Rational Design and Internet Governance

Why is there no single institution for Internet Governance?

Based on Koremenos, Lipson & Snidal and Herbert Burkert

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Main argument **Fragmentation can be a rational response to uncertainty.**

Contents

Four Hypotheses

The hypotheses frame the link between rational design theory and Internet governance.

H1 Uncertainty over master plan

The institutional design of Internet governance reflects rational responses to uncertainty rather than a single coherent master plan.

H2 Flexibility under change

The greater the uncertainty about actors' behavior and technical change, the more Internet governance depends on flexible and decentralized institutional arrangements.

H3 ITU-ICANN tensions

The tensions between ITU and ICANN can be understood as conflicts over scope and control.

H4 Limits of a single ideal institution

A single ideal institution is unlikely to solve Internetgovernance problems, because important design goalssuch as inclusiveness, transparency, independence,efficiency, and flexibility are difficult to maximize at thesame time.

Why Internet Governance Matters

The Internet is technical infrastructure, but its consequences are political and social.

The Internet is not only technical.

It affects communication, markets, privacy, cybersecurity, political control and access to information.

Technical layer

Names, numbers, standards

Economic layer

Markets, platforms, data flows

Political layer

Security, speech, surveillance

Institutional design matters because technical decisions have public consequences.

What Is Internet Governance?

A working definition for this presentation.

Internet governance

The coordination of rules, standards, actors and institutions that shape how the Internet operates and develops.

Technical	Standards	Security	Public policy	Actors
DNS, names, IPs	Protocols, norms	Risk, traceability	Rights, markets	States, firms

Puzzle: If the Internet is global, why is there no single global institution?

Infrastructure Creates Governance Problems

Burkert links Internet governance to the older problem of cross-border infrastructure.

1. Networks expand

Infrastructure reaches borders.

→

2. Borders appear

Connection and transit need rules.

→

3. Institutions

Coordination becomes necessary.

From telegraphy to the Internet

Cross-border communication infrastructure pushes international institutionalization.

Internet governance is a new version of an older infrastructure problem.

Why do institutions differ?

Institutional features are shaped by cooperation problems.

- *Koremenos et al. argue that many international institutions are best understood through "rational design," because states devise institutions to promote cooperation and respond to problems such as distribution, enforcement, large numbers and uncertainty.*
- *Rational design means that international institutions are shaped, deliberately or gradually, to solve specific cooperation problems such as uncertainty, enforcement, distribution, and conflicts over control.*

Uncertainty	Enforcement	Distribution	Number
What will happen?	Will others comply?	Who gains and pays?	How many actors?

Rational design makes fragmentation analyzable, not merely messy.

Rational Design Is Not Perfect Planning

This clarification matters for Internet governance.

Rational design means

Institutions can be explained through the problems they are designed or modified to address.

It does not mean

Every institution is perfectly planned, fully efficient or created from zero in one moment.

Internet governance evolved as new problems appeared and older institutions adapted.

Five Design Dimensions

Koremenos et al. provide a vocabulary for comparing institutions.

Dimension	Question	Internet governance relevance
Membership	Who participates?	States, firms, technical experts, civil society
Scope	Which issues are covered?	Technical coordination or public policy
Centralization	Are tasks delegated?	Secretariats, coordination bodies, forums
Control	Who makes decisions?	State-centered or multi-stakeholder authority
Flexibility	Can rules adapt?	Fast technological change requires adaptation

Cooperation Problems

Institutional design varies because cooperation problems vary.

Distribution

Who benefits, and who bears costs?

Enforcement

Will actors follow the rules?

Number of acters

How many actors must coordinate?

Behavior uncertainty

Will others cooperate, or use the system strategically?

Future uncertainty

How will technology and conditions change?

Preference uncertainty

What do other actors actually want?

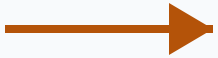
Internet governance contains these problems at the same time.

From Theory to Hypotheses

The rational design framework generates expectations for Internet governance.

If Internet governance faces

- high uncertainty
- many actors
- disputed authority
- fast technological change
- competing design goals



Then we should expect

- fragmentation
- flexibility
- overlapping institutions
- scope and control conflicts

The following four hypotheses translate this expectation into the case.

Hypothesis 1

Fragmentation as rational response

The institutional design of Internet governance reflects rational responses to uncertainty, rather than one coherent master plan.

In the case of Internet governance: Different institutions emerge around different functions.

Hypothesis 2

Uncertainty produces flexibility

The greater the uncertainty about actors' behavior and technical change, the more Internet governance depends on flexible and decentralized arrangements.

In the case of Internet governance: Flexible forums supplement rigid treaty-based models.

Hypothesis 3

ITU-ICANN tensions: scope and control

The institutional tensions between ITU and ICANN can be understood as conflicts over scope and control.

Scope: Which issues are governed?

Control: Who makes decisions?

Hypothesis 4

Limits of one ideal institution

A single ideal institution is unlikely to solve Internet governance problems, because key design goals are difficult to maximize together.

Core trade-off: Inclusiveness, transparency, independence, efficiency and flexibility may conflict.

Case Background: ITU

International Telecommunication Union: the older state-centered logic of communication governance.

ITU

- roots in telegraph infrastructure
- formal international organization
- state-centered membership
- telecommunications and standards
- public-policy role via convergence

Institutional strength

Historical authority and formal legitimacy in communication infrastructure.

Institutional limitation

May be slower, more state-centered and more politically constrained than fast-moving Internet governance requires.

Burkert's puzzle: why did the ITU not simply absorb Internet governance?

Case Background: ICANN

Internet Corporation for Assigned Names and Numbers: a newer multi-stakeholder logic.

ICANN

- created in 1998
- coordinates names and numbers
- Domain Name System role
- multi-stakeholder model
- closer to technical Internet governance

Institutional strength

Flexible and functionally close to technical Internet coordination.

Institutional limitation

Creation process, representation, inclusiveness and independence remain contested.

ICANN is flexible, but flexibility does not automatically produce legitimacy.

ITU vs ICANN

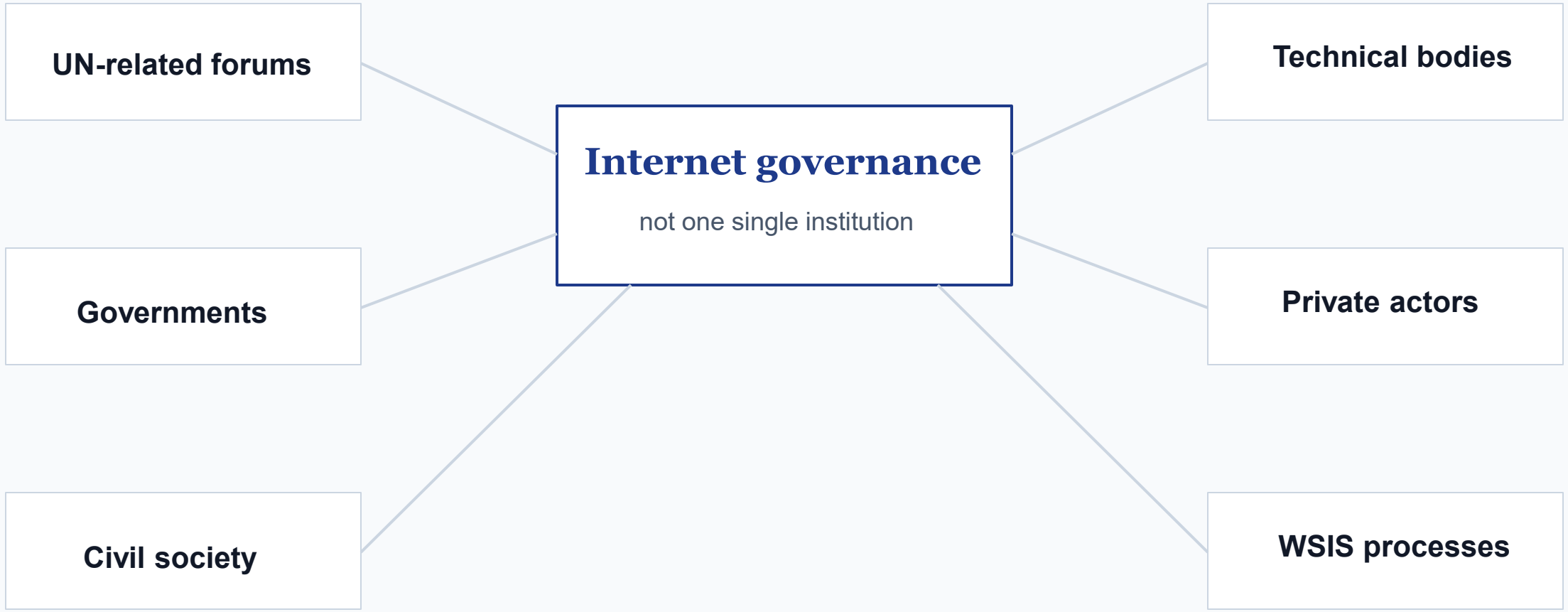
A rational-design comparison across institutional dimensions.

Dimension	ITU	ICANN
Membership	State-centered, with sector members	Multi-stakeholder structure
Scope	Telecommunications, standards, convergence	Names, numbers, DNS, stability
Control	Governments hold strong formal authority	Distributed but contested authority
Flexibility	Formal and stable, but slower	Flexible, but legitimacy is questioned

The conflict reflects different institutional designs, not only organizational rivalry.

Beyond ITU and ICANN

Burkert treats Internet governance as a multi-player, multi-interest, multi-process, multi-layer field.



The real question is how to manage this fluid environment.

Ideal Institution and Adapting to Fluidity

Burkert uses ideal criteria as critical tools, but doubts one monolithic solution.

Ideal institution criteria

1. intentional creation
2. clear focus
3. representation
4. inclusiveness
5. independence
6. transparency and information
7. accountability, review and redress

Burkert's alternative

Do not assume fluidity can be eliminated. Instead:

- manage multiple institutional presences
- build cross-institutional coalitions
- use criteria to criticize weak processes
- improve coordination and accountability

The goal may be better management of fluidity, not one perfect institution.

Conclusion and Future Outlook

Fragmentation is not only failure.

It can also be an institutional adaptation to uncertainty, plurality, conflict and technological change.

Future question

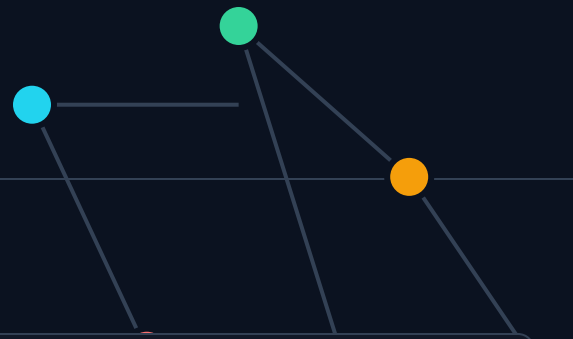
How can fluid governance remain accountable, representative and flexible?

The Internet may not need one perfect institution; it needs managed complexity.

Thank you. I look forward to your questions.

Discussion

Three questions connecting rational design to digital governance



1 Fragmentation

Governance failure, or a rational adaptation to uncertainty and many actors?

2 Accountability

Can multi-stakeholder governance remain flexible and democratically accountable?

3 Future Forums

Should AI and cybersecurity use existing forums, or do they require new institutions?

Key tension: adaptability vs. unity, legitimacy, and control

Thank You for listening