

Some Comments on the Paper *Mindsets, Rationality and Emotion in Multi-criteria Decision Analysis*

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I was very happy to read this paper. It is rare that somebody takes the care to investigate the philosophical foundations of MCDA and despite the fact I have several divergent points of view with the author I was pleased in exercising some abstract considerations about our research and practice.

Let me start explaining why I consider the issues addressed by the paper under a different perspective. What is the scope(s) of our research in MCDA? Are we trying to convince decision makers how to do best or are we trying to help people assisting decision makers to do best? Who is our audience? ‘Decision makers’ or ‘assistants’ to the decision makers? Perhaps both, but my personal impression is that who really uses decision analysis tools are what I call ‘analysts’ and these deserve particular attention.

Decision theory and F. Wenstøp’s analysis remains within a frame where the audience is instead decision makers. This is legitimate, but I feel that decision makers rarely are users of decision aiding tools. Instead analysts are great users of what I call the ‘decision aiding methodology’ (Tsoukiás, 2003). I will therefore try to read the paper’s contribution under such a perspective. The result is that part of the author’s analysis loses interest. The fact that decision makers use values, norms, ethics, rules or whatsoever makes little difference. For the ‘analyst’ these are all ‘reasons’ supporting or opposing a certain recommendation. The use of multiple criteria becomes a natural way to represent the fact that the reasons to be considered (and modelled) are several, conflicting, and not necessarily readily available and clear. Further on, if we focus on the interactions between the decision maker and the analyst (what I call a ‘decision aiding process’ (Tsoukiás, 2003b)) then I would rather talk about

‘constructing’ reasons instead of ‘eliciting’ them. As already shown in other fields where decision aiding is practiced (such as in psychotherapy, Capurso and Tsoukiás, 2003) the reality within which we look in order to ‘solve’ a problem is constructed by the interaction between the client and the analyst (see also Watzlawick, 1984; Watzlawick *et al.*, 1967, 1974).

Under the above perspective, the issue is not to know whether we have to use norms, values or duties, but how to introduce such reasons within a formal model. It is not a matter of choice nor is it a question of advice. A decision maker has his/her own reasons and these naturally have different origins. We can discuss with the client whether in a precise problem situation it is appropriate to use a certain reason, but not whether we should use a precise type of reasons. The analyst’s problem is how to put together such different reasons taking into account that these may correspond to different concerns of the client. A decision aiding methodology cannot limit itself in considering a certain type of reasoning (deontic, value based, heuristic or normative). It has to be able to consider any reason. This does not seem to be the concern of the paper which is limited in claiming a wider range of reasons.

There are also some further specific points to be discussed in this thought-provoking paper.

1. *Subjectivity*: The author seems to make a usual error: Pareto solutions correspond to an ‘objective’ solution, while the search of a compromise (among the Pareto solutions) is subjective. In reality Pareto solutions are an uncontestable way to aggregate preferences expressed on several dimensions (criteria) since it respects unanimity. It is this characteristic that makes them appear as

'objective'. However, preferences are 'subjective'. The same objects with the same prices will not be preferred in the same way by different decision makers. Preferences and therefore decisions are ALWAYS subjective whatever is the approach, the method or the algorithm we consider. An optimization model only finds the optimal solution for an objective function which represents the subjective preferences of a decision maker. It will never exist as anything like an 'objective' preference or value. Even if we consider as 'objective' values which are socially accepted and uncontestable, preferences and decisions (and the relative responsibilities) are personal and therefore subjective.

2. *Rationality 1*: The author distinguishes between consequentialism and rule based behaviour, basically between Pareto (1971) and Weber (1922). I would rather use Simon's distinction between procedural and substantive rationality (Simon, 1976). The fact that decision makers mix such rationalities, in order to establish their local behaviour when facing a problem situation, just tells us that models considering only one of these will be limited with respect to the client's reasons. How do we consider in decision aiding such different rationalities? My very personal reply is to consider decision aiding as a process and not just as a formal model construction. Decision aiding is also supporting in shaping a problem situation or in formulating a problem. Such a process perspective of decision aiding allows to consider different types of support as well as their temporal dimension.
3. *Rationality 2*: The author compares MCDA to several different concepts and definitions of rationality. To his classification I will compare another based on the implicit hypothesis done in decision aiding about the origin of the rationality model to use. In other words, what characterises decision aiding in our discipline is the use of a formal and abstract language and the use of models of rationality. Where do such models of rationality come from? Different hypotheses on such origins will result in different forms of rationality. Of course this makes sense in a decision aiding perspective and not in a decision making one.

Normative rationality is based on external norms or laws on what is rational (typically of economic nature: a decision maker is rational if (s)he respects the axioms of economic rationality).

Descriptive rationality is again based on external norms, but these are based on empirical observations of other decision makers (a decision maker is rational if (s)he behaves as other decision makers did successfully in the past in similar situations).

Prescriptive rationality is based on maintaining a local coherence within the decision process, the one better fitting the client's preferences as they result from an elicitation process (a decision maker is rational if (s)he does what (s)he says (s)he wants to do).

Constructive rationality is again based on local coherence. However in this case such a coherence is not 'discovered', but constructed during the decision aiding process through learning (a decision maker is not rational, (s)he constructs a rationality maintaining a dynamic coherence with the decision process).

There exist different approaches in MCDA (and more generally in decision aiding) which are based on such different hypotheses about the origin of the models of rationality (see more in Dias and Tsoukiás, 2004).

4. *Emotions*: The author dedicates a large part of the paper to the importance of considering emotions in decision theory. Yes, it is true, emotions are very important. I would rather disagree in using neuro-physiology to support that. I remain very suspicious towards the type of experiments considered in the paper (too many arbitrary logical deductions between the hypotheses and the conclusions). As soon as we accept that decisions and values are ALWAYS subjective, representing a precise decision maker, then we automatically accept emotions as a means through which the decision maker communicates values, preferences and any other reason relevant to the problem situation.

Once again I would like to thank Fred Wenstøp for writing and presenting this paper. There is a lack of reflection on these issues and this is a useful

paper to begin a discussion which I hope will attract in the future further contributions.

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