



# The Wisdom of the People: a Framework for Transparency

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## 1. Introduction

This contribution is an extension of work done in the context of the RISCUM Project (1, 2, 3). Its aim is elaborating communications requirements between citizens, experts and politicians in order to increase the transparency of decision processes. In RISCUM transparency was defined in the following terms: *In a given policy area, transparency is the outcome of an ongoing process which increases the stakeholders' appreciation of related issues and provides them with channels to stretch the implementer to meet their requirements for technical explanations, proof of authenticity, and legitimacy of actions. Transparency requires a regulator to act as guardian of process integrity.* This definition was tentatively applied to the Swedish Nuclear System, with particular emphasis in nuclear waste management. This paper elaborates further some of the components of the above definition, in particular it explores the factors which influence the *boundary judgments* for the policy area under consideration, the *resources and communications* required to increase the stakeholders' appreciation of this policy area, the *design of channel capacity* to stretch the implementer and the *resources and organisational processes* required to increase the quality of the interactions between experts and policy makers. Underpinning all the above elaborations is the consideration that transparency requires resources to support the self-regulation and self-organisation of stakeholders and experts in a context that clarifies and enforces the ethical concerns of society.

In this paper I first discuss a set of key concepts that are used to elaborate the idea of transparency. Next I discuss the idea of a policy issue as an organisation involved in the social articulation of its meanings. In particular I explore means to influence the boundaries of these meanings based on wide social debates rather than exclusively on expert debates. The argument is grounded in the need to bootstrap the production of these meanings in effective organisational processes. The aim is to open interaction spaces for stakeholders, experts and politicians in such a way that they can contribute to the best of their abilities to the articulation of the policy issue. In the end this is the meaning of transparency offered by this paper.

## 2. Organisation: Identity and Structure

Perhaps the fundamental idea underpinning the concept of transparency in this paper is that the meaning of a policy issue, the way it is construed and appreciated by relevant participants, emerges from the identity of the organisation producing this issue in the day-to-day. Moreover, I argue that the link between meaning and identity -the quality of this link- is given by the structure of the entailed organisation, that is, the structure producing the policy issue. To make sense of these propositions I need to clarify some of these concepts. This is what I do next.

I see an *organisation* as a closed network of interpersonal relations producing a whole, with its own *identity* and *structure* (4). From this definition it is apparent that I'm using organisation in a communicational sense rather than in an institutional sense. This point is further discussed below. *Closure* is fundamental to the emergence of an organisation. An organisation is the outcome of recurrent interactions *creating, regulating* and *producing* products and meanings in people's day-to-day experiences, beyond the rational discourse of policy makers<sup>1</sup>. A complex network of interactions achieves closure whenever communications produce loops of mutual influence between the resources creating, regulating and producing these products and meanings. The three aspects come together when those in these interactions produce *transformations* of one kind or another in the world. They are *actors* creating and producing meanings in *shared interaction spaces* moment-to-moment. Comparing their own appreciations of these transformations with those of stakeholders—should actors have these observational capabilities- allows them either to adjust their espoused meanings, to make them more consistent with the stakeholders' awareness of the situation or change their *relations* in order to produce transformations that bring the stakeholders' appreciations closer to their intended meanings. This is a mechanism to achieve desirable properties like transparency in a collective.

However imperfect, I hypothesise that there is an organisation wherever and whenever there are loops of mutual structuration as explained above. In other words, there is an organisation wherever and whenever meanings and real world transformations are producing each other<sup>2</sup>. But it is only when these self-organising processes are related to self-awareness and self-reference that actors are, if they have the necessary resources, in the position to produce desirable properties like transparency.

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<sup>1</sup> These meanings are often mediated by products and services, however I'm accepting  
in this definition the possibility that the interactions may produce beyond them  
intangibles like love, trust, comfort, security...

<sup>2</sup> In co-evolution with multiple other organisations emerging in the same way.

An organisation has identity and structure. The *forms of interaction* of those producing the organisation's transformations (i.e. actors) define its *identity*. These forms are the outcome of recurrent interpersonal interactions, which are conserved in spite of environmental disturbances and the always-present possibility of actors' defection. These forms are relational aspects that actors conserve even if particular individuals come and go. They are far more than the psychological recognition of belonging to a group; they are *relationships* that emerge among the members of a collective as their interactions produce a transformation. From these relationships values of all kinds may emerge, from negative ones like unfairness, to positive ones like respect for each other and transparency. It is apparent that these values are more than formal declarations of purpose and intention; they emerge from the actors' moment-to-moment interactions. An organisation's identity emerges from these relationships.

The relations of particular actors producing the organisation at a particular time or epoch define its structure. Relations are particular *embodiments* of relationships, supported by existing resources. For instance a hierarchical relationship can have multiple embodiments in different circumstances; the same relationship underlies multiple relations. These relations are stable interactions that allow people and other resources to operate together.

It should be apparent from the above that an institution, in the sense of a formal legally established collective, does not necessarily have the requisite organisation for its intended policies. For instance, the ministry accountable for nuclear waste management is unlikely to have itself the organisation to produce in the ground the related policies. There will be several other institutions, some of them responsible for their regulation, others responsible for their production, all together producing one way or the other the *organisation* creating, regulating and producing 'nuclear waste management'.

It is the quality of this organisation that we should explore in order to understand how to produce desirable properties. In particular I'm interested in working out the necessary organisation to produce transparency as a desirable property emerging from the interactions of the multiple resources focused, in this case, on nuclear waste management. This may be an organisation espousing the need for process transparency. Actors often are aware that espousing a value is not enough to produce it, but seldom they are aware that this mismatch emerges from the values governing their interactions. Indeed their interactions may produce values exactly opposite to those they espouse in good faith. But even if they are aware of the values governing their actions they may not know how to change them, let alone be able to change them. Clarifying requirements to change relations is at the core of the transparency problem we are addressing here.

The hypothesis is that meaning (i.e. purpose for the products of particular transformations) and identity are linked by the organisation's structure. In other words, if the purpose is achieving the safe disposal of high-level nuclear waste, and

there are resources focused on its production, the challenge is working out a structure able to underpin with relations of transparency the production of this purpose. It is in the organisation's identity that its values-in-use are expressed.

### 3. About the Organisation's Structure

Producing a particular transformation, like for instance transforming nuclear waste (produced by nuclear utilities and others) into safely disposed nuclear waste, requires resources, often from a variety of institutions, which when related by stable interactions define the structure of the system-in-focus, in this case of the nuclear waste management organisation. The functional requirement for this structure is disposing *of all kinds* of nuclear waste in ways that are socially accepted. We are talking of an organisation capable of creating and re-creating meanings for nuclear waste management over time, to regulate them and to produce them (i.e. the on-going safe disposal of nuclear waste over the foreseeable future). A particular desirable organisational property is transparency in decision-making.

The organisation for nuclear waste management requires capacity both to dispose today and to anticipate future requirements to maintain the waste safely disposed. The meaning of this capacity is socially constructed from the organisation's interactions with the stakeholders as these express their legitimate interests. The organisation has to achieve the necessary structure to cope with the unfolding of 'presents' into the future. In other words, resources are required not only for disposal today but also for the long-term safe disposal of this waste. Disposal today tells us about the multiple on-going organisational interactions with *suppliers and customers (among others the communities)* affected by this activity and *interveners (i.e. regulators, policy makers and others)* providing context to the organisation. The way the organisation incorporates in the present future disposal requirements tells us about its values and beliefs in the processes of structuring possible options. And, for the sake of transparency, this structuring should make possible for suppliers, customers and interveners *to stretch* the organisation. This is an important social mechanism to get the most out of the organisation responsible for the policy issue.

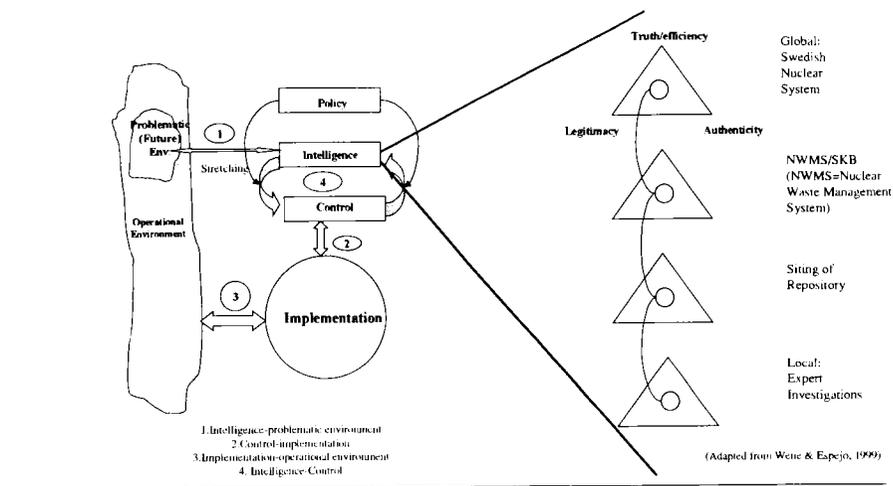
Therefore, in our case, the organisation for nuclear waste management needs resources both to achieve today and in the future safe disposal of waste. The organisation's *implementation* function is defined by whatever capacity is available today for disposing nuclear waste. The chances are that there will be a number of outlets with this capacity; in the Swedish case installations like CLAB and SFR provide this implementation capacity. The organisation's *control* function is defined by whatever resources are managing these disposal activities as a whole today. Equally, whatever resources are anticipating future requirements and building them up, define the organisation's *intelligence* function (3).

These control and intelligence resources are mainly focused on the scientific and technical aspects of this disposal. The former are expert resources focused on current

operations today; the latter are expert resources focused on future possible requirements. Their judgments about the situation today are based on their appreciation of the achievements of the implementation function in the case of control and on their appreciation of stakeholders' values/concerns in the case of intelligence. The day-to-day management of nuclear waste is the main source of contextual information for people's understanding of its risks. People's assessments of these activities must be seen as important indicators of the values they are going to see in the nuclear industry as a whole. *The wisdom of the people*, we know, is not in their scientific and technical appreciations but in their daily judgments, often unstructured, of the industry's activities. Structurally, the problem could be in the fact that the assessments made by the control function of the industrial operators' activities may be decoupled from the intelligence function's assessments of, and designs for, long-term waste disposal. This would happen if their communications were weak. In this case the chances are that intelligence designers will not be as sensitive to the people's wisdom as they ought to be. They will be missing important signals detected by the industry's control managers<sup>3</sup>. Structuring options for the future will be shaped by their own technical expertise, often stretched only by unrepresentative pressure groups in the environment. Equally, these weak communications between intelligence and control are likely to impair the capacity of those managing operations today to influence people's appreciations of 'future' related issues, since they are less sensitive about the 'future' debates in progress. This lack of sensitivity may make their resource allocations less aligned with the changing moods and concerns of society.

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<sup>3</sup> This argument assumes that control managers are well in touch with the implementation activities, something that often is not the case.



**Figure 1**  
Communication Loops for Transparency

**Figure 2**  
Levels for Meaningful Dialogue  
(The Swedish Example)

Communications between intelligence and its problematic external environment, between control and the implementers, between these implementers and their operational environments and between intelligence and control (see figure 1) are all loops that should be interconnected in order to increase the chances of policies well grounded both in stakeholders' wisdom and in experts' knowledge. Breaking or conflating these communication loops is likely to reduce the quality of the related policies.

Let's study each of these communication loops using the Swedish case as an example:

1. Communications between intelligence and its problematic external environment. In the case of nuclear waste management the key policy issue is siting and building a deep repository for high level nuclear waste. The intelligence capacity for this work, the study of options, is provided by SKB as well as by a variety of additional research and development resources focused on this issue. Environmental and civic groups articulate, among others, the problematic external environment. The social challenge is increasing the communication pressure (i.e. stretching) exercised by the civic and environmental groups over the organisation's intelligence capacity. While it should be possible to absorb a good deal of this pressure in the environment itself, by orchestrating communications in it, the larger is the residual pressure left unattended by these environmental communications, the more intelligence capacity is necessary in

the organisation. Lacking in this capacity can be construed as lacking in transparency, as there are issues for which the organisation does not offer clarification. This point is further complicated because the study of options is at the same time a global and a local issue. It is global in the sense that it is an issue that affects everyone in Sweden. It is local in the sense that it affects in very particular ways citizens in specific communities. The intelligence function needs a good regulatory model of the situation, one that considers the local and the global (see figure 2). These models are not arguments detached from the people articulating them, and this people are operating at several structural levels. This fact triggers the need for intelligence to articulate dialogues at several levels in society (see figure 2).

2. Communications between control and the implementers. SKB's corporate management provides the control capacity for waste management. It is responsible for resources bargaining with those managing installations like CLAB and low-level nuclear waste repositories, and also for their monitoring and for enabling their co-ordination. The challenges for the control function are to develop an overview and appreciation of the repositories' performances in their operational environment. Indeed, it is through communications with the implementers' activities that this control function not only appreciates their concerns but also the stakeholders' moment-to moment concerns. Moreover, it is through these interactions that the control function can influence the way these stakeholders will articulate these concerns. Lacking capacity for these assessments and management implies that the organisation does not have adequate control capacity.
3. Communications between implementers and their operational environments. It is through the operation of installations like CLAB that stakeholders in general, and not only at the local level, experience nuclear waste management activities on the ground. This is an operational communication that triggers their assessments of performance. These may well be communications with a wide range of *suppliers* and *customers* as well as with a range of possible *interveners* like regulators and relevant groups in the communities. It is in these communications that people develop trust or mistrust in nuclear operations. It has to be appreciated that these are on-going communications based on deeds rather than on future plans. This is the base of their tacit wisdom.
4. Communications between intelligence and control functions. Finally, it is in the communications between control and intelligence that the overall achievements of nuclear waste management today are checked against future scientific and technical options. If the control function lacks a good appreciation of implementation it may fail alerting intelligence about people's concerns that may impinge on their response to future options. If the intelligence function lacks adequate capacity to clarify environmental issues it may fail supporting control in producing desirable operational responses consistent with people's long-term concerns. Even if both functions had appropriate capacity for their functional responsibilities, if they lacked capacity to communicate with each other, to check and balance each others views, the outcome is likely to be implementation insensitive to people's concerns about the future and

environmental assessments that suggest lack of organisational authenticity; people in the environment will experience day-to-day organisational responses that are inconsistent with the values emerging from future oriented debates.

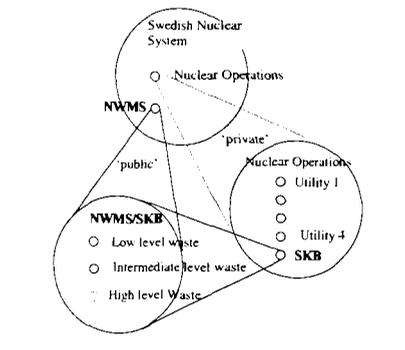
It is in the context of these communications that we can now discuss the structural meaning of the organisation's policy function. This function creates, develops and orchestrates these interactions. Its role is creating the organisation's purposes (i.e. meanings) and steering organisational processes to produce its identity. It is the function where final closure of communications takes place, where values such as transparencies are shaped. Those in this function must have an overview of the organisation's transformations and are their *owners*. Particular individuals may carry out other of the organisational functions (like intelligence and control), but in this role they are accountable for creating meanings and closing communication loops. Those in the policy function need to manage the processes linking purposes and identity through structure. They are responsible for bootstrapping their understanding of the organisation in the relationships producing its identity and vice-versa. They are accountable for the loops of double structuration linking the creation to the production of meanings. This requires abilities to reflect upon the collective self and to achieve organisational self-awareness. This is the suggested role for politicians in the organisation. It is through their grasp of direction, purpose and values that they should allocate resources and orchestrate the necessary communications to develop the necessary structures to create, regulate and produce policies/tasks. Among other aspects they should orchestrate balanced debates between experts dealing with the problematic future environment and experts managing the current operations (communication loops 4 in figure 1). It is from these debates that policy options grounded in desirable values and values-in-use may emerge. This is a form to give authenticity to policy processes.

#### **4. Boundary Judgments: Organisation and 'Policy Issue'**

Nuclear waste management as a policy issue is associated to a particular organisation; the Nuclear Waste Management System (NWMS). The boundaries of the policy issue are produced by the related organisation. *Owners* and *actors* who create, regulate and produce the nuclear waste management policy construct this organisation. They do this in the context of *customers*, *suppliers* and *interveners*, who through their interactions stretch the organisation. The organisational system emerges as a human interaction system (HIS) from their interactions. The meanings of these interactions -their ethical implication- define the system's boundaries and therefore are aspects requiring clarification.

Even if participants espouse the same meanings for a policy issue it does not imply that they will produce one and the same identity. For instance in our report of the Swedish case (2) we hypothesised that the espoused meaning of "system for the management of nuclear waste, by means of existing and new disposal methods, with the purposes of making this waste harmless to society and maintaining a clean

environment” had emerged from two different ethics, the private commercial ethics of the nuclear utilities and the public ethics of society at large. Naturally the resources and related structures supporting the commercial ethics are different to those supporting the public ethics; at the very least we may expect in the latter case public research and advisory activities beyond the commercial activities of the implementer. These two structures may be responsible for two different identities for the NWMS. We referred to this as the Vasarely<sup>4</sup> effect (see figure 3). In this hypothesis, two different organisations emerge from the same espoused policy. The commercial identity is influenced by the need to produce value to shareholders; the public identity is influenced by the need to clarify policy to the stakeholders, that is transparency. These are two different criteria of performance; one influenced by the need to be effective, the other by the additional need to clarify the meaning of effectiveness<sup>5</sup>. Different identities are bootstrapped to an apparently similar meaning by two different structures, thus producing two different organisations for the same policy issue, hence the Vasarely effect. If this hypothesis were the case we can anticipate that people will perceive incompatible values in the NWMS and therefore question the authenticity of owners and actors.



**Figure 3**  
**Two Organisations for the same Meaning:**  
**The Vasarely Effect**

What is apparent from the above discussion is that policy issues may trigger different, though largely overlapping organisations, responsible for producing different values through their related identities. It is also implied by our earlier discussions, that these policy issues are related to values through communication networks braiding participants’ interactions; these are the relevant structures. However, it is natural to expect the need for policy clarification, as well as for clarification of values and required structures. All these aspects should be themselves

<sup>4</sup> This is a reference to the French-Hungarian constructivist painter who produced special effects in his paintings as those illustrated by figure 3.

<sup>5</sup> In reference 1, chapter 6, these latter criteria is referred as Comptegrity.

the concern of debates and discussions. Considering this point, and assuming a policy issue in process of being implemented, as it is the case of nuclear waste, the challenge for transparency is not so much to diagnose the existing organisations, or to design them for particular purposes, but to *clarify* the structures in place and the allocation of resources in order to learn how to increase the chances of producing an organisation with desirable properties like transparency in this case.

Therefore the mode we use in this organisational study is neither diagnosis nor design but the mode of clarification or critical. In this mode politicians are unclear, uncertain about the purposes of interest and the issue is working them out. Moreover they accept that these purposes are in constant evolution and the problem is to bootstrap the participation of all those (in particular experts) who legitimately have to participate, regardless of the values they espouse<sup>6</sup>. As the clarification takes place, new meanings emerge and new organisation structures are postulated as necessary, in an on-going process of bootstrapping identity with meaning through structure. Meanings are evolving, at the same time as values are shaping relationships and resources are opening the space for structures fit to produce these meanings and values. What these arguments imply is a theory for grounding values in social structures. They offer an initial answer to the question, how do we move to/from meanings to identity? We are in the infancy of this grounding.

Lack of clarity as to whether long-term nuclear waste management is a policy issue for society as a whole or for the nuclear industry alone triggers the possibility of a dual structure for this policy issue (cf. the Vasarely effect); one embodied by the NWMS and the other by SKB. In the former case the issue of a deep repository for high level nuclear waste is a long-term social issue and therefore one relevant to the control, intelligence and policy functions of the nuclear waste management system, which entails SKB resources but is much more than these resources (2). On the other hand, from a commercial perspective there is the risk of seeing this as a policy issue for SKB, with the participation and intervention of other regulatory and decisional resources, but finally a problem for SKB's policy function. From an organisational perspective the issue of whether it is one or the other, or a mix of both as it may be the case in current practice, is not a matter of espousing the view that it is a social issue, but of clarifying how resources are allocated and which communications are in place (cf. figure 1); in the end this requires clarification of the sources of motivation, sources of power, sources of knowledge and sources of legitimation (5) that underpin these communications.

The idea of levels of meanings (figure 2) is a practical expression of this clarification. Levels of meanings imply recognising the above sources of clarification for each of the dialogues emerging from the model of the policy situation produced by the intelligence function of the NWMS (link between figures 1 and 2). In the Swedish case this model recognised the need for autonomous meaning creation at the levels of the NWMS, High Level Nuclear Waste Management and local experts

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<sup>6</sup> Naturally, there are limits for the values that are acceptable.

investigations. These are three hypothesised levels for differentiated dialogues. Tacitly this model is hypothesising the need for an *organisation* to create meaning for nuclear waste management in general and for global and local meanings for high level nuclear waste management. These are requirements for transparency. In particular this is a means to increase stakeholders' appreciation of the policy issue and to provide them with communication channels to feed their wisdom into NWMS decision processes.

## 5. Conclusion

The ideas presented in this paper are still evolving and they will be further tested in the context of the current RISCOS project. Perhaps the most significant idea is that of an organisation mediating between the meanings of a policy area and desirable social values, like transparency. For this mediation to be effective it has been hypothesised the (self) construction of structures with requisite identities. This is a process whereby evolving and uncertain purposes are bootstrapped to evolving relationships. Underpinning this bootstrapping is the clarification of the requirements to make possible desirable social transformations, like in our case, nuclear waste into safely disposed nuclear waste, enabling and respecting the views of stakeholders whose appreciations are constantly challenged by new knowledge; enabling and allowing experts debate policy issues whose boundaries are constantly reshaped; enabling actors in general to produce in the ground policies that are shaped by their own actions; giving to politicians the chances to both articulate the legitimate interests of society and steer the production of desirable social values. Achieving all this requires creating a rich and creative context for social communications, with checks and balances throughout.

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