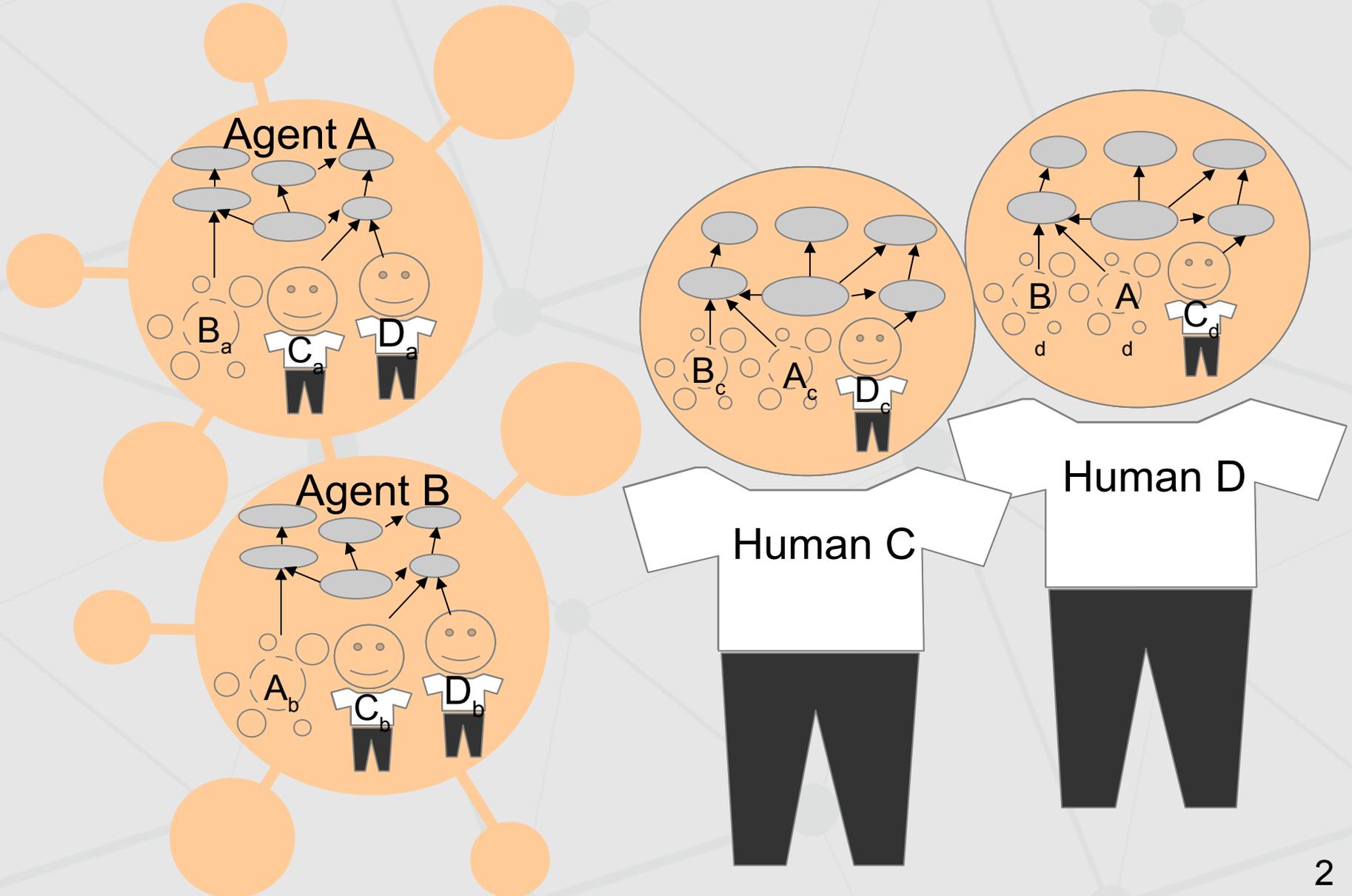


# Computable cognitive model based on social evidence and restricted by resources

Applications for personalized search and social media in multi-agent environments

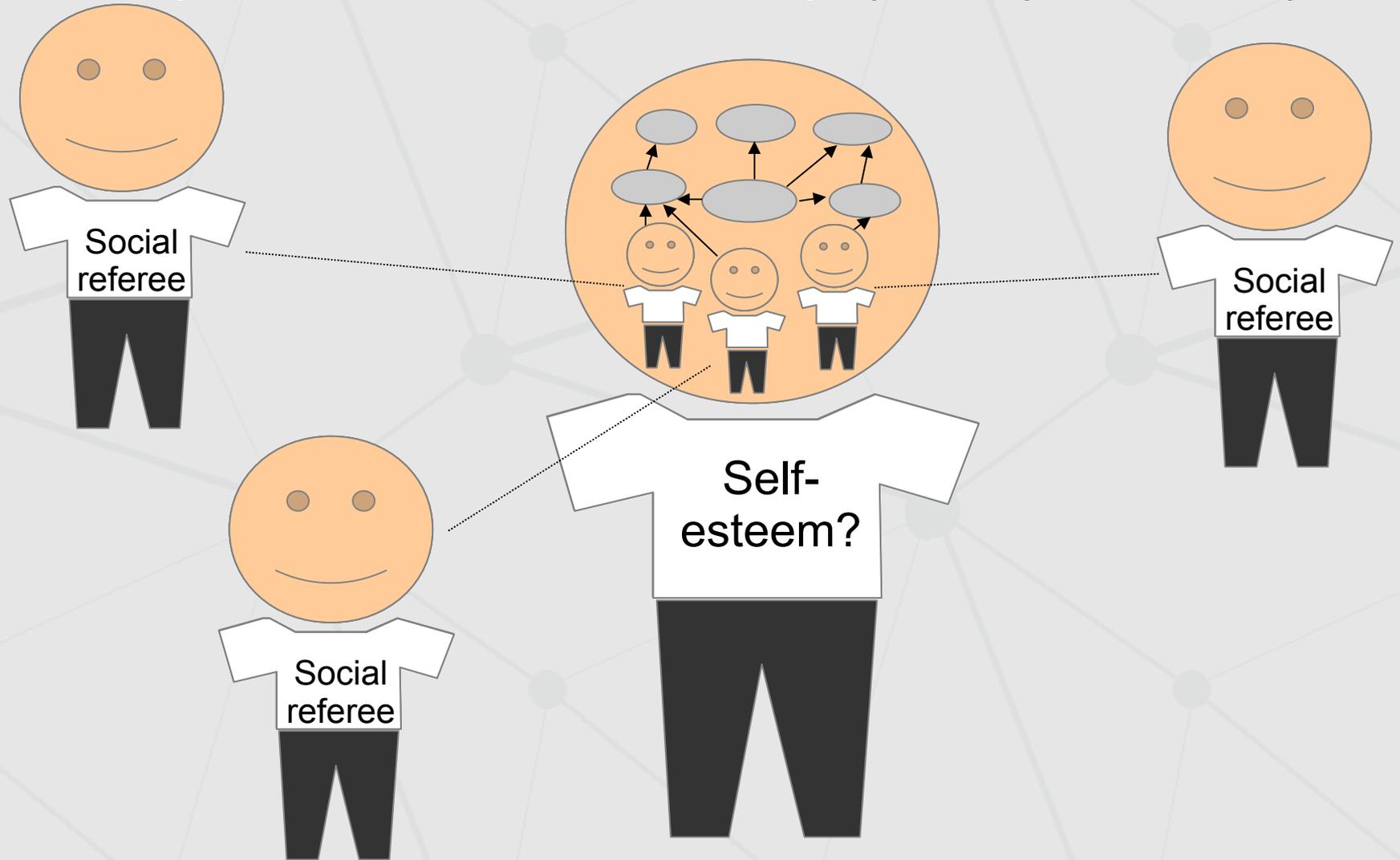
Anton Kolonin  
Aigents Group  
2015, August

# Belief systems in social multi-agent environments



Computable cognitive model based on social evidence and restricted by resources

# Compassion-based artificial psyche (Webmind)

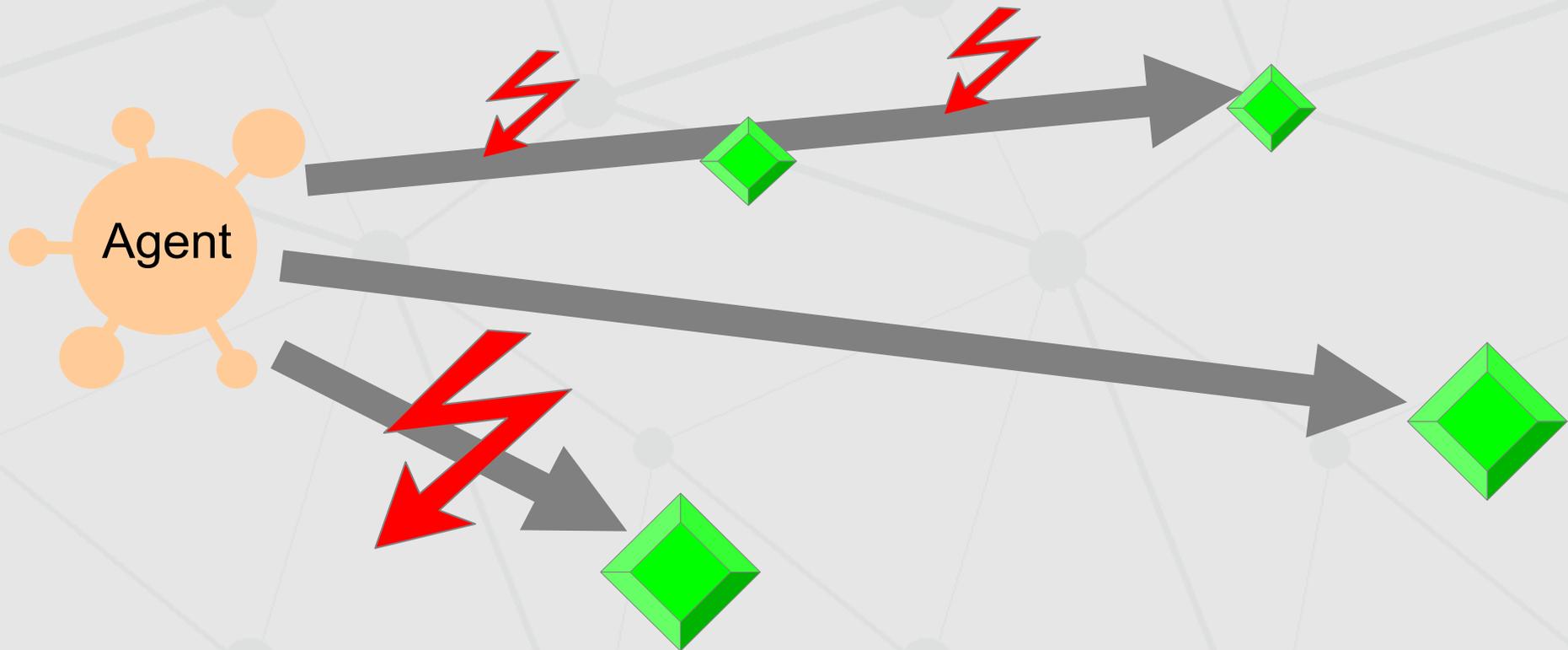


B.Goertzel, A.Kolonin, J.Pressing, C.Pennachin (2000)

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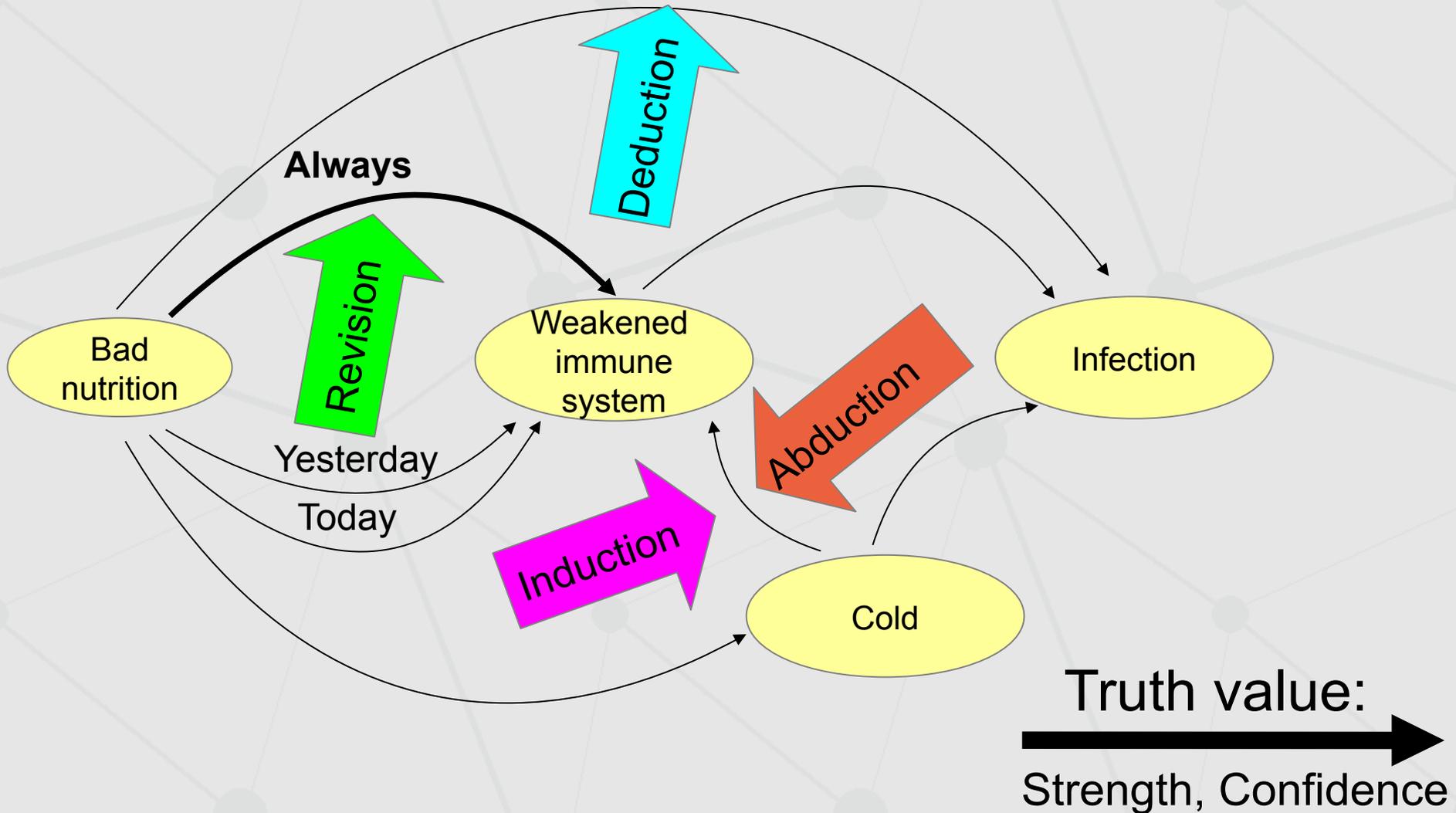
Working definition of intelligence:

Ability to reach complex goals in complex environments, using limited resources



B.Goertzel (1999)

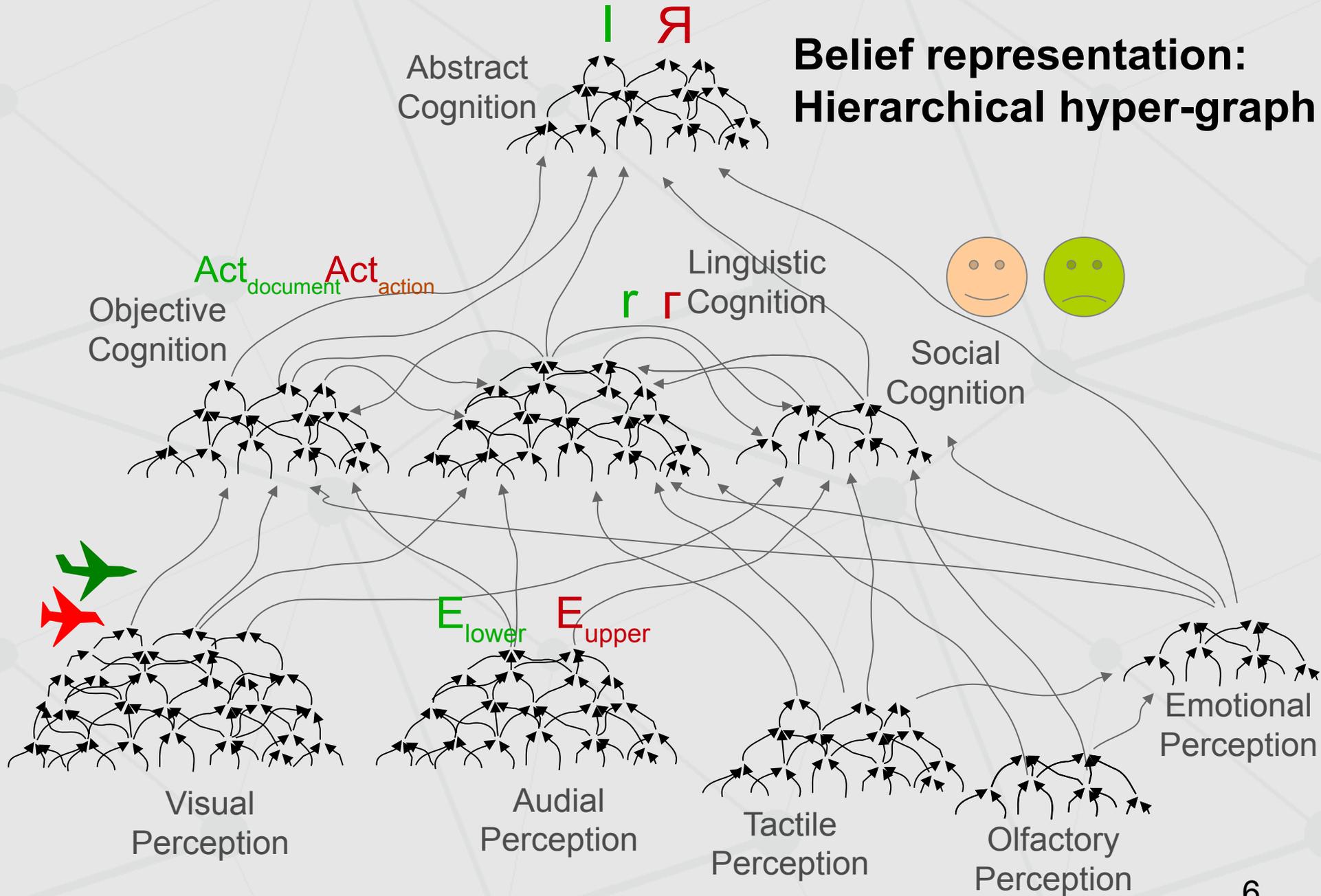
# Non-Axiomatic Reasoning (NARS) Inference



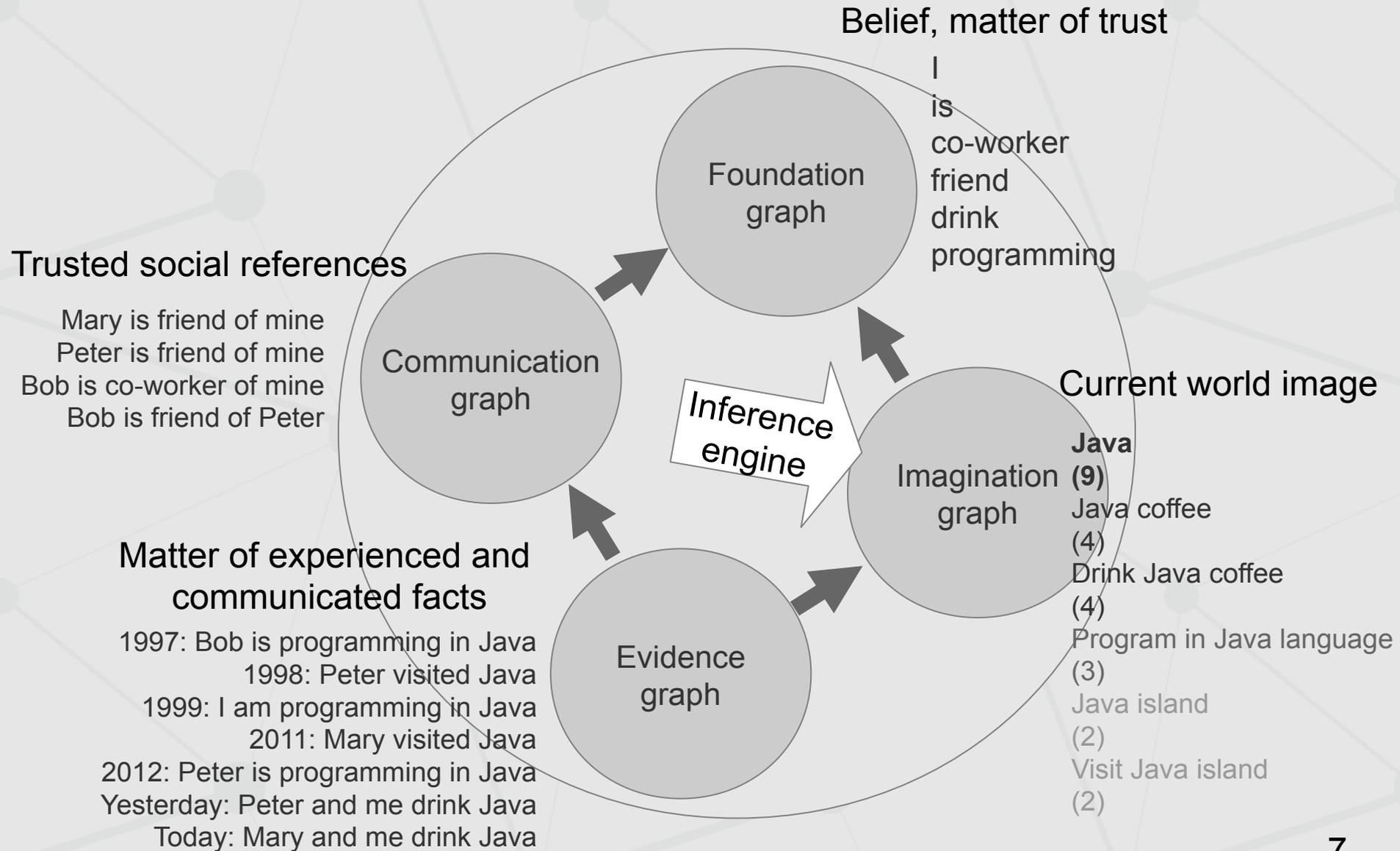
P.Wang (1993)

# Computable cognitive model based on social evidence and restricted by resources

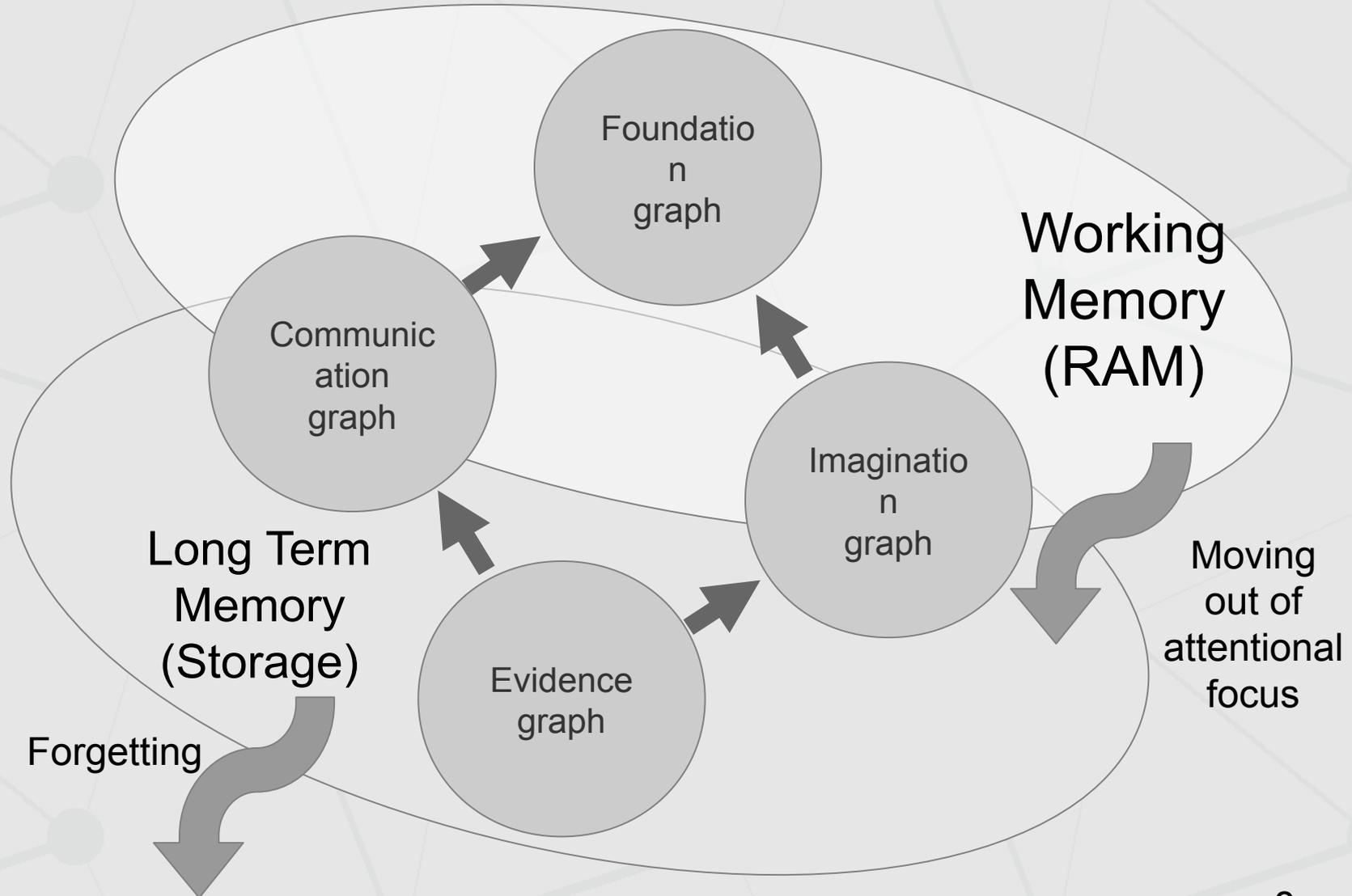
## Belief representation: Hierarchical hyper-graph



# Social evidence-based cognitive model

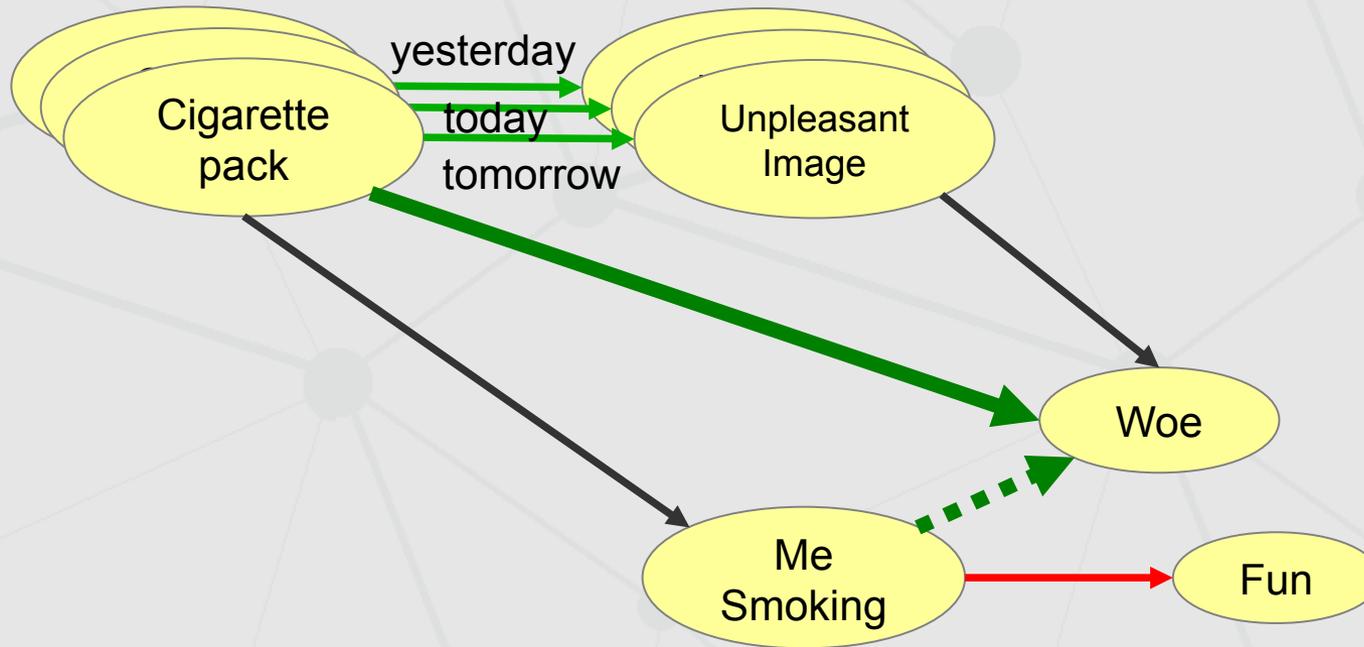


## Applying resource constraints



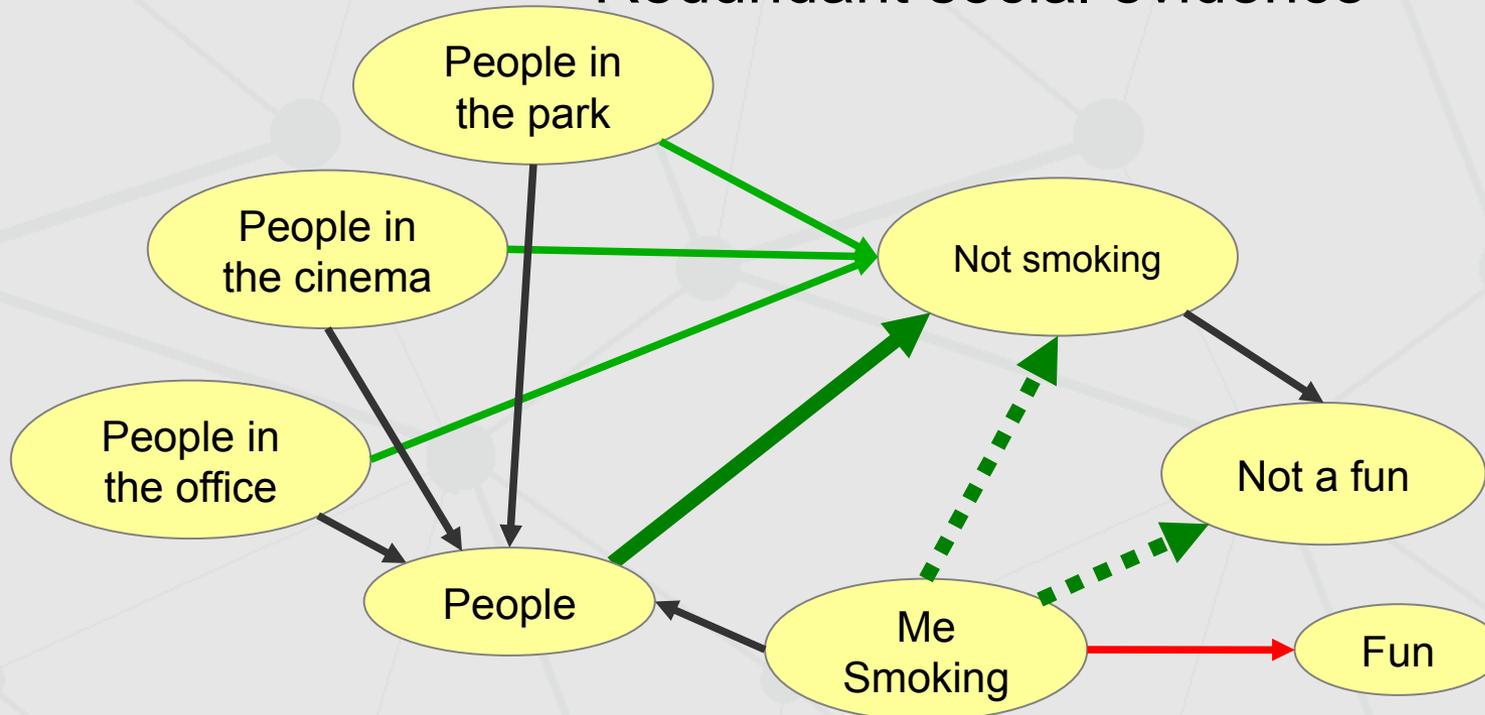
# Testing the model: Belief change techniques

Redundant temporal evidence



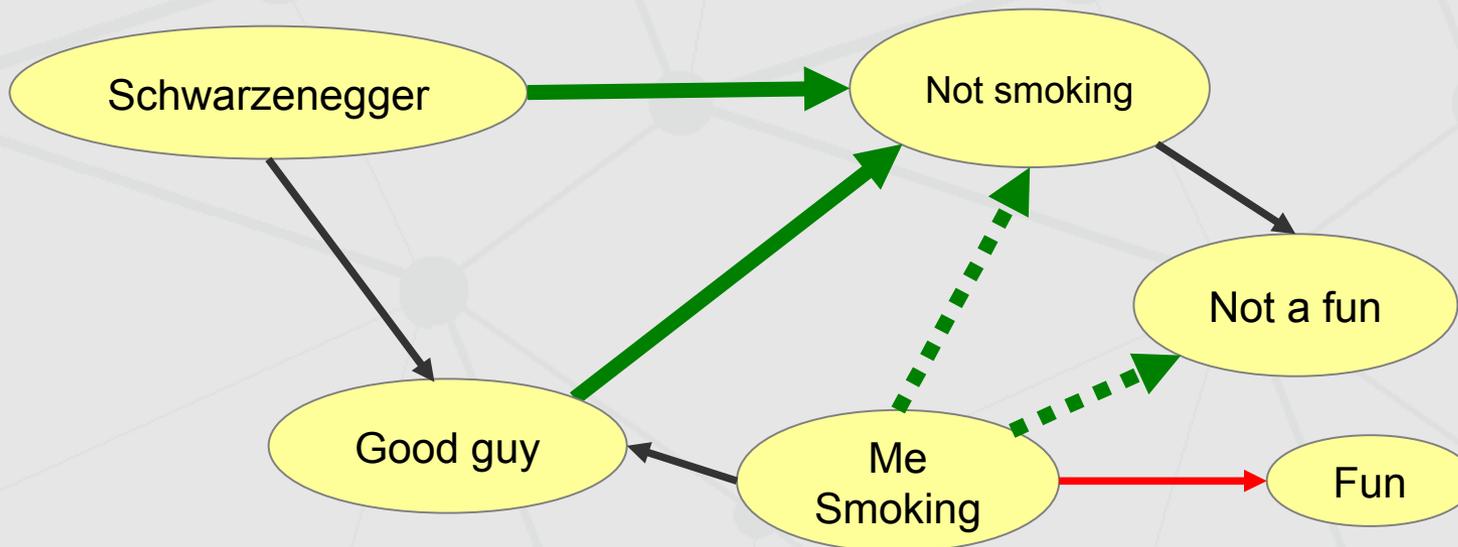
# Testing the model: Belief change techniques

Redundant social evidence



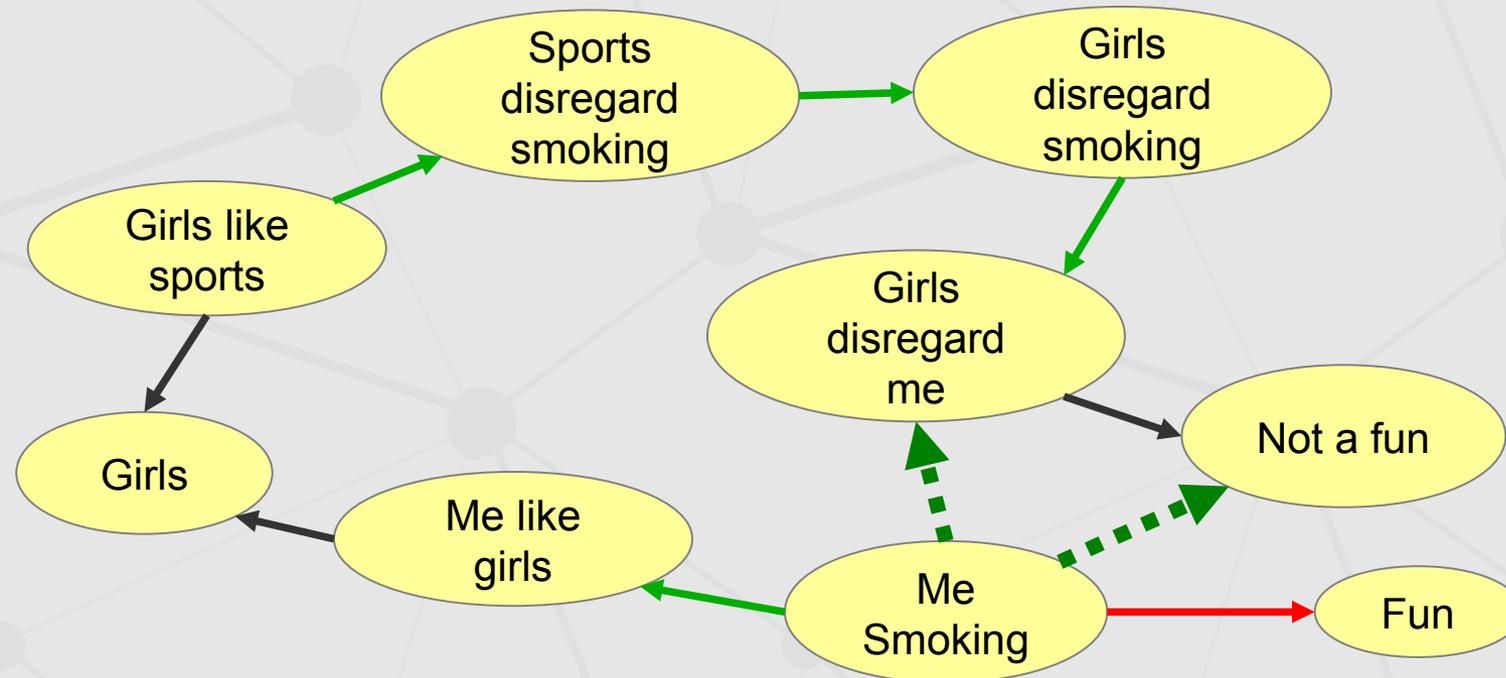
# Testing the model: Belief change techniques

Highly valuable social evidence

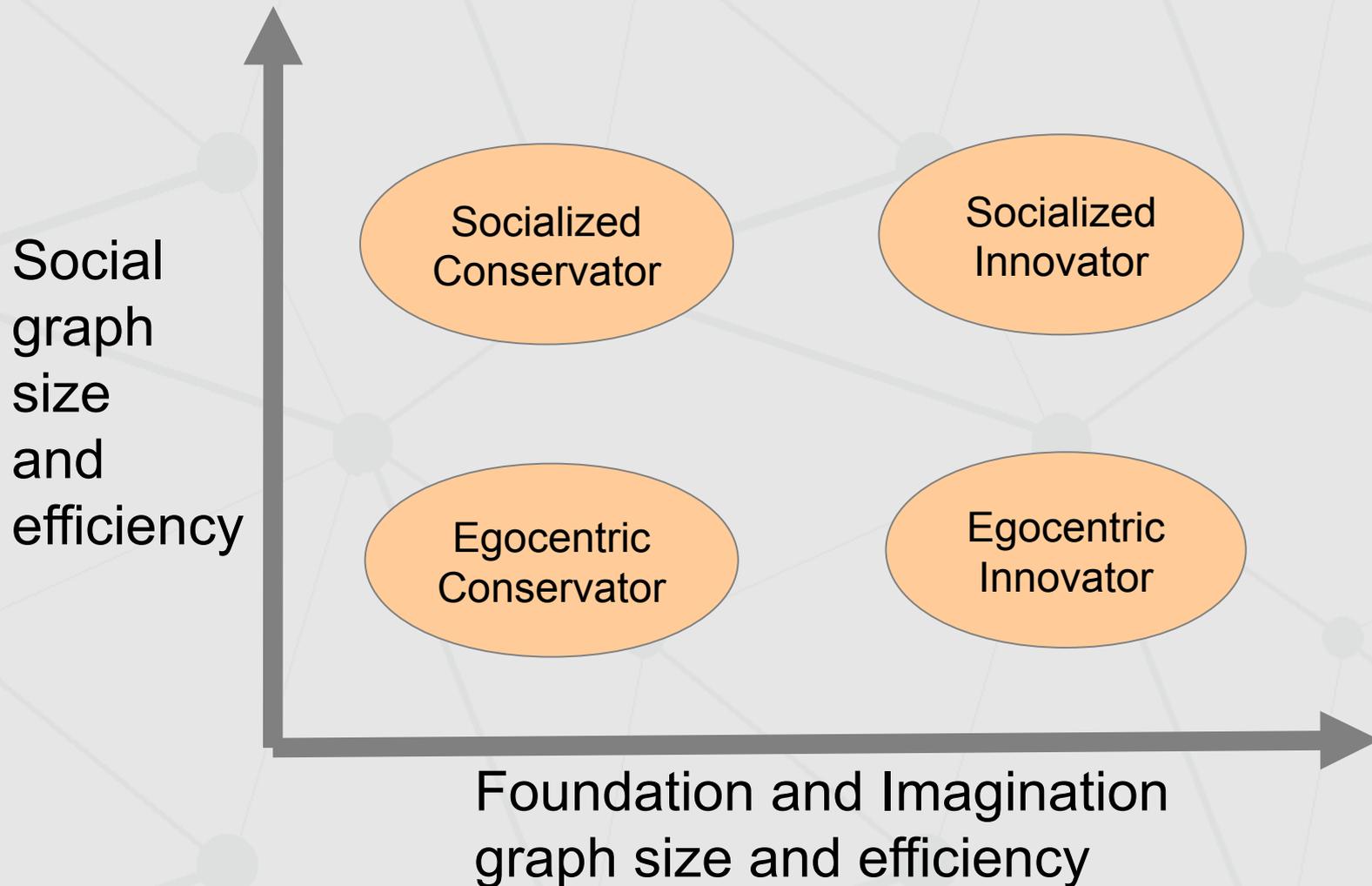


# Testing the model: Belief change techniques

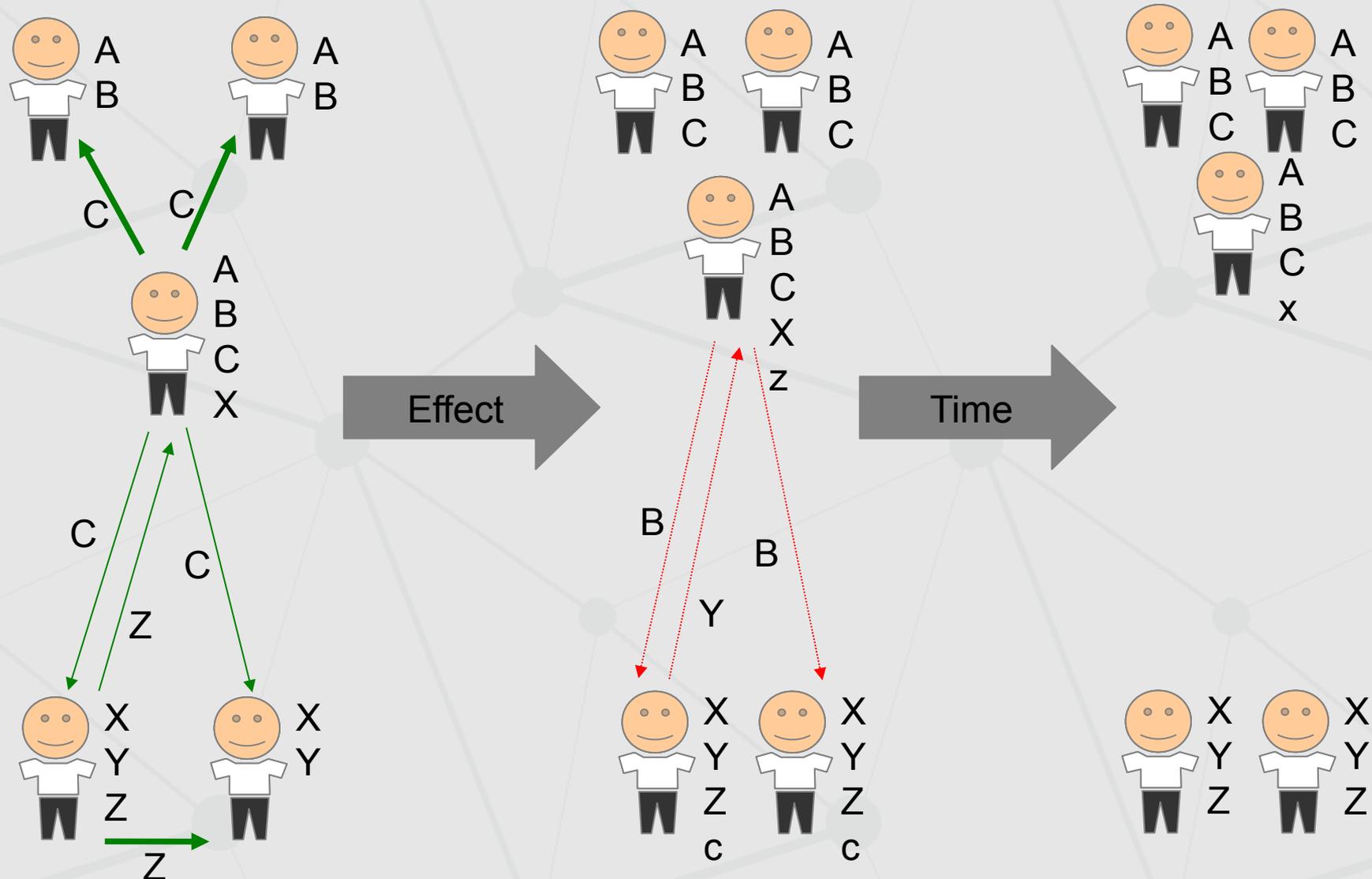
## Implicit evidence injection



## Model parameters: Psycho-cognitive types

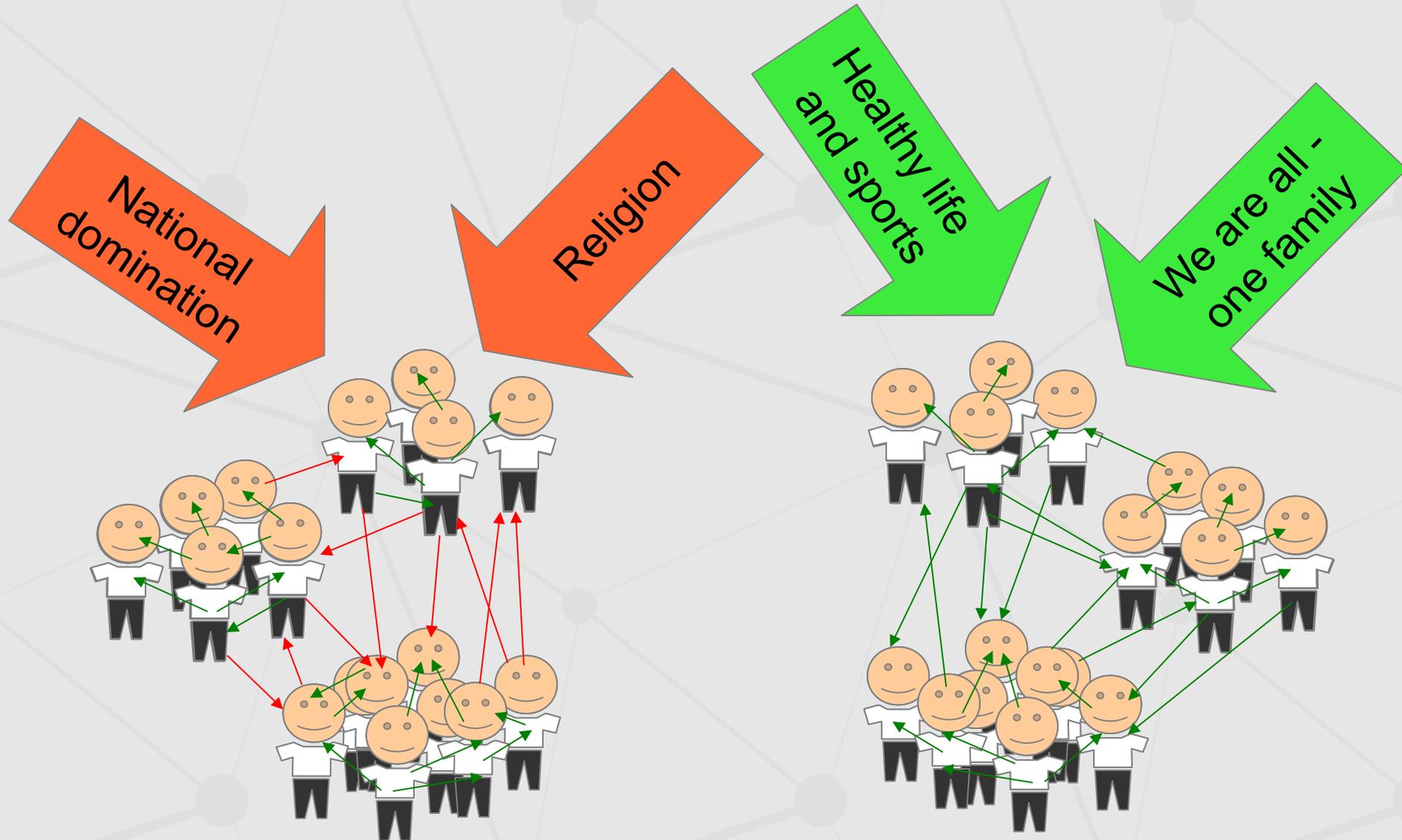


# Why needed? : Detecting social dynamics phenomena

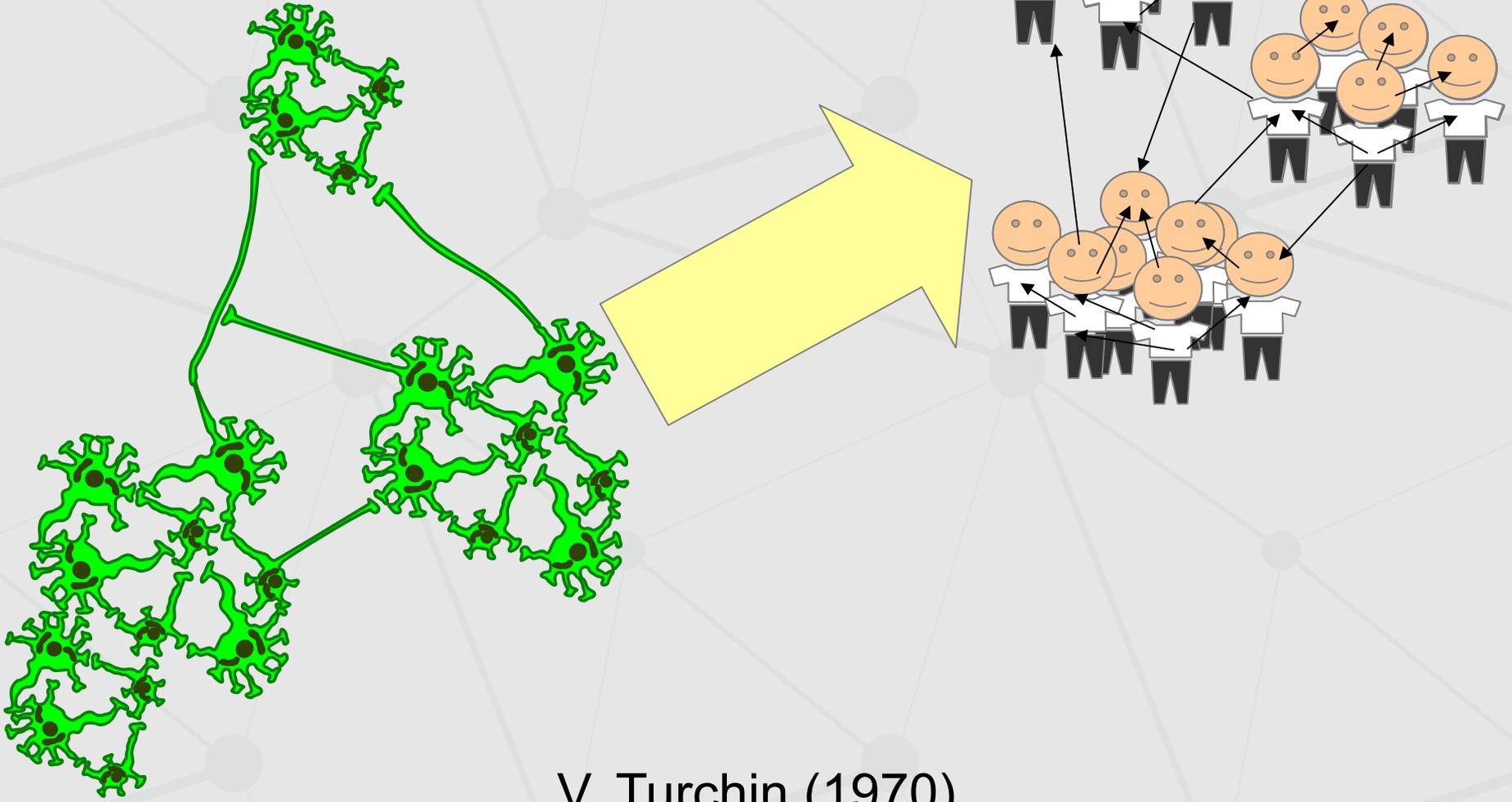


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# Why needed? : Planning trends of social development



# Managing complexity in meta-system transition phase

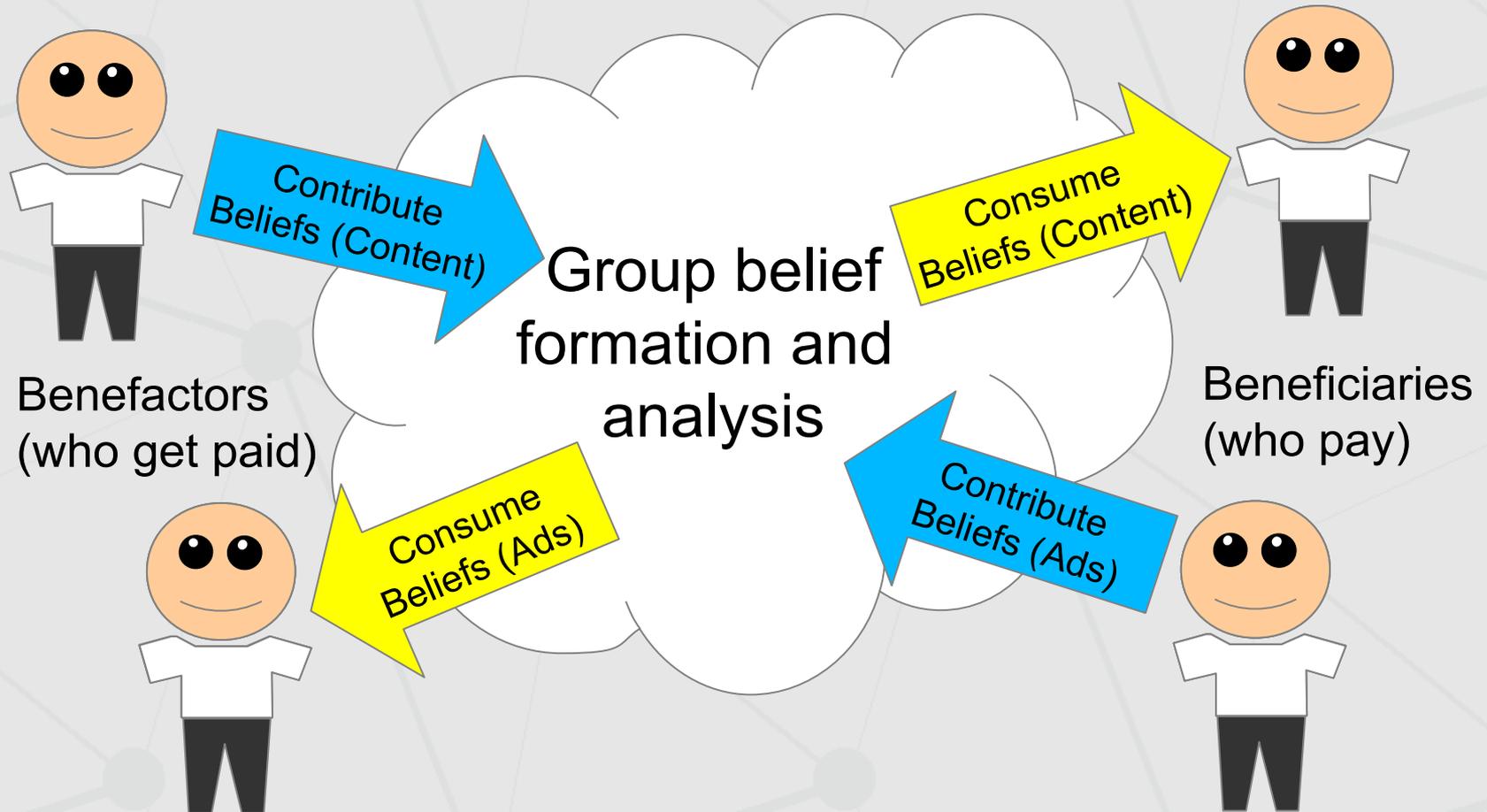


V. Turchin (1970)

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## Project: Social cognitive system

Purpose: Real time evaluation of group belief system and collaborative opinion delivery in social environment



**Thank you for attention!**

Anton Kolonin  
Aigents Group  
2015, August