

# decision theory - why? why not?

In choosing among alternative courses of action, express your beliefs about what might happen as a result of each course in terms of subjective probabilities, and the relative desir-ability of these "outcomes" to you in terms of "utilities"; calculate the expected utilities of the alternatives, and make your decision so as to maximise expected utility.

This model of one (of many) human deciding process, which goes by the inaccurate (and pretentious) name of decision "theory", is being operated now - in a limited way and more so far in the USA than elsewhere - by and on behalf of political and economic power-holders. A Giovagnoli cites military/foreign policy studies as examples in her article in RADICAL STATISTICS 11 - as "misuse" of the approach, and criticises "inhuman features" of the theory (I suppose I'll have to use the word) in its present form. She implies that some revision could rehabilitate the theory.

D Lindley, the best-known advocate of the use of decision theory in Britain, replies that it is a neutral tool that anyone can use for their own purposes. If there is conflict among our goals - that is, their joint optimisation is impossible - then some attainment of one goal must be sacrificed unless we are prepared to give up or completely subordinate the others. As in any case this would be done implicitly, there are advantages - in self-awareness, consistency, making the best of it - in doing it explicitly, even if human life is involved.

It would only be where decisions are predetermined by a single criterion that trade-offs would not be needed; and this criterion would have to have a clear and indisputable measure. Custom in traditional societies is an example, perhaps; another more contemporary one is the profit motive (over a given time period). In the latter case, other considerations such as human factors, where irrelevant to profit, are in fact implicitly valued at zero - which you could argue is worse than giving them price or utility tags.

The criteria of a genuine socialist society (now here yet in existence) - expressed by such phrases as "human needs", "the common good" or "the free development of each" - could not have such clear and indisputable measures. They may be mediated through such aims as reduction of worktime, getting more creative and comfortable working conditions, variety and high quality of consumer goods, preservation of resources and environment, decentralisation etc. These aims would often be in conflict, and a decision theory approach may help people think about production and energy decisions the community had to take.

Thus it is not the features of the approach itself which are objectionable, but the priorities, motives and constraints of existing social relations which the approach reveals. Similarly I find it difficult to swallow that atomic physics as such is discredited by the neutron bomb.

In the real context of existing society, however, the introduction of decision theory is not neutral. This is because the method of decision making can affect the openness and locus of decision-making (assumed above to be given constants). I tentatively suggest that decision theory tends to operate in favour of the powerful in the latter respect, and against them in the former. Thus it meets resistance as well as interest from them.

The salient characteristic of analytical tools - and this applies to such things as cost-benefit analysis and programme budgeting also, more widely used than decision theory to date - is precisely the clarity with which they express real aims. In spite of a certain amount of technical mystification and scientific pretension - which radical statisticians can easily expose - they are much clearer than the woolly rhetoric by which politicians and PR people of all kinds habitually confuse matters. In the absence of decision analysis, it is pretty safe to hide real aims, seem to pursue contradictory policies (all different from the real ones) to placate different interests, express benevolent ideals without specific inconvenient commitments.

No, decision theory and image management don't gel well. It's at least slightly risky to jabber on about freedom, peace, democracy and our children's future, when published decision analyses reveal that what really matters is bodycounts, strategic power, access to raw materials etc. Policy-makers whose analysts value human lives at their potential earning power had better be careful talking about the sanctity of human life. After all, radical statisticians do need something to work on!

I may be making a bit much of this, in view of the restricted circulation of policy studies, whether or not they are actually kept secret. And yet the problem is also one of self-justification; the powerful may hold on to fuzziness and resist the blandishments of the decision theory bods because they themselves need the solace of hypocrisy.

Part of the attraction of analytical tools to power-holders is that they hold the promise of tightening up their control. There is often conflict between the official aims of the controllers, and the divergent real aims of people in the organisations they control (eg to follow their own ideals, to protect their jobs, to have an easy time etc). This conflict is an underground one in that all participants justify themselves (usually) in terms of the official aims; it is too dangerous to espouse dissident aims. Nevertheless the official aims are being resisted, and everyone is (unofficially) aware of it.

The more rigorously official aims are pursued - and decision theory may assist here - the more difficult such balancing tricks become. The balance of power is shifted towards where it officially (but not in reality) was all along.

Where the ideology of professionalism allows some autonomy of the professionals from their controllers (a positive aspect of professionalism from a radical point of view) this conflict can appear more openly. A recent debate on medicine in THE LISTENER brings this out.

A front-page article "exposed" the failure of medicine to give results justifying the resources used by it. (The anti-expertise crusade, Ivan Illich etc coming to the aid of the cuts.) In reply, a doctor wrote in that, maybe by the obvious measures of cost effectiveness - cures effected, lives saved etc - the value of drugs had been exaggerated. Yet this was not so as regards the relief of pain; when he was younger, he could hear continuous screaming from patients in sepsis wards. There are no sepsis wards today.

Of course, you could say (by removing the social context) that medicine could apply decision theory by assigning very high utilities to relief of pain. Yet, in practice, tools such as decision theory are likely to be formalised in medicine, if at all, in pursuit of more "efficient" practice. In measuring such efficiency, how many lost working days would equal one day's pain relief? What would be happening is a shift in the locale of decisions from individual medical staff (where it partly is now) to, say, national administrators working on different criteria.

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So far I have argued that the dangers of decision theory lie in its social context, not in itself. However, I recognise that its use does involve many assumptions, which it is often necessary to make but which do have their objectionable sides.

Decision no. 1 is - whether to use decision theory, which by definition must be made somehow than by decision theory! To put it another way, the process is short-circuited unless we neglect the utility of using decision theory itself - but utility of doing decision theory = 0 seems a strange assumption in view of the strong feelings for and against it!

So there is nothing irrational in saying "No, I don't want to. I don't enjoy it, and I haven't the time. Being so calculating will make us all into mechanical robots. I like doing things on impulse." Or, on the other hand: "You ask whether my utilities really make it worth me spending 15 minutes with pencil and paper before deciding whether to take an umbrella. In fact the process of decision theorising has great utility to me in satisfying deep-seated neurotic needs." (I know the last example contradicts the last paragraph, but I can't be bothered to work it out!)

Similarly, we may refuse the role of decision maker; feel unable to order utilities (perhaps because of attachment to moral absolutes); feel unable to specify probabilities (perhaps because of belief in the will of God or fate or history; or awareness that the consequences of action are always different from those foreseen). We may not be sure of our aims; aims may be changed by analysis from the "more real" (?) aims revealed by impulse. (This possibility is shown by how easy it is to fiddle utilities etc to come up with the answer you wanted in the first place!)

Exercises - consider 1) the Greek woman told by the Nazis that, if she does not name one of her three sons to be killed, all will be killed.  
2) the meaning of "better 100 guilty men free than 1 innocent in prison".  
3) what the failure to abolish car transport to prevent accidents really reveals about the value of human life to ...?  
4) the end justifies the means; the goal is nothing, the movement everything (and vice versa);  
5) X is its own purpose;  
6) the usefulness of "utility": utile for what? Where does it end and where does it begin?

And on this philosophical note I come to a .

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