

Shifting governance, decisions, planning, information

Valedictory address

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Introduction

These days, we tend to define governance as *the way society organises itself*. Governance is no longer equated with action by government, as was the case in the past. This shift in the concept of governance represents a gradual development over the last 30 years. Recent headings in research programmes and publications bear witness to this development and include such titles as “Shifts in governance”, “Governance beyond the state”, “Governance without government” and “The role of the state in a changing world”. This shift is also indicated in the growing and maturing interest of professionals and decision makers in the concept and involvement of so-called *stakeholders*, and in methods and processes to secure widespread ownership of problems and solutions.

Vertical shifting refers to movement across the levels of government – local, provincial, national, supranational and transnational – with increasing tension between the top end and the bottom end. Horizontal shifting refers to movement across society – government, private sector, civil society – with governance roles formerly performed by government gradually shifting to other actors in society. It is often argued that vertical and horizontal shifting influence each another.

From an economic and social policy point of view, governance concerns the production and distribution of public as well as private goods and services, and the corresponding allocation of society’s resources. As Kleerekoper [1] argued some 40 years ago, although the general interest is often invoked by governments to justify and explain policies and decisions, it is a fiction and cannot serve as a departure point for policy formulation and the allocation of tasks among society’s actors.

Within this wide frame of reference, we will explore in this paper the following key connections between the concepts of society, good governance, decisions, decision and planning methodology, and information:

- the nature and structure of society, general interest and governance
- the processes and nature of choice and decisions
- appropriate planning methodology
- the information dimension.

In the course of my professional career, I have benefited from wide exposure to development problems and related decision and planning processes. I have been

fortunate enough to have enjoyed some 35 years of international consulting practice as well as 20 years of work in the academic world, the two directions profiting from mutual reinforcement. In the last 10 years, I have been introduced to the provision of information in general and spatial information in particular, so complementing my advisory decision and planning practice and the body of underlying theoretical understanding. I thank all those, my colleagues, who have worked with me on the many projects I have been involved in, and in teaching and research during my academic years. They have managed to work with an idiosyncratic individual and to cut across my sometimes stubborn attitudes and approaches; they have offered me friendship and social ambiance, and generally improved the professional and personal me. I sincerely thank them. I also thank ITC and the Department of Planning and Geo-information Management for the opportunity to give this last formal lecture and exchange views on issues so close to my heart.

Metaphysical society

Ancient concepts

Newton is reported to have said that "if I have seen further, it is by standing on the shoulders of giants" [2]. The current debate on governance, which started maybe 30 years ago and is still gaining momentum, is a case in point.

The great mediaeval scholastic philosopher and theologian Thomas Aquinas, the Angelical Doctor, argues normatively [3] that society's objectives must derive from the divine plan of God the Creator. Society and its individual members are accountable to God, and must formulate and pursue the general interest within this divine mandate. In its economic operations, society should let its transactions be arbitrated by the *iustum pretium* (the just price). Government is the interface between the metaphysical guidance and unruly society, and is entrusted with the operational formulation and pursuit of the general interest. Government wears the cloak of God; it represents the metaphysical guidance. People and institutions have their designated stations in life.

In this view, good governance is implicitly equated with a strict hierarchical structure of society (Figure 1). At the top of the hierarchy is central government. Central government has the responsibility to formulate and pursue the general interest through policies, decisions and action, and is accountable to the metaphysical guidance. Government is the guardian of the general interest.

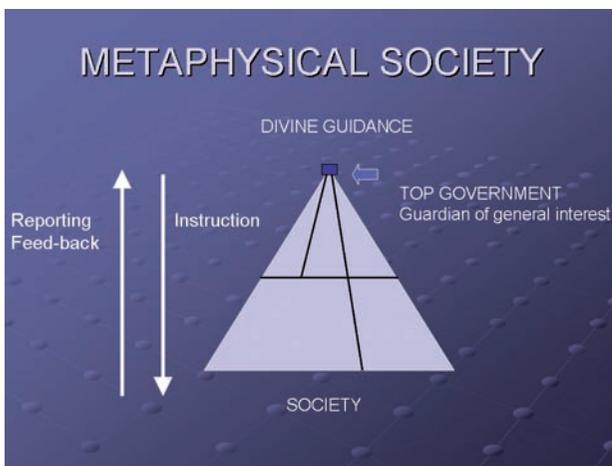


Figure 1 Metaphysical society

More recent developments

Many years later, in the 1950s and 1960s, the early development economists essentially stepped into Aquinas's footprints. Besides making a powerful and innovating contribution to economic analysis and modelling, Tinbergen, Frisch, Chenery and others address the organisation of the economic order and the procedures and methods of formulating and implementing economic and social policy, and, often implicitly, define the conceptual structure of society. Their model of society is a strict hierarchical structure. Society's aspirations gravitate upwards to central government. Central government defines the general interest, formulates policies and instructions to sectors and levels in the hierarchy, and has the legitimate responsibility to enforce that decisions taken in society reflect central government's instructions and policies.

In his valedictory lecture of 1963 at the Free University of Amsterdam, Kleerekoper [1] performs surgery on the notion of the general interest and its position as the cornerstone of social and economic policy. He argues that *general interest* necessarily abstracts from *particular interest*, and raises the question of what would remain after such abstraction, answering "essentially nothing". Proceeding from here, he concludes that the general interest is a fiction. If formulated or invoked to justify specific policy, the general interest represents government objectives as seen by the government at that point in time and on that specific occasion. Governments parade the fiction of the

general interest as an effective means of formulating, justifying, selling, implementing and enforcing specific social and economic policy.

John Maynard Keynes reportedly said that “each politician is under the spell of some defunct economist”. Be that as it may, considerable time elapsed before the ancient models of society, governance and government were seriously questioned. Kleerekoper provided me, on my first reading his lecture, with a watershed insight into the religious and philosophical foundation of the concept of the general interest and the metaphysical nature of central government viewed as the guardian of the general interest.

The hierarchical concept of society, with the government cast in the role of exclusive and legitimate designer and enforcer of social and economic policy to pursue general interest, may never have been true reality. Nevertheless, it has certainly been widespread practice, or attempted practice, for long periods. Governments all over the world have invoked, explicitly or implicitly, their special place as the interface between the common folk and the temporary realm, on the one hand, and metaphysical guidance and eternity, on the other.

The last few decades have increasingly recognised the reality of society as the arena where complex, fluid, negotiation-based transactions and interactions take place, characterised by temporary and ever-changing alliances, procedures and structure. The hierarchical model of society is a model indeed, designed and applied to superimpose an ordering and mandated structure on the underlying chaos and dynamics of society's transactions and interactions.

Increasingly, we tend to look at societies as organisms, as nature, and, as Stephen Gould [4] says, “nature is indifferent and essentially unstructured”. Our understanding of nature and society is limited. In the words of Richard Dawkins [5], “we are African apes used to average size objects moving at average speeds across average distances”, conscious of our existence in an awesome and infinitely wider and complex reality, which is “frightening yet full of splendour”. In these conditions, and as a coping mechanism, we model. We cut the dynamics of reality down to our size, and design structures, methods and procedures that are necessarily partial, temporary, and under constant pressure from the surrounding complexities. In the words of Krugman [6], our models are “metaphors, and we should use them, not the other way around”. Change and adaptation are innate, otherwise we would not survive.

In this connection, let us briefly look at our increasing insight into the limitations of the so-called *rational* model to explain our behaviour and our social and economic institutions. Scientific understanding used to be pursued through a rigorous sequence, with feedback and provisions looping in and out. The starting point was identifying the problem and formulating assumptions as to its major causes. Then these assumptions were tested, the outcome either confirming or refuting them on an empirical or sometimes thought-experimental basis. *Bounded rationality* was coined by Herbert Simon [7] in the late fifties to mitigate, not abandon, the abstract *rational man* concept.

These days, we are gradually taking bounded rationality one significant step further and are challenging the notion of rational man as a matter of principle. Social scientists have started to talk about the *evolutionary paradigm*. Essentially, it says that at any point in time individuals and societies, like nature's life forms, live through a range of choices and forms of societal organisation. At any point in time, the choices and forms available to us reflect the best adaptations from days, conditions, models and life forms of the past. As Kolk [8] says, "in non-genetic evolution a general mechanism of variation and selection prevails. Of the window of opportunities those opportunities survive that best adapt and have adapted to the local circumstances." This paradigmatic change in looking at causality, progress and prediction is well in line with our earlier critical discussion about the general interest and the metaphysical structure and nature of society.

So, here we are. Our straightforward thoughts of the past on the nature and organisation of society do not hold water. Maybe they never did, but somehow we believed in them and managed to make it appear as if they did. Yet the true reality surrounding us, and in which we participate to the extent of our existence, is fluid, dynamic and forever changing – a dance of energies. This reality inexorably grinds away at each and every rule and structure through which we organise and formalise our lives. When the tension between rigidity and dynamics becomes untenable we adapt our rules and structures – of necessity.

How do the emerging evolutionary paradigm and the demystification of the general interest influence our understanding of governance and, particularly perhaps, of good governance?

Good governance has become a pervasive and wide-ranging notion. We talk about good corporate governance, design appropriate codes of conduct in business, discuss the organisation of societies in terms of good governance, levy political pressure and launch international interventions invoking good governance, and look at family life from the perspective of good governance. We bring virtually every form of organisation and human grouping under this banner. We extend the notion to animal and plant life, and in holistic thinking even to physics and the universe. Is it clear then what we mean when we mention good governance? Does what seems clear to us have global validity? And if the answers to these questions are affirmative, does this imply that a single formula exists for the appropriate organisation of our societies? These are intriguing questions of considerable ramification.

Multi-system/stakeholder society

Our lost world

We have so far reasoned that:

- the general interest is no longer with us as the natural, just and unequivocal parameter of right social and economic policy
- governments no longer carry the holy grail of the general interest as that notion itself is fundamentally compromised
- particular interest appears on the horizon as the driver of society's dynamics.

In these conditions, we cannot escape an effort to revisit and redesign our ancient concepts of society, governance and the roles of society's main actors, as a matter of principle and pervasive significance.

A small digression

In an interesting exchange of views, Gelles [9] challenges Krugman [6] in a discussion under the heading "Dominant mechanism versus political decision in human economy". Krugman takes an evolutionary vantage point, from which he defines economics as "the study of what emerges from interactions among intelligent, self-interested individuals", likens this definition of principle to the body of thought in evolutionary biology, and concludes that economics has a lot to learn from evolutionary theorists. In the words of Gelles, "ants and rivers evolve in a similar way. They leave patterns in history that are very much alike; but human housing industries follow the law debated in councils more than any other mechanism." Gelles makes his point in the context of a more general view of the *study of change*, where he says that non-genetic changes in landscapes and river patterns can be likened to a tug-of-war similar to that encountered in ants or human societies.

In discussing the general nature of change, we might take our starting point from Lorenz' 1963 analysis [10] that space is never free, aggression is innate, and every object and every action challenges alternative use of the space. In combination with the tendency for energy, in whatever form, to be outgoing and to seek efficient outlet, Lorenz' analysis, if taken beyond the boundary of his ethological studies, and Gelles' point above can be interpreted as supporting the premise that change is everywhere and of all times, and is the result of a perennial tug-of-war between competitive forces and parties, animate as well as inanimate. Change is forever adaptive, not geared to some teleological horizon. Change can be argued to be progressive, in the sense of Dawkins' biogenetical definition of progress as "a tendency for lineages to improve cumulatively their adaptive fit to their particular way of life, by increasing the numbers of features which combine together in adaptive complexes". It requires only a modicum of adaptation to render this definition valid beyond the biological evolutionary realm.

Multi-system society

Van den Toorn [11] speaks of society as an entity consisting of interacting subsystems of often temporary and versatile nature, and calls this concept "multi-system society" (Figure 2). Other social scientists and practitioners in and since the eighties refer to society as "negotiation society", with implicit and explicit negotiations taking place all the time between stakeholders.

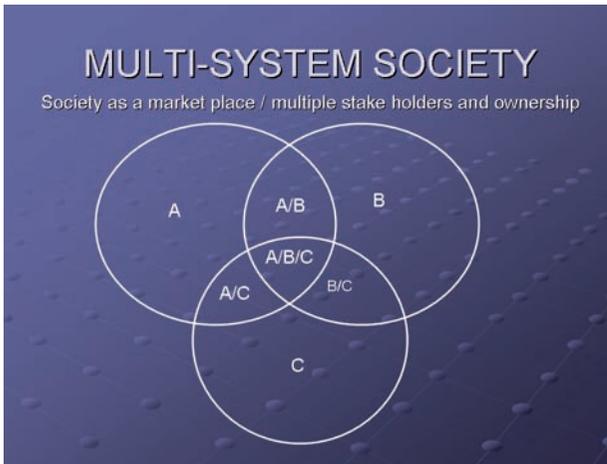


Figure 2 Multi-system society/stakeholder society

The notion *subsystem* indicates that the grouping concerned belongs to a system constituency, and is a system by itself, with its own ambitions, resources and trade-off appreciation. A subsystem's existence is versatile and related to one or more specific issues. Some subsystems may be long-lived because of being party to one or more long-lived issues, whereas others may disappear quickly as the issue involved is either quickly resolved or otherwise eliminated. The notion *stakeholder* says that a stake is being held, and that the grouping is a stake- or issue-related grouping. A stakeholder is necessarily a *system*, a subsystem of society. How otherwise could there be an issue in which the stakeholder is involved, and how could the stakeholder take part in implicit or explicit negotiation, define acceptance boundaries, and appreciate trade-offs?

Common to these views is an undercurrent of thought that society is not a directed but a bootstrap system, characterised by the dynamic adaptation and arbitration of impulses. Society redefines itself continuously as a result of continuous interaction. Any outcome in such an environment is the result of two major forces: trade-offs and relative power. Let us take a closer look.

Trade-offs will emerge when, in negotiations or preparing for negotiations, greater satisfaction of one or more objectives would entail less satisfaction of one or more other objectives. As a well-known Dutch soccer pundit [12] says, "every advantage has its disadvantage and every disadvantage its advantage". Subsystems or stakeholders identify, measure and appraise the trade-offs they may face, and design strategy and tactics to reach a result that is acceptable given the issue, the trade-offs involved, the distribution of power, and the nature of the subsystem or stakeholder. As trade-offs become more severe, a subsystem's acceptance boundaries may risk violation. Should the acceptance boundaries be breached, many things can happen. In extreme cases – and they do occur, as the world bears witness – revolt may break out and repression follow for longer or shorter periods, bringing devastation and human suffering on a greater or more modest scale. In milder cases, disappointment and distrust may be the results, often with long and lasting adverse impacts.

Relative power says something about the degree to which one subsystem or stakeholder may influence one or more other negotiation partners, as well as the negotiation results themselves. Effective and relative power, though, "is not a lump", according to Dahl [13]; it is not something you either do or do not have in a given quantity. Formally powerless peasants or citizens may yet topple a repressive

government. Human violation of the acceptance boundaries of the environment or animal rights may lead to a backlash – sometimes hideous – even though those directly affected may be powerless in the common language of man. Relative power tends to increase as trade-offs become more severe and draw nearer to the perceived survival-related acceptance boundaries of the subsystem or stakeholder concerned. Power is a relative notion in other directions too. Nietzsche explains that the master is master only because the slave is slave, with the implication that the master is the slave of the slave and the slave the master of the master.

In the bootstrap system of adaptive multi-system society, the two aspects of relative power mentioned above play out in tandem. Jointly with the trade-offs we discussed earlier and the regulatory frameworks we will investigate below, they determine the dynamics of society's interactions, as well as the outcomes of the interactive processes. We will address the role of culture in this regard later on.

Government and civil society

Many concepts, definitions, terminologies and models as to what constitutes modern society coexist at this point in time. Yet a degree of convergence seems to be emerging.

The primary and ontologically principled role of the government or the state is that of being the disinterested regulator of society's transactions. It has society's mandate to regulate to the satisfaction of the subsystems of society on whose authority and behalf government came into being in the first place.

At the same time, however, governments everywhere have added to this role, and, in some cases, largely replaced it with another. Governments have themselves evolved into competitive subsystems, protecting themselves and furthering their own interests. Kleerekoper's conclusion that the general interest is a fiction is incisive in this context. Invoking the general interest as the paradigm for social and economic policy has served the government subsystem as an efficient strategy for accumulating material and immaterial resources unrelated to its role of providing disinterested regulation of society's transactions. It has therefore been instrumental in creating the perception in many societies that the government is a purely competitive subsystem and that government and civil society are natural, yet of necessity coexisting, enemies.

The distinction between government in the role of the principled and disinterested regulator of society's transactions and its role as a competitive subsystem of society is not always easy to make, and the dividing lines between the two are often fuzzy. It may be doubted whether time-honoured civil society institutions such as parliaments and democratic elections are truly and sufficiently forceful to ensure that governments see themselves primarily as society's servant and most of the time act accordingly.

Governance

The modern debate [14] on good governance as it has developed over the last two decades tends to emphasise the regulatory role of the state and reduce the inherent selfishness and competitiveness in its role as a self-interested subsystem of society. A degree of convergence seems to be emerging that says that the state or the government must be:

- *legitimate*: a true mandate from the subsystems of society to regulate society on their behalf. This should translate into society's formulated objectives, policies and regulatory frameworks within an overall paradigm of societal interaction, dynamics, change and necessary adaptation.
- *transparent and accountable*: the above mandate to be exercised transparently. The state's organisation and individuals charged with specific tasks should be held accountable.
- *operating within a fair judiciary*: well-designed legitimate laws and rules applied evenly throughout society, with no one/no subsystem being above the law.
- *effective in the pursuit of arm's length management and a fair judiciary*: implicit acknowledgement of the fact that the state should act on behalf of its citizens on an agreed mandate, and not engage in undue competition with civil society.
- *conducive to thriving civil society institutions*: aimed at the checks and balances in society necessary for government to fulfil its legitimate mandate and for civil society to be able to continuously audit the aims and action of government.

To the degree that the government acts as a competitive subsystem rather than in a disinterested regulatory capacity, the playing field should be the same for government and any other subsystem of society. Ironically, government, in its regulatory role, should see to this.

How should we understand *governance* in the paradigm sketched so far (i.e. multi-system society forever redefining and organising itself)?

- Governance cannot be equated with the way in which government exercises authority and power.
- Recent literature reports vertical and horizontal shifts in governance, both from a theoretical and an empirical point of view. Such shifts implicitly represent the comparison between the ancient concepts and attempted practice we discussed earlier and those of today. In multi-system society, there is neither vertical nor horizontal, but an ever-changing odd-shaped Venn-diagrammatic configuration.
- Multi-system society is a composite bootstrap entity, self-regulating and self-organising. No single subsystem of the entity exercises governance. Governance is a systems variable, the result of continuous inter-subsystem interaction and negotiation, a *hic-et-nunc*, or perhaps a somewhat ex-post rather than ex-ante phenomenon.
- Governance is evolving in the full evolutionary sense in which we discussed evolutionary science; it is constantly dynamic, with no clear sense of direction other than best adaptation.
- The principled role of government is that of formalising transaction rules for and on behalf of society's subsystems, in line with society's mandate to government. In the growing consensus on conditions of good governance, legitimacy, dynamics and adaptation are key characteristics of government's principled mandate.
- In addition to this principled role, government has normally evolved as one of society's competitive subsystems. Good governance would require a level playing field where the government subsystem enjoys no privileges denied to society's other subsystems. Under the conditions of good governance, government must abstain from parading the fiction of the general interest to justify its actions as a competitive subsystem and from using it as leverage to further its particular subsystem interests.
- Ironically, of course, the conditions of good governance are time-bound. In due course, they may legitimately be formulated differently, very differently even, although it is hard to escape the thoroughly human feeling that there is something universal about it.

Culture

Having said all this, should we reach the conclusion that a uniform concept of society and a uniform structure and organisation of society are necessary to achieve good governance? Maybe or maybe not; or maybe only in certain regards. Most of the analysis so far originates largely from Western thought and developments, and is coloured by characteristics common to Western culture and achievements. Very little of our thinking and thought is value-free, of universal validity.

Culture provides the collective wiring of the mind, and this collective wiring represents value systems that are proven to be deeply rooted, have long time horizons, and vary significantly between societies [15, 16, 17]. Even if the conditions of good governance were fully universal, the mechanisms delivering good governance would be likely to vary, and necessarily and considerably so. A society culturally dominated by a high score on Hofstede's Uncertainty Avoidance Index will seek stability and security more than anything else, and this would certainly translate into the precise mandate society would give to government and other actors in society. Or a society culturally dominated by values such as caring and concerns for equity and the quality of life would phrase a mandate using terms different from those used by a culture that greatly values the achievement and visibility of success. With differences in mandate originating from deep-rooted value systems, not only will the mandate itself differ but also the transaction rules, as indeed will society's dynamics and adaptive behaviour.

Decisions and decision processes

At this stage, let us take a look at decisions and decision processes and factor in politics, before going on to say a few words about the stylised and often elegant world of mathematical modelling and operations research.

Decisions are the stuff that society's transactions are made of. According to Sharifi [18], a decision is a conclusion of preference for one state rather than another. For a decision to be effective, it must include the arrangements necessary to get from the state at the time of formulating the decision to the preferred state. The process involved is complex.

Our minds and the processes of decision are quintessential to our history and the fate and development of societies and individuals. Formalising these processes into abstract terms serves to model history and development, yet does not do sufficient justice to the heat of the day and the dynamics of our world. Let us take a closer look.

The mind of the decision maker would seem to be a straightforward enough notion. But it is not. At any point in time, the mind is an entity of great complexity: a multitude of chemical and electrical processes, receptive to a wide-ranging diversity of sensory and thought signals, and with a multitude of end purposes. When we talk about decisions, however, we normally refer to specific strategies and policies, goods and services, and consider a limited range of inputs and a limited context for the decision process rather than the overall complexity.

The ancient theorem of metaphysical guidance, the concepts of well-ordered hierarchical society, and the location of the moral high and low ground in society have found their way into the actual models and procedures of decision making and societal and individual behaviour. *Rational man and bounded rational man* are extensions of a belief in an almost axiomatic hierarchical order – the micro-cosmos of our existence and minds looked at through the magnifying glass of that theorem. If this ancient theorem can no longer be accepted, as argued, then neither should postulates of rationality or bounded rationality. We replaced hierarchical society with multi-system negotiation-based society a while ago. Let us do the same with regard to the nature of our decisions. Decision processes then appear as messy, and our mind as an arena featuring a multitude of physiological actions, fights, feats and actors at any point in time. If we put this into the colloquial of daily life, an illustration of a not unusual context within which decisions are made may run as follows:

The chief executive officer trying to reach a board decision sees in front of him his advisers and lesser managers. They are all differently dressed, have different facial expressions and body language, entertain hidden agendas of unknown contents and, even if saying the same things, interpret them differently. The CEO has to see the dentist or the psychotherapist about school problems of one of his/her kids, is troubled about the stock market, may feel the need to reduce weight, has pain or other discomfort, and enjoys the flashy car just bought (Figure 3).

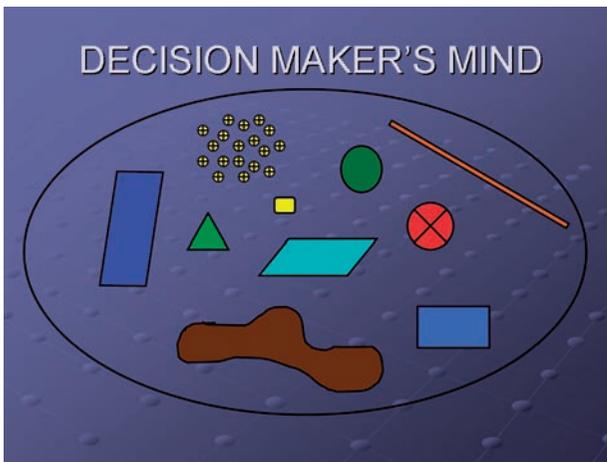


Figure 3 The decision maker's mind

Other decision makers, ourselves for instance, face similar contexts when making decisions. This is our world, this is the environment within which we live our lives and make our choices.

Decisions are selection, known ex-post

Loucks [19] once said that the decision maker can choose only when he or she knows what he or she can have. Choice is between merchandise on the shelf. General statements such as we prefer economic growth to employment generation, food production to transport, or love to money miss the point. What we need to know is the expected trade-offs and trade-off patterns: what we gain or lose comparatively and relatively as a result of specific choices. Only then will we choose. We do not make choices on the basis of directional preference, but on the basis of what we think we can have.

Loucks' statement reflects observed decision makers' behaviour. Deeper down, we can understand the richness of the statement when we combine it with our recent discussion about the complexity of the decision maker's mind. Basically we are saying that choice is messy and complex. We are saying that at any point in time its habitat features a multitude of events, processes, point values and cultural dimensions, and is, in addition, idiosyncratic to the decision and decision maker concerned. Analysis preparatory to decisions will necessarily consider a limited number of aspects. Such analysis, however useful and necessary, addresses a limited area in the decision maker's mind. Choice shows up when the choice is made. It is based on analysed as well as non-analysed trade-offs negotiated within the decision maker' mind.

Decision support systems and models

Venturing out into the world of decision models and decision support systems, we meet with abstraction and mathematical elegance. Most, in fact virtually all, such models take rational or bounded rational man as their point of departure. Objectives are formulated, constraints defined, causality established, and functions indicating the relative importance of objectives constructed. Frisch [20] argues that this preparatory work can and should be done sitting with the decision maker until he confesses his preferences. Other authors have argued that, if you do not know what to aim for, decisions become arbitrary. There is an almost intuitive appeal here: a feeling that you have to know what you are shooting at, otherwise why shoot at all. Our earlier discussion, though, indicates that the complexity of our mind processes, the non-feasibility of directional choice, and the need for trade-off patterns to reveal the

merchandise on the shelf effectively limit the support from formal models to actual choice as a matter of principle. The degree of this limitation will depend on the subject of decision and the choice of model and method.

Decisions are taken continuously at all levels of society by all of us. Almost always some form of accountability is involved. We often have to justify our decision to other stakeholders. This aspect ushers in the political dimension. I propose that we take a look at the political feasibility of constructing the Frisch ex-ante objective function, which is the common approach in many decision support models, and later examine the ex-ante constraint function.

Politics and the ex-ante objective function

An ex-ante objective function states the objectives to be pursued and the relative importance of these objectives. It represents essentially directional choice, preferring the satisfaction of objective A to that of objective B, while adhering to the rational principle that, if C is preferred to D and D to E, C is preferred to E. To construct the function, we need to know the objectives and the preferences between them.

The political decision maker seeks to make decisions and formulate objectives that may be directly related to staying in power or, less selfishly perhaps, to what may be important for his or her constituency. In democratic society, politicians tend to seek constituencies on the basis of numbers of voters. The trade-off here is that, if the politician chooses to formulate the objectives relatively narrowly and with a fair degree of precision, the constituency will likely be relatively small, yet coherent and prepared to make an effort to carry their chosen representative to the high altars where the decisions are made. Still, the constituency will be small, and its influence on actual decisions will likely be small accordingly, to the extent that the objectives may not actually be pursued or achieved. The other option is to formulate objectives more widely. The constituency will likely be larger, but also less coherent and less prepared to go to pains to get their chosen representative to the inner sanctum – for he or she may be a decent human being and politician, but not really distinguishable from other office seekers. The politician will choose a position between these two courses of action.

If ideology strongly drives the choice and formulation of the objectives, the power base should be expected to be small, coherent and stable, and may radicalise. The decision maker in such a constituency will almost be forced to radicalise; the narrow band within

which the objectives are formulated will diminish the possibility of achieving them through tolerant, democratic and perhaps peaceful means.

Democracies tend to go for numbers of voters, although treasuring some smaller idealistic constituencies as the visible sign of political maturity, and maybe wisdom. So, one should expect objectives to represent things we all would wish for: widespread and considerable prosperity, a long healthy life for everyone, social solidarity, good-neighbour foreign policy, etc. Precision and targets would not normally be part of the scene. Frisch and the decision support system builder will therefore face the virtual impossibility of formulating meaningful objectives without imprinting their own interpretation and measurement criteria or indicators. Even if it were feasible for the politician to formulate the objectives sufficiently accurately to support meaningful analysis, there is still the issue of assessing their relative importance. Stating relative importance involves greater visibility of sense of direction than formulating meaningful and sufficiently accurate objectives, and hence aggravates the size of the constituency dilemma.

Technically, a complete ex-ante objective function fully determines the ultimate choice, given the choice population and the constraint function. Here we encounter Loucks' point again: decisions/choices made without knowing the trade-offs, a blind date so to speak – in stark contrast to the nature of decision making as discussed earlier.

Ex-ante constraint function

The last complication I would like to draw attention to concerns the construction of an ex-ante constraint function. Prima facie this would look like a problem readily solved. In fact it is not. It suffers from those same drawbacks we discussed above. This particularly concerns resource constraints, or the availability of resources that are not physically fixed (e.g. investment funds, recurrent expenditure, staff and expertise availability, organisational absorptive capacity, certain environmental dimensions). Political decisions determine resource availability in such cases. The availability of investment funds, for example, is a decision that will take into account at least the following:

- the options for expanding resource availability (e.g. greater or lesser indebtedness, fiscal measures, private sector involvement in what used to be public domains)
- the trade-offs between potential availability of investment funds and potential benefits (e.g. the availability decision taken when benefits as a result of expanding investment funds are expected to be considerable would differ from that taken in a situation where this is not the case).

Therefore, with regard to resources the availability of which is a matter of choice, we are back to the need to know key trade-off patterns, our merchandise on the shelf.

Planning and appropriate methodology

Planning and decisions

Planning has many meanings and applies to many scenes. One can plan a trip, the next few years of work, deployment of a country's resources, business development, an evening out, city expansion, the reduction of dangerous loads on vehicles, national development, poverty reduction, and indeed numerous other subjects. What binds planning is that there is a perceived need or desire for change, and there are different ways to meet that need. Preferences must be established and choices made. Preference is, as we discussed earlier, not a straightforward notion, and our discussion about decisions and decision processes bears witness to this. In the context of this lecture, we are concerned with planning as being preparatory to a set of specific decisions relating to the allocation of scarce resources to competitive resource employment opportunities.

So far, we have discussed the nature and concepts of society and decision processes. We have also said a few words about modelling as the instrument through which organisations, as well as each one of us individually, perceive the world and reality, analyse and act. We have not yet looked at methodology as a tool to help us to find our way, and prepare and take decisions and engage in planning.

Appropriateness

In her contribution to the debate on appropriate technology of the seventies and eighties, Stewart [21] considers a technology a vector of characteristics. A methodology, method or technique is a "soft" technology and should equally be considered as a vector of characteristics. The number and nature of characteristics are not fixed. One could argue that there as many characteristics as one would like to look at (e.g. ease of application, time required, costs involved, information needs, purpose, skill requirements, institutional setting, specific decision process, political environment, a range of cultural dimensions, and many other dimensions).

But who identifies or should identify the characteristics that matter? This can only be the individual or organisation or – in the terminology of this lecture – the subsystem within which the methodology is being considered for application. Appropriateness must then be defined as the degree to which a methodology fits the recipient

subsystem. The subsystem concerned will identify the characteristics that it considers important, and measure the methodology against these characteristics to help to decide whether or not to adopt or apply the methodology. A methodology suiting one subsystem with respect to a specific decision problem or process may not suit another subsystem facing similar decision conditions. Nor may it suit the same subsystem at another point in time or facing another decision problem or process.

The appropriateness of methodology is apparently idiosyncratic and tied to specific subsystems, decision subject matter and decision processes. At the same time, though, our analysis of concepts of society and the nature and processes of decision enables us to identify a number of critical contours of planning and decision methodology.

First, the concept of society as a hierarchically organised and monolithic entity with central government cast as the guardian of general interest does not stand up to analysis and does not represent our reality. Instead we have concluded that society is composed of subsystems. Some of them may have a more permanent character and others may be short-lived, with their existence determined by a short-lived issue or problem. If, as we argue above, the appropriateness of methodologies is idiosyncratic and tied to specific subsystems, subject matter and precise decision processes, no single methodology for reaching decisions and concluding planning can be appropriate.

This implies a practical need for each subsystem and its planners and decision makers to be imaginative and prepared to search for or develop a methodology suitable and appropriate for dealing with specific decision problems and decision processes. The many techniques, methods, systems, procedures and methodologies that actually exist bear witness to this point.

Second, we have concluded that decision processes are messy. No methodology says it all or is all-conclusive. A methodology supports a decision process; it does not conclude it. It can highlight specific implications of intended decisions under specific assumptions and estimates. It is then left to the decision process itself to combine the insights achieved through the methodology with the unwritten dimensions of the decision space and process. This has impact on the efforts, costs and intellectual labour to be spent sensibly on the design and development of methodology. Paraphrasing 'Occam's Razor' [22], if it satisfies the subject matter and process of decision, there is little reason to search beyond that point.

Third, methodologies that rely on computed optima as advice to the decision maker will often render little support to the decision maker. The 1972 conference *Crisis in Planning*, reported by Faber and Seers [23] and organised at the IDS in Sussex, illustrates this point and gives two causes for the crisis:

- politicians complaining that they do not receive effective support from analysts and planners from the point of view of the decision maker
- planners and analysts complaining that politicians pay little attention to planning and decision advice.

In this connection, Leys [24] wondered whether politicians and analysts/planners perhaps had their wires crossed, and did not understand the nature of each other's profession and needs. As a case in point, we have pointed out that meaningful ex-ante objective and resource constraint functions representing the decision maker cannot easily be constructed, if at all. Appropriate methodology must necessarily abstain from constructing and using ex-ante preference functions and assuming that they represent decision makers' preferences. Instead, appropriate methodology should assist the decision maker by inventory and analysis of selected trade-offs as implications of possible choices. Both the decision maker and the analyst should understand full well that these trade-offs form a perhaps important, yet limited, input into the decision process.

Fourth, decision and planning processes essentially concern negotiations and preparing for negotiation. Methodologies must support complex interaction characterised as give and take, balancing, watching acceptance boundaries, allocating secondary/tertiary compensation for severe trade-offs/pain points, looping in and out. To do this, they will have to be designed and developed in such a way that fast and thorough understanding should be acquired by the subsystem concerned about critical trade-offs.

Fifth, the conditions discussed above and earlier make it imperative for methodologies to provide a forum for solid dynamic interaction between analysis and decision. Possibilities should be built into planning and decision methodologies to go back to any stage of the process, and change whatever needs to be changed to support the decision process from the point of view of the subsystem concerned. Only then can the pitfall of crossed wires, indicated by Leys, between analysis, planning and decision making be minimised.

Planning and decision methodologies that meet these conditions are increasingly being developed and applied in the profession [18]. They are interactive; apply weights in an instrumental sense, not as the representation of decision makers' preferences; focus on a limited number of major objectives and resource constraints; create and analyse trade-off patterns; and are satisficing rather than optimising. One such methodology, a member of a wider family, is Utility-based Trade-off Analysis, which I have worked with and tested in connection with Project Portfolio Management Systems (e.g. PPMS design in Syria and Iran) and a number of major planning and strategy/policy formulation studies (e.g. five-year planning in Kenya and Vietnam, and the Mekong River Basin Master Plan).

Information

In the sixties, Stolper [25] wrote his *Planning without Facts*, and indeed information in those days was always limited and decisions had to be taken, and indeed were taken, with often minimal information and facts. Ever since, in a process that is still ongoing and even accelerating, the world is changing from a poor to a rich data and information environment. This is taking place to such an extent that meta information systems are rapidly becoming necessary (and are being developed) to stay abreast of the wealth of facts and avoid being snowed under. The development of a data- and information-rich world underpins good governance. It increasingly allows stakeholders to interact on the basis of facts and auditable analysis, and is instrumental in:

- supporting legitimacy and accountability, which are key dimensions of good governance
- exposing powerful stakeholders to pressure for auditing
- empowering stakeholders and putting in place the technical means for creating effective checks and balances
- creating effective possibilities for the meaningful and informed participation of stakeholders in the decision and planning processes and the inherent implicit and explicit negotiations.

Of policy and intervention decisions by governments it is said that 80% or more make explicit or implicit reference to geographical location. In the past, economists and policy decision makers have generally ignored this geographical connotation of their analysis and decisions. With the developments in geographical information systems (GIS), and with decision and planning support systems acknowledging the spatial connection (SDPSS), the challenge to incorporate the geographical dimension explicitly in the decision processes is increasingly recognised. Such systems can help to increase the

quality of decisions. They allow the analysis of sometimes crucial geographical interrelationships, which, if well understood, may strengthen the strategic contents and effectiveness of social and economic policy decisions and their implementation.

Planning and decision preparation take place at different and multiple levels and scales. Sometimes minute detail is required; at other times one is concerned with a wider remit of decisions. In terms of information requirements compatible with the level and scale of specific planning and decision problems, no size fits all. There is little point in seeking to acquire very detailed information for a decision problem that operates at a wide and abstract scale, such as the formulation of a five-year plan or a river basin master plan. There is little point, either, in capturing and processing aggregate and wide-angled data and information in a detailed decision and planning problem such as the layout and maintenance of a sports stadium or an irrigation system.

Decision and planning problems and ambitions require a methodology that specifically suits the purpose at hand. From an information point of view, the right decision and planning process would start off by formulating the purpose of the process, and then proceed to identify the major building blocks of the process, select the appropriate decision and planning process methodology, identify the information requirements, identify the data requirements and the sources from where the data should come, and select the techniques required to acquire and later transform the data into the information needed. Throughout the process, feedback and interaction will usually lead to looping in and out between the building bricks or modules of the decision and planning process.

Conclusion

Let us draw this lecture to a close.

- (1) In the formulation and implementation of social and economic policy, there is no place for metaphysical thought and concepts. General interest is a notion belonging to a metaphysical concept of mankind and society. It is abstracted from any *particular interest* and left to definition by the government of the day, and is often invoked by governments as an instrument to further their particular interest.
- (2) Society is an entity of coexisting and competing subsystems, a stakeholder world. Stakeholders are legitimate in their pursuit of their particular interests within the context of their resources and system-driven priorities.

- (3) Government plays the dual role of being the guardian of society's transactions and, at the same time, being a competitive subsystem of society/stakeholders in its own right. In the former role government serves society; in the latter it pursues its own particular interest. *Good governance* seeks to separate the two roles and create transparency and accountability. Separating the two roles refers to (i) the overall legitimacy of government and authority as a function of society's need to guide society's transactions, and (ii) the acceptance by society of government and authority to perform in that role. Good governance thus represents a delicate interaction between government and civil society, with legitimacy requiring society's acceptance of government authority. Good governance allows a government to pursue its own particular interest, provided this interest is separate from the government's role as provider of guidance to society's transactions, in a manner that is sufficient, transparent and accountable, and operates in fair judiciary.
- (4) *Appropriate* decisions and planning represent full stakeholder participation and do not violate the acceptance boundaries of stakeholder systems. The methodologies and techniques applied in the decision and planning processes are appropriate to the degree that they accord with the decision and planning problems in hand and the stakeholders from whose points of view the problems are analysed and solutions are defined and selected.
- (5) Effective and efficient operation of our multi-system society, achievement of good governance, establishment of full stakeholder participation in decision processes, and application of appropriate decision and planning processes and methodologies require to be supported by appropriate information. The ongoing development towards an information-rich world and accompanying developments in computer power and information technology render the provision of appropriate information no longer a distant ideal but an attainable feature if so desired by the stakeholders in the processes to be served.

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