

# Separated at Birth?



Black Hole



Theresa May

# Basic Democracy, Knowledge Management and Democracy-by-Design

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- An Act of Parliament in the Republic of Absurdistan
  - A Minister may by regulations make such provision as the Minister considers appropriate if the Minister considers that such provision should be in force
  - Regulations under this section may not – (a) impose or increase taxation, (b) make retrospective provision, (c) create a relevant criminal offence
  - But regulations under this section may make any provision that could be made by an Act of Parliament (including modifying this Act).

## 9 Implementing the withdrawal agreement

- (1) A Minister of the Crown may by regulations make such provision as the Minister considers appropriate for the purposes of implementing the withdrawal agreement if the Minister considers that such provision should be in force on or before exit day.

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*European Union (Withdrawal) Bill*

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- (2) *Regulations under this section may make any provision that could be made by an Act of Parliament (including modifying this Act).*
- (3) But regulations under this section may not –
  - (a) impose or increase taxation,
  - (b) make retrospective provision,
  - (c) create a relevant criminal offence, or
  - (d) amend, repeal or revoke the Human Rights Act 1998 or any subordinate legislation made under it.

- **Setting:** Using Elinor Ostrom's institutional design principles to specify algorithms for self-organization
- Self-governing socio-technical systems – using human and computational intelligence to formulate (self-organise) solutions to collective action problems
  - E.g. a 'fair' and sustainable distribution of common-pool resources
  - In an open system, with an economy of scarcity, expectation of error, etc.
  - Given the private ownership of the means of social coordination

# Self-Governing Socio-Technical Systems

- Socio-technical systems in the digital transformation requiring self-governance
  - Community energy systems
  - Peer production systems
  - (so-called) Sharing economy applications
  - Knowledge commons and participatory sensing
  - Communal management of shared living/working space
- Common properties
  - *Rule-oriented*: conventional, mutable rules – can be violated and repudiated
  - *Self-organising*: selection, application and modification of the rules by participants themselves
  - *Value-sensitive*: rules chosen to ‘optimise’ with respect to shared set of congruent values (which might not be explicitly represented in the rules themselves)

- The **Dilemma of the Rules**
  - On the one hand, sufficiently unrestricted to allow 'freedom of (collective) action'
  - On the other, sufficiently restricted to resist the 'iron law of oligarchy'
- How to balance majority preference and expert judgement
  - How does a community of individuals, with a set of shared values and common interests, use its knowledge to select the 'correct' option from a set of alternatives
- Constitutional Choice
  - How to: provide the material conditions for human flourishing. promote free exercise of constitutive human capacities; and sustain desirable conditions of social existence

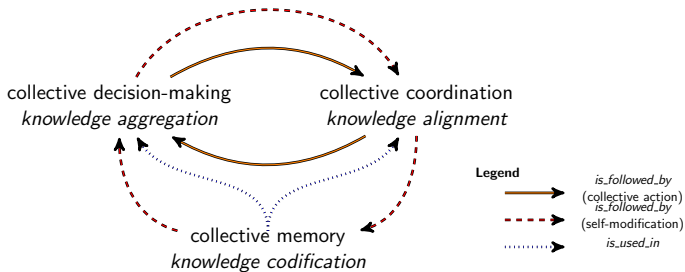
- Democracy would seem to be the ‘least worst’ choice of political regime
  - “At the bottom of all the tributes paid to democracy is the little man, walking into the little booth, with a little pencil, making a little cross on a little bit of paper – no amount of rhetoric or voluminous discussion can possibly diminish the overwhelming importance of that point.” – Winston L. S.-Churchill
  - “We had a vote. You lost. Shut up. That’s Democracy” – A. Troll
- Crisis of confidence? From the “end of history” to the “end of democracy”



- **Knowledge management underpinned the successful and sustainable classical Athenian democracy for 180 years**
  - Massively outperformed its rival city states, economically, architecturally, militarily, and diplomatically, on a number of independent metrics
  - Despite a relative parity in territorial size, population density, cultural development, and availability of mineral resources
- **It was not (just) about the voting** (Sorry Winnie)
- Ober's analysis
  - Greater social benefits derived from higher levels of cooperation
  - Superior capacity for resolving public collective action problems
  - Itself was a product of special features of their participatory and deliberation model of self-governance
  - Transparency across multiple inter-dependent knowledge management processes

# Democracy in Classical Athens

- Distinctive Athenian system for organising useful knowledge
  - Knowledge aggregation
  - Knowledge alignment
  - Knowledge codification



# Strategic Mechanisms

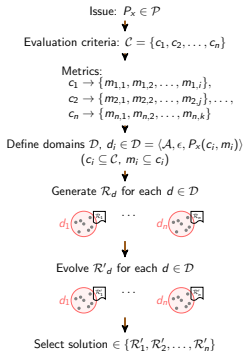
Problem	Process	Strategic mechanisms	Transparency and Inclusiveness
<p><b>Collective decision-making</b> + Unequal distribution of knowledge; dominance of information sources, elimination of diversity</p>	<p><i>Knowledge aggregation</i></p>	<p>Social networking, open discussion fora and computational social choice</p>	<p>Widespread participation and engagement; heterogeneity in judgement of preferences; fair voting protocols</p>
<p><b>Collective coordination</b> + Asymmetric distribution of power, ownership of means of coordination diminishes opportunities for collective action</p>	<p><i>Knowledge alignment</i></p>	<p>Collective awareness, social capital, economy of esteem, credible pre-commitments, interactive self-governance</p>	<p>Rotation of roles and memberships; standard rules of order; accountability; visualisation</p>
<p><b>Collective memory</b> + Establishing and maintaining agreed conventions to satisfy/satisfice a shared set of congruent values, tendency towards oligarchy</p>	<p><i>Knowledge codification</i></p>	<p>Algorithmic self-governance, knowledge commons, institutional structuration, and distributed consensus tech. (e.g. blockchain)</p>	<p>Executable specification of mutable rules encoded in smart contracts; trusted, independent knowledge archives</p>

# Design Principles

- *Clear boundaries (as per Ostrom) between who is a citizen/participant in knowledge aggregation and alignment processes, and who is not.*
- *Processes generally aim to lower transaction costs, and increase aggregate value of social cooperation.*
- *Agreement on certain matters on which decisions must be made as being of common interest (e.g. security, welfare etc.).*
- *Clear line between common interest questions and factional or partial goods questions. Appropriate procedural rules for decision-making in each domain.*
- *Common knowledge by citizens of substantive rules and of procedural rules for making new rules and revising existing rules.*
- *Epistemic diversity among citizens, along with distributed social knowledge of locus of expertise and reliability of experts.*
- *Procedural rules ensure that valuable, diverse inputs are recognized as such and taken up as appropriate. Filtering process for assessing what (and whose) information input is (and is not) relevant to each specific sort of question.*
- *Processes serve as focal points/bright lines for collective action by citizens against violations and specify a hierarchy of possible punishments depending on seriousness of violation.*

# Relevant Expertise Aggregation (Ober, 2013)

- Relevant Expertise Aggregation (REA)
  - A process of collective decision-making (used in classical Athenian democracy) that is both ‘democratic’ and ‘epistemic’
  - Depends on the ‘type’ of problem that a community is trying to solve



# Basic Democracy (Ober, 2017)

- Basic democracy: designing institutions for governance to prevent the occurrence (or recurrence) of tyranny
- Liberal democracy: concerns for justice, values, morality, autonomy, rights, etc.
- Claims
  - Is a reasonably stable form of collective self-government by a diverse group of citizens;
  - Can be both legitimate and effective; and
  - Demonstrates the importance of civic education and civic dignity
- Stability requires rules, which themselves must restrict the absolutist tendencies of the collective rulers and degeneration into different political regimes

- Thought experiment addressing a question about social order
  - How a human community can reliably realise the benefits deriving from social coordination and cooperation ...
  - ... without submitting to a ruling oligarchy or an autocratic monarchy
- Stage one: Founding
- Stage two: Agree on the basic rules on participation, legislation, and entrenchment
- Stage three: Concerns the making and enforcing of post-foundation rules

# SimDemopolis and Some Experiments

- Multi-agent system
  - Set of agents  $\mathcal{A}$
  - Connected by social network  $\mathcal{G} = \langle \mathcal{A}, p \rangle$
  - Multiple rounds of an *operational choice* 'game' – common-pool resource allocation (linear public good game)
  - Occasional invocation of *collective choice* rules – e.g. participation
- Suber's Game of Nomic
  - Mutable/Immutable rules is helpful
  - So is paradox (paradoxically?)
- Avoidance of (entropic\* tendency towards) various forms of tyranny
  - Civic participation (3 variations) vs. oligarchy
  - Legislation/representation vs. autocracy
  - Entrenchment vs. majoritarian tyranny

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\*'Entropic' =<sub>def</sub> 'a process of seemingly inevitable gradual degeneration'



- Democracy by Design (DbyD)
- DbyD is an instance of value-sensitive design, which recognises that many new socio-technical systems in the digital transformation require some form of collective self-governance
- Eight foundational principles
  - **P1. Prevention rather than re-invention**
  - **P2. Democracy is not an end-state, nor the default**
  - **P3. Democracy embedded in design**
  - **P4. No compromises on democratic processes**
  - **P5. Visibility, inclusivity, transparency, and accountability**
  - **P6. Inter-dependence of diversity**
  - **P7. Education in the recognition of prosocial benefits**
  - **P8. Procedural evaluation**

- Documentation of classical processes sufficiently accurate for specification of an algorithm
- Simulation rather than counterfactuals
- Learning and innovation was endogenous

# Public Understanding of Democracy

- Insight into democratic theory and practice
  - Knowledge to resist the slide from populism into extremism
- Reflection: restore collegiate and knowledge-based self-organisation of academia and science, as opposed to centralised, metric-based bureaucratic managerialism
- Protest: public understanding of science and democracy
  - Importance of responsible knowledge management
  - Importance of civic education and critical thinking
  - Importance of civic dignity
  - Distinction between democracy and majoritarian tyranny
  - Identify arrogation of political power and influence

# The Six Letter “B” Word

- **The essence of democracy: (at least) the confluence of multiple transparent and inclusive knowledge management processes that enable a diverse and heterogenous collective of individuals to satisfice a shared set of congruent values, and to avoid tyranny**
- Total breakdown<sup>†</sup> of knowledge management and tyranny avoidance processes
  - Oligarchy
  - “This country has had enough of experts” – Michael Gove
  - Majoritarian tyranny
  - Unity
  - Knowledge aggregation and civic dignity
  - Knowledge codification and civic education
  - Knowledge alignment
  - Changing mind

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<sup>†</sup>Almost: the ‘Bright Lines’ feature stopped an instinctive autocrat from negotiating in secret and fixing unrestricted self-modification

- Computational Comparative Politics
- Plato: who should rule?
- Popper: how to dispose of a 'bad' ruler
- How to marginalise those who will not commit to the "truth"?
- How to create narratives that can overcome confirmation bias?
- **We'd all prefer to live in a 'nice' liberal democracy – but this type of political regime is not the default, and needs preserving**
  - *Do not cry tomorrow for that which you did not have the courage and wisdom to defend today – Ariel Dorfman*