

# Overview



- Developing alternative governance – “soft law”
- Anticipatory ethics – alteration of our temporal view of oversight mechanisms and their jurisdictional locus.
- A pivotal role for Public participation & deliberation in decision making.
- Input → Pure procedural justice –civil litigation resolution
- Output →Distributive justice
- Overarching objective → Sustainability of NT.



# Where to?



Direct  
Regulation &  
Precautionary  
Principle

New Science  
Governance

Anticipatory  
Ethics &  
Governance  
[AEG]

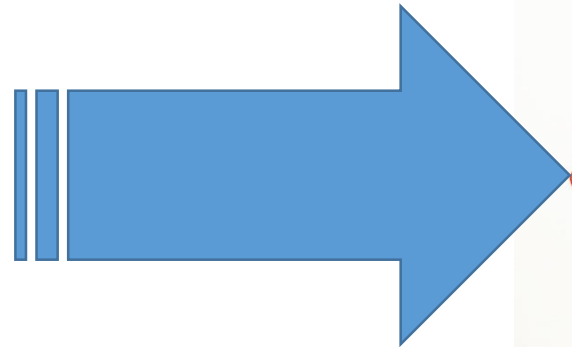
Procedural  
Justice

# Great benefits often carry risks and hazards

- Nanotechnology undoubtedly has enormous potential economic and social benefits
- There are the *risks* known and uncertain associated with Nanotechnology.
- Oversight required



# RISK REQUIRES OVERSIGHT





# Regulatory Challenge

- Governability
- “Wicked problem”
- Extensive scientific knowledge gaps
- Uncertainty about potential impact and harm
- Outpaced by development
- Regulating in thin air
- EU approach incremental largely based on existing regulation of bulk materials
- Based on precautionary principle



# Precautionary Principle

- A lack of full scientific knowledge
- shall not be used as a reason
- to postpone measures to prevent harm for legally protected interests
- if there are threats of serious or irreversible damage.



# Precautionary Principle

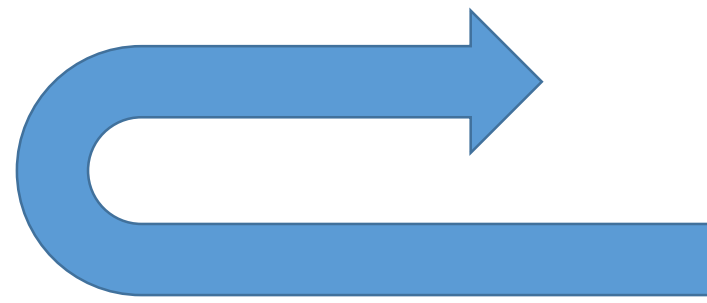





- Morally prudent regulatory approach underpinned by utilitarian consequentialism.
- Modifies the notion that risk of harm is acceptable provided damage caused is no more than an economic problem reparable by financial compensation.



- Ambiguous – undefined level of risk to trigger precaution.
- Simplistic – fails to take account of opportunity cost
- Bias towards status quo leading to - “Technology freeze”
- Probability neglect – amplifies fear of worst case scenario
- More harm than good??

# New Science Governance

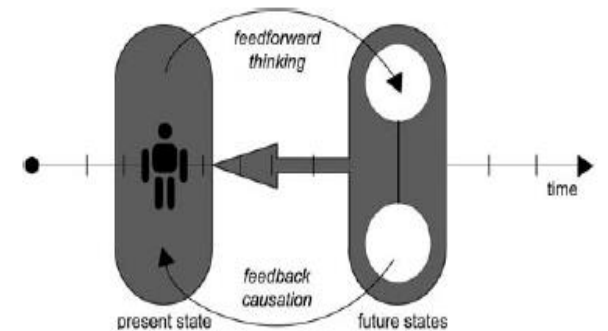


- Government  Governance – deliberative democracy
- Power over  Power to
- Constrain  Enable

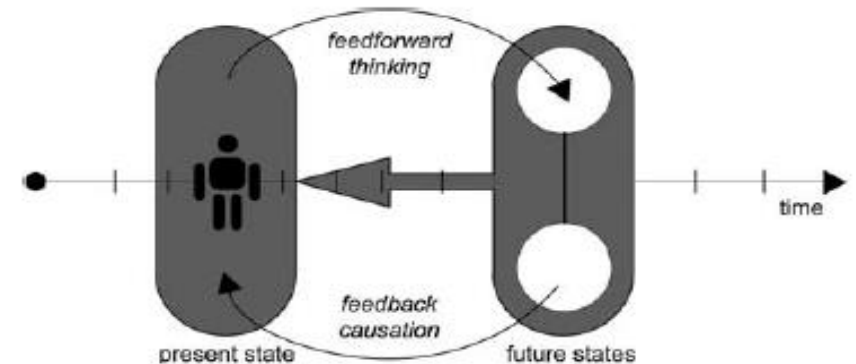


# Anticipatory Ethics and Governance

- ✓ engagement with the ethical implications of a technology while the technology is still in a pre-revolutionary or introductory stage of development.
- ✓ objective is to identify as many of the real world contextual ethical issues as possible at the introductory stage
- ✓ to guide the development of the technology towards desired societal outcomes



- ✓ an ongoing, evolutionary process the ultimate goal of which is to internalise responsibility and institutionalize reflexivity in decision making
- ✓ Based on John Rawls' Overlapping Consensus & Wide Reflective Equilibrium
- ✓ Input ..... → Procedural justice
- ✓ Output .....Distributive justice →
- ✓ Overarching objective ....



# AEG - simultaneous activities based on Rawls' theory of overlapping consensus and WRE

## Public Participation & Engagement

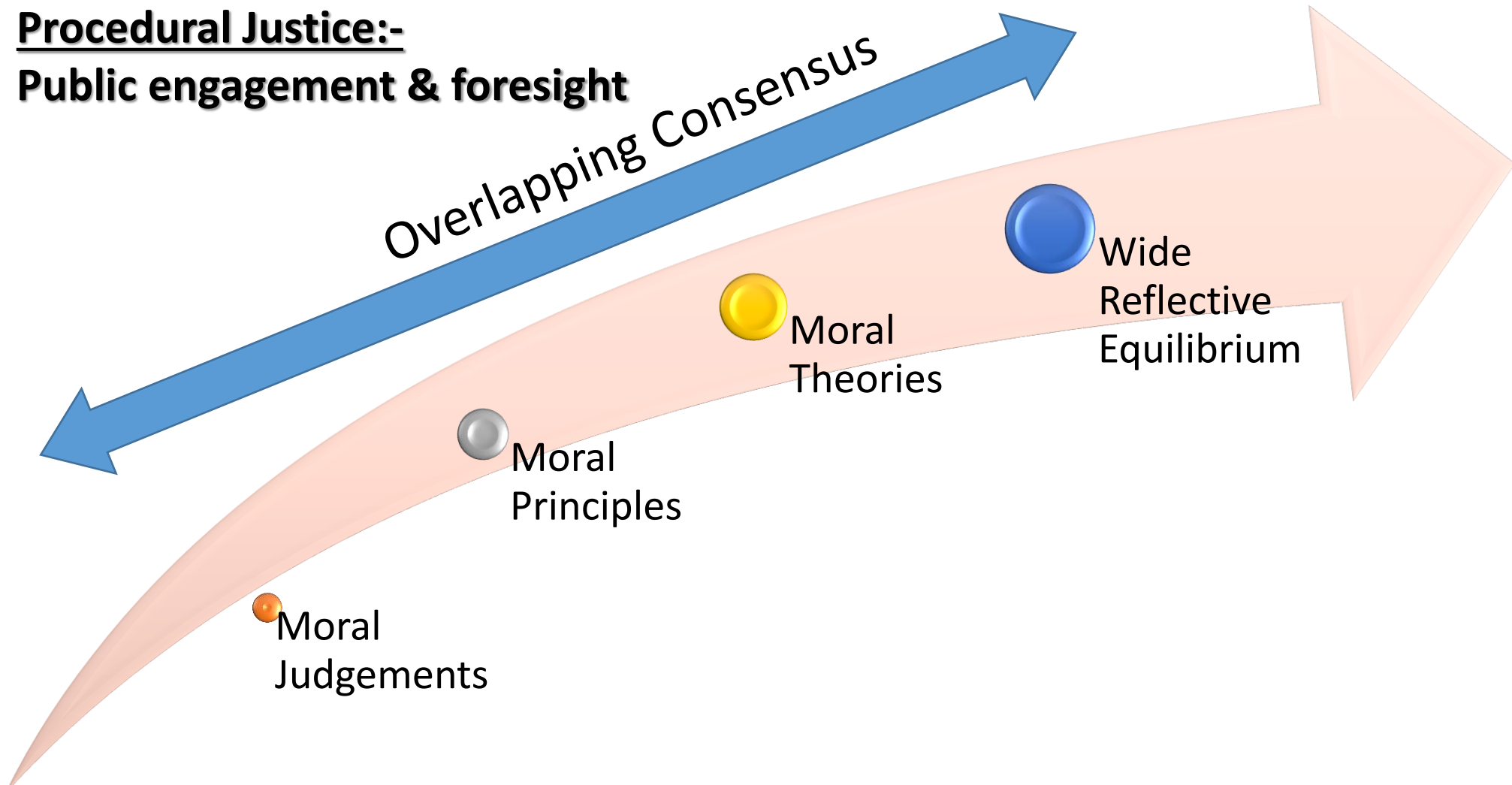
- Foresight:- Distinguished from prediction – developing plausible evolving scenarios of possible futures that can be subject to public engagement and deliberation;
- Integration:- Bringing engagement and foresight into domain of scientific practice (intellectual and design processes) to enhance reflectiveness, institutionalise anticipatory governance from the earliest and most powerful stage of technological development (introductory/early development - nascency – malleability)

# AEG – Public participation & foresight

**Procedural Justice:-**

**Public engagement & foresight**

Overlapping Consensus



# Procedural Justice



- An ex-ante approach – to participation and deliberation
- about the fairness of decision making .
- A process:-
  - for approaching the problem of DECISION MAKING in context of a “Wicked Problem” – NT
  - inclusive of rights of MEANINGFUL PARTICIPATION ----- an essential pre-requisite for the legitimate authority of decisions.
  - desired output ----- NORM-CREATING OUTCOMES that are perceived to be substantively just ----- DISTRIBUTIVE JUSTICE perceived fairness in the division of social benefits and burdens.
- Example :- “the slicer-picks – last” rule - perceived fairness because of perceived legitimacy based on the slicers participation in the process which is independent of the outcome

# Procedural Justice



**Equality doesn't mean Justice**



**Equality**



**Justice**



# The Participants



**THE HELPFUL  
ENGINEER**

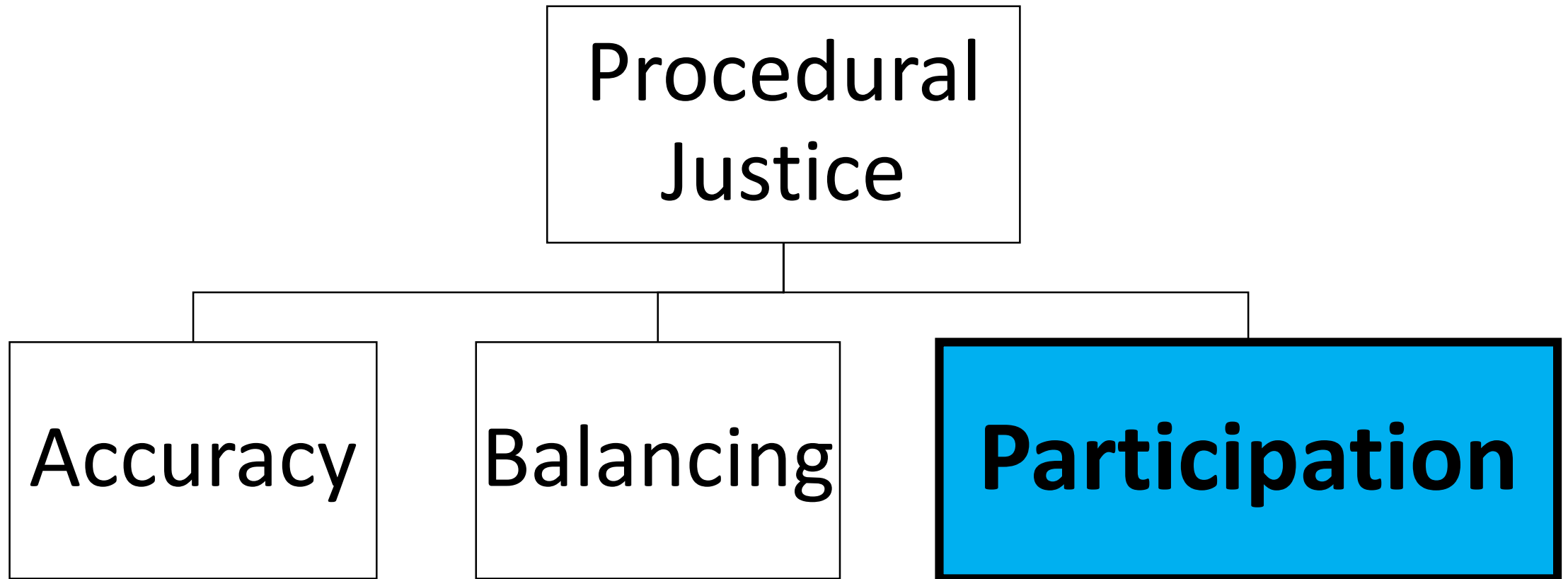
# Procedural Justice



- Provides information – knowledge transfer - to inform participants
- to encourage participants to co-operate in their decision making behaviour
- Non – coercive to reach overlapping consensus
- Outcomes are perceived as a **legitimate** source of authority and binding even though all participants may not agree with the decision
- Legitimate because a reasonable balance is struck between the goal of consensual outcomes and the cost of our foregoing our ideal values – WRE.
- Provides a good and sufficient reason to voluntarily co-operate, accept and comply with decisions.
- -> Participatory Legitimacy Theory



# Theories of Procedural Justice

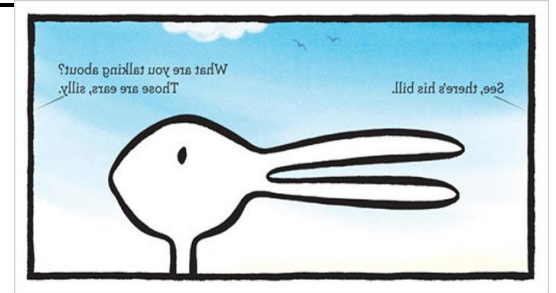


# The participation model of procedural justice

- the correct outcome is a function of a process that guarantees fair and equal participation;
- Values participation for its own sake not solely for its impact on the quality of the outcome;
- Values participation because it respects the dignity and autonomy of those affected by the outcome of the process – rights based & fairness centred

# Participatory Legitimacy Theory

- The **fairness** of a procedure and its **outcome** is conditional on the opportunity afforded to those who shall be bound by the outcome to have a reasonable opportunity to **participate fairly and equally** in the proceedings.
- Does not require actual participation:
  - Requires an option or a right to participate.
  - To be heard directly or by representation
- At a *meaningful* stage of the decision making process ( contribution plays a role in the deliberative and decision making process)



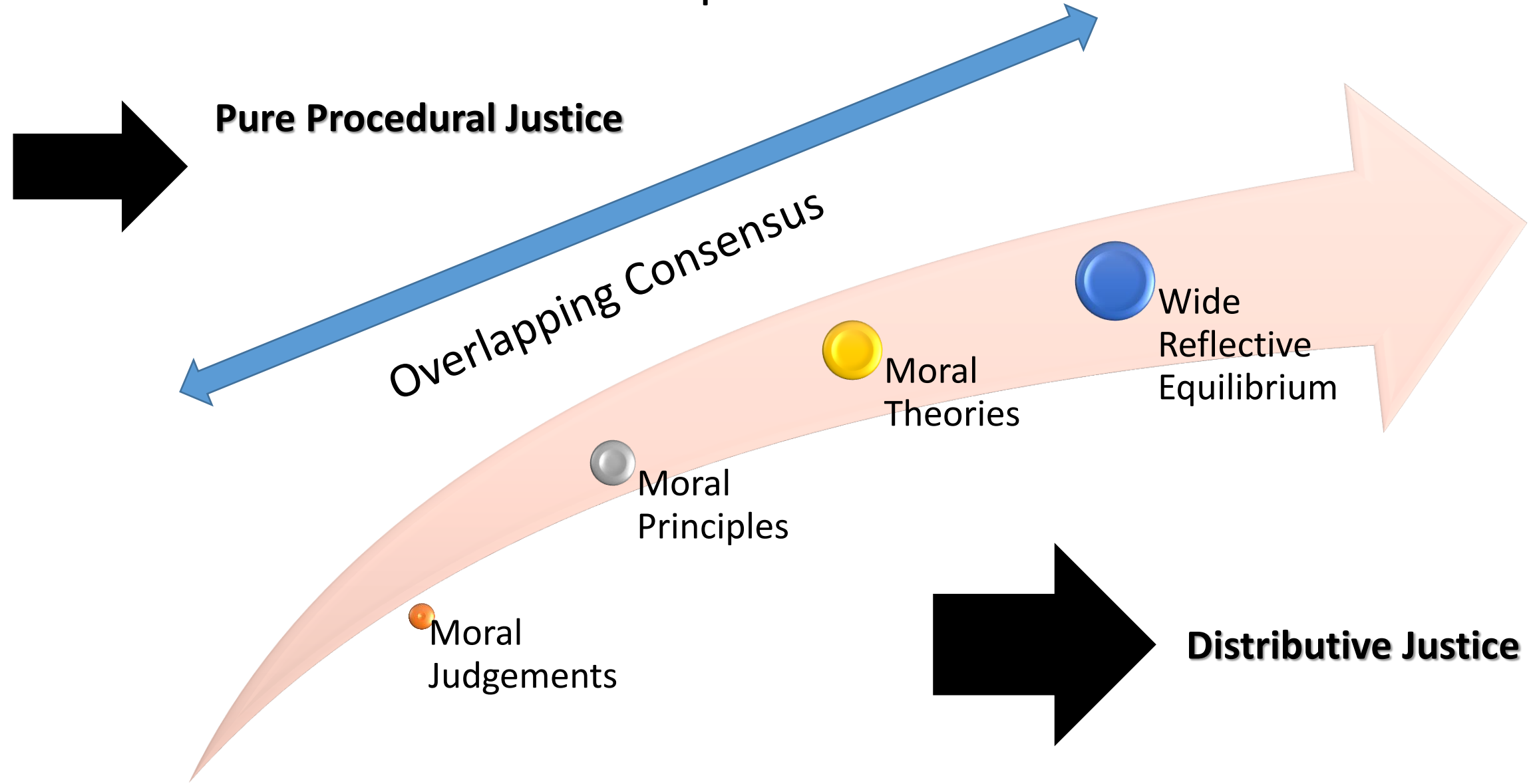
Bunny or Bird??

*“a wheel that can be turned though nothing else moves with it, is not part of the mechanism”*  
(Wittgenstein Ludwig 1953)

# Value of legitimacy

- Perceived source of authority of outcomes –
- Reach wide reflective equilibrium via overlapping consensus
- Achieve voluntary societal acceptance and embedding – social good
- Creates moral obligation on participants towards co-operation and compliance
- Develop action guiding norms = normative legitimacy (entanglement thesis – procedure transforms general and abstract decision making into action guiding decision making norms)
- Contribute to Sustainability in situation of uncertainty, heterogeneity - NT

# Wide Reflective Equilibrium





*That's all Folks!*

*Any Question?*