

REACTIONS, REPLIES, REFLECTIONS

Development Game: Teaching versus Planning Device

We have received the following communication from Paul Streeten about the "development game" described by Clive Bell in the last issue of the Bulletin¹⁾.

Clive Bell believes that the development game can be used both as a teaching and as a research and planning device. I wish to argue that the belief that the game can be used as a basis of realistic (as opposed to mock) planning destroys its value for teaching purposes.²⁾

First, procedures based on mathematical models may encourage a sense of subjective certainty, which is not justified by the uncertainty of the actual system. The dangers are possibly greater in war games and business games, but the combination of artificiality with deductive rigour can, psychologically, yield dangerous results. If the purpose of teaching is to make minds more flexible and open to doubt, this benefit would be destroyed by the creation of unwarranted confidence. Research is needed into the effects on decision-making of game-playing.

Second, the well-known danger of rationality derived from a closed system of equations is suboptimization: selecting the best position for part of a system which is not the best for the whole. The danger, as Boulding put it, is that people devote themselves to the best way of doing something that should not be done at all. Intuition has the merit that it may be based on taking into account a large system in a crude way, while game playing takes account of a partial system in a precise way. But being very rational about subsystems may be worse than not being very rational about the system as a whole. The reply to this line of criticism might be that the system incorporated in the game and more intuitive methods need not be mutually exclusive. If there are any parts of the planning process that can be handled by simulation exercises, should not that be done, and the results treated as an input into vaguer decision processes? This would minimize the strain

1) Bulletin, Vol. 1, No. 3, February 1969, pp. 3-5

2) The arguments have been put briefly but well by Kenneth E. Boulding in "The Economics of Knowledge and the Knowledge of Economics" American Economic Review, Papers and Proceedings, May, 1966.

put on intuition, which is a very scarce resource. The rejoinder to this apparently sensible defence is that simulators have a bias in favour of their own skills: they will tend to dismiss or minimize the importance of variables not included in their models. As Boulding says: "Here, indeed, a little learning may be a dangerous thing, or even a little rationality."

I should conclude that the value of the game as teaching device can only be maintained if those conducting the exercise are aware of its dangers as a research and planning device.

Clive Bell writes:

Paul Streeten's interesting comments on my article raise issues more worthy of a lengthy discussion. Since limitations of space preclude this, I shall confine myself to two observations.

First, as no fewer than eight exogeneous variables are left to the caprice of the umpire, and a further five lie at the mercy of a random number generator in the programme, there would appear to be small scope for subjective certainty. Of course, such shocks do not cover all contingencies arising in the real world, but the model cannot be given a deterministic label if it includes thirteen random variables.

Second, I would stress that the current model represents only a first step towards analogue devices which planners should find useful for exploring a certain class of policy alternatives. In my view, such devices share characteristics in common with other planning tools, e.g. input-output analysis, even though they are addressed to more speculative problems. Hence, while I readily concede the point concerning suboptimization in general terms, I fail to see why analogue models should, in principle, be more suspect than input-output analysis. How many economists and planners would not flinch at the suggestion that the latter should be abandoned as a planning device?

Finally, I would like to make good an omission from my article: that of a generous acknowledgement to both Paul Streeten and Michael Lipton for their comments and suggestions on an earlier draft of that paper.