Systems thinking and Equity-focused evaluations

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Introduction

Questions about access to resources - who gets what? - ought not to be seen in isolation from related questions of power - who owns what? They also ought not to be seen in isolation from questions of knowledge and expertise - who does what? Moreover these questions relate to important questions regarding legitimacy - who gets affected by what some people get? Such questions are often more easily avoided in a normal evaluation for fear of the ethics and politics involved in addressing them. But such questions as formulated above also may not be easy to grasp or work with in terms of an approach to evaluating an intervention. To the systems thinker C. West Churchman (1913-2004), such ethical and political questions were profoundly important. It was Churchman's life-long task to surface the need to address such questions. One of the most significant insights offered by Churchman in order to address ethical issues was the need to engage meaningfully with different perspectives.

"A systems approach", Churchman famously stated, "begins when first you see the world through the eyes of another" (Churchman, 1968). One of his most influential books "The Systems Approach and its Enemies" (Churchman, 1979), was based on the idea that truly ethical decisions can only be made by considering the perspectives of those whose views you may oppose. Churchman's ideas inspired his doctorate research student, Werner Ulrich, to develop a practical approach to employing such questions in a structured way that could be used by practitioners from different professional and non-professional backgrounds (Ulrich, 1983). Ulrich's approach - Critical Systems Heuristics (CSH) - was a landmark publication in the field of systems thinking. For one distinguished systems practitioner in the field of management sciences, Mike Jackson, CSH "described for the first time an approach that takes as a major concern the need to counter possible unfairness in society, by ensuring that all those affected by decisions have a role in making them" (Jackson, 2003). This chapter addresses how CSH can be used to explore dimensions of ethics in general and equity in particular, in supporting Equity-focused evaluations. It is illustrated by reference to a case study drawn from rural India.

Equity, evaluation and systems thinking

Equity is an ethic. More precisely, equity is a particular expression of a virtue-based ethic associated with 'justice' that "requires everyone to have the opportunity to access the same

resources" (Bamberger and Segone, 2011). UNICEF sponsored evaluations, in short, must ensure good outcomes for redressing the prevailing inequities of resource-access, and/or enhance the rights of access to resources amongst those traditionally worse-off groups in our communities. The Joint Committee on Standards for Educational Evaluation (JCSEE), a touchstone for many evaluators, has an indirect reference to equity:

"Human Rights and Respect: evaluations should be designed and conducted to protect human and legal rights and maintain the dignity of participants and other stakeholders."

Yet evaluation does not have a unified view on who should decide ethical issues relating to an evaluation. Nor beyond the preferences of individual evaluators does it have many established methods of deciding whose perspectives and standpoints should be acknowledged or marginalized. Indeed rarely is it something that an evaluator gets to decide - despite the JCEE standards and similar frameworks adopted by evaluation associations around the world.

The systems field likewise has a strong interest in ethical issues. Systems thinking has gained currency in the evaluation field primarily to assess complicated and complex interventions. The emphasis has been on understanding how multiple factors and actors within situations behave in relation to each other. However, systems thinking also provides a powerful way for evaluators to address important equity issues.

In their book, *Systems Concepts in Action: A Practitioner's Toolkit* (Williams and Hummulbrunner, 2010), Bob Williams and Richard Hummelbrunner argue that systemic approaches to managing interventions can be understood as the confluence of three concepts; interrelationships, perspectives and boundaries. Boundaries delineate between what is "in" and what is "out", what is "fair" and what is not. Similarly, Martin Reynolds and Sue Holwell in their book *Systems Approaches to Managing Change: A Practical Guide* identify three purposeful orientations for the use of a systems approach in any intervention:
(i) making sense of, or simplifying (in *understanding)* relationships between different entities associated with a complex situation;
(ii) surfacing and engaging (through *practice*) contrasting perspectives, and
(iii) exploring and reconciling (with *responsibility*) power relations, boundary issues and potential conflict amongst different entities and/or perspectives (Reynolds and Holwell, 2010).

The juxtaposition of perspectives, boundaries and power, place systems thinking firmly in the ethical domain, since power assures whose perspective gets to set the boundaries of an endeavour.

Equity and the Narmada Valley Development Project

The Narmada (or Riwa) is the fifth largest river in the Indian subcontinent. It forms the traditional boundary between North India and South India and flows westwards over a length of 1,312 km (815.2 miles) before draining through the Gulf of Cambey (Khambat) into the Arabian Sea, 30 km (18.6 miles) west of Bharuch city in Gujarat.

The Narmada Valley Development Project (hereafter called the Narmada project) in India is not a simple or even a single project.[1] It is better described as a long-term programme involving many individual projects associated with the construction of dams on the Narmada.

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[1] The ideas for the Narmada case study can be found in extracts from Reynolds, M. (2009) "Environmental Ethics" pp. 40-51 in *The Environmental Responsibility Reader*, edited by Martin Reynolds, Chris Blackmore and Mark Smith. London, New York Zed Books

In systems terms the programme is not merely complicated, involving many variables, but extremely complex, incorporating different and often conflicting perspectives or viewpoints. The Narmada project involves the construction of 30 large, 135 medium and 3000 small dams to exploit the waters of the river and its tributaries for better irrigated agricultural practice to produce more food, and for the generation of hydroelectric power.

The idea was first conceived in the 1940s by India's first prime minister, Jawaharlal Nehru, but it was not until 1979 that the project took form. Of the 30 large dams, Sardar Sarovar is the largest and most controversial. In 1979, the Sardar Sarovar Project was proposed and attracted initial support from international financial institutions including the World Bank. But after much controversy and protest since the late 1980s, particularly regarding the extent of displaced villages and measures to mitigate the extent of such displacement, many financial institutions withdrew support. Protest was led by Narmada Bachao Andolan (NBA), a national coalition movement including people affected by the project, environmental and human rights activists, scientists and academics.

The construction of Sardar Sarovar dam itself was stopped in the mid 1990s. However, in October 2000, the Indian Supreme Court again gave the go-ahead for the construction of the dam. Other dams associated with the wider Narmada project have likewise been the subject of protest.

If we consider "equity" as "fair access to resources" there are four possible evaluation dimensions:

- Water access and quality (e.g. water-borne diseases from stagnant reservoir waters), dealing primarily with water security.

- Urban and rural economic development (e.g. displaced populations from rural areas), dealing primarily with energy security.

- Change in agricultural practices (e.g. shifting towards large-scale irrigated farming), dealing primarily with food security.

- Ecological impacts (e.g. loss of biodiversity in previously rich hydrological systems), dealing primarily with issues of climate change and long-term sustainability.

Issues of equity loom large in any judgement of the worth of the Narmada project. The potential and actual conflicts are clearly formidable.

The Narmada project is far from unique. Large-scale dam construction, like other big socio-economic developments, have been subjected to intense criticism in recent years, both through extensive consultant-reporting and strong activism and protest. But often there is a sense of inevitability about such projects. From a cynical perspective, decisions appear to be made through some inescapable process over which the judgements of evaluators and others get swept away in the current of so-called progress. But cynicism disguises a wealth of opportunities for seeing and doing things differently; for taking these issues of equity of voice, experience and opinion and doing something beneficial.

A systems outlook on such issues can help to realise such opportunities. For example, some basic systems questions might be asked to reveal areas of responsibility that need to be, and can be, managed more constructively.

- *Interrelationships*. What are the particular issues that need attention and how might they be related with each other? What interrelationships and interdependencies between water, energy and food have a particular impact on worst-off groups? Does global warming deserve more attention than longer standing issues of abject poverty in the world? Or should we just despair at the magnitude and complexity of issues confronting us?

- *Perspectives*. How might these issues be attended to and by whom? Is it just 'them' out there or is it also you/ me/ 'us'? Whose perspectives are relevant to these issues and what realistic role might different stakeholders have in making their perspectives count? How for example may the views of vulnerable groups like pastoralist farmers or other less powerful, and often the most worst-off, members of displaced communities such as women, the disabled, and children, be given expression? Or, should we just resort to fatalism, nurturing a general sense of apathy and blame?

- *Boundaries*. Why are some issues privileged more than others, and some ways of dealing with them from particular perspectives prioritised over others? What opportunities are there for challenging mainstream ways of dealing with harmfulness and wrongdoing? Who is and who is not considered an "expert" is a boundary decision. How pervasive are existing systems of expert-driven solutions to poverty-alleviation, or existing systems of financial control by international lending agencies in partnership with national Governments, in sustaining iniquitous situations? Or should we just remain cynical of human nature and the prospects for realising alternative ways of doing things.

Despair, apathy and cynicism are human attributes sometimes encouraged by those with an interest in keeping things as they are - contributing to vicious cycles of business-as-usual and the type of eco-social collapse invoked by cynics. So how might systems thinking, and more specifically, CSH tools associated with systems thinking, help to overcome such attributes in supporting more meaningful and purposeful pro-equity interventions through purposeful equity-focused evaluations?

Systems thinking and Critical Systems Heuristics

The problem is that with so many dimensions to consider, how do you structure a comprehensive equity-based investigation that prevents key aspects falling between the cracks and being ignored. Critical Systems Heuristics (CSH) provides a highly structured set of questions that prevents such a fate.

CSH comprises a series of highly evaluative questions designed to expose key perspective and boundary decisions, and subject them to critiques. The intent however, is not simply to expose these decisions and subject them to ceremonial ridicule (thereby promoting cynicism) but, in line with Churchman's ideas, to explore equitable ways of resolving the exposed tensions. The twelve CSH questions are associated with four sources of influence – motivation, control, knowledge, and legitimacy – each briefly described below. For a more comprehensive narrative description see Reynolds (2007) and Ulrich and Reynolds (2010).

Motivation

The development of a system - whether it is an intervention itself (e.g., a project, programme or policy) or an evaluation of an intervention - starts with some notion of "purpose." Since a purpose reflects embedded values associated with some person or persons, it is valid to ask, "Whose purpose?" Identifying first what the *purpose* of the system should be helps identify who the intended *beneficiaries* ought to be. This in turn raises questions about what should be appropriate *measures of success* in securing some improvement to those beneficiaries. Together these boundary questions relating to purpose, beneficiaries and relevant measures make transparent the *value basis* of the system.

Control

The exploration of motivation leads to questions regarding the *necessary resources* or *components needed for success*. Financial capital and other forms of tangible assets like natural, physical, and human capital might be complemented with less tangible factors such as social capital (access to networks of influence). But who ought to be the *decision makers* in control of such resources? This in turn prompts questions as to what should be left *outside* the control of such decision makers in order to ensure some level of *accountability*. There are risks in having all the necessary resources under the control of the system. If the system has all the resources, then the system cannot be controlled or held accountable in any way by those outside the system. Such questions help make transparent the *power basis* of the system.

Knowledge

One important set of factors that need to be independent of the decision maker is knowledge or expertise. In an ideal setting, expertise ought not to be under the control of the decision maker but should have independence. So what ought to be the necessary *types and levels of knowledge and experiential know-how* to ensure that the system actually has practical applicability and works toward its purpose? Who ought to be the *'experts'*? And how might such expert support prove to be an effective *guarantor*, a provider of some assurance of success? Over-reliance of one area of expertise over the other may constitute a *false guarantee* – a sort of self-deception. Such issues help to make transparent the *knowledge basis* of the system.
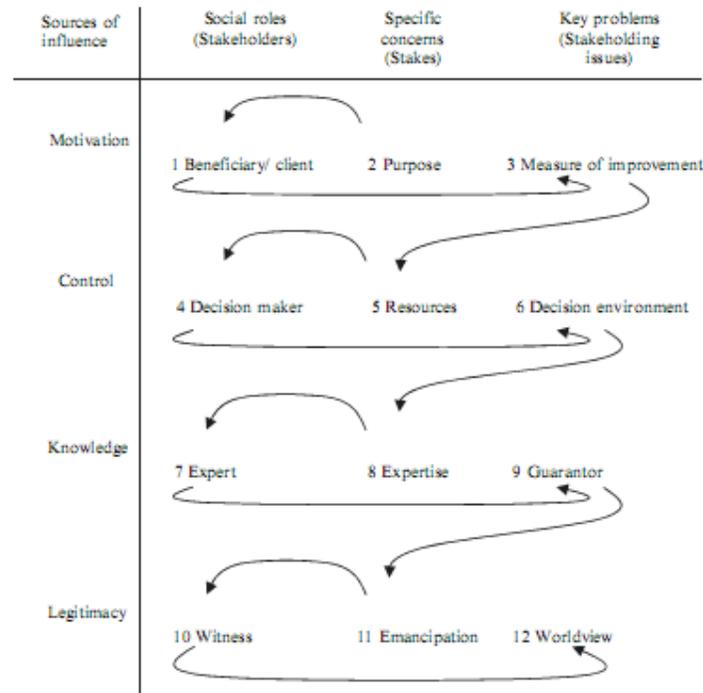
Legitimacy

 Any assessment of the values (motivation), power (control), and expertise (knowledge) associated with any system will always be biased in some way. So what gives the system the legitimacy to carry out its tasks? If the system is looked at from a different, opposing viewpoint, in what ways might the system's activities be considered coercive or malignant rather than *emancipatory* or benign? Who is capable of *making representations* on the victims' behalf, and on what basis would they make this claim? Finally, how might the underlying *worldview* associated with the system be reconciled with these opposing worldviews? Such questions help to make transparent the worldview or moral meaning underpinning the system. This in turn provides the *basis of legitimacy*; a sense of social and

legal approval to the system at any one time.

Figure 1 illustrates the above narrative in terms of twelve boundary questions associated with CSH

Figure 1 Unfolding narratives of 12 CSH questions

Sources of influence	Social roles (Stakeholders)	Specific concerns (Stakes)	Key problems (Stakeholding issues)
Motivation	1 Beneficiary/ client	2 Purpose	3 Measure of improvement
Control	4 Decision maker	5 Resources	6 Decision environment
Knowledge	7 Expert	8 Expertise	9 Guarantor
Legitimacy	10 Witness	11 Emancipation	12 Worldview

Source: (Ulrich and Reynolds, 2010,)

The above narrative covers most of the debates and discussions inherent in a critical systems assessment.

Equity-focused evaluations using CSH comprise three stages:

- firstly, an unfolding of the 12 interrelated boundary judgements in evaluative terms of what 'ought' to be good pro-equity intervention;
- secondly, a critique of the "ought" claims through a more descriptive analysis of the intervention; and
- thirdly, an exploration of possible changes in stakeholding amongst stakeholders in order to improve pro-equity issues being addressed.

The remaining sections examine each stage in detail using the Narmada case study. The Narmada project is not presented here as an actual exhaustive Equity-focussed evaluation study using CSH. The case study is used only for illustrating the three stages and relevance of the CSH questions.

CSH 1: Unfolding key systems questions

You may have noticed that the narrative had an "ought" orientation. In an equity-focused

evaluation it is helpful to have some notion of what a good and/or right pro-equity intervention might look like. Thus the first stage of a CSH inquiry has a normative or "ought" focus. It starts by unpicking the notion of stakes, stakeholders and stakeholdings.

Stakes, stakeholders and stakeholdings

Critical Systems Heuristics starts with a mapping of the interrelationships amongst 12 bounded judgements associated with the issue of stakeholders. CSH makes use of finer distinctions than most stakeholder based analyses since it starts with three core questions, related to three key boundary decisions:

(i)   What ought to be at stake?
(ii)   Who ought to be the stakeholders?
(iii)   What possibilities ought to exist for improving stakeholdings?

These boundary decisions can be iterative. You normally start by identifying stakes (e.g. access to water; access to sources of energy; access to food; prosperity; soil sustainability; employment; traditional rural life), and on that basis select those who ought to be substantially involved or affected – that is, the stakeholders. The concept of stakeholdings may be new to many evaluators but it is critical to equity issues. With CSH, a stakeholding is a key issue or "problem" related to the topic of interest (say changes in agricultural practice) relating to a particular stakeholder group.   So in the case of the Narmada project, one thing at stake from changes in agricultural practice could be traditional rural lifestyles - and from the perspective of a landlord stakeholder, the stakeholding could be related to the potentially uneconomic nature of patchworks of small landholdings.

If you now review the narrative in the previous section you can see how each of the four sections were framed in terms of stakes, stakeholders and stakeholdings (see also Figure 1).

Motivation, control, expertise and legitimacy

The three boundary decisions – who or what ought to be the stakes, stakeholders, and stakeholdings - are explored from four distinct perspectives: motivation, control, knowledge and legitimacy. These four perspectives are important sources of boundary critique because:

1. *motivations and values* are built into our view of situations and efforts to 'improve' them;

2. *control and power structures* influence what is considered a 'problem' and what may be done about it;

3. *knowledge* defines what counts as relevant information and skills; and

4. *legitimacy* forms the moral basis on which we expect third parties (i.e., people not involved, yet in some way concerned) to bear with the consequences of what we do, or fail to do, about the situations in question.

Stakeholder perspectives between the 'involved' and the 'affected'

Motivations, control and knowledge focus on those *involved* in our system, legitimacy focuses on those *affected* (often a victim) by decisions related to motivation, control and

knowledge, but who are not currently part of the system.

Once again, equity here is primarily concerned with issues of justice. Every system creates 'victims' who have no role or influence within the system but may well have an influence on the system. They may be intended or unintended victims. They may be things (e.g. biodiversity) as well as people. This tension between the 'involved' beneficiaries and the 'affected' victims is signalled in the last of the CSH questions - the clash of worldviews (Q12).

The CSH matrix

So we now have what amounts to a 3x4 matrix - three stakeholder issues and four sources of influence by which we can critique the system - plus a distinction between "involved" stakeholders and "uninvolved but affected" or "victim" stakeholders.   Table 1 provides an overview of these boundary distinctions and describes each of the twelve boundary questions in the normative 'ought' mode. A normative account of a particular system - the Narmada project – is used to exemplify responses to each of the twelve questions

Table 1: Unfolding normative boundary judgements for an intervention using CSH

Sources of influence	Boundary judgements informing a system of interest (S) *For example where S = pro-equity intervention such as the Narmada project*			
	Stakeholders	**Stakes** (Specific interests and motivations)	**Stakeholding issues** (Key Problems)	
Sources of **motivation**	Q1. Beneficiary Who ought to be the intended beneficiary of the system (S)?	Q2. Purpose What ought to be the purpose of S?	Q3. Measure of success What ought to be the measure of improvement of S?	
Narmada project	*Population groups associated with the Narmada River Valley, particularly most vulnerable groups, and Narmada ecosystems*	*Provide wider access to quality water for drinking and agricultural irrigation, hydroelectric energy, whilst mitigating against long-term flooding and ecological damage*	*'impact' measures e.g. general indices of gross national product (GNP), agricultural performance, rural & urban livelihood, poverty alleviation, environmental impact assessments*	
Sources of **control**	Q4. Decision maker Who ought to be in command of the conditions of success of S?	Q5. Resources What conditions of success ought to be under the control of S?	Q6. Decision environment What conditions of success ought to be *outside* the control of the decision maker?	
Narmada project	*State representatives of vulnerable poor and the disenfranchised, environmental interest groups, multilateral development banks (MDBs)*	*Capital: finance (including compensation), physical, human (employment), natural (particularly water), social, political (inter-State and international)*	*Federal representatives keeping a check on State representatives; other local, national and international stakeholders and groups not involved in planning; downstream fisheries; forests; wildlife; natural events.*	The involved
Sources of **knowledge**	Q7. Expert Who ought to be providing relevant knowledge and skills for S?	Q8. Expertise What ought to constitute relevant-knowledge and skills supporting S?	Q9. Guarantor What ought to be regarded as assurances of successful implementation?	
Narmada project	*Local rural people, technicians, engineers and scientists with experience in monitoring dam constructions elsewhere, reputable NGO and expert consultancies drawn from local and international contexts*	*Technical: culturally appropriate science & technology, and multi/interdisciplinary skills Practical: facilitation skills in developing stakeholder participation, rural peoples knowledge Emancipatory: appropriate monitoring of damaging effects and past experiences; transnational expertise*	*Technical: independently guaranteed science & technology, and social science Practical: wide stakeholder dialogue/ participation; transnational networking Emancipatory: poverty alleviation; triple bottom line guarantors implicit in sustainable development rhetoric of the 1990s*	

Sources of influence	Boundary judgements informing a system of interest (S) *For example where S = pro-equity intervention such as the Narmada project*			
Sources of **legitimacy**	**Stakeholders**	**Stakes** (Specific interests and motivations)	**Stakeholding issues** (Key Problems)	
Narmada project	*Advocates of local displaced communities and individuals – the oustee- networked with transnational contacts (e.g. Oxfam); strong representative women's groups*	*Compensation and resettlement of displaced communities and individuals (oustees); alleviation from effects of irregular rainfall and drought; freedom from decisions made in neighbouring States over common resources like water and forests*	*Large scale techno-centric solution good for trickle-down benefits to local communities; economic security of nation and States to be complemented with appropriate concern for existing and predicted skewed socio-economic and ecological development*	The 'affected'

As Table 1 suggests, CSH exposes different types of stakeholder perspective and potential critiques amongst stakeholder groups. Conflicting interests can be identified between, say, those population groups intended to be beneficiaries of the project (Q1), those with decision-making authority (Q4), and those with relevant expertise to support the project (Q7). Within one stakeholder group conflicts can inform the "stakeholding" column (i.e. Q3, Q6 and Q9).

A higher level critique is between those stakeholders who ought to be 'involved' in the system design (Q1-9), and those stakeholders who ought to be 'affected' by it, but not involved (Q10-12). The tension is particularly expressed in Q12 which signals the space necessary to permit conversation between the worldview underpinning the prevailing system of interest (i.e. aligned with the 'involved') and the worldview of those victims of the proposed intervention/ reference system (aligned with the 'affected').

CSH 2: A critique of the 'ought' claims and exposure of the 'actual' value base of the system

The normative unfolding of boundary judgements provides a platform for generating an appropriate equity-focussed critique of an intervention. So far the assessment has been framed in an "ought" mode - a value laden *normative* assessment of the situation. It begs the question of whose normative values *actually* dominate. In order to clarify that in a systematic way, the 12 questions are repeated in an "is" mode – what *is* the purpose (CSHq2)? who *are* the actual beneficiaries (CSHq1)? and so on. The "is" mode is a *descriptive* assessment of the situation that draws more attention to the actual rather than an espoused value base of the intervention/ system. Each cell is compared using the two modes to generate a set of critiques.

Table 2 provides a summarised critique of the Narmada project from the perspective of each of the four sources of influence.

Table 2: Critique of Narmada project associated with four sources of influence

Sources of Motivation

	Stakeholder (Beneficiary/ client)	Stake (Purpose)	Stakeholding (Measure of improvement)
'ought'	Worst-off Narmada River Valley, groups and ecosystems	Water, energy, and food security, mitigating against long-term ecological damage.	Poverty alleviation and ecological well-being.
'is'	Less vocal groups like *adivasi* (Scheduled Tribes) prone to being displaced (oustees) and disaffected.	Increase prospect of insect-borne diseases. Inundated areas cause salinization of land alongside canals through build up of salts. Cross-purposes (different aims between different States).	Large numbers of poor and underprivileged communities dispossessed of their land as a source of livelihood; inadequate compensation and rehabilitation for resettled people.
critique 'is' against 'ought'	Is this a case of 'paved with good intentions'? Are multilateral development banks (MDBs) possible surrogate clients?	Is there a 'single bottom line' of national economic development overriding localized socio-ecological development? Unfair and/or unrealistic aims?	Dominance of monetised impacts and indices in terms of GNP masking qualitative impacts ('enchantment of measurable outcomes')? Difficulty in estimating long-term effects and qualitative factors? Possible emphasis on immediate impacts vs. process?

Sources of control

	Stakeholder (Decision-maker)	**Stake** (Resources)	**Stakeholding** (Decision environment)
'ought'	Representatives of vulnerable poor and disenfranchised.	Appropriate capital: financial, physical, human, natural, social, political.	Multiple and appropriate levels of social, economic and ecological accountability.
'is'	Contestation between 4 State governments sharing common resource. Western multilateral banks still have considerable leverage. Increase power of project's user groups including industrial users of water and electricity.	Long-term dependence on private trans-national companies. Disruption of downstream fisheries. Increased competition over resources by agricultural and industrial users.	Excessive unaccountable profiteering amongst private contractors and possible corruption in dispensing large budgets. Stronger Indian economy diminishes reliance on international funders thereby diminishing sources of accountability.
critique 'is' against 'ought'	Private profiteering from contractors and corrupt officials? Local autonomy vs. Western dependence?	Is this a case of resource development or depletion (e.g. Forests & downstream fisheries)? Possibly excessive attention to cash rather than land compensation? What levels of corporate responsibility are evident amongst transnational interests?	Possible command and control ethos in project planning in order to guarantee funding support; lack of accountability for long term effects on displaced communities; or excessive accountability (particularly to MDBs and Federal government) producing delays?

Sources of knowledge

	Stakeholder (Expert)	**Stake** (Expertise)	**Stakeholding** (Guarantor/ assurance)
'ought'	Collegiate team of formal and informal (local, including rural peoples) experts conversant with technical and socio-political issues.	Range of technical, interdisciplinary and trans-disciplinary expertise relevant to supporting project aims.	Transparency in levels of certainty and uncertainty associated with project implementation.
'is'	Disparate, wide ranging, and conflicting advisory support.	Loss of traditional local skills in more sustainable farming practices. Reinforcement of, and dependence on, techno-centric expertise, particularly from overseas. Diminish biodiversity through monoculture irrigated farming.	Over-estimate of hydroelectric power generated. False promises regarding maintenance of dams given disorganised State infrastructure and neglect of possible long-term impacts (e.g. large reservoirs could cause earthquakes).
critique 'is' against 'ought'	Over-reliance on experts with vested interests in dam construction, 'green revolution' expertise, and/or indigenous peoples groups associated with international NGOs?	Is there an excessive reliance on international rather than local expertise in reviewing plans? Unexpected consequences generating need for different expertise (e.g. malaria incidence and healthcare).	Increasing and/or changing levels of uncertainty inevitably reduces guarantor provision: reliance on Western 'modern' practices not suited to culture? Risks of earthquakes?

Sources of legitimacy

	Stakeholder (Witness)	Stake (Emancipation)	Stakeholding (Worldview)
'ought'	Local oustee advocates networked with transnational contacts.	Alleviation from effects of (i) irregular rainfall and drought, and (ii) prevailing top-down planning denying sustainable access to common resources like water and forests.	Platform for expressing equity issues regarding access to resources, intergenerational justice, gender relations, farming practices, energy security etc.
'is'	Proliferation of NGOs in 1980s. Advocate groups like Narmada Bachao Andolan (Ghandian civil resistance techniques) prove effective but divisive between States and less respected with increasing numbers of water-user groups dependent on the project	Evidence of riverine ecosystem damage, along with submergence of forest farmland. Trickle-down benefits to local communities not evident. Transition towards landless rural labour and urbanization.	loss of confidence amongst MDBs due to increase cost factors and strength of protest groups; Narmada project continues despite contestation and micro successes of oustee advocates.
critique 'is' against 'ought'	Conflict between groups representing different affected interest-based constituencies: different effects on same groups situated in different States?	Are costs borne by vulnerable groups being monitored? E.g., control of insect-borne disease, adapting to salinization of soil; ecosystem demise (flooding and deforestation)?	Change in political space for expression by disaffected groups; the project's user groups are too large for project to be abandoned. State and Federal bureaucracies possibly preventing expression of contrasting worldviews?

An equity-focussed evaluation of the Narmada project suggests a normative value-base associated with "equity". The contrasts between the "ought" (e.g. in Q1 the intended beneficiaries being prevailing worst-off groups) and the "is" (e.g. in Q1 the prime beneficiaries are arguably large landowners and those with access to sufficient capital to be able to exploit the opportunities the dam brings) surface concerns about the extent to which the system is actually framed in a way that maximises equity. For instance, some may defend the actual situation arguing that the benefits to large instutions and the capital intensive investments trickle down to the poorest, in ways that many project aimed at directly alleviating poverty have not done. CSH provides a structure that critiques both stances.

CSH 3: Stakeholding development: exploring opportunities and challenges in the system

It is always good to surface different stakeholder perspectives on, and to provide a critique of, an intervention, not least because it warns against complacency amongst decision makers associated with an intervention. But, there is always a risk that critiques can lead to an entrenchment of stakeholder positioning or 'stakeholding'.

Stakeholding is a statement of the problem associated with the stakeholder and their stakes.

However, it is not the aim of a critical systems analysis to end up with a statement of the problem. The difference between merely stating a problem and actually doing something with the tension it exposes is the difference between "stakeholding entrenchment" and "stakeholding development"

Stakeholding entrenchment is essentially a problem statement that merely reinforces the status quo around a particular intervention. It usually arises from the descriptive part of a CSH critique, and often provides a source of cynicism around stakeholding issues. In contrast, stakeholding development frames these problems as potential opportunities for assisting a deeper resolution of core issues.

Particular attention here is given to CSH questions 3, 6, 9 and 12 regarding stakeholding development. .

Key things to look for regarding stakeholding issues

Below is a summary of key issues for an Equity-focused evaluation of the Narmada project.

Sources of motivation … intended beneficiaries

Q3 Stakeholding (Measure of improvement): *'Key Problems' =* <u>tensions</u> *between idealised measurable values associated with the performance of the 'system' with a focus on presumed benefits* <u>*as against*</u> *realities of a 'situation' with a more balanced view on actual 'costs'.*

Q2 what's at stake? To improve livelihoods of worst-off groups and ecological well-being.
Q1 who are key stakeholders? People and ecosystems associated with Narmada Valley and their political representatives

Stakeholding entrenchment	*Fixed* 'impact' measures or targets associated with macro-economic 'national' indices e.g. GNP and agricultural performance. Very little attention given to measuring localised impacts and where such measures are used, there is evidence of them being grossly underestimated (e.g. the numbers of project-affected families associated with Sardar Sarovar dam rose from 6.5 thousand in 1979 to over 43 thousand by 2006). Also, despite recommendations in 1969 to compensate oustee (displaced) families with like-entitlements to land and restoration of livelihoods, project officials continued with the tradition of promoting and giving cash compensation (widely regarded as being wholly inadequate and leading to entrenched rural destitution).
Potential for stakeholding development	*Emergent* measures corresponding to changing situations e.g. 1965 report from Narmada Water Resources Development Committee recommending a wider inter-state approach to the initiatives of dam construction taking account of the ecosystem boundaries affected. In 1969 the Narmada Water Disputes Tribunal contested existing colonial Land Acquisition cash compensation laws and replaced them with 'land for land' directives. In the 1980s measures suggested by the Ministry of Environment and Forests (MOEF) required compensatory reforestation, resettlement improvements, wildlife sanctuaries, and other measures arising from environmental impact assessments. More generally though, are there opportunities for measures to be used that may fundamentally question the wisdom of the Narmada project?

Sources of control… decision makers

Q6 Stakeholding (Decision environment): *'Key Problems' =* <u>*tensions*</u> *between idealized control and leverage of the 'system' by national and state bureaucratic institutions* <u>*as against*</u> *realities of a 'situation' with interest groups holding bureaucracies to account.*

Q5 what's at stake? Command of necessary resources to effect change in welfare of worst-off communities associated with the Narmada project. *Q4 who are key stakeholders?* State representatives (primary?); National government and international representatives (secondary?).

Stakeholding entrenchment	*Command and control* over 'capital' (financial, physical, human, natural, social, political) by corporate industry, multilateral development banks (MDBs) and National and State governments. The entrenched measures of improvement have been circumscribed by regarding the Narmada project as being a fait accompli. The power relationships over such resources have shifted considerably since the Narmada project was first conceived. Numerous 'Committees' have served to consolidate bureaucratic control over the natural resources. Traditionally, land, forests, rivers and fish etc. were communal property managed effectively by local farming practices.
Potential for stakeholding development	*Accountability*: Established checks on State representatives by using National and international stakeholders and groups not involved in planning. A Review Committee was constituted on the back of wider international concern over the plight of displaced communities. Localised groups also emerged providing powerful sources of accountability. For example <u>Narmada Bachao Andolan (NBA)</u> : their non-violent campaigns, including hunger strikes, a 36 day march, mass demonstrations, and use of the media. <u>Friends of River Narmada (FRN)</u>: an international coalition of individuals and organizations (primarily of Indian descent) supporting NBA in terms of providing a repository of information, on-going research, public education and outreach, promotion and publicity. The equity oriented evaluation question is how much have these sources influenced and changed existing practices amongst Indian sources of bureaucratic control?

Sources of knowledge… experts

Q9 Stakeholding (Guarantor/ assurance): *'Key Problems' =* <u>*tensions*</u> *between idealised promises of the 'system' as promoted by government commissioned experts* <u>*as against*</u> *realities of 'situation' through testimony of past experiences and international commentary and cautionary advice.*

Q8 what's at stake? Command of knowledge to guarantee success of the Narmada project as a pro-equity intervention.
Q7 who are key stakeholders? Rural peoples' knowledge (primary?) National and international government commissioned experts (secondary?).

Stakeholding entrenchment	*Complacent expert (techno-centric) control* over 'knowledge': The Narmada project has all the hallmarks of built-in assurances of success based on a guarantor of good 'faith' rather than appreciating wide-ranging interdisciplinary and trans-disciplinary evidence. Much of the expertise used was international environment consultants employed by the dam construction companies, and therefore lacked independence and trust. Engineers dominated the constitution of the Disputes Tribunal. Considerable evidence existed in India and other developing countries of the underestimated financial and livelihood costs of such projects. These were ignored.
Potential for stakeholding development	*Embracing uncertainty and humility,* acknowledging unpredictability of effects and need for precautionary approach involving wide participation in validation of

	knowledge deemed relevant. The Narmada Waters Development Committee set up in 1980 used agencies like Caltech and Lokagen (representing rural people's knowledge) and advised on a review of the effects of the dams in 2025, thus acknowledging at least some element of uncertainty. Some movement towards working with independent experts worldwide, at the time when MDBs were under pressure to make their loans more widely accountable towards equitable interests relating to social and ecological responsibility.

Sources of legitimacy… witnesses (advocates)

Q12 Stakeholding (Worldview): *'Key Problems'* = <u>tensions</u> *between idealised premises underpinning the 'system' dominated by a worldview mantra of 'local pain for national gain' <u>as against</u> realities of a 'situation' in which worst-off groups are further disenfranchised.*

Q11 what's at stake? freedom of expressing disaffection towards the Narmada project.
Q10 who are key stakeholders? local oustee advocates and environmental groups networked with transnational contacts, and strong representative women groups.

Stakeholding entrenchment	*Relinquishing to pre-dominant assumptions* with inevitability of industrial 'progress' and national economic development through modernisation techniques of agricultural production. The dominant worldview is one that draws its legitimacy from what is known in dam-jargon as the 'iron triangle'. This refers to the insipid relationship of mutual benefits from politics and politicians, bureaucratic entities of corporate control, and construction company expertise. The relationship can be likened to a vicious circle amongst stakeholding interests from sources of motivation (politics), control (bureaucracies), and knowledge (commissioned expertise). The marginalisation of affected groups particularly those indigenous to the areas affected – the *adivasi* – amongst the oustees represents the key expression of entrenchment in Narmada. Adivasi have not been consulted and remain treated as collateral damage to the Narmada project. Despite protests, the project continues to generate 'problems' of landless rural labour demands. They are regarded within project documentation as 'problems' rather than issues to which affected people may have some legitimate role in shaping. Questions arise as to the further denial of political space for deliberating on such issues and the further entrenchment of inequities through pervasive relations of power.
Potential for stakeholding development	*Challenging existing relations of power.* Throughout the 1980s an international network of pressure groups contrived space to lobby MDBs like the World Bank in order to question their support of seemingly iniquitous interventions like the Narmada project. Along with a growing internal awareness of the huge extent of the affects of the Narmada dams on local groups and long term sustainability of riverine ecosystems, this in turn generated space for indigenous NGOs to flourish.

Summary

Critical Systems Heuristics provide a framework by which a very wide range of often complex *interrelationships,* between contrasting *perspectives,* can sometimes lead to uncomfortable and difficult decisions about *boundaries.* Evaluators and their clients who see the world in terms of simple relationships, single perspectives and relatively easy boundary choices will inevitably regard CSH as a challenging process. But they are not the only ones. In their desire to promote a particular world view, or institutional imperative, evaluators, clients and project workers can often ignore the full scope of their endeavour and the issues raised.

Equity-focussed evaluations must ensure good outcomes for redressing prevailing inequities of resource-access, and/or enhance the rights of access to resources amongst those traditionally worst-off groups in communities. Often it is difficult to appreciate the wider picture of issues relating to resource access. It is also often challenging to engage with different perspectives about the inequities of resource access.

A systems approach prompts firstly, a greater awareness of the interrelated issues of equity, secondly, an appreciation of different perspectives on inequities, and thirdly a reflection on boundaries used to circumscribe our awareness and appreciation. This third attribute signals the challenges as well as the possibilities of better pro-equity interventions.

Critical Systems Heuristics is helpful in dealing with issues of ethics and politics generally, and hence issues of equity more specifically. The Narmada project provides a particularly rich example of issues of equity addressed with respect to water, energy, and food security, as well as longer term issues of sustainability for future generations.

In using CSH tools to illustrate some preliminary features of an Equity-focused evaluation of the Narmada project intervention, three dimensions of inequities are addressed:

1. Unfolding interrelationships: revealing key equity issues between stakes, stakeholders and stakeholdings; that is, asking:
   (i)   who ought to be getting what (**sources of motivation**)?
   (ii)   who ought to be owning what (**sources of control**)?
   (iii)   who ought to be doing what (**sources of knowledge and expertise**)? and
   (iv)   who ought to be affected by what's going on and how ought any disaffection be given space for expression (**sources of legitimacy**)?

2. Critique using contrasting perspectives: engaging with issues of possible inequities; that is, asking:
   (i)   who *is* getting what in relation to actual benefits?
   (ii)   who *is* owning what with regards to control over key resources?
   (iii)   who *is* doing what with regards to accepted expert support? and
   (iv)   who *is* actually affected by what is going on and what actual possibilities are there for such disaffection to be given space for political expression?

   And what is the significance in contrasting **factual** judgments with **value** judgments for each of the key stakeholder perspectives?

3. Stakeholding development: exploring challenges and opportunities of progressing an intervention in accordance with principles of pro-equity intervention, that is:

   (i)   reconciling 'fixed' targeted measures of success with pro-equity measures that may be hidden by official 'targets' (are official performance indicators masking existing inequities?);
   (ii)   reconciling typical 'command-and-control' decision making with pro-equity

accountability (are decision makers further marginalising inequities arising from the intervention?);

(iii)   reconciling typical expert promises of project success with inevitable uncertainty and pro-equity cautionary concerns (are experts taking account of the possible inequities arising from the intervention?); and

(iv)   reconciling the premises of an underlying consensual belief system with the need for nurturing contrasting belief systems (are witnesses and advocates of the disaffected effectively opening up – or possibly closing - space for meaningful and purposeful dialogue?)

CSH is not the only systems approach relevant for equity-focused evaluations. There are many variants of basic systems concepts that can be used for addressing different evaluation questions (Williams and Imam, 2007). However, based on the substantive ethical principles of systems practice developed by perhaps the most celebrated of systems thinkers, C. West Churchman, and further developed by the philosopher and planner, Werner Ulrich, CSH goes beyond the partiality of bureaucratically convenient 'evaluation questions'. CSH can lay claim to providing one of the most comprehensive and provocative frameworks for evaluating systemic inequalities arising from any intervention.

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