Rational man and social science

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Water was short in the torrid summer of 1976 and there were soon calls for restraint. Where I live, the Anglian Water Authority quickly threatened to ban garden hoses, if the calls went unheeded. The sun blazed down in emphasis and the Authority made an ostentatious purchase of standpipes for the streets, in case households had to be cut off. Philosophising amid my limp lettuces, I wondered how much notice it was rational for me to take. It was plainly in the general interest that water be saved and this premise will not be challenged. But was it rational for me to save water? This is the common or garden problem I wish to put to you.[1]

The question is one about collective goods, meaning goods which can be provided only by collective or central action. They benefit all yet it seems that, if contributions are voluntary and if everyone acts rationally, they will never be provided. Examples are parks, schools, trade unions, national defence and democracy but I pick my own to save getting embrangled in a cluttered landscape. I shall remind you of the two standard ways with collective goods, usually dubbed the economic and the sociological, and shall complain about both. This is the middleground of the paper. There is also a background in the nature of rational action and its bearing on method in the social sciences and we shall have to touch some hard puzzles in epistemology and ethics. But let us start in the foreground with a lazy gardener growing his own lettuces during a drought. He is asked to save water. Is he to respond?

The Water Authority opened on a gentlemanly note of logic and ethics, with only an offhand gesture to my self-interest. All (good) citizens should save water, I was told; you are a (good) citizen; so you should save water. I granted the minor premise with smug alacrity. Undoubtedly I was a (good) citizen. But I disputed the major. Why should all (good) citizens save water? The aim was for enough water to be saved in sum now to see us through later. That is the collective good whose value to all citizens, including me, will not be challenged. But it did not depend on whether *all*

[1] My warm thanks go to Amartya Sen, to Quentin Skinner and to those at the 4th Thyssen meeting for their criticisms of an earlier draft.

citizens save water. Enough is enough; why should I help? Well, came the soft answer, very little is being asked of you. It would not hurt you to put half a brick in your cistern, for instance, and, if a million households do the same, the region will be a million gallons a day to the good. Nor would you really miss the odd bath and, if you showered with a friend, you might even enjoy it. At worst any marginal unpleasantness will be outweighed by your marginal self-satisfaction. Every little helps postpone the crisis and so benefits you too. Virtue brings its own reward, you see.

As a philosopher with lettuces at risk, I was unmoved. The question being initially not what was right but what was rational, it was too soon to appeal to virtue. My beautiful friendships might survive the odd bath skipped but my lettuces would die. Bluntly, my costs would outweigh my benefits and so, by an 'economic' definition of rationality, it was irrational to incur them. The reason was not that a dead lettuce now would outweigh my present joy in contemplating an uncertain future gallon of water. It was that the Authority's case involved a flaw akin to a fallacy of distribution. I stood to gain, only if a million others saved water too. Unless they did, my efforts would be vain. But, if they did, my efforts would be unnecessary. Hence my efforts would be either vain or unnecessary. Since they cost me something, however little, it was not rational for me to make them. It was fallacious for the Authority to argue that what all would rationally want to have provided each would rationally help to provide.

Meanwhile a lady wrote in sorrow to the local paper to lament 'the odd person who thinks that washing his car or watering his garden cannot make all that difference.' Yes, but was he so odd? Taking the question numerically, the Authority found that he was not and so doubled its exhortations and put a formal ban on hoses. The letter columns of the paper began to glow with the Dunkirk spirit, as citizens pooled tips on bathing in a bucket and boiling eggs in the tea pot. One man reported that his dahlias were blooming on dishwater as never before and was printed under the heading 'Virtue Rewarded'. But the figures told another story. Surveys showed that, while 10% were saving like mad, 40% were making only token economies and 50% none at all. Let us invent a random citizen from each group, called Lock, Stock and Barrel. Lock is one of the 10% all but keeping their taps locked. Stock is one of the 40% making a few stock gestures but no more. Barrel is one of the 50% using water by the barrel. Let us suppose that all grow flowers and lettuces but none earns his living from his garden or has any other special claim to water. Also none is a magistrate, councillor or local bigwig, with a special need to set an example (or not to be caught out). Lock loses both flowers and lettuces, Stock loses his flowers but waters his lettuces by hand. Barrel hoses both impartially. Which is the rational man?

Insofar as three men have resolved the same problem in different ways,

logic suggests that at most one is rational. Nonetheless it can be argued that all are, since each had objectively good reasons for his response. Lock and his 10% had the reasons considerately supplied by the Water Authority. Stock and his 40% had the legal ban on hoses as a reason for abandoning the flowers and economic reasons for saving the lettuces. Barrel and his 50% kept rather quiet (except for a man who announced that he had paid his rates for unlimited water and meant to have what he had paid for) but there were reasons to hand. For instance the City Council was still visibly watering lawns, flowerbeds and even hard tennis courts. Besides, domestic water consumption is trivial compared with what industry uses. Also the argument about the fallacy of distribution could itself be cited by Barrel as a reason.

But, I reply, even though all had good reasons, it does not follow that all were rational. We cannot decide that, without asking who had the best reasons. It can turn out that all had equally inconclusive reasons but not that all had sufficient reasons, since a sufficient reason for doing x is also sufficient for not doing y. Admittedly Buridan's ass, placed midway between two bushels of hay, has a sufficient reason for eating either. But he does not have one for preferring a named bushel; and, in any case, Lock, Stock and Barrel are not in the same fix. If they all face the same problem set by the drought, we need a way of arbitrating between them and that is why logic will accept no more than one winner.

The reply depends on the problem's being the same for each and this too can be doubted. Each man had his own projects, desires and beliefs. Each did what appeared best to him and could report, like the legendary fellow who leapt naked into a bed of nettles, that it seemed a good idea at the time. Each had apparently scored 100% in a private examination which he alone sat. Economists often give this answer and it taps one common interpretation of utility theory. Here each man faces a situation defined by the utilities for him of various combinations of services of goods and is blessed with a complete, reflexive, and transitive scheme of preferences. In trading off the utility of plants saved against that of freedom from sanctions, Lock, Stock and Barrel all act differently and all consistently. Or so it may be said.

In simple form, this approach sounds vapid but I am not trying to poke fun. Even if the universal fact of ordered preferences in each man is the merest of tautologies, it cannot be known *a priori* how much of what a particular man would prefer to what at what prices and empirical work is still needed. Also, like drones in a beehive, tautologies are nowadays seen to be useful on their own account as categorial axioms or statements introducing paradigmatic concepts and it need not be trite or vapid to say that explanation should be concerned with preference and individual satisfaction. Nonetheless the circularity should not pass unnoticed. Indifference maps are drawn by taking a man's actions as signs of pair-wise

comparisons and then projecting the comparisons on the assumption that the man has a consistent scheme of transitive preferences which result in his maximising his utility. Any apparent discrepancies between the assumption and his revealed choice are removed by drawing distinctions among apparently similar occasions of choice. The distinctions are regulated by a principle of producing the simplest map consistent with the assumption. Yet, even if the process recalls a traditional culture preserving its belief in witchcraft, oracles and magic, that need not be to condemn it.

Nevertheless any purported explanation of action becomes a redescription, premised on making all men not just equally rational but necessarily so. With more space I would argue that such redescriptions are not explanatory. As it is I must be content to note that they cannot answer the original question. How much notice was it rational for me to take of the drought? I refuse to accept the answer that, however much or little notice I take, I shall always have acted rationally. Fortunately there is another way to read utility theory, which supports this refusal. Many economists, still subscribing to Edgeworth's dictum that 'the first principle of economics is that every agent is actuated only by self-interest',[2] would urge that Lock, Stock and Barrel could not all have succeeded in maximising their self-interest. They put a hard-headed gloss on 'self-interest' and the question is who gained the highest benefit at lowest cost. The hard-headed reply is clear. Since each individual saving of water is either vain or unnecessary and since it involves some cost, however small, Barrel is the outright winner, until hoses are banned. Thereafter the judges must decide whether there has been a change in the price of water. If penalties and risks of detection are low, then the price is still effectively zero and Barrel retains his title. If they are high, Stock moves into first place. A change of price does not affect the principle, however, which is that it is more rational to gain a fixed benefit at lower cost.

The moral for government is equally clear. The water campaign used the terse slogan 'Save It', borrowed from the campaign to save energy when oil prices doubled. In both cases each consumer could reason rightly that his saving would be either vain or unnecessary as a contribution to the total. In both cases the total benefit is shared among all, whether they have contributed or not. Yet the energy campaign had far more success. Why? Unlike water, energy is usually metered and each man pays for what he uses. So there is a selective incentive, even if not one of quite the sort which confines a subscription concert to those who have paid the subscription. It could only weaken the energy campaign to extend the 'Save It' slogan to water or, for that matter, chastity. There has to be an effective spur, like a real risk of a huge fine or an outbreak of VD among teenagers. Without

[2] *Mathematical Psychics*, Kegan Paul, London, 1881, p. 16.

one, it is merely irrational to work for charity, pay bills, vote in elections, take litter home from picnics or volunteer in a national emergency. In all such matters Reason stands like a proverbial sergeant major, inviting those who can play the violin to step forward and marching them off to scrub the latrines.

In fact, of course, people do vote in safe seats on wet nights without Australian-style fines. They do demonstrate amid hostile crowds, collect money for spastics, speak out against tyrants and bath in five inches of water. But they are being stupid, given the hard-headed economic argument. While they are stupid, the moral does not apply and there is no need for selective incentives. Yet the moral is still there, only waiting for the spread of education and enlightened self-interest. Theories of the social contract sometimes fancy that men need law because they are irrational. On the contrary, by the economic account men need law because they are too often rational.

The implications for social life go deep but time is short and I propose next to pick out the assumptions of this economic account. (It is, I confess, a very crude account and there may be subtler notions of rational choice in economics which threaten my argument. But at least it is the account which is carried over into exchange theory and, however crude, it bears at least a basic resemblance to common assumptions in economics.)[3] There are three assumptions to note especially. First rationality is taken as *Zweckrationalität*, a matter strictly of the means to a given end. The rationality of ends does not arise, except insofar as ends can be means to further ends. The criterion for what is a better means needs not be in crude cash. For instance the value of a lovingly tended lettuce may be much more than the few pence the greengrocer would charge for an apparent substitute. But even with a loose notion of opportunity cost it remains irrational for each man to do as the Water Authority wants. Such is the result of an economic means-only analysis of what it is to be rational.

Secondly an egoism has been assumed. There is no fallacy in arguing, 'The public will need water later; there will be none later, unless the public saves it now; so it is rational for the public to save water now.' The same holds, although with diminishing force, as we substitute smaller units, like industries, still large enough to affect their own future supply. The flaw emerges, when we argue, 'Each man will need water later; so it is rational for each man to save it now.' Egoism exposes the flaw by pointing out that it is irrational for a man to do for himself what others will do for him. This is not to say that he has no interest in the interest of others, since he often has goals which he can attain only by co-operation. Also the fact that he

[3] I am encouraged to find it also the account which Amartya Sen makes his target in 'Rational Fools', his Herbert Spencer lecture, 1976.

loves his mother, for instance, may both condition his goals and act as a selective incentive. But the puzzle set is the classic egoist puzzle of finding terms under which the interests of each will coincide with the interests of all including himself. Since its solution lies in selective incentives, it follows that men are by nature much the sort of creatures Hobbes took them for.

There is also, thirdly, a social atomism. Lock, Stock and Barrel have featured throughout as abstract atoms or individuals. They could be picked at random from their groups, because it made no difference *who* they were. Each was simply a member of the set comprising all like him and the sets differed merely in the skill with which they tackled the same problem. This is not the only way to conceive human beings. For instance had Lock been made a social atom but not an egoist or an egoist but not a social atom, other solutions might have emerged. We get the 'economic' solution only if he is both an atom and an egoist and therefore stupid. But with these three assumptions it truly follows, I submit. It is irrational to contribute to a collective good at positive cost, even though the good benefits each and will not be provided for anyone if all act rationally. The secret of harnessing the General Will is to find the selective incentives which force men to be free.

Those who dislike the solution must challenge the assumptions. Let us start with the third by making more of the thought that Lock, Stock and Barrel are citizens. Could it be that Lock is not a stupid atom but a rational citizen? Certainly the fact that he is a citizen helps explain why he saves water. There are norms of citizenship, exploited in the original appeal to all (good) citizens to economise and evidenced by the indignant tone of letters to the paper. So far a citizen has been merely a member of the set of individuals attached to the national water supply but, if the idea of norms is introduced into the argument, a fresh inference emerges:

1. A citizen is required to do his 'duty'.
2. His 'duty' at present is to save water.
3. So he 'should' save water.

Previously there was no valid step from, 'It is in the interest of all that water be saved' to 'It is in the interest of each to save it.' Now it looks as if we might pass validly from 'It is the duty of all' to 'It is the duty of each.'

There is, admittedly, a doubt about the meaning and truth of the premises. 'Duty' in the first two and 'should' in the conclusion bear a special sense deriving from the concept of a norm. Whether this is a proper sense is too long a story to unravel here. To set the sociologist off, I shall simply assume that there is a social position of citizen with normative expectations attached, which every citizen has a 'duty' in quotes to discharge. I shall also assert that citizens did truly have a 'duty' to save water. Someone may protest that this is preposterous, when half the population was taking no notice and another 40% very little. But in that case why should the Locks

be so smug and the Barrels so silent? At any rate, assuming that talk of 'duties' in quotes is licit, we can see the difference between economist and sociologist by citing the fate of Lord Finchley as immortalised by Hilaire Belloc:

> Lord Finchley tried to mend the electric light
> Himself. It struck him dead and serve him right.
> It is the business of the wealthy man
> To give employment to the artisan.

To the economist Lord Finchley's fault was that of a wealthy man who forgets in a situation of choice under risk and uncertainty that the hire of an electrician would be worth the opportunity cost. To the sociologist his Lordship erred in transgressing the bounds of his station and found that *noblesse oblige* was reinforced by lethal electric sanctions.

At first sight there is nothing here to embarrass the economist. He can grant that each citizen has a 'duty' to save water and simply ask why that makes it rational to do so. The prize still goes to Barrel, who has calculated that the costs of doing his 'duty' outweigh the benefits and has therefore rationally shirked the 'duty'. But the sociologist has a fresh answer. It is that each citizen has the goal of doing his 'duty' and saving water is the only means to this end. Rationality being taken as *Zweckrationalität*, of course it is rational for a citizen to save water. Similarly, a citizen may or may not have a duty to vote but, if he does, then it is rational for him to trundle to the poll, whatever the weather.

The economist is now awkwardly placed. Insofar as he has disclaimed all interest in the source and rationality of goals, it seems that he is bound to concur. To do so does not put him out of a job, since it not always so plain what 'duty' demands of citizens. The Chancellor of the Exchequer, for instance, has a duty to combine a high level of GNP with high employment and will need the best economists in the Treasury to tell him how to manage it. Equally, with a looser test for what counts as an economic problem, most social policy offers scope for cost–benefit analysis in implementing it. More loosely still, there is huge scope for thrusting the ambitious claims of exchange theory on an already confused world. But, on the other hand, he has now forfeited his claim to judge between Lock, Stock and Barrel. Instead of ruling clearly in favour of Barrel, he must suspend judgement until told what goal is being sought and what sociological constraints there are on the rational economic choice of means. Indeed, for the particular case of a typical householder in a drought, he no longer has any standing at all, since it does not take a degree in economics to decide what to do about a few buckets of water.

This raises a hard question about rationality assumptions in neo-Classical economics. They are usually claimed to be neutral, in that they serve to

isolate the mathematical aspects of problems in allocating resources, without prejudging what competing ends are in themselves worth pursuing. But in fact they go much further. For instance in the theory of supply and demand, the rational supplier produces to the point where marginal cost = marginal revenue. But it is not self-evident that this is a rational way for a supplier to behave. Whether it is depends partly on whether the supplier's goal is to maximise profits or, as champions of satisficing models suggest, merely to make enough profit to keep going. It depends also, however, on whether it is rational to maximise profits – not surprisingly since to equate MC with MR is necessarily to maximise profits. Satisficing models, although dethroning profit, still take it to be rational to maximise something, for instance the satisfaction gained from a style of life, which needs at least minimal profits. Either way, a life devoted to maximum return at minimum cost is assumed to be rational. Otherwise sound neo-Classical theory gives solely bad advice. It was only by making assumptions about the rationality of ends that the economist could give a clear ruling in favour of Barrel.

These assumptions did not obtrude earlier because they were dressed as assumptions about human nature. Rational economic man is an egoistic social atom who answers an appeal to save water only if it is in his own interest. The judges cannot award the prize to Barrel without knowing the real interests of egoistic social atoms. Lock, saving every spoonful, is utterly efficient in pursuing the goal set by the Water Authority and his mistake can only be that it is the wrong goal. But we are not quite ready to exploit this finding. So let us leave the economist in his awkward position and attend to the sociologist.

In place of an abstract, individual, yet universal, homunculus, we are now asked to assume a social being, essentially located in a scheme of positions and roles. It is important to see how very strong the postulate must be. At first sight positions are merely abodes and roles merely trappings. If a man dislikes being a fireman he can change his job or not work at it so hard, just as he can move house or wear old clothes. But in that case he will always be wondering whether it is rational for him to answer the 999 call. The sociological solution depends on an inference from 'It is his "duty" to answer the call' to 'It is rational for him to answer it.' The inference is invalid if the goal served by answering the call could be better achieved by some other means and so validity is secured by making the goal that of doing his 'duty'. This is a flimsy device unless 'him' and 'his' refer not to a pre-social atom but to an essential role-bearer. Otherwise the economist springs back with minimax calculations about when it is rational to do one's 'duty'. Ultimately, failure to perform must be failure to be himself.

I stress the word 'ultimately'. The point is not that a fireman cannot rationally change his job but that he cannot escape all positions and roles and remain human. A rational fireman need not be a totally dedicated

fireman. Being also a husband, father, footballer and second trombone, he may rationally wonder how best to combine his roles. A sociological scheme has room for doubt within it and, witness the Chancellor of the Exchequer, scope for economists to resolve the doubt. But, ultimately, there can be no extra-social goals to judge the return on role-playing against. For the solution to work, *homo sociologicus* must be a very strong assumption indeed.[4]

Nor can *homo sociologicus* be an egoist. The economic solution assumed *Zweckrationalität*, egoism and atomism. It is not enough for the sociologist merely to switch goals by rejecting the atomism. Egoism has turned out to be a thesis about real interests and so about goals. In disputing that these are a man's real interests, the sociologist also disputes that egoism contains the best analysis of how to achieve them. The problem is no longer set because the self-interest of each does not coincide with the self-interest of all including himself. Instead, there is a new problem set when roles are so assigned that the discharge of each frustrates the discharge of all. Thus, on Marx's account, the rational and dutiful capitalist finds himself behaving in ways which destroy the capitalist system. Similarly rational and dutiful democrats would take so much part in government that it could not function. Moreover, men socialised into egoism are conditioned to want more than they can possibly have. The solution accordingly no longer lies in finding the selective incentives which let egoists wax fat. It now lies in finding a scheme of positions and roles which can all function at the same time and in socialising men into accepting them. Rational action is no longer action which yields an individual more for less but action which lets a man be himself.

We now have two answers to the hose-pipe problem. One makes it rational for Barrel to use as much water as he can get away with. The other makes it rational for Lock to use as little as an obedient citizen needs. I myself like Lock no better than Barrel and, even as he receives his embossed scroll from the Lord Mayor, I shall try to strike him down. One way would be to challenge this version of *homo sociologicus* directly, as a true model of man for whom all questions of rationality arise within a role and are settled by calculated obedience. But that would lead to a ham-fisted bout of assertion and counterassertion and there is more virtue in a fresh look at the idea of rationality itself.

Both answers started by assuming that rationality is an instrumental notion, relating means to ends but neutral among ends. Both turn out to commit themselves about the rationality of ends. The reason is that both make (implicit and perhaps inadvertent) assumptions about human nature,

[4] I do not, of course, mean to suggest that all sociologists make this assumption. But it is a frequent strand in orthodox sociology and one which has been taken over into politics and exchange theory. Also it does at least have the merit of giving a firm answer to questions about the identity of the individual.

which, in stating what men essentially are, imply a thesis about where their real interests lie. I shall contend that this is neither an oversight nor a peculiarity but arises because *Zweckrationalität* is not the sole nor even the primary notion of rationality.

What, then, are the conditions for an action to be *zweckrational?* They are often said to be that the agent must believe, after deliberation among alternatives, that he is doing what is most likely to achieve whatever he happens to want. Let us start by spelling these conditions out too weakly and then tighten them, until we reach a defensible answer. Too weakly, then, *S* acts rationally in doing *a*, if and only if:

(1) *S* wants to achieve *g*
(2) *S* has a choice among alternative ways of achieving *g*
(3) *S* believes that *a* is the best way to achieve *g*.

Such an account say too much and too little. It includes too much by specifying a conscious choice among alternatives. The minor objection is that there need not be alternatives. Whether drinking water is the rational way to stay alive in the desert does not depend on whether there is an inferior way to stay alive, nor on whether there is anything else to drink. The major objection is that to insist on conscious deliberation is to miss the place of habit in rational action. The rational way to drive a car is precisely not to deliberate each change of gear but to master the skill so well that no deliberation is needed. There are rational habits and, were there not, we could not talk, plan, associate, build, reason or perform many other tasks which make social life possible. Rational action is a skill requiring habit and, if the point is missed, large areas of social action are wrongly classed as non-rational, with great harm to the social sciences.

The conditions include too little by resting content with the agent's wants and beliefs. The lesser objection is that mere belief that *a* is the best way is not enough to make the doing of *a* rational. Since knowledge would be too strong a condition, what is required to distinguish subjectively from objectively rational action is rational belief. Much hangs on the definition. When the Tameside council tried to unscramble the scheme for comprehensive education in Tameside, the Minister tried to stop them on the grounds that they were interfering unreasonably with children's education, not because selective schooling is unreasonable (although he thought it was) but because it was too late to organise it before the school year started. On appeal the Law Lords overruled him, not because the council did have a viable scheme and time enough but because, they said, the law recognises that a man may be reasonable, although wrong. The only limit to reasonable error, in the eyes of the law, is that a man cannot be 'so wrong that no reasonable person could sensibly take that view.' Blatant circularity aside, the judgement is surely mistaken. It holds a man to act reasonably,