

# RETHINKING RISK: THE IMPACT OF ACTION ON UNCERTAINTY



AXA  
Research Fund  
Through research protection



Department of  
Management  
[MANAGEMENT SCIENCE GROUP]

Shweta Agarwal [s.agarwal@lse.ac.uk]

SUPERVISOR: Gilberto Montibeller



Qualitative view  
reflected by  
quantification

## PERSONAL AND CONTEXTUAL DEFINITIONS...

- Probability of damage
- Variance, cVaR
- Hazard, Exposure
- Dread, *feeling*

## DIFFERENT FROM MANAGERIAL CONCEPTIONS...

- Mastery over 'odds' of fate
- Has a bearing on success (good risks)
- Is manageable (not a gamble)
- Subject to post decision control

Qualitative view  
reflected by  
agency

### UNCONTROLLABLE UNCERTAINTY

Actions independent of Uncertainty  
[e.g. natural events]

### CONTROLLABLE UNCERTAINTY

Actions can influence Uncertainty  
[e.g. large stakes/ inventions]

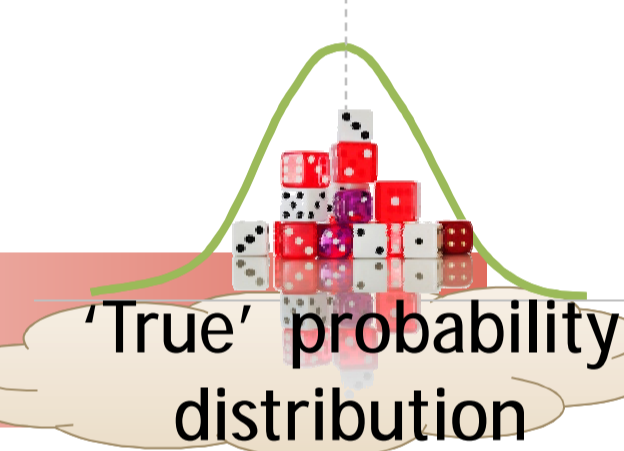
## UNDERSTANDING



$$\text{Risk} = \text{Uncertainty} + \text{Outcome} + \text{AGENCY}$$

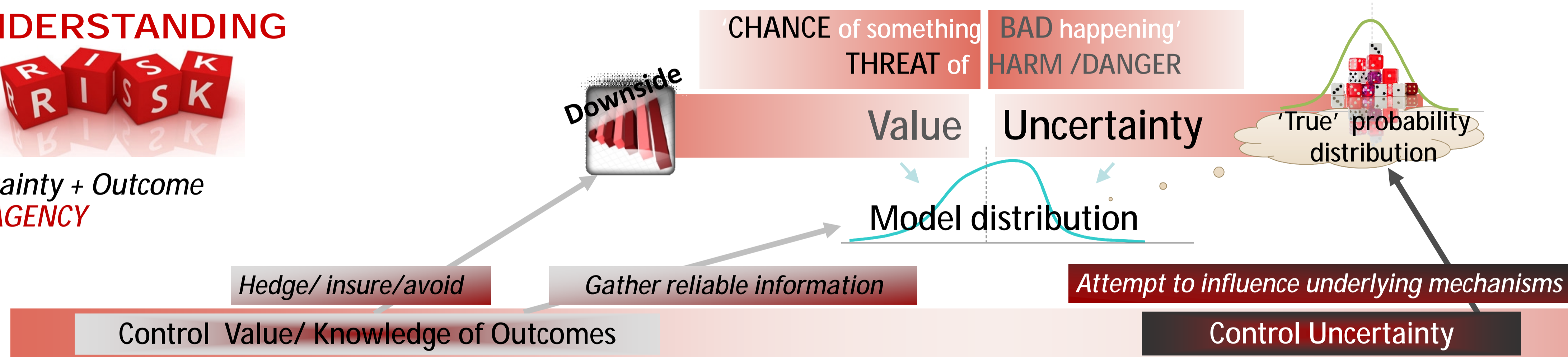
CHANCE of something  
THREAT of BAD happening'  
HARM /DANGER

Value Uncertainty



Qualitative understanding  
of uncertainty has  
implications for risk  
management.

## MANAGING



## EXAMPLE:

