

This reading is abridged from March, J (1994) *A Primer on Decision Making: How Decisions Happen*, New York Free Press, pp. 8-15, and reprinted in Billsberry, J. (ed.) (1996) *The Effective Manager*, pp. 160-162. London, Sage/Open University.

### **Limited rationality by James March**

Studies of decision making in the real world suggest that not all alternatives are known, that not all consequences are considered, and that not all preferences are evoked at the same time. Instead of considering all alternatives, decision makers typically appear to consider only a few and to look at them sequentially rather than simultaneously. Decision makers do not consider all consequences of their alternatives. They focus on some and ignore others. Relevant information about consequences is not sought, and available information is often not used. Instead of having a complete, consistent set of preferences, decision makers seem to have incomplete and inconsistent goals, not all of which are considered at the same time. The decision rules used by real decision makers seem to differ from the ones imagined by decision theory. Instead of considering 'expected values' or 'risk' as those terms are used in decision theory, they invent other criteria. Instead of calculating the 'best possible' action, they search for an action that is 'good enough'.

As a result of such observations, doubts about the empirical validity and usefulness of the pure theory of rational choice have been characteristic of students of actual decision processes for many years. Rational choice theories have adapted to such observations gradually by introducing the idea that rationality is limited. The core notion of limited rationality is that individuals are intendedly rational. Although decision makers try to be rational, they are constrained by limited cognitive capabilities and incomplete information, and thus their actions may be less completely rational in spite of their best intentions and efforts.

In recent years, ideas of limited (or bounded) rationality have become sufficiently integrated into conventional theories of rational choice to make limited rationality viewpoints generally accepted. They have come to dominate most theories of individual decision making. They have been used to develop behavioral and evolutionary theories of the firm. They have been used as part of the basis for theories of transaction cost economics and game theoretic, information, and organizational economics. They have been applied to decision making in political, educational, and military contexts.

### **Information constraints**

Decision makers face serious limitations in attention, memory, comprehension, and communication. Most students of individual decision making seem to allude to some more or less obvious biological constraints on human information processing, although the limits are rarely argued from a strict biological basis. In a similar way, students of organizational decision making assume some more or less obvious information constraints imposed by methods of organizing diverse individuals:

1 *Problems of attention* Time and capabilities for attention are limited. Not everything can be attended to at once. Too many signals are received. Too many things are relevant to a decision. Because of those limitations, theories of decision making are theories of attention or search than as theories of choice. They are concerned with the way in which scarce attention is allocated.

2 *Problems of memory* The capabilities of individuals and organizations to store information are limited. Memories are faulty. Records are not kept. Histories are not recorded. Even more limited are individual and organizational abilities to retrieve information that has been stored. Previously learned lessons are not reliably retrieved at appropriate times. Knowledge stored in one part of an organization cannot be used easily by another part.

3 *Problems of comprehension* Decision makers have limited capacities for comprehension. They have difficulty organizing, summarizing, and using information to form inferences about the causal connections of events and about relevant features of the world. They often have relevant information but fail to see its relevance. They make unwarranted inferences from information, or fail to connect different parts of the information available to them to form a coherent interpretation.

4 *Problems of communication* There are limited capacities for communicating information, for sharing complex and specialized information. Division of labor facilitates mobilization and utilization of specialized talents, but it also encourages differentiation of knowledge, competence, and language. It is difficult to communicate across cultures, across generations, or across professional specialties. Different groups of people use different frameworks for simplifying the world.

As decision makers struggle with these limitations, they develop procedures that maintain the basic framework of rational choice but modify it to accommodate the difficulties. These procedures form the core of theories of limited rationality.