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# **Interactive energy planning: Towards a sound and effective planning praxis**

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## **Abstract**

Though it is being questioned whether planning theory should be fitted into neat typologies, some have described evolving planning theory as a journey away from ethnocentrism, through the lands of rationalism, pragmatism, socio-ecological idealism, political-economic mobilization, currently anchoring along the shores of the land of communications and collaboration. Whether or not a particular typology is applicable, theory and praxis are establishing standpoints, which strengthens our understanding of the planning complex, and which should inspire improved energy planning methodologies and tools.

This paper presents an “Interactive Energy Planning” framework, which is intended to support interactivity in planning, building on important theoretical and experimental advances in planning. In particular, the paper explores the potential significance of allowing a critical perspective on context analysis and problem-orientation to define the course of the planning process, and deploying value-rational planning tools primarily as a platform for interactivity.

The focus on interactivity in energy planning will allow contemporary government planners, consultants, researchers, and organizational managers more effectively to address important technical and economic problems.

## **Interactivity drives innovation**

It is not neo-classical economic theory, but rather the praxis of political intervention and institutional change that helps to explain two recent innovations in European energy policy; Denmark’s success with wind power (Lauber, 2006b), and UK’s success with curbing urban traffic in London (Livingstone, 2004).

In fact, the widespread application of neo-classical economic theory in contemporary policy making may lead us to be overlooking crucial options for innovation, as institutional and technological path dependence and lock-in situations are not

effectively dealt with, or perhaps not even recognized. Neo-classical economic theory favors the idea that preferences of various agents are constant and comparable, and that decisions are reversible and predictable according to a process of benefit maximization. But real life decisions are otherwise complex and irreversible, individuals and institutions are prone to routines and habits, but may also act creatively.

Neo-classical economic theory’s indifference to the mechanisms of power and the nature of technology, its’ marginalization of institutional and technological path dependence and lock-in

situations, reveal its' incapability to explain the effectiveness of policies that supports innovation by regulating markets rather than de-regulating them (Lauber, 2006a).

In original institutional economic theory it is suggested that individual and institutional preferences are specific and contextual, generally prone to routines and habits, but most importantly, not based on trivial rational calculation, but rather on judgment that is generated by creation and coordination of expectations through social interaction (Nielsen, 2005).

The notion of interactivity is also central in Michel Foucault's works, who has made a convincing case about the way truth, and reason, is coupled with power and epistemology. Foucault uses a historical narrative to provide us with a theoretical basis for understanding the way rationality and power works to produce knowledge and "truth". According to Foucault, planners should find that many given "truths" are temporary outcomes of historical conflicts currently nesting within networks of power, and are either in line with or in opposition to the planning context itself. In order to understand and possibly influence particular decisions about technology choice and socio-economic development, planners are required to seek clarity about these conflicts through the eyes of both an internal and external context, while critically analyzing the mechanisms of power being exercised, truths being established. Foucault makes it clear that global structures of power, interests, and values, are best analyzed by looking at local tactics of domination, concretely by the way people interact along the borderline of their reign (Foucault, Bertani, Fontana, and Ewald, 2003).

Such focus on interactivity is in opposition to many widely applied energy planning frameworks, like Integrated Resource Planning (Shrestha and Marpaung, ;Swisher and Januzzi, 1997), which unilaterally focuses on making techno-economics generally applicable to produce the value-drivers needed in dealing with particular decision problems.

Such focus on instrumental rationality has possibly contributed to the experience that "planners and other agents of intervention continue to make assumptions about the values, beliefs, or rationalities of those for (or with) whom they plan, which frequently do not hold" (Watson, 2003).

In response, planning theorists are calling for planners to embark on story telling practices (Richardson, 2005), suggesting for the planner to become a narrative explorer placed in context, uncovering the mechanisms of power by searching for the "truth" in the detail (Flyvbjerg, 2004).

Though it is being questioned whether planning theory should be fitted into neat typologies (Richardson, 2005), some planning theorists (Lawrence, 2000) have furthermore described evolving planning theory as a journey away from ethnocentrism, through the lands of rationalism, pragmatism, socio-ecological idealism, political-economic mobilization, and currently anchoring along the shores of the land of communications and collaboration.

This paper attempts to bring together in a single planning framework basic questions in energy planning, including those that deals with power, winners and losers, with the move towards the communicative and collaborative in planning.

## An interactive planning framework

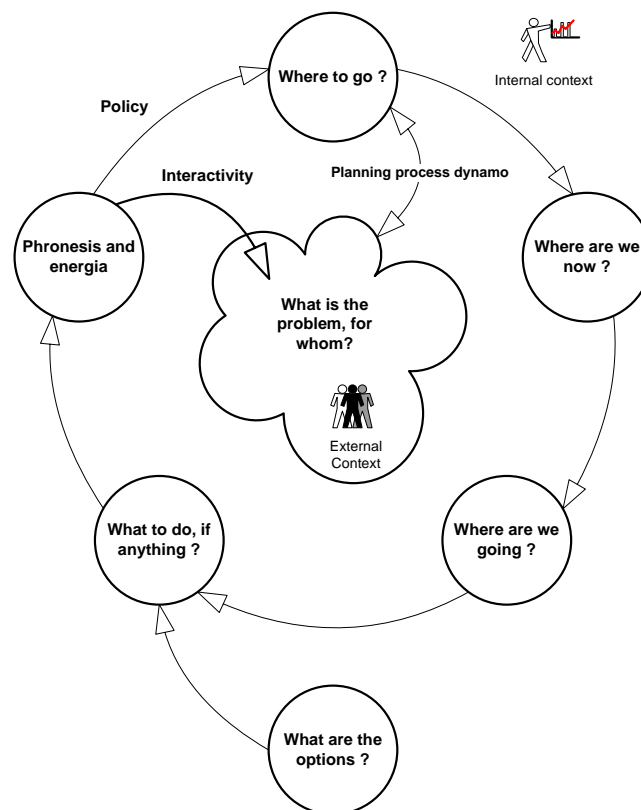
Flyvbjerg (Flyvbjerg, 2004) suggest for planners to recognize the basic questions in planning as being:

1. Where are we going?
2. Who gains and who loses, and by which mechanisms of power?
3. Is this development desirable?
4. What, if anything, should we do about it?

The intention of asking such basic questions is to allow for the process of social interaction in context to shape not only the formulation of the decision problem, but also the formulation of objective, the appreciation of alternatives, as well as the nature of the outcome.

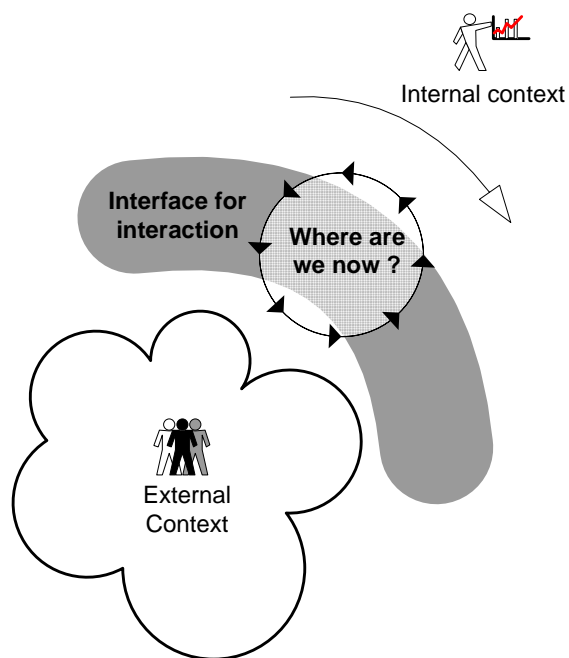
Besides adding the question of “Where are we now?” (and with this question also often the question: “How did we get here?”), the proposed framework builds on three pillars of understanding in planning: Context as a social construct formed by historical and cultural appropriation; Social interaction as a riskful transaction between conflicting interests through which emotions, rationality, and power, synthesize to become episteme; and Creativity as inherent to a sound human environment by means of which individuals and institutions expresses innovative capabilities.

Thus, Figure 1 illustrates planning as a circular process of communicating contexts, problem, objective, trends, options, instruments, policies, and strategies for intervention.



**Figure 1: An interactive planning framework; a circular process of communicating contexts, problem, objective, trends, options, instruments, and strategies for intervention.**

Figure 2 illustrates that each step in the planning process is an interface for interaction between agents, either within the internal context (the planning team), within the external context (the problem field), or inbetween the internal and external context.



**Figure 2: Each step in the planning process is an interface for interaction.**

The practical challenge in interactive energy planning becomes to address, map, and document the interaction that has, is, and will be taking place over the course of the planning process. The analytical challenge is to name and unmask dysfunctional games, as well as to deconstruct situations in which one agent exercises power over another agent, with or without consensual contracts.

An example of a dysfunctional game in energy planning is the situation in which one agent uses an embedded historical technical and economic rationality to limit another agent's intent to innovate, and this agent attacks the first agent's rational basis, the "You cannot do what I do < >

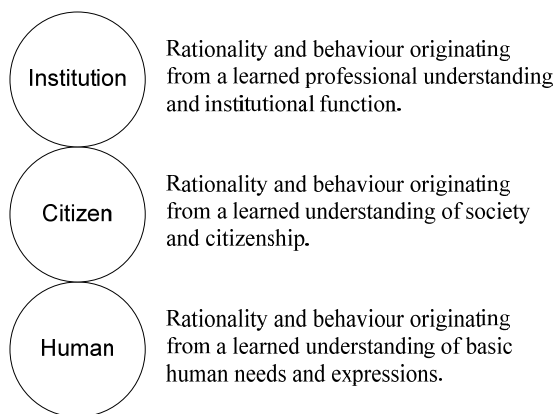
You have no reason to claim that" game. For example, in December 2003, an Irish grid operator announced that they would accept no more electricity from wind farms, because wind power was unmanageable and grid failures would be inevitable (Courtney, 2006). In response, the chairman of the Wind Energy Association held that the assumptions for this decision were "fundamentally flawed", without any further clarification (Murray, 2004).

While dysfunctional games may serve the involved interacting agents, protecting them from the intimidating reasoning of other agents, it does not serve the greater societal purpose, which is to stimulate creativity and innovation. Thus, such games need to be addressed by planners and policy makers.

In interactional planning, agents' real objectives is unmasked by naming games, possibly calling power bluffs, and addressing the underlying rationality by analysis, without judging them by any single institutional or professional interest.

Serving a deconstructive purpose, interaction may be modeled as transactions between agents, originating from learned behavior and rationality; according to the agent's role as institution, citizen, and human, as illustrated in Figure 3.

Aligning with its origin in psychology's field of transaction analysis, the interactional planner's challenge becomes to bring about individual and institutional relationships of the type "I am ok, you are ok" (Berne, 1964). The fundamental hypothesis is that such position is the most effective basis for allowing creativity and innovation to thrive, by the mechanism of stroking agents through recognition and communicating that change is possible.



**Figure 3: The agent; Behavior and rationality originating from learned understanding of three archetypes: institution, citizen, and human.**

The concept of interactive energy planning should inspire planners to spend less time in “The world is mine < > Yes, but not in my utopia” and other dysfunctional games, and more time analyzing the basis for internal and external rationalities, allowing for interventions into interactions to support value-rational change.

Technical and economic analyses are not always relevant, and certainly never adequate in approaching a decision problem. Interactivity as a theoretical and methodological platform relies on a basic cross-disciplinary planning framework with particular emphasis on the analysis of interaction between agents. The challenge is to use the analysis of interactions as an instrument for intervention that leads to the establishment of open and sober communication between citizens allowing each other the potential to innovate.

### **Towards inclusive and cross-disciplinary planning frameworks**

In perspective, interactive energy planning is intended to prepare for a shift towards inclusive and cross-disciplinary analytical frameworks and institutional designs. Interactive energy planning requires the

involvement of multiple professional disciplines: economists, engineers, politologists, sociologists, psychologist, historians, and educators - as no single profession should be made responsible for handling complex analytical problems related to social and technological change.

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