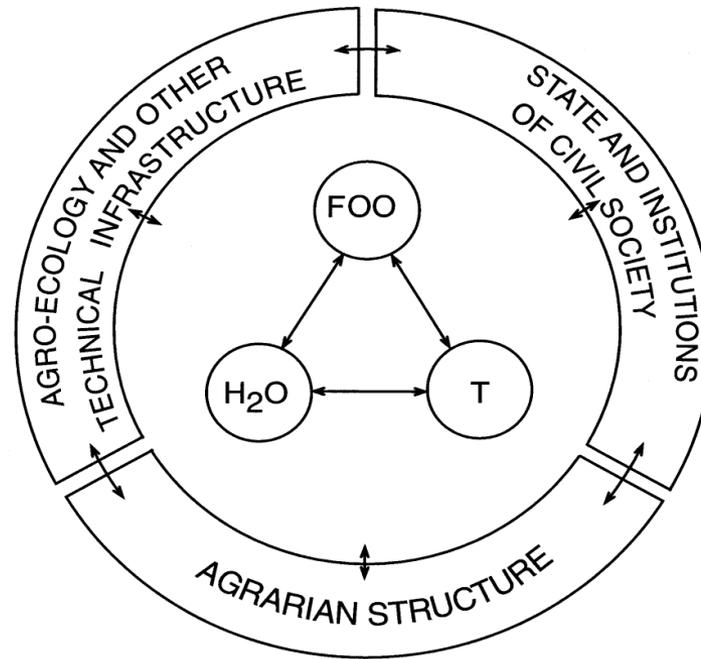


The problemshed

Framing your research object



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2 November 2015

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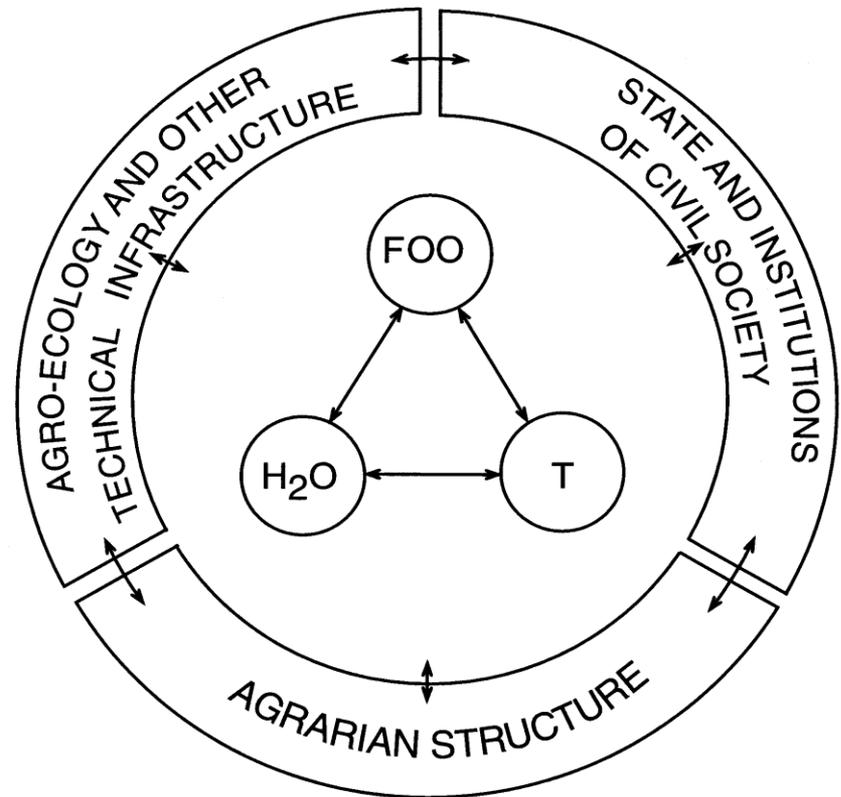
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Contextuality

1. How generally valid or situation specific is water knowledge, and can or should it be?
2. To what extent can water studies focus on water only, that is, how much of the relationship with other resources and social dynamics need to be taken into account in water focused analysis?
3. To what extent should water specific theory be embedded in broader theory on socio-natural transformation?

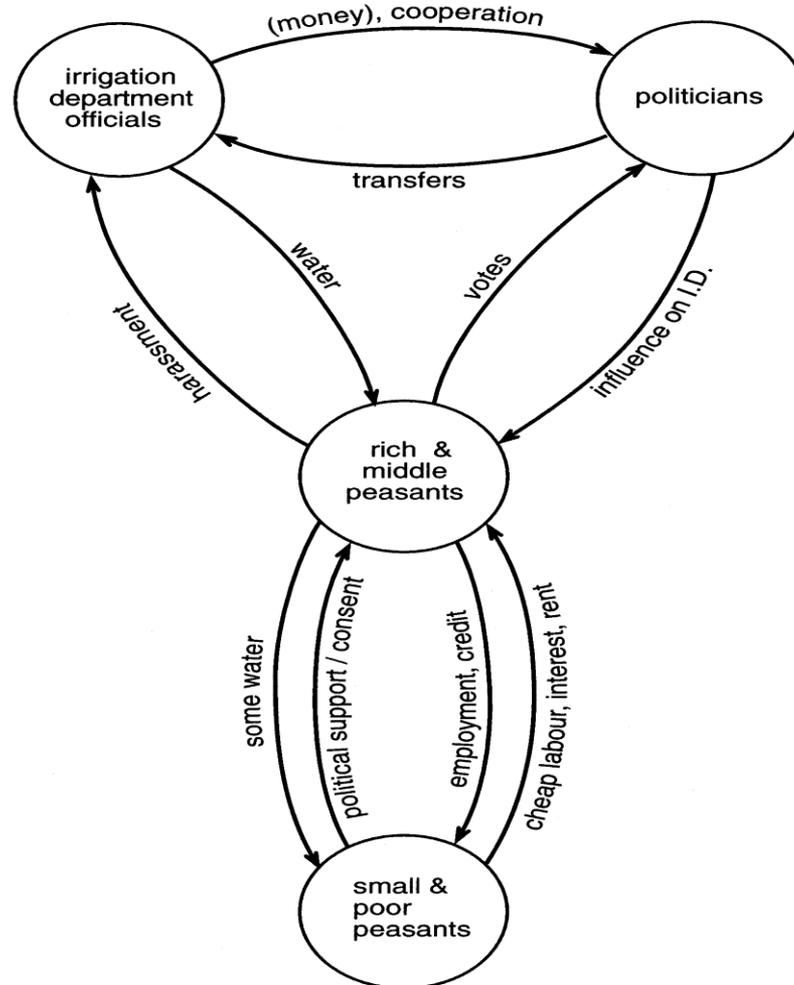
Selectivities in framing

- Ontological
- Epistemological



Source: Mollinga (2003)

Framing and interdisciplinarity



Source: Mollinga (2003)

Technique of framing-1

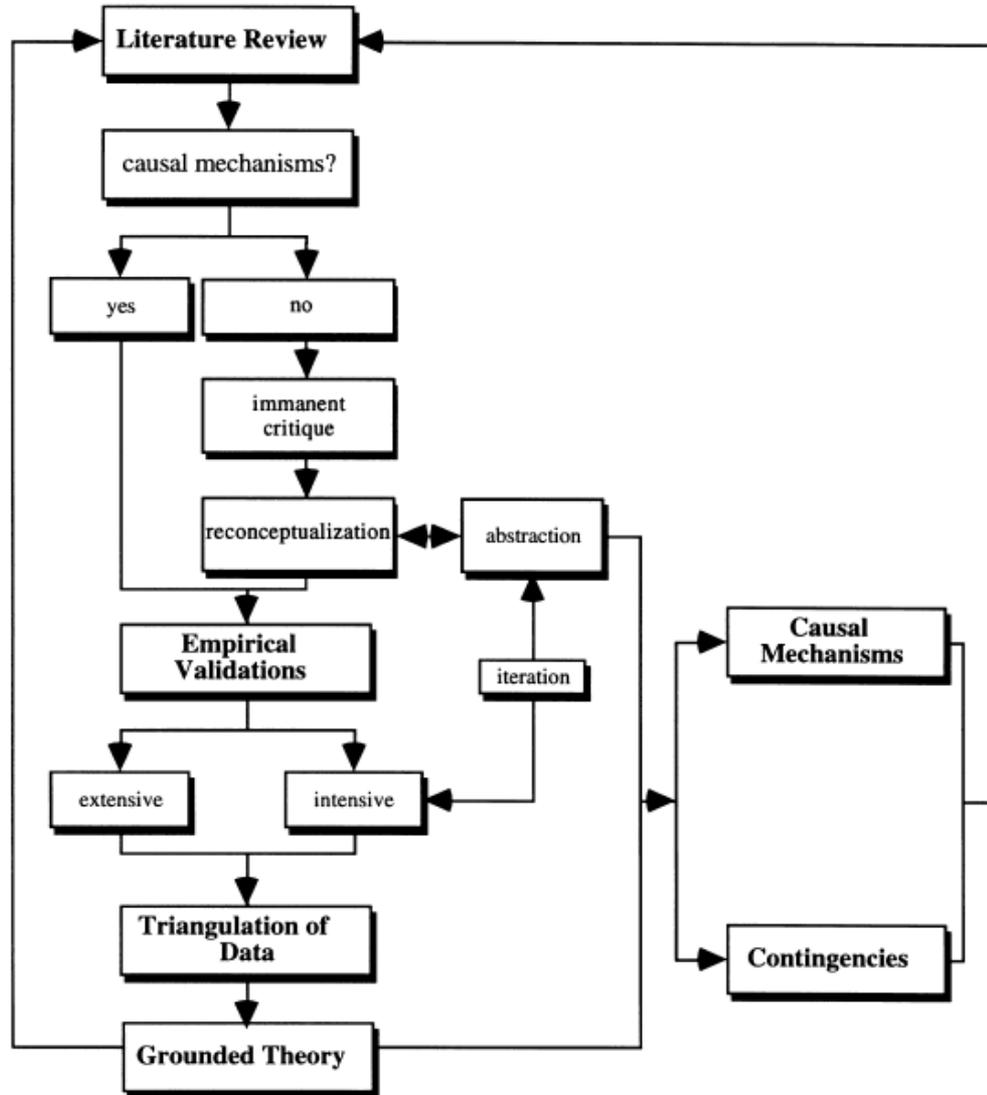


Figure 1 Realist research in practice



Technique of framing-2

“We suggest the following steps and principles for conducting a critical realist data analysis. (...).

1. Description of events
2. Identification of key components
3. Theoretical re-description (abduction)
4. Retroduction: Identification of candidate mechanisms
5. Analysis of selected mechanisms and outcomes
6. Validation of explanatory power”

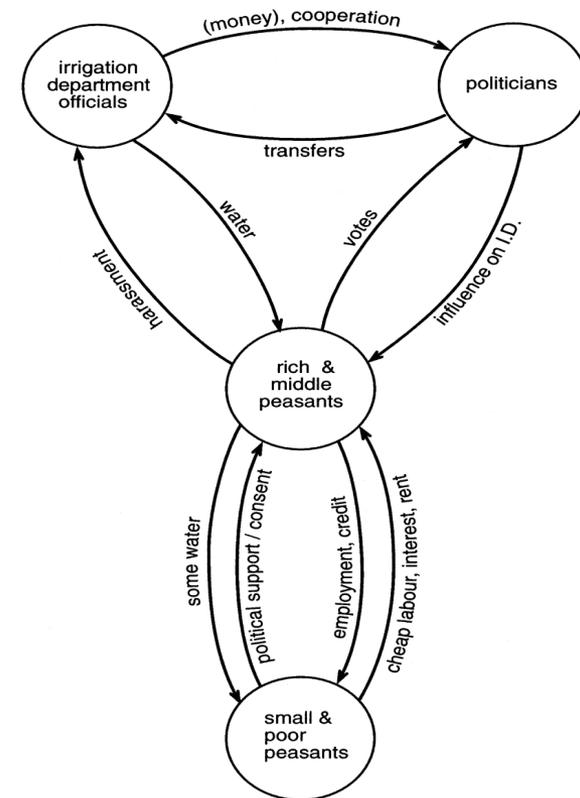
(Bygstad and Munkvold (2011:5)



Employment, labour and caste in local water distribution

Three paradoxes in local water distribution:

1. 'Caste' was not obviously a structuring factor in water distribution in this caste ridden society;
2. An accepted and acknowledged set of local irrigation rules with 'equal irrigation time per unit area' as its principle, combined with clearly unequal distribution in practice;
3. This evidently unequal pattern of distribution was not accompanied by conflict and contestation (while conflict and contestation were rampant at higher levels of the canal system).



Source: Mollinga (2003)



Question

- Should we aim to ‘generalise’ our knowledge?

or

- Should we aim to determine the ‘validity domains’ of our knowledge?

Escapes from contextuality as 'local specificity'

1. Abstraction
2. Validity domains
3. Look for widely valid (single) mechanisms

Back to the starting questions on the contextuality of knowledge

1. How generally valid or situation specific is water knowledge, and can or should it be?
2. To what extent can water studies focus on water only, that is, how much of the relationship with other resources and social dynamics need to be taken into account in water focused analysis?
3. To what extent should water specific theory be embedded in broader theory on socio-natural transformation?



End of part 1

Group discussion

- Groups of 4-5 participants
- Have a conversation on:
 - How have you been ontologically and epistemologically selective in your research framing (or: in defining your problemshed)? (15 min)
 - Does your research aim to ‘generalise’ in one way or the other if so, how? (15 min)
 - Which **questions** has this conversation led to? (10 min)

The questions will be briefly presented in the plenary (10 min)

Stepwise comparison: what is your 'case'?



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internal validity ----- >

external validity <-----

	<i>Mill's Method of Difference</i> MMD	<i>Mill's Method of Agreement</i> MMA
Most-Similar System Research Design	MSSD + MDD (dealing with differences in similar cases)	MSSD + MMA (dealing with similarities in similar cases)
MSSD	<p><u>Unequal water distribution</u>: three secondary canals from one South Indian system, one water-abundant (head), two water-scarce (tail), exhibiting different spatial patterns of unequal water distribution.</p> <p><u>Economic reform</u>: Anglo Saxon countries, opting for either liberalisation or nationalisation, with assumedly different outcomes.</p> <p>PRIMARY CASE</p>	<p><u>Unequal water distribution</u>: additional canals, across degrees of scarcity, from the same and similar South Indian systems, exhibiting similar variation in the spatial pattern of unequal water distribution.</p> <p><u>Economic reform</u>: Anglo Saxon countries, all liberalising, with assumedly similar outcomes.</p> <p>PRIMARY CASE - extended</p>
Most-Different System Research Design	MDSD + MMD (dealing with differences in different cases)	MSSD + MMA (dealing with similarities in different cases)
MDSD	<p><u>Unequal water distribution</u>:</p> <ol style="list-style-type: none"> secondary canals from a South Indian, a North Indian system, and a Western Indian system with different water rationing rules, and different attempts at irrigation reform,, with different patterns of inequality/differential access; secondary canals from a South Indian and a Khorezmian (Uzbekistan) system, with different infrastructure designs and different governance regimes, with different patterns of inequality/differential access. <p><u>Economic reform</u>: Anglo-Saxon and continental European countries, with dissimilar educational policies, having assumedly different outcomes.</p> <p>SECONDARY/TERTIARY etc. CASES</p>	<p><u>Unequal water distribution</u>:</p> <ol style="list-style-type: none"> secondary canals from an Indian and a Mexican system, with similar time-share based rationing rules, with similar patterns of inequality/differential access; secondary canals from a water-scarce system (Pakistan) and from a water abundant system (Indonesia, Philippines), with similar irrigation reform programmes implemented, reproducing similar patterns of inequality/differential access. <p><u>Economic reform</u>: Anglo-Saxon and continental European countries, with similar monetary policies, having assumedly similar outcomes.</p> <p>SECONDARY/TERTIARY etc. CASES</p>

A route not traveled: Identifying variables

Dependent variable:

Pattern of unequal distribution

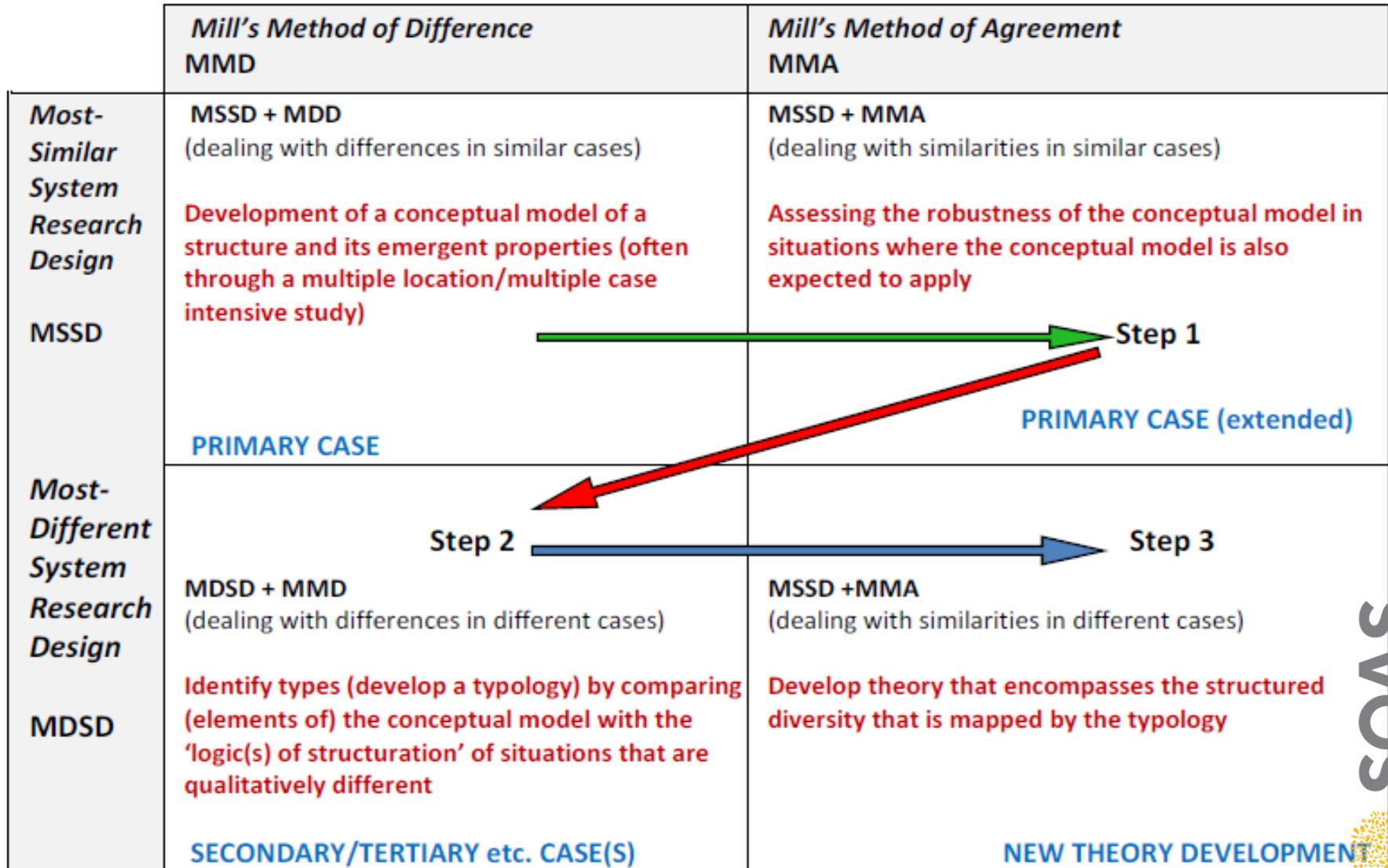
Control variables taken into consideration:

1. water supply to secondary canal (abundant/scarce) [MSSD + MMD and MSSD + MMA]
2. rationing principles&rules in protective design (localisation, warabandi and block system) [MDSD + MMD]
3. state form/political regime/governance system (post-Soviet authoritarian, liberal democratic) [MDSD+MMD] (liberal democratic with weight on province-level water governance and corporatist with weight on national level water governance) [MDSD+MMA]
4. infrastructure design principles (scarcity by design with dependent small local units in a queue and abundance by design with largely independently supplied large local units) [MDSD+MMD]
5. Overall water availability in the system (low rainfall, short monsoon, design for low water using crops and high rainfall, spread over the year, designed for high water using crops) [MDSD+MMA]

It would not be difficult to extend this list by adding new independent variables, or by specifying and subdividing the already identified.

The envisaged route

Figure 4: Stepwise comparative analysis for theorising structured diversity¹



What is a 'case'?

- What is my case in the envisaged research?
- A 'case' in Levi Faur's/critical realist's comparative research design is a 'set of theoretical attributes'



QCA: Levi-Faur's approach

“The major goal of the social sciences (...) is to generalize in a way that reflects the diversity and complexity of the social world in general and cases in particular.”

“...a controlled, reasoned increase in the number of cases without compromising the strength of case-oriented analysis.”

“The way to go about increasing the number of cases involves *redefining the nature* of the case while still keeping the focus directly on evidence for or against the theory.”

“ ...a case is a *particular configuration of attributes...*”

(Levi-Faur *Question of Size?*)

The ‘case’ I can’t yet talk about: Amrita Lamba’s PhD research

Title:

**Strong State-Society Synergy for Inclusive Natural Resources
Governance: Comparing Brazil and South Africa**

“In this thesis, using the conceptual – analytical framework of Judith Tandler’s and Peter Evans’s State-Society Synergy approach and Francis Fukuyama’s State Building model, I describe a novel institutional architecture, which I call the *Strong State-Society Synergy (4-S) approach* by knotting the aforementioned threads of thinking about governance. The 4-S heuristic approach provides a fine-grained analysis of the mechanisms at work in the fuzzy space created by the overlap of formal and informal institutions. (...) I attempt a comparative natural resources governance analysis to understand how the events unfolding/unrolling (in this space) in the *water, wetlands and forestry sectors in Brazil and South Africa* – countries for which there is good reason to expect very similar responses, but in which quite different outcomes are observed (Gauri and Lieberman, 2004) [which] can be understood and evaluated from the 4-S perspective. “ (*Upgrade paper*)



Table 1: Stepwise Comparative Research Design Amrita Lamba's PhD research

<i>Stepwise Comparative Analysis</i>	Difference	Agreement
Most Similar System Research Design	<p>Step 1: Extraction of generalization from diversity: The 4-S approach</p>	<p>Step 2: Configuration of attributes mapped against localities/sectors to confirm suitability of both the attributes and the localities/sectors for the research purpose</p>
Most Different System Research Design	<p>Step 3: Interrogating diversity</p> <p>(External Validity)</p>	<p>Step 4: Framing of a new generalization for natural resources governance through a rethinking of the 4-S heuristic model by a process of adaptation, specification and exclusion of attributes on an examination of the fieldwork findings</p> <p>(Theory Building)</p>



(Internal Validity)

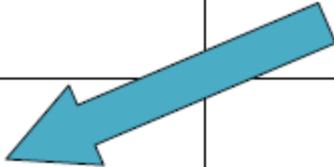


Table 2: Mapping the particular configuration of attributes of the 4-S model across the water, wetlands and forestry sectors in Brazil and South Africa to test the assumption that the localities/sectors and the attributes of the 4-S heuristic model are suitable for the research purpose (Step 2/internal validation).

Case/Attributes	Brazil		South Africa	
	Water	Forestry	Water	Wetlands
<p>Presence of Synergy</p> <p>a) Embedded formal and informal institutions</p> <p>b) Locally borne out norms of trust/networks of civic engagement</p>	<p>Jaguaribe river basin, Ceará</p> <p>Traditional & modern water management practices coexist</p> <p>Users Commission as oversight organizations</p>	<p>Verde para Sempre, Brazilian Amazon</p> <p>RESEX creates governance vacuums where institutional mixing occurs</p> <p>RESEX established through grassroots initiatives</p>	<p>Crocodile river catchment, Mpumalanga</p> <p>Fuzzy institutional landscape; Role of leadership; Self organization</p> <p>Feedback loops set up by ICMA (innovation); trust in leadership;</p>	<p>Craigieburn wetlands, SRC</p> <p>Muddied legal framework for wetlands providing a space for embedded institutions</p> <p>Wetlands in communal areas managed by local rules & norms</p>
<p>Presence of a Strong State</p> <p>a) Institutional capacity/will</p> <p>b) Proactive state</p>	<p>Democratization wave at national level since mid 1980s; Entrepreneurial state government</p> <p>State and Federal Water Laws stress on IWRM; Users Commissions & sub-basin committees created by the state</p>	<p>CFM allows local people to establish local governance structures</p> <p>Reform of Brazilian forestry law in 1998 & 2006 for community timber management</p>	<p>IWRM instigated by democratization wave since the 1990s</p> <p>National Water Act based on IWRM; establishment of ICMA</p>	<p>Strong boundary institutions</p> <p>National Water Act has not granted recognition to wetlands</p>

Step 3: The configuration of attributes that characterizes the 4-S model will be broken down into sub-questions and significant differences and similarities in the localities and sectors can be sought out by interrogating diversity in experiences across the water, wetlands and forestry sectors in Brazil and South Africa. In Table 3, I have operationalized the attributes of the 4-S model by listing out the sub-questions that will inform the comparison for this study. However, these sub-questions will evolve in the fieldwork and just define the starting point for that fieldwork.

Table 3: Operationalization of the attributes of the 4-S heuristic model: the Sub-Questions

Sub-Questions	Jaguaripe river basin, Ceará, Brazil	Verde para Sempre, Brazilian Amazon	Crocodile river Catchment, Mpumalanga, South Africa	Craigieburn wetlands, SRC, South Africa
1. Is the prior existence of social capital an imperative for synergy to thrive across the public-private divide?	X		X	
2. Do embedded (overlap of the formal/informal) institutions predicated on locally borne out norms of trust enhance synergy?	X			X
3. Do locally borne out norms of trust and networks of civic engagement lead to non patron-client state-society engagement in all scenarios?		X	X	
4. Does a strong/proactive state almost always ensure increased civic engagement and state responsiveness?	X	X		X
5. a) When institutional embeddedness and locally borne out norms of trust exist, is decentralization and accountability always bottom-up? b) Is decentralization always accompanied by a larger role for the state in synergistic arrangements?	X		X	
6. Can state-society synergy exist in the absence of a strong state?	X			X
7. Does state-society synergy prevail in all instances where state and civic engagement are dominant/prevalent?		X		X

Discussion

What is your 'case'?

