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

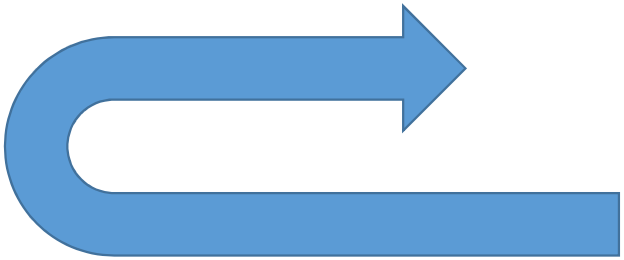
- A lack of full scientific knowledge
- shall not be used as a reason
- to postpone measures to prevent harm for legally protected interests
- if there are threats of serious or irreversible damage.

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??

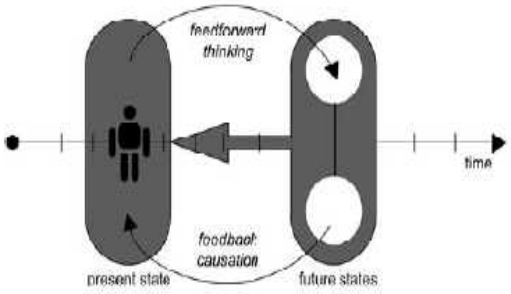
New Science Governance



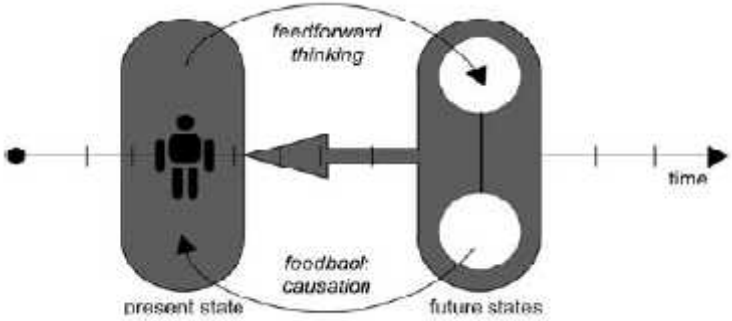
- Government → Governance – deliberative democracy
- Power over → Power to
- Constrain → Enable

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 <u>internalise responsibility</u> and <u>institutionalize reflexivity</u> 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

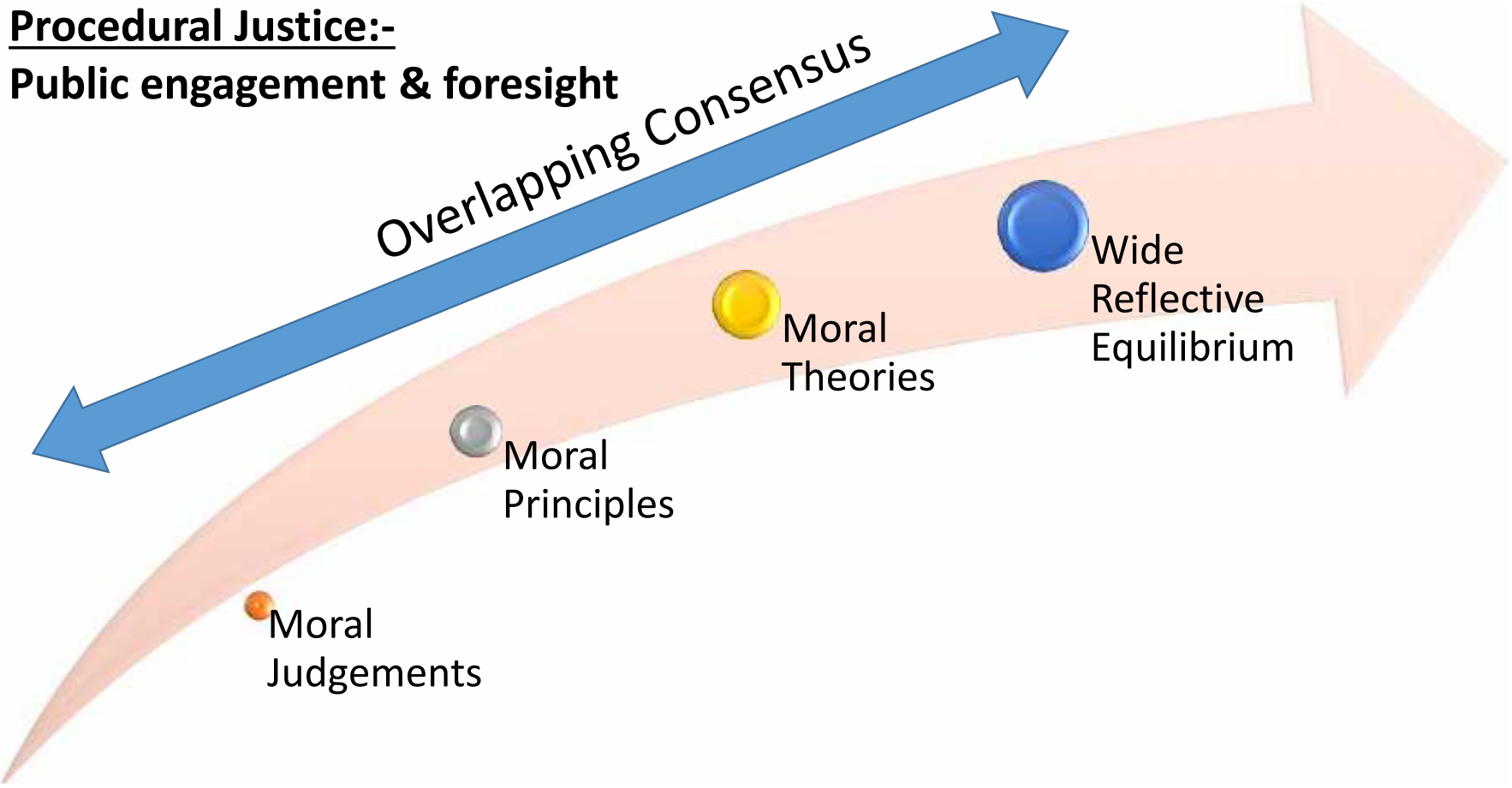
- Foresight:- Distinguished from prediction – developing plausible evolving scenarios of possible futures that can be subject to public engagement and deliberation;

- 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



Procedural Justice

- An ex-ante approach – to participation and deliberation
- about the fairness of decision making .
- A process:-

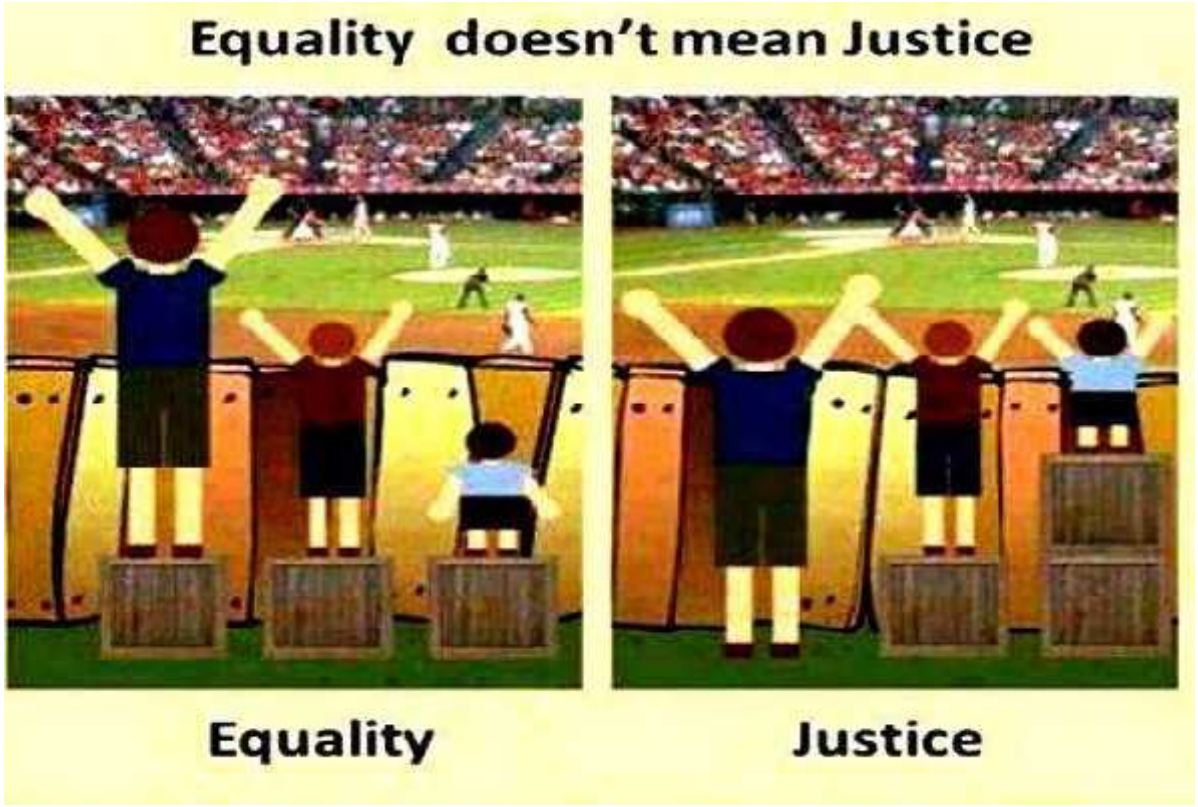
➢ for approaching the problem of DECISION MAKING in context of a "Wicked Problem" – NT

➢ 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

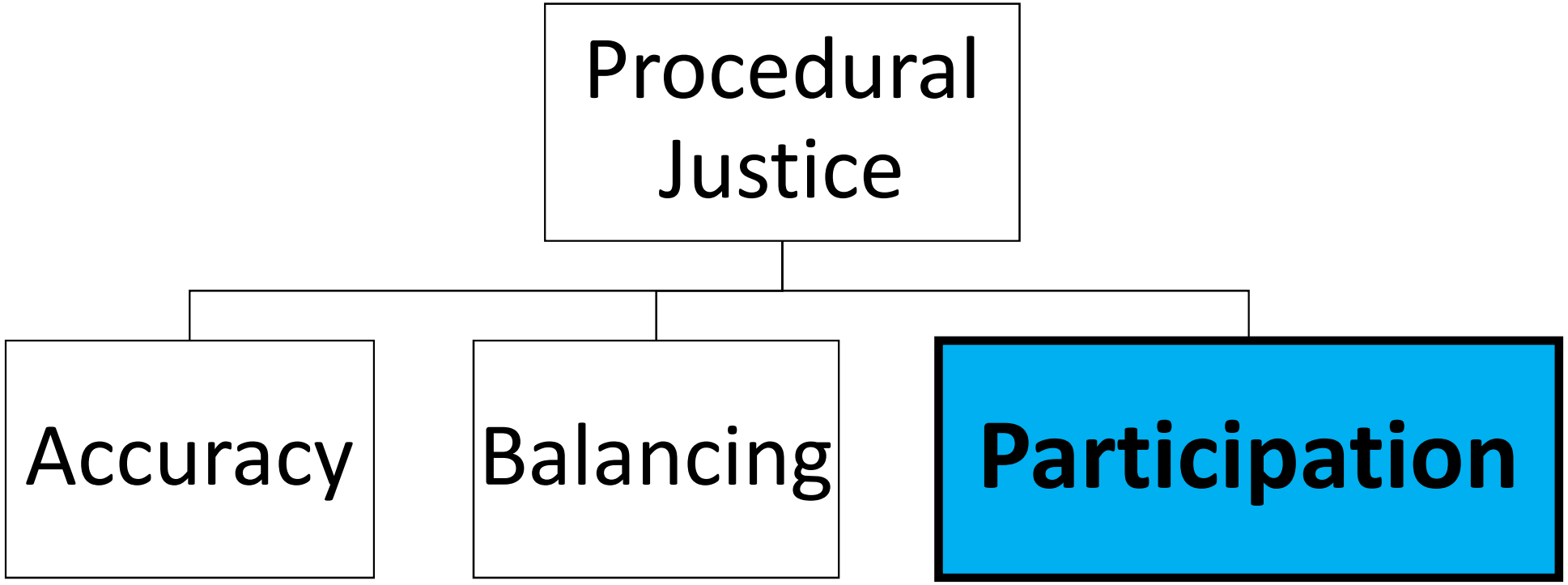


The Participants

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

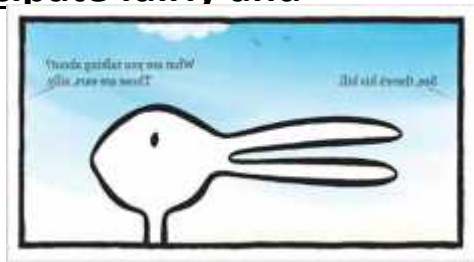


The participation model of procedural justice

- 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



Bunny or Bird??

- At a *meaningful* stage of the decision making process (contribution plays a role in the deliberative and decision making process)

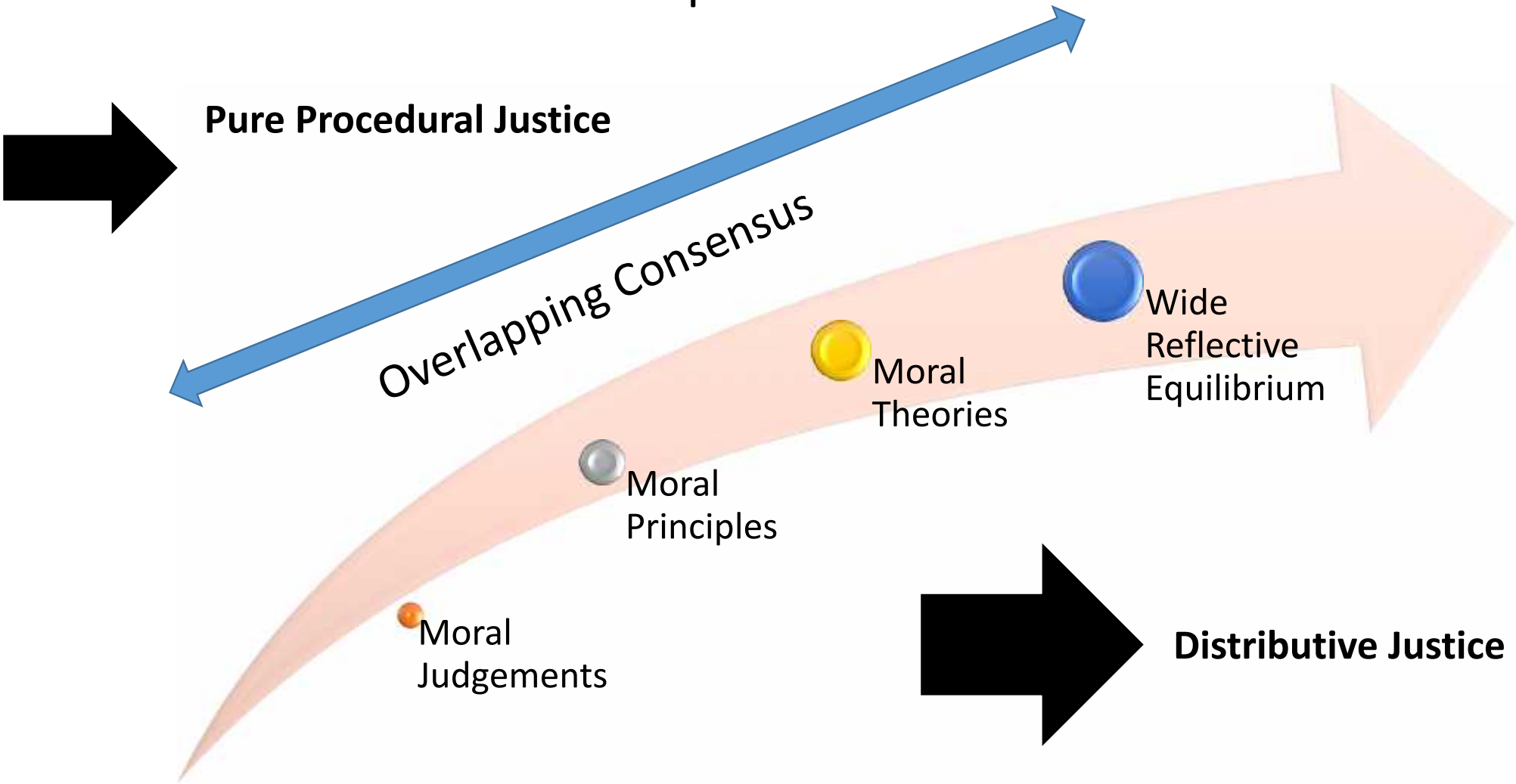
"a wheel that can be turned though nothing else moves with it, is not part of the mechanism" (Wittgenstein Ludwig 1953)

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 ?