The Decision Hedgehog: Group Communication and Decision Support

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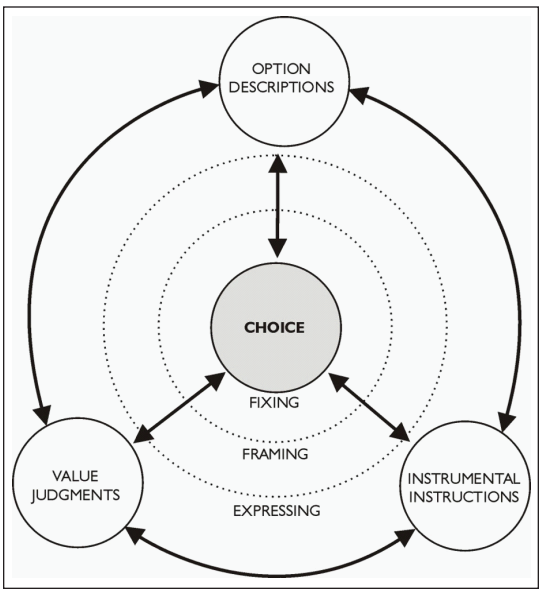
INTRODUCTION

The discourses established as the foundations of group decision support systems (GDSS) have been called into question not only in the interests of advancing the academic GDSS field (Bannon, 1997), but also out of the perceived need to plug gaps that sophisticated GDSS systems throw up in practice (Huber, 1981; Humphreys & Brezillon, 2002; Humphreys & Jones, 2006; Stabell, 1987). The limitations of rational perspectives of "decision-making as choice" have been raised (Carlsson, 2002; Cyert & March, 1992; Nappelbaum, 1997). The challenges relate to failures of implementation, the rise of unintended outcomes, the impact of cultures of fear and failure within organisations (Humphreys & Nappelbaum, 1997), and problems associated with externalisation of decision systems designers who "play God" by designing from outside the game for those who are inside (Humphreys, 1989).

Figure 1. The circular logic of choice



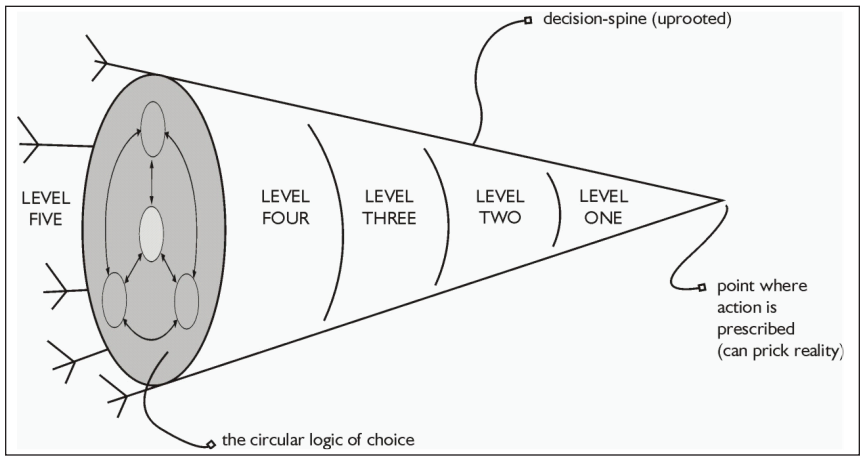
Alternative discourses have emerged. The attention-based view of the firm (Occasio, 1997) has its origins in the work of Herbert Simon (1960), who conceptualised decision making processes as linear, moving through three stages: intelligence, design, and choice. *Intelligence* involves a search for "the conditions that call for decisions." *Design* focuses on "inventing, developing, and analysing possible courses of action" through the construction of "a model of an existing or proposed real-world system." Decision-making is thus cast as problem solving, the model provides a representation of "the problem" which can be "solved by" implementing a prescribed course of action identified as "preferred" or "optimal" within this representation.

Yet, for the participants in the group decision-making process, the "representation of the problem" is cast within the plane of the symbolic/imaginary (Deleuze & Guattari, 1988), as are the prescriptions for action that emanate from its consideration within the group. So the "solution" to the decision problem is chosen on the basis of a collective fantasy by participants who do not always have sufficient resources for adequate "reality testing" before committing to a prescription for action (Humphreys, 1989).

The problem definition process is rooted in participants' issues of concern and spirals within what Nappelbaum (1997) called the *circular logic of choice* (Figure 1): the decision-making group progressively sharpens the description of the problem by cycling through option descriptions, value judgments, and instrumental instructions, reducing discretion in how these may be defined in spiralling towards the prescribed choice (Humphreys & Jones, 2007).

At the outset, all imaginable courses of action are candidates for implementation. The group process, aimed at developing a single, collectively agreed upon representation of "the problem" then progressively employs problem expressing, framing, and fixing processes to strengthen the constraints on how the problem is represented until only one course of action is prescribed: the one which "should be" actually embarked upon in

Figure 2. Decision-spine



the *real*. Elsewhere (Humphreys, 2007; Humphreys & Jones, 2006), we have described how these constraints are negotiated and set at five qualitatively different levels of problem representation. These are *level 5,* exploring "what needs to be thought about"; *level 4,* expressing the problem and identifying frames in which it is to be represented; *level 3,* developing structure within a frame; *level 2,* exploring what-if questions within the frame;, and *level 1,* making best assessments. The way that participants in the group decision-making process agree to set the constraints at these five levels progressively establishes their view of the "truth about the decision situation."

According to Michel Foucault, "truth is a thing of this world: it is produced only by virtue of multiple forms of constraint" (Foucault, 1980, p. 131), and in this sense, all these discourses identified at the various levels, in the problem expressing, framing, and fixing processes, are involved in moving toward prescribing the *one and only best course of action* (the "true solution"), which can be considered as particularised and, sometimes, artificial *discourses of truth***.** Conversely, the representation of the problem constructed through the use of this discourse does not reveal the "real" situation. Rather it is an artefact, which, as has been discussed elsewhere (Humphreys, 1998), is generally advanced, in organisational communications, through the other, more general, kinds of discourse of truth which may be coercive or rely upon cycles of seduction, challenge, and ruse between those people who are party to the decision.

Within these discourses of truth, naming identifies particular subjects and objects, thus giving them implicitly fixed identities extending through time and space (Lacan, 1977). Information about the relationships between them is provided entirely in the terms specified by the communicator (Eco, 1985). Such telling about what "is" or what "will be if these prescriptions are implemented" may be useful for establishing control or coordination in local decision making processes, but locks out consideration and exploration of potential resources and pathways that are not described explicitly and exhaustively in the structure of the problem representation (Humphreys & Brezillon, 2002).

In practice, decision-making processes founded in the circular logic of choice spiral within five levels of increasing constraint in problem representation, though a *decision-spine,* located in the symbolic-imaginary, capable of "pricking the *real*" at its point. The *decision-spine* is named by analogy with the structure and characteristics, in the real world, of an uprooted spine from a hedgehog, as illustrated in Figure 2.

THE DECISION HEDGEHOG

Located within the plane of the symbolic-imaginary, the decision spine is rooted in cognitive operations at level 5—exploring what needs to be thought about—(see Figure 2). Such explorations are *not* necessarily bounded within the spine, but can extend throughout the unbounded body of an imaginary and symbolic