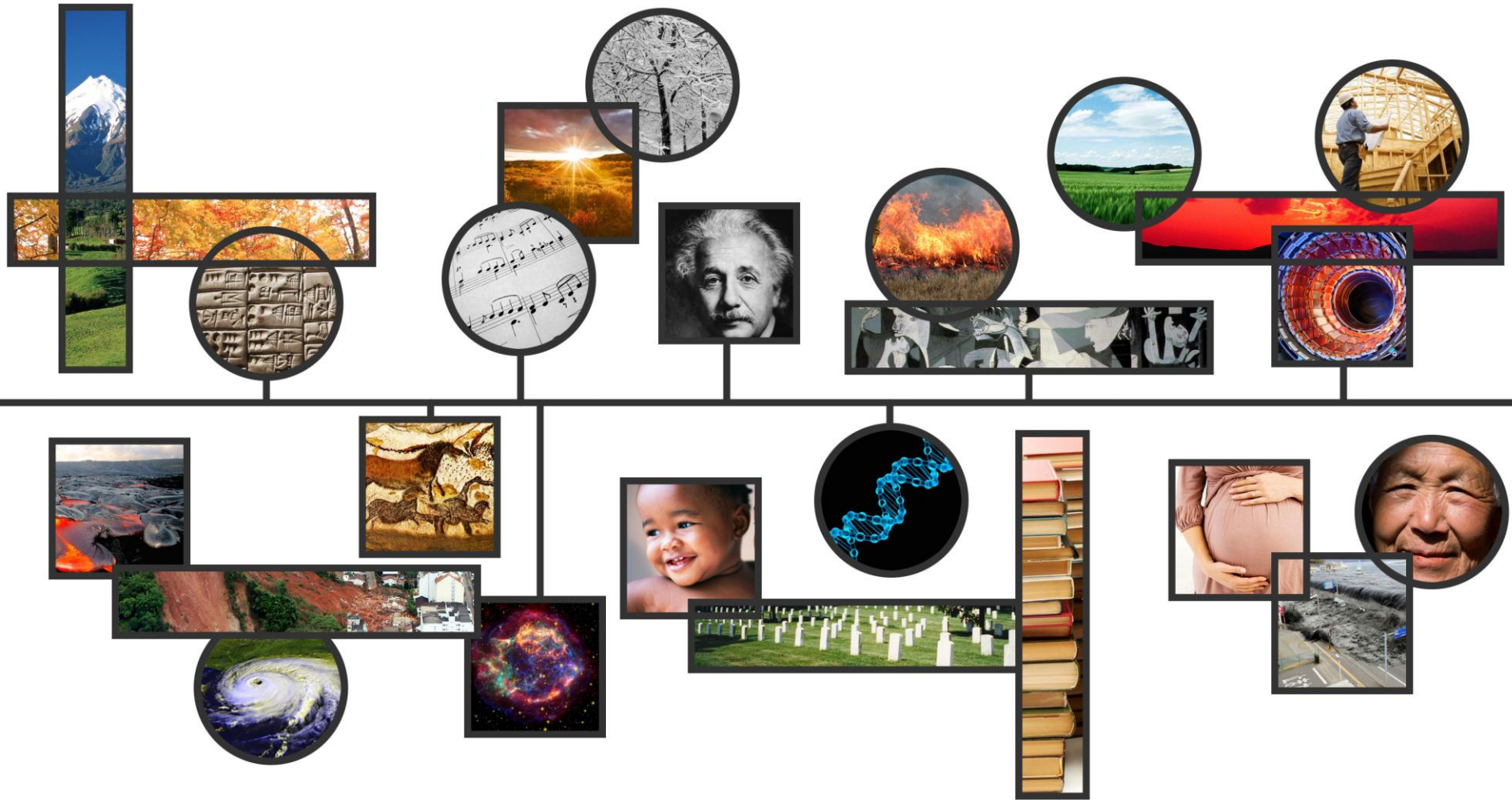


# What is and what is NOT anticipation?

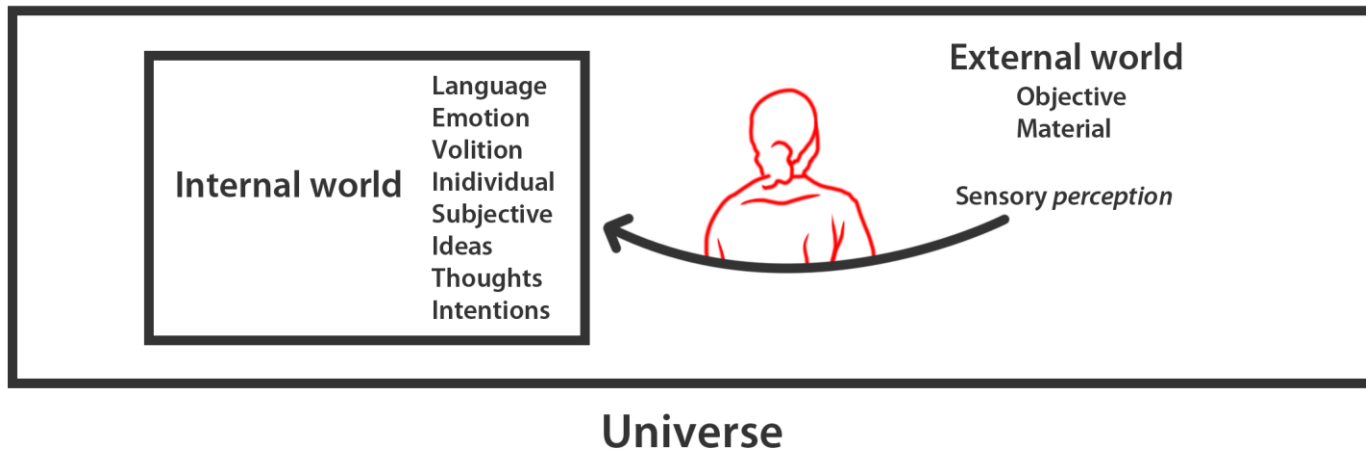
ARS Colloquia ATEC/EMAC  
The University of Texas at Dallas

antÉ

# CHANGE - The mother of all that is



# Knowing about the changing world is knowing about our own change as we examine reality

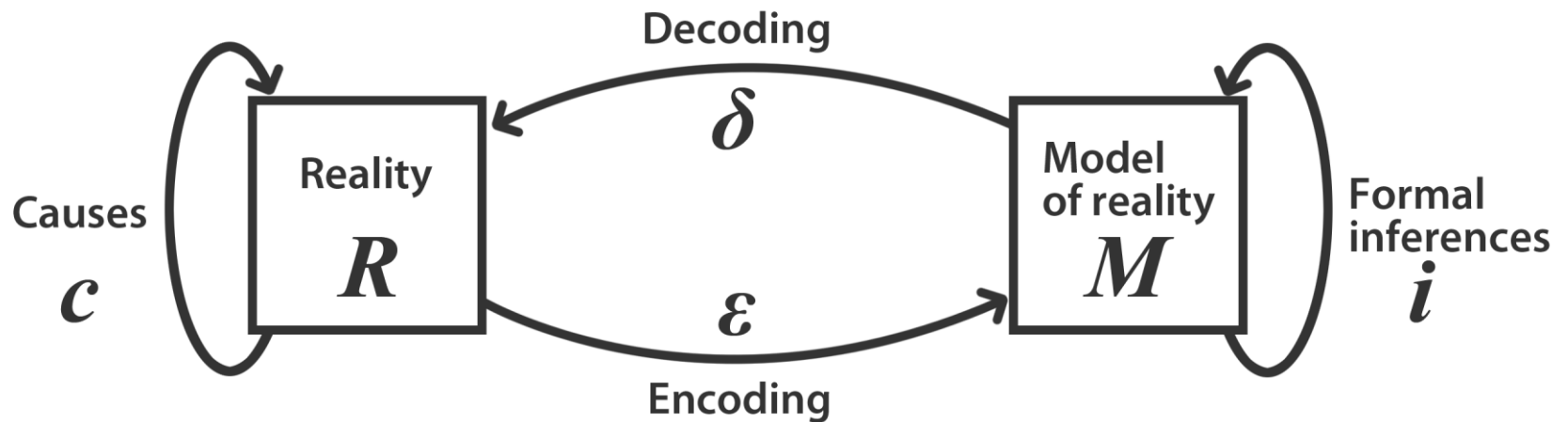




# Nadin: The human being receives information and generates information

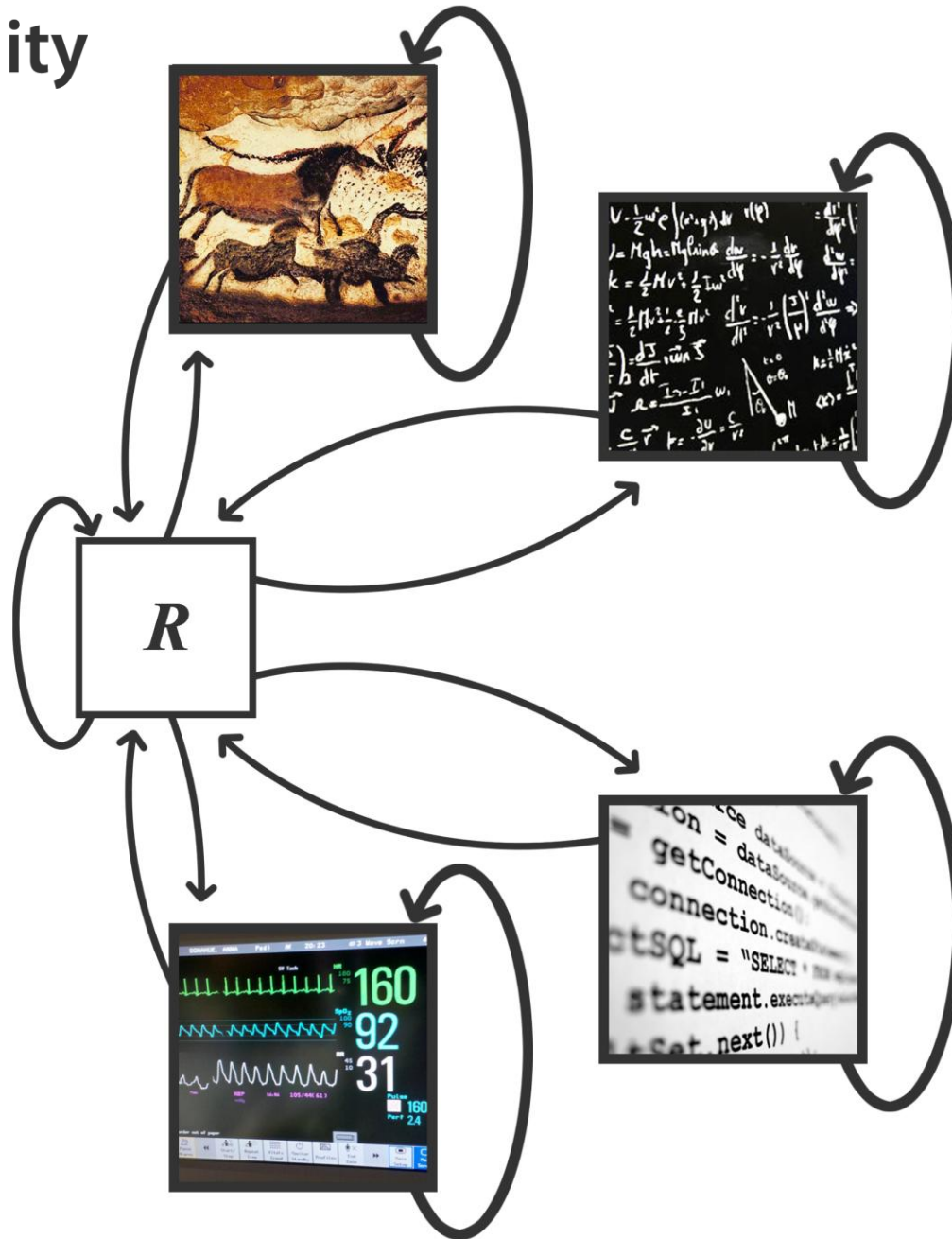


# Mapping from reality to knowledge and back to reality



$$c = \delta \circ i \circ \varepsilon$$

# Models of reality

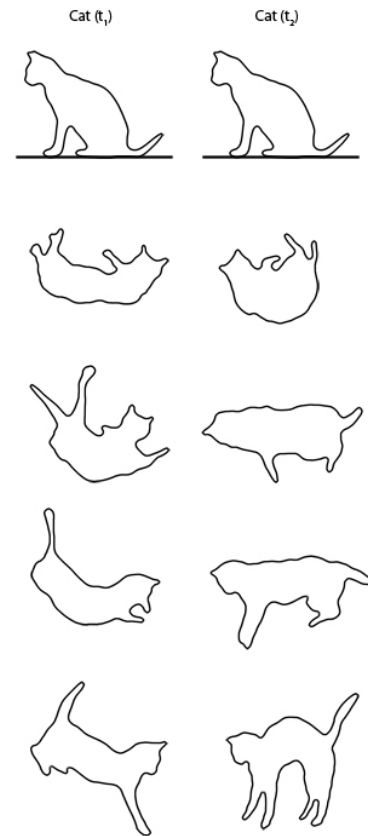


# Dynamics of the physical is different from the dynamics of the living



**Reactive**

**vs.**



**Anticipatory**

# Dealing with the future



→ Expectation  
Premonition



→ Planning  
Guess



→ Forecast  
Prolepsis



→ Inference  
Foretelling



→ Prediction



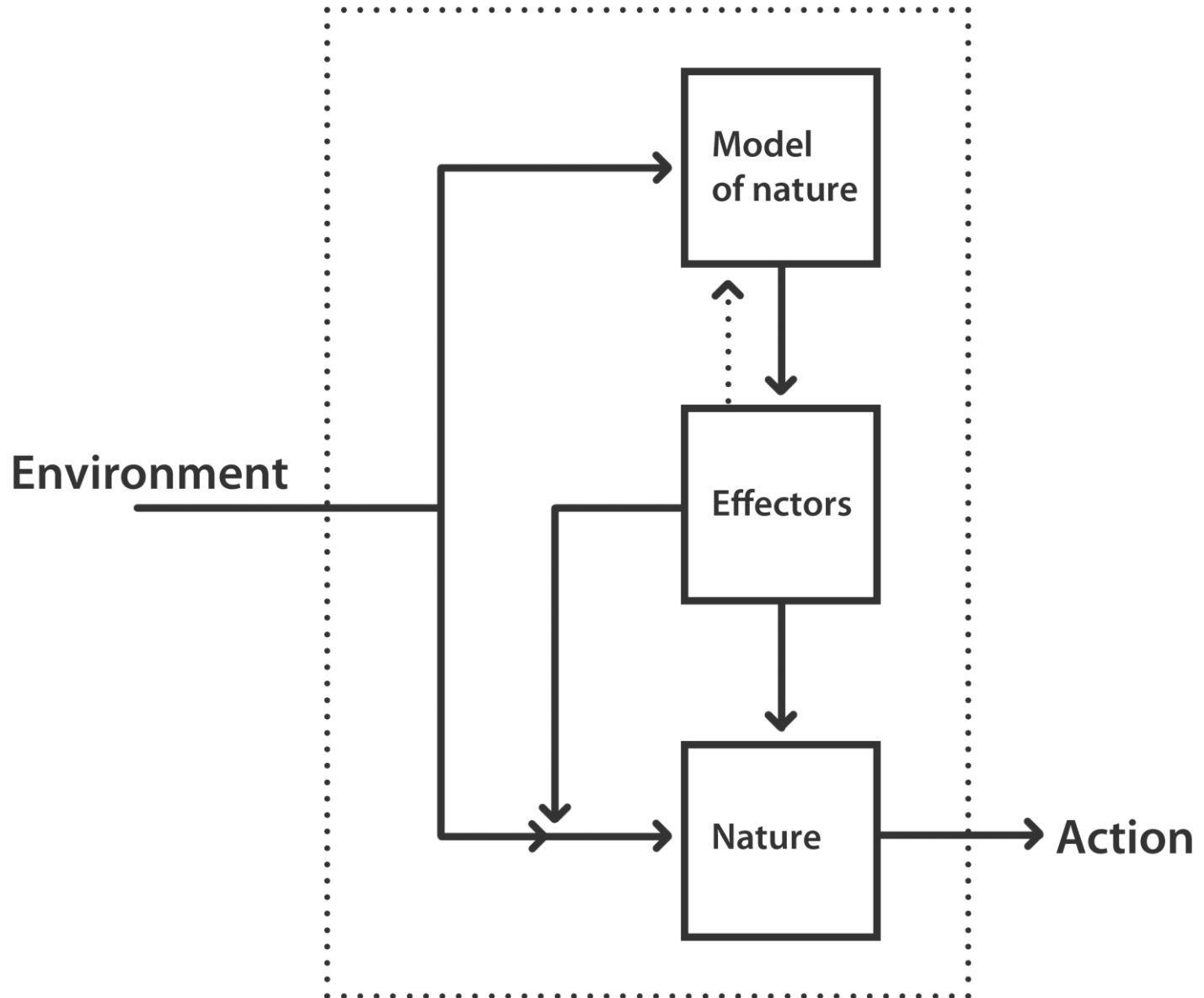
# Think of the economy as being more like a cat than a washing machine

(cf. Nassim Nicholas Taleb—Learning to Live with Volatility, Nov. 2012)



Do you want to have good economic predictions?

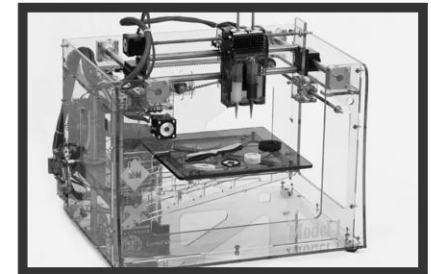
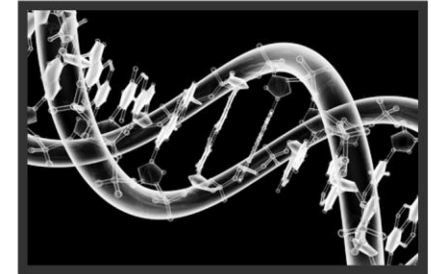
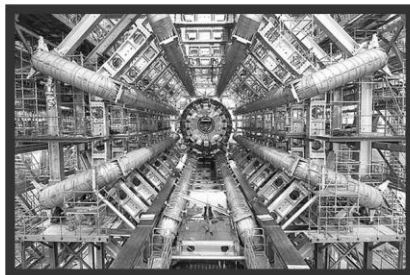
# Anticipatory system



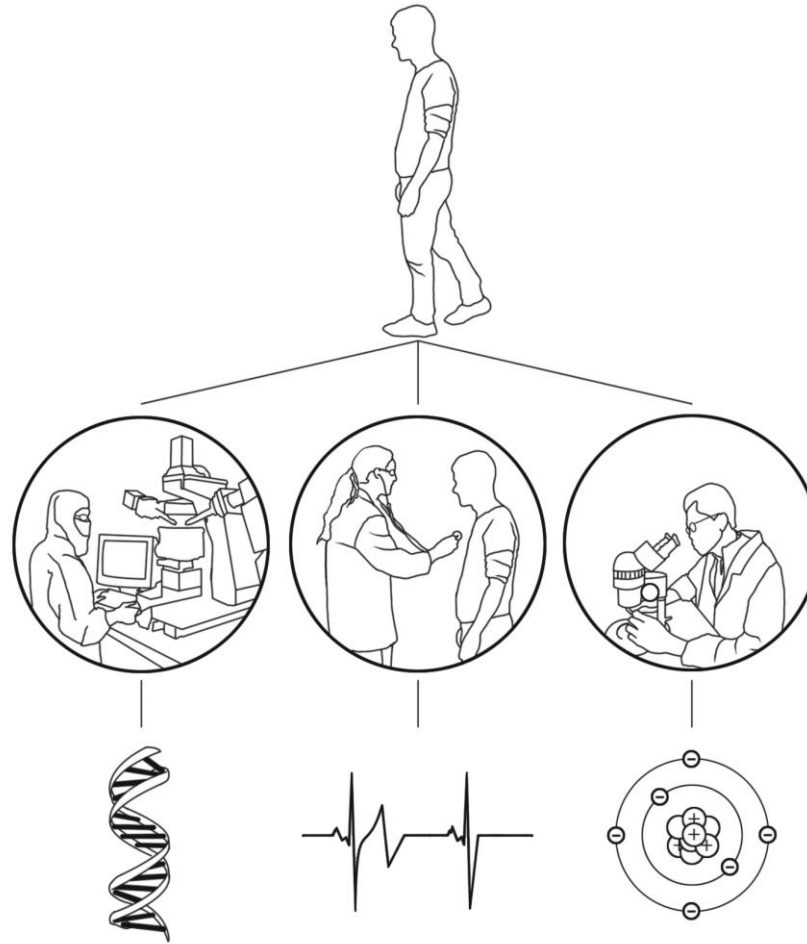
# Anticipation is always expressed in action



# Hacking is anticipatory



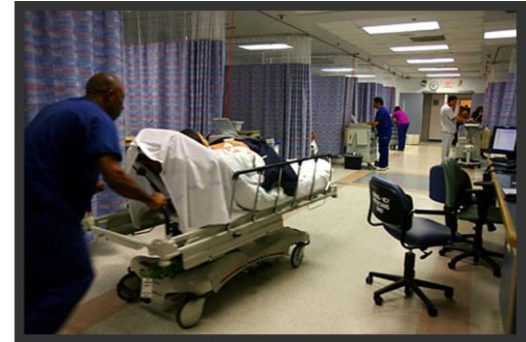
**Reductionism: project a view upon the world and expect the world to behave accordingly**



**Who wants us to behave like a machine?**

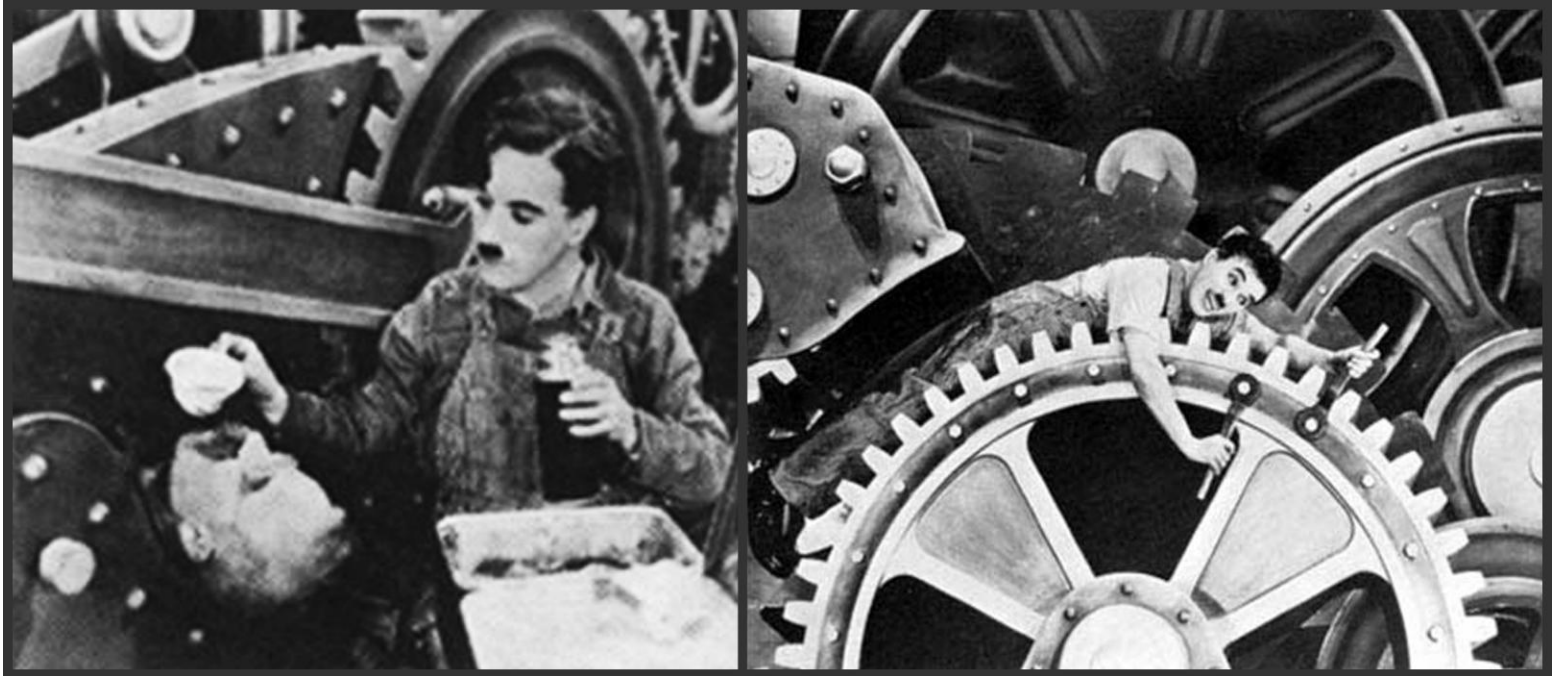


# Limits of prediction



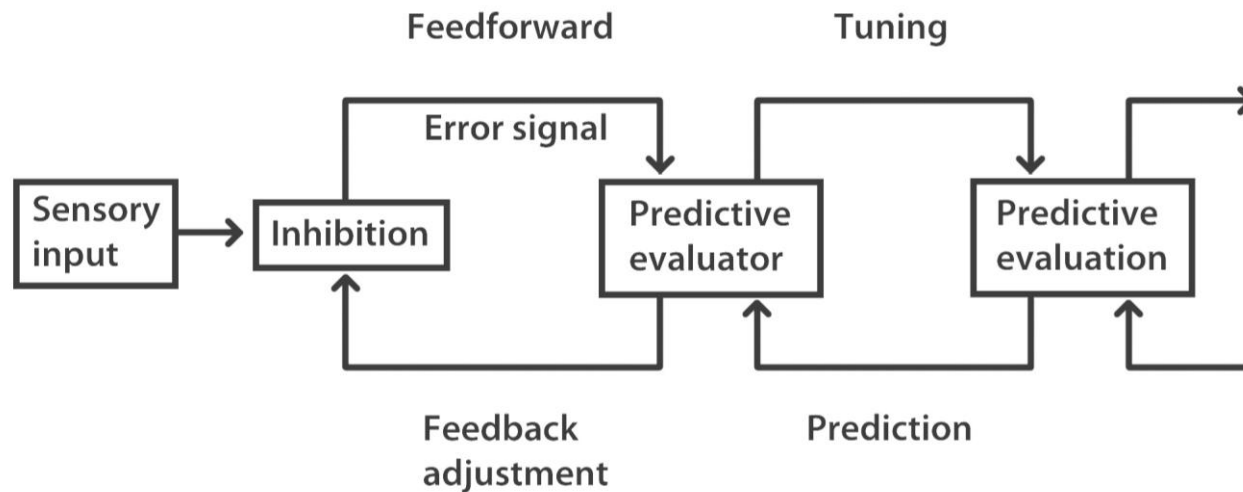
Living under the conditions of risk

# The consequences of ignoring anticipation

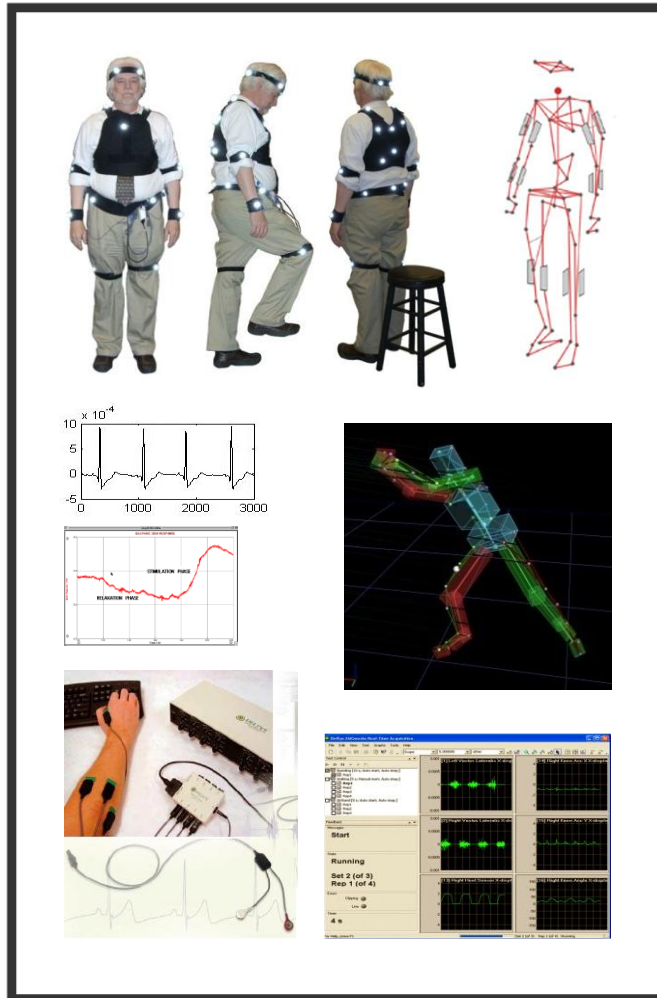


**There is no creativity in the absence of anticipation.**

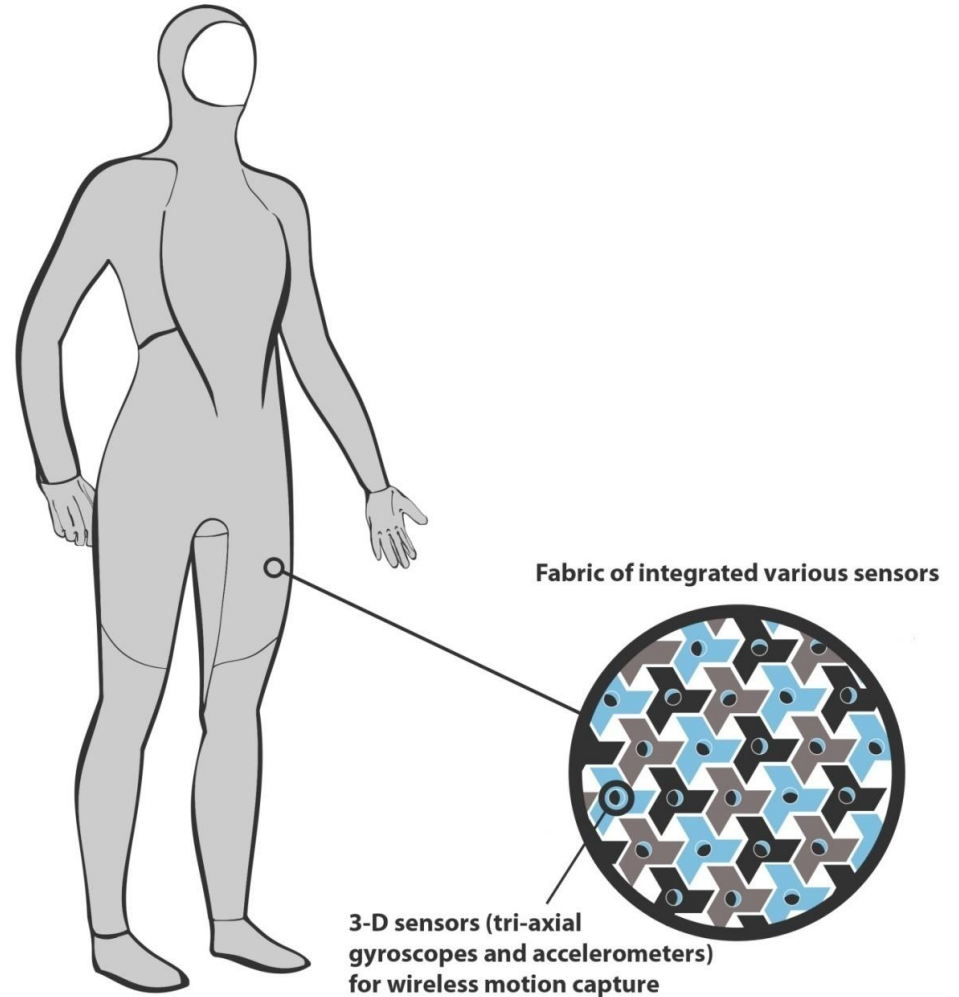
# Information from the world - sensory perception



# AnticipationScope™ and Anticipatory Profile™



**Present**



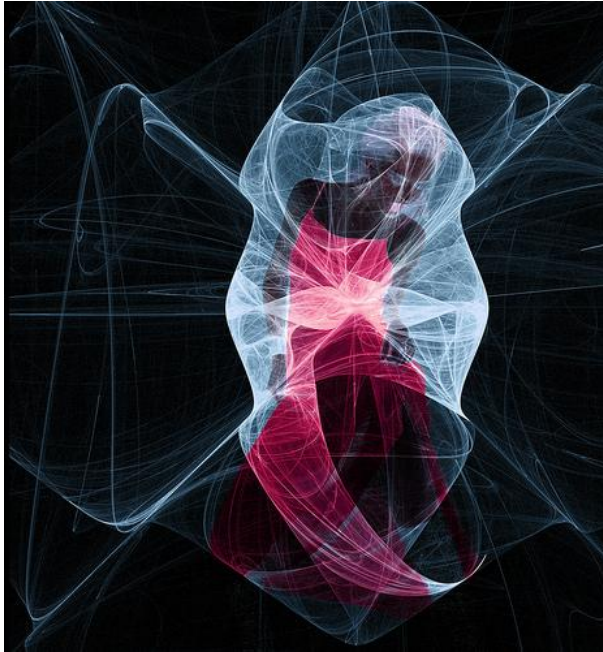
**Future**

**Anticipation—A New Frontier in Science**

**Determinism meets non-determinism**

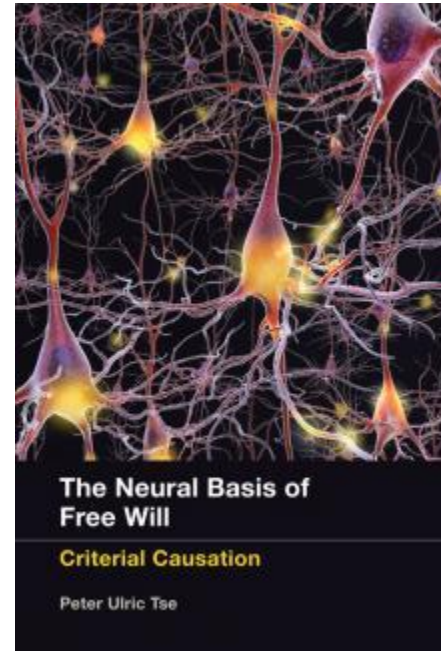


# ***New Research Suggests Humans Can Sense Future Events Without Any Known Clues***



**Julia Mossbridge**, lead author of the study and research associate in the Visual Perception, Cognition and Neuroscience Laboratory at Northwestern University

**Jeffrey M. Zacks**, PhD Washington University (St. Louis), Predictive Perception, *Journal of Cognitive Neuroscience*



**Peter Ulric Tse** is Professor of Cognitive Neuroscience in the Department of Psychological and Brain Sciences at Dartmouth College