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A Conversation with Amartya Sen

Arjo Klamer

The initial reason for conducting conversations with economists was to check my interpretation of their work (Klamer, 1983). The conversations, however, turned out to affect that interpretation. I should have expected this. After all, why else would economists so frequently interrupt the reading of each other's articles and gather in offices, cafetarias and seminar rooms to talk about what is going on in their minds, except that they benefit from these informal discussions? Conversations seem to uncover dimensions of discourse which are at least partially absent in what economists write. Thus, I discovered a better reason for conversations with economists; namely, understanding the text behind the written text.

In December 1985, I decided to take advantage of a stay at Oxford and talk with Amartya Sen, who fulfills such diverse roles as a philosopher among economists, a leader in social choice theory, a critic of basic assumptions in neoclassical choice and welfare theory, an economist who has made significant contributions to the study of famine and poverty, and a statistician who has devised measures of poverty.[1] He has served as President of the Econometric Society and is currently President of the International Economic Association.

It was a cold, misty day in December of 1985. The door to which a porter of All Souls College had pointed us (I was accompanied by Rob Fisher of Holy Cross College[2]) was locked so

[1]Many of his important papers are collected in Sen (1982) and Sen (1984). Perhaps his most well-known book is *Collective Choice and Social Welfare* (1970). His latest book is *On Ethics and Economics* (1987).

[2]We prepared this conversation together and he took an active part in our discussion of welfare economics (not reproduced here). I owe him for his moral and intellectual support. Thanks are also due to the editors of this journal, and, above all, Sen himself.

■ *Arjo Klamer is Visiting Associate Professor of Economics, University of Iowa, Iowa City, Iowa.*

we waited in the courtyard, pressed against what must have been a very old wall. Ten minutes later Sen came running into the courtyard, apologizing profusely for being late. We went up to his study, which was more like an apartment, a very chaotic apartment at that, with papers and books piled up and spread out all over. We had to clear the couch and two chairs before we could sit down and talk.

Background

How did you get interested in economics?

For someone from India it is not a difficult question to answer. The economic problems engulf us. When I was nine years old we had the Bengal famine. (*A. K.: This was in 1943.*) It was a very strong experience: the victims suddenly emerged in millions—it seemed from absolutely nowhere, dying in incredible numbers. The official estimates of famine mortality were between one and one and a half million. Later I reestimated it and found that three million would be much closer to the mark. One did not, of course, then know the absolute numbers, but the enormity of the catastrophe was clear even to a child. I would remember the harrowing scenes vividly when more than three decades later I tried to do an economic analysis of the causal antecedents and processes of famines.[3]

I had to have great interest in economic problems right from the beginning—there really was no option. But as a student I was also interested in science, mathematics, philosophy, and Sanskrit. After beginning my college education doing natural sciences, I shifted to economics, at Presidency College, Calcutta.

Why?

Economics seemed not only useful and challenging, but also more fun. There were also people doing economics at Presidency whom I found fascinating, people such as Sukhamoy Chakravarty—a formidable intellect. There were others. They all had a strong interest in economics; they also mostly had an interest in politics, of a fairly left-wing kind, which tends to grab one more powerfully in a country like India. So I took an interest in the left wing—I fear only at an academic level—but my involvement with economics had a component of social passion, in addition to intellectual fascination.

To what kind of left-wing politics are you referring?

I was never in any political party. But Marx had a great influence on most Bengali students studying in Calcutta, Dhaka and elsewhere. I also had much interest in Aristotle, Smith, Mill, even Bernard Shaw, but Marx was distinctly a bigger presence in our political discussions and arguments.

What kind of economics did you do at the time?

There was a bit of a schizophrenia here. At Presidency College the economics taught was very narrowly defined standard neoclassical economics. This would have

[3]See Sen (1981) and the reviews by Arrow (1982) and Solow (1982).

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been true, I believe, in any college in India at the time. But outside the classroom we talked a lot about politics and society. There was also a great deal of excitement about history and literature.

The neoclassical economics we were taught had the merit not only of being very well-taught—one of my teachers, Bhabatosh Datta, is probably the best lecturer in economics I have ever encountered—but also of making us read a lot of classics in neoclassical economics. Marshall's *Principles* was one of the first books in economics that I read and *Hicks's Value and Capitol.* We were encouraged to read challenging books; many of us encountered Samuelson's *Foundations* before his *Introduction*. I've later been rather critical of Samuelson's use of a narrow view of rationality and related ideas, but there was no question that it was great fun to read him, and to profit from his disciplined and exciting intellect. There was also a great deal of interest in the older classics, by Smith, Ricardo, Mill and others.

After my first degree I went to Cambridge. That was in 1953. In terms of sophistication, the economics that I was asked to do there was quite a drop from what I was doing in Calcutta. In a way that is understandable, both because Cambridge prided itself—rightly—in making intelligent use of common sense, but also because premature highbrowness is a problem from which the Bengali intelligentsia is particularly prone to suffer.

With whom did you study in Cambridge?

I had Maurice Dobb[4] and Piero Sraffa[5] as my teachers at Trinity College. I also came to know Dennis Robertson[6] quite well, who, too, was at Trinity. I saw quite a lot

[4]A very influential Marxist economist whose best-known books are *Political Economy and Capitalism* (London: Routledge, 1937) and *Studies in the Development of Capitalism* (London: Routledge, 1946.) Lived from 1900 to 1976.

of them, and also, of course, other teachers elsewhere in the university—Berrill, Johnson, Silberston and others. In my second year I was also doing essays for Joan Robinson.[7]

Were they important for you?

Yes, Maurice Dobb particularly because I was interested, as I already said, in politics besides economics. He was a very well-integrated scholar in political economy. He was a Marxist, but most widely read in other traditions as well. He was one of the least dogmatic persons one can think of. He made me very interested in such classical problems as the motivation behind the theories of value.

Piero Sraffa I also found very interesting, not so much for his own economic work, which I found a little too technocratic and dull, but because of the general discussions we had about the nature of economics, philosophy, and politics. He was one of the cleverest persons I have ever met, with tremendous originality and an enormous range of interests. For reasons that are not altogether clear, he confined his economic writings to rather narrow and mechanical subjects. He had wonderful ideas on such subjects as rationality, human behavior, the role of society in value formation, the part that politics plays in the genesis of economic theory, and so on. I don't think that he wrote any of these down. It was truly exciting to talk with him on these subjects, rather than on "double switching" and other technical discoveries on which his economic reputation seems to be based. Sraffa talked mainly about people, but wrote mostly about commodities.

And then Robertson was very important. He presented good, critical reasons for being skeptical of behaviorism, including the notion of revealed preference that had by then taken hold of economics. The idea that we can understand human beings in terms only of their behavior, and then only their non-verbal behavior, never through conversation—"don't talk, just watch"—was very alien to the Marshallian part of the Cambridge tradition, a tradition I came to admire a lot. The natural heir to that tradition in my student days was Dennis Robertson.

I felt very lucky to be able to chat and argue with these people on all these—and many other—things. And, of course, I also came to know Joan Robinson. She gave me some special supervision in my second year and later became my Ph.D. supervisor,

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[5]Sraffa (1898–1963) wrote *Production of Commodities by Means of Commodities* (Cambridge: Cambridge University Press, 1960), a book that helped revive the classical approach to value theory. He also edited, in collaboration with Dobb, the works of David Ricardo. The excitement that Sen experienced in his discussions with Sraffa was shared by people such as Ludwig Wittgenstein and John Maynard Keynes.

[6]First student, then collaborator and finally critic of Keynes. After being overshadowed by the *General Theory*, he more or less withdrew from the discussions. A major work of his is *Banking Policy and the Price Level* (London: P. S. King & Son, 1926). Born in 1890, he died in 1963.

[7]Joan Robinson (1903–1983) first earned a reputation with the extension of Marshallian analysis to include imperfect competition. She collaborated with John Maynard Keynes as member of the so-called "Cambridge Circus," and later started the Cambridge controversy about the validity of the neoclassical aggregate production function.

along with Amiya Dasgupta, a wonderfully probing economic theorist,[8] who had first initiated me into economics in India in 1951.

How was it to work with Joan Robinson?

I interacted with her well. Though she had strong likes and dislikes, and rather disliked some things I found quite exciting (such as welfare economics), she was an excellent person to talk to in her own area of work. I was a great admirer of her. But I was not much persuaded by her view of economics. Oddly, she was the only one who actually made a conscious, sustained attempt to change the direction of my work.

I did my Ph.D. thesis on "The Choice of Techniques,"[9] which she accepted as a worthy subject, but I was also getting interested in welfare economics, which she thought was all nonsense. She took a naively positivist view of ethics, and was bored by discussion on well-being, social judgments and normative evaluations. She wanted to get me away from all the "ethical rubbish." Maurice Dobb was much more encouraging, and was more open-minded about my interest in ethics and welfare economics. He did not share my early enthusiasm for social choice theory, but was extremely tolerant of it—always ready to listen, to argue, to respond. I remember discussing my sense of wonder after reading Kenneth Arrow's *Social Choice and Individual Values*, published a few years earlier. He wanted to be assured that Arrow's results weren't (*the hands go up to mark the quotation*) "just algebra," and made me write on their relevance in non-formal terms. We had fascinating discussions on all this, and I learned a lot from Dobb's challenging questions and scrutiny.

Joan thought that my interest in welfare economics and social choice theory reflected a clear failure to grasp what was really important. Much later, while I was doing the *Collective Choice* book,[10] she wrote me a letter asserting that I had told her that when I finished this book, I would come back and do some serious economics. I could not, of course, have said anything like that, and she must have extrapolated some peace-making remark I had made. She did hope that I would get back to what she took to be serious economics. Capital theory, growth theory, distribution theory, those were just about the only central issues to her.

On Welfare Economics

What was driving your interest in the direction of welfare economics?

Well, it is an important subject, of course. And at that time much neglected in the fashion of positive economics. There was, I did feel, a need to return to the

[8] Dasgupta, who is now 85, wrote several important papers on development theory—some of them collected in his *Planning and Economic Growth* (London: Allen & Unwin, 1965)—and wrote also on economic methodology, including an original history of thought, *Epochs of Economic Theory* (Oxford: Basil Blackwell, 1985).

[9] Later published as Sen (1960), the book was reprinted five times.

[10] Sen (1970).

traditional concern of economics with human welfare and social evaluation. This basic conviction was also supplemented by my interest in classical economics and the roots of value theory. I was by then persuaded that to see value theories—either the labor or utility theory of value—just as an approximation for predicting relative prices is a mistake; one could more fruitfully see them as ways of describing, interpreting, and understanding some features of society.

There are also elements of normative evaluation in the value-theoretic perspective, helping to assess what is being achieved by society. This is straightforward in the case of utility theory. It can be broadened by moving away from the narrowly psychological interpretation of utility to the classical concepts of use value and the fulfillment of needs. In the case of the labor theory of value, the notion of exploitation invites one to compare what could have happened—all the rewards going to human efforts—with what is actually happening—much going to owners of non-human resources. There are difficult ethical issues implicit in these approaches, and they had been taken seriously by classical political economists such as Smith, Marx and Mill, not to mention Aristotle, and also much discussed recently by moral philosophers of different schools of thought, such as Rawls, Nozick, Scanlon, Dworkin, Hare, Harsanyi and others.

I was convinced that there was something quite big that needed to be explored. The extant approaches to welfare economics at that time included: one, the positivist rejection; two, taking welfare judgments out of welfare economics—such as compensation tests, which make normative evaluation turn essentially on possibilities, no matter how good or bad the actual situation is; three, concentrating only on non-conflict comparisons—Paretian welfare economics, which is limited by its silence on distributional issues; and, four, examining what social welfare functions we can use without much of an informational base, in particular, not using interpersonal comparisons of utility, nor making any foundational use of non-utility information—Arrow's impossibility theorem shows the informational poverty of such a framework. I felt that the informational issue was quite central, not only to avoid Arrow-type impossibility results, but also to make adequate room for concepts such as justice, equality, freedom, even efficiency. But I did not then understand the main issues clearly enough and was not able to pursue these things much at that time. On my plan to work on this, Dobb was quite sympathetic; Sraffa was skeptical in a friendly way; Dennis Robertson felt that it was a sensible thing to do, but he was clear that utility provided enough of a basis for all welfare economics. Joan Robinson thought that this was just not an interesting subject at all. I did not manage to get back to welfare economics and its informational base until much later.

A lot of what you do is critical of what other economists do.

Well, every economist is somewhat critical of other economists because that is the way in which you assess your position—in the coordinates established by others. But it is true that I have complained about the narrowness of modern economics. I was going to say neoclassical economics, but it is also true of straightforward Marxian economics, straightforward neo-Keynesian economics and so on. Most of modern economics tends to concentrate too heavily on very narrow things, leaving out enormous areas of what are seen as political and sociological factors on the one side, and philosophical issues on the other. But these issues are often central to economic problems themselves. Taking an interest in them is part of our own heritage. After all, the subject of modern economics was in a sense founded by Adam Smith, who had an enormously broad view of economics.

Smith would be an absolutely ideal example of giving economics its due. Among the classical economists whom I have enjoyed reading, I have got more joy out of reading Smith than anyone else. Marx comes very close to it. Someone who is regarded as a major figure, David Ricardo—my gurus Piero Sraffa and Maurice Dobb spent their lifetime editing his works—I find on the whole more boring to read, although I see the excellence of his purist analyses. He is quite narrow, not really deeply interested in social or political aspects of economics. I find it odd that neoclassicals and the neo-Keynesians, who battle with each other, tend to agree on the unique importance of Ricardo. Ricardo was the first economist in the narrow sense among the classical political economists. He was not going to look at many things, but he was going to assess rigorously a few things well. It is an approach that has borne many fruits in our discipline, but it is also limited and narrow, and ultimately counterproductive. By narrowing the focus sharply—possibly quite arbitrarily—difficult problems can be made nicely neat. Think of Ricardo's corn theory of profit rates, later extended by Sraffa. But this is also the way to lose sight of many crucial influences. An economic analyst ultimately has to juggle many balls, even if a little clumsily, rather than giving a superb display of virtuosity with one little ball.

On Rationality and Adam Smith

You have given lots of thought to the rationality assumption in neoclassical economics. Do you agree that it is a fundamental assumption?

Yes, I think it is a fundamental assumption. Not only to neoclassical economics, but also to most other schools of modern economics. Of course, the standard "rationality" assumption is defined in two quite different ways. It is sometimes defined in terms of the pursuit of self-interest, sometimes as consistent behavior. The defenders of the former approach seem to refer frequently to remarks by Adam Smith on the so-called economic man, but then one overlooks much of Adam Smith's other writings including *The Theory of Moral Sentiment*, and, indeed, a good part of *The Wealth of Nations*, where Smith took a broader view of human motivation in society and did not see self-interest pursuit as uniquely rational.

The other definition is based on the idea—which is a rather modern idea—that rationality is just being internally consistent in choices. In this view, you are rational if you choose consistently, even if you happen to consistently choose the opposite of what you want and value! If the pattern of consistency in choice has certain properties, which we may call binary properties of choice, then we can represent a person's choice function by a binary relation; with a stronger set of assumptions, the binary relation would be an ordering relation; with somewhat stronger assumptions, the ordering relation would have a numerical representation; and with an even stronger assumption the ordering relation with a numerical representation would have cardinal properties. The mathematical structure is neat and useful, and can certainly be used to simplify economic analysis in many contexts, when so-called rational behavior is assumed. But I am very skeptical of the adequacy of both of these ways of seeing rationality.[11]

That becomes clear in your "Rational Fool's" article (reprinted in Sen, 1982). But the defenders of the assumption maintain that thinking of economic behavior as the maximization of an objective function under constraints makes sense. And it does, doesn't it?

I think it does and it doesn't. One point to be clear about is that maximizing behavior does not entail maximization specifically of self-interest. The objective function can include other goals and commitments. I believe it is true that self-interest must be a major motivation among the various motives that we have. No one would deny that and, of course, Adam Smith rightly saw it as such. As he put it, prudence, of which the intelligent pursuit of self-interest would be a part, is the quality which is most helpful to the individual, even though humanity, justice, generosity, and public spirit, he argued—and I think I am now using his words—are the qualities most useful to others. I think it is important to see precisely what role we give to this part of our motivation, that is, to the prudential pursuit of self-interest. If it is given a role which excludes all other motivation and all other modes of behavior, we get a modelling of human beings that can scarcely accommodate rationality in general. If people have other goals and motivations, why should they be compelled by economic theory to pursue self-interest? People may truly want to promote causes which are not identical with their own welfare, and which they don't perceive as their own self-interest. There is no reason why rational human beings should not pursue those other causes. For example, if we wish to promote what we see as the interest of some group, such as a family, a community, a class, a political party, a social group, even at some personal sacrifice, what's irrational about intelligently pursuing that goal?

Furthermore, it is not clear that the relentless pursuit of self-interest is a good description of how people actually behave. There are these two distinct problems: What is rational behavior, and how do people actually behave? There is, of course, also Milton Friedman's question, namely, what behavioral assumption leads to the best predictions? This is an important issue, even though Friedman takes too narrow a view of the nature of economics in concentrating only on this predictive efficiency. Prediction is only one of the purposes of economic theory—there are many other purposes, evaluation is one of them, description is another. But even within the predictive perspective, there is little evidence that assuming self-interest maximization would yield the best predictions. There is not much to indicate that you get great predictive success by assuming that people relentlessly maximize profits and nothing else. If you have to explain economic success in countries such as Japan, which have strong social norms of behavior, it is not particularly helpful for making predictions to

[11]Sen gave his presidential address, entitled "Consistency" to the Econometric Society on this subject. The address will be published in *Econometrica*.

ignore those norms and assume that people simply maximize profits. It is inefficient for prediction, in addition to being a bad description.

We could incorporate these other motives to which you are referring in the objective functions.

Yes, up to a point, but there are problems. Let me clarify by making some distinctions. There are three separate but interrelated ways in which we could be self-interested or self-promoting. (*He hesitates.*) I'm not sure if either of these terms are right. Well, the term that Adam Smith used—self-love—may be the best. There are three components of self-love, related respectively to the composition of personal welfare, personal goals, and personal choices. The first component is your welfare being self-centered. In this case your welfare, as you see it, depends only on things you yourself consume and possess: there are no externalities in the individual welfare function—your well-being does not go down if others suffer. There is no jealousy of other people either. This component of self-love we could call *self-centered welfare*. It constrains the composition of individual welfare, but does not itself say anything on what your goals may be, or what your choices may depend on.

The second component concerns the content of your goals. This component of self-love entails that you are only interested in promoting your own welfare, no matter what that welfare depends on. Whether or not that welfare depends only on what you yourself consume is a separate question, namely the question that defines the first component. This second component—*self-welfare goal*—only speaks about your exclusive goal being the pursuit of your own welfare. The third component of self-love—this is the hardest one to articulate—is concerned with your choices. *Self-goal choice* requires that your choices be based on using all the instruments in your control to pursue your own goals, paying no attention to the goals of others with whom you live, except insofar as their goods influence your own goals. Self-goal choice does not constrain your goals, or the determinants of your welfare—only your choices are completely tied to your own goals in every act of your choice. You can have any one of these three—self-centered welfare, self-welfare goal, self-goal choice—or any combination.

This is the structure that I have tried to spell out in a paper called "Goals, Commitment and Identity."[12] When you have all three, you have an extreme form of self-love. This extreme form is, of course, standardly assumed in mainstream economic theory, for example, in standard general equilibrium theory. You can drop the first two by changing the objective function by, say, bringing in sympathy for others—others' miseries and happiness may influence your own welfare—and commitment to goals other than the pursuit of your own well-being—in that case, your goals will not depend only on your own well-being. But self-goal choice cannot be dealt with in this way. A violation of self-goal choice will require acting against, in an immediate sense, your own objective function—whatever it is—perhaps in recognition of other people's goals and aims, or perhaps in pursuit of some socially useful strategy that promotes the goal of all.

[12]Also discussed in Sen (1987), published after the time of this interview.

So are you telling me that at times we make choices that have consequences that conflict with our own goals?

Well, that can be so, but not necessarily. Even when self-goal choice is violated, we must distinguish between different reasons for rejecting self-goal choice. There may be good ethical reasons for being non-consequentialist as has been powerfully argued by Bernard Williams and others. A person will let go of an opportunity to promote his or her goals because of some ethical values not well-reflected in the objective function. This is an interesting subject and I have indeed tried to examine the argument for such a non-consequential ethical position.[13] But there is a different—an indirectly consequential—argument with which non-consequential ethics must not be confused. The reason for departure from self-goal choice can be, in this second view, entirely consequential, but involving more complex instrumental reasoning, including the use of social rules. If the pursuit by each person of his respective goals leads to the underfulfillment of the goals of all, then there clearly is a consequentialist argument for departing from such act-by-act pursuit of each person's own goal in every isolated act of choice. This too is of course an old problem, and relates to the case for so-called rule utilitarianism, even though what is involved here is the instrumental use of rules, rather than evaluations, based on utilities as such, which is a very special case. The general point is that the rejection of self-goal choice—that is refraining from taking particular action that would have promoted one's own goal better—can be based on complex consequential reasoning in terms of social interdependence, and this must not be confused with rejecting self-goal choice on the basis of non-consequentialist ethics. While the analysis of game forms makes it easier to see the nature of the problem, it is of course a question that has been discussed in general terms for a long time, for example by Adam Smith and Immanuel Kant.

How do you make the connection with Adam Smith?

From Adam Smith we get a clear analysis of the possibility that when goals of different people are partly congruent and partly conflicting, then the pursuit of individual goals in isolation may not be a sensible thing to do for people living in a society. This leads to the subject of behavior according to social norms, which Adam Smith particularly emphasized. Here... I should find this passage from Smith—I am so keen on that (*he looks up the passage*), "These general rules of conduct, when they have been fixed in our mind by habitual reflection, are of great use in correcting misrepresentations of self-love concerning what is fit and proper to be done in our particular situation." Smith is trying here to capture the idea that in a society there are certain things that are fit and proper to be done. We may base our behaviour not only on our own goals, but also on the goals of others. The ultimate objective is that all of us manage to achieve our respective goals better. It would be nonsense to say, "If you arrive at this kind of compromise, then whatever you seem to be pursuing are in fact your real goals." No, the argument involves socially instrumental use of

[13]See Sen (1985).

departures from the immediate pursuit of your own goals in isolation. You, like others, want to pursue your own goals better, but you know that others strive to pursue their own goals better too, and that you will get in each other's way. In a situation of interdependence like in the Prisoner's Dilemma, each can do more harm to the other person's goals than he can do good to his own by following self-goal choice. In that context the fit and proper rule to be followed, as Adam Smith would put it, may involve practical recognition of other people's goals; it involves norms for living in a society. It is a matter of social living, social intercourse, of social cooperation, through an acceptance of instrumental use of fit and proper behavior.

Indeed, as we know from some experimental results with the Prisoner's Dilemma, people often depart from narrow personal goals, even when they are instructed otherwise. They often take note of other people's interests and goals in the game. While there have been interesting theories by Axelrod, by Kreps and others, to explain this kind of behavior in finitely repeated Prisoner's Dilemma by assuming some ignorance, such as not knowing how many times the game will be repeated, or not knowing what the others really prefer, the explanation may well lie in the Smithian direction, involving a different line of reasoning altogether, rather than any ignorance.

Can you give some concrete examples?

We are not only competitive with each other; much of the time we can be primarily cooperative with each other. If workers in a factory, for example, were to pursue their narrowly perceived interests or goals, I don't think that you would get a very high achievement of productivity. Many systems flourish precisely because people have codes of conduct; there are certain things to be done. This may, of course, involve loyalties, influencing the goals they wish to promote, and thus violating self-welfare goal, at least to some extent. But in addition, people may not relentlessly pursue their own goals—whatever they are—and may be guided also by the recognition of the strategic interdependences—the social instruments in the form of demands of fit and proper behavior. This involves practical recognition of the goals of others, of the enterprise, of their colleagues, and the fact of living in situations of social interdependence.

Similarly, when an accident has happened or someone is in danger, you are not going to figure out how your helping will affect the promotion of your goals. You do certain things immediately because there are certain rules of good behavior which you follow. These rules of behavior give people confidence about what they can expect from each other. Self-goal choice may be, thus, rejected, but it is a very productive rejection. Rules of conduct may create a situation which is superior for all. The norms that emerge in society are sensitive to the issues of social instrumentality.

Of course, people need not always behave in this kind of way. Nor is such behavior the only way of seeing rationality in group contexts. But it is one way of seeing the demands of reason, involving what may be called social rationality. (I am currently trying to write a book on the subject.) The claims to rationality of such practical reasoning are quite strong, but there is no claim that this must be uniquely rational. There are different ways to reason and different possible conclusions as to what would be rational to do under these circumstances. The acceptance of this permissible plurality within the general idea of rationality is extremely important.

Are these new elements to be introduced in economics?

These are not new elements. For example, Weber, Tawney and others have discussed the role of values in the successful emergence of capitalism. Ethics was seen as playing a part in it. What kind of value systems made capitalism successful? Did simple virtues like honesty, truthfulness, keeping promises and honoring contracts, even if they went somewhat against one's immediate interests, play a part? These are old questions. We need a broadening of such questions to understand present-day economic problems better. It would be difficult to explain the varying successes and failures of different countries in their production achievements without bringing in variations of behavior norms. Countries with certain types of strong social norms, such as Japan, have had considerable advantage. These issues relate to the analyses presented recently by Michio Morishima (1982), Ronald Dore (1983 and 1984) and others, using empirical insights drawn from studies of Japan and other countries.

Many neoclassical economists may become nervous of all this. It sounds interesting but what do we do with it? How can we bring these ethical factors into our models?

I think that one has to give up first the unitary conception of one ordering standing for, one, your view of your own welfare, two, your goals, and, three, your choices. I think that's absolutely hopeless. In my paper "Rational Fools," which you kindly referred to, I tried to show the limitations of a model in which economic agents don't know the differences between their welfares, their goals, and the bases of their choices.

One way of structuring a departure would be to bring in at least three distinct binary relations—if you have to do it in binary terms, which you need not of course, but I shan't pursue that issue now. You can ask how these distinct binary relations correspond to each other. The correspondences may vary. You may well expect that the correspondence may differ between Mrs. Thatcher's England, with its increasing emphasis on self-interest, and say, Japan with a powerful hold of social norms of behavior.

The work that you end up having may possibly be called sociology. But it is economics as economics has been understood until very recently. Adam Smith, Marx, Mill, even Edgeworth, Wicksell and Marshall regarded these types of inquiries as perfectly legitimate parts of economics. It is only in recent years that this kind of an exercise would be placed outside economics.

Let me give an example. Mrs. Thatcher is constantly talking about the importance of wealth creation, and she sees this being best done through the pursuit of profits and self-interest. But it is quite possible that Britain's long run problems have something to do with the tremendously narrow motivation structure in British industry. In any kind of small, independent enterprise in which cooperation over large groups isn't involved, the British are marvelous. They run the best pubs in the world, with the labor of two or three people, possibly a family. There is not much shirking. A lot of efficient work. In contrast, whenever there is a situation involving large groups and team work, requiring an understanding of, and response to, each other's interests and goals, there seem to be problems. This is where Japan, or Germany, or even the United States, may still have an advantage, and the nature of social norms and of schooling on behavior patterns may be important here.

Do I understand you to say that there is a danger to the promotion of economic self-interest in a society?

Well, there are problems here which have to be considered. Of course, a society based on self-interest promotion and no cooperative values may well be culturally unattractive, but I am not concerned with that issue here. What is relevant here is that such behavior may also produce an uneconomic society.

Ronald Coase is often cited in defense of the efficiency of the market mechanism. But if you think about it, one of the propositions with which he is concerned is that a firm grows until the externalities are internalized. If now within the firm you were to pursue only your own interests and goals, if you were trying to get away with as much cheating as you could manage, the productive efficiency of that firm would be deeply problematic. The internalized externalities are internal to the firm, but external to individuals working in that firm. Within the firm there is still the question as to how the firm itself may be best organized to deal with these interdependences. And that's absolutely the central point of wealth creation. There is no guarantee that the promotion of narrow self-interest in the various forms we discussed would be helpful in this.

There has been some discussion of this type of problem among industrial economists. But there is not much of it in the general microeconomic literature. There have been inadequate explorations of its implications for rationality as well as efficiency. When you worry about this, people say that it is a very negative complaint. Well, it's negative mainly because the job of constructing alternative models and presenting different formulations of efficiency problems is still very inadequately addressed. In some ways we are guilty, I guess.

There is a lot to be done. I hope very much that economics will move in this direction. Quite a lot of the high-brow economics, which is impressive and helpful in many respects, assumes that the basic problems have been understood in the central case; it accepts the appropriateness of the standard general equilibrium model, with everyone pursuing their self-interest, given tastes and technology. You then skillfully introduce imperfect competition, ignorance, uncertainty; you may bring in learning, signalling; you can do disequilibrium dynamics. It is assumed that there is no deep problem with the basic story. The extensions and variations may, thus, look like consolidating battles, the main war having been won, and the high ground already secured. But the high ground is not secure at all. The most basic element of such modelling, namely the motivation of human beings, is not well addressed. Once we try to understand the challenging issue of human motivation, we enter one of the most neglected areas of economics.

At this point in our conversation we had reached a natural break in British intellectual life, namely afternoon tea. Sen wondered whether we should continue in the Senior Common room where tea is served, but we opted for sherry and water in his own study. Our conversation continued at a length that, if printed in full, would triple the length of this transcript. We talked, among other *subjects, about his recent work incorporating the value of freedom of choice in judging living standards and well-being, his attempts to redesign measurements of poverty and real national income, Arrow's impossibility theorem ("a surprisingly beautiful result"), and his claim that health statistics and other such indicators should be standard part of the informational basis of welfare economics ("I once weighed nearly 250 children from two villages in West Bengal to check their nutritional status related to income, sex, etc. If anyone asked me what I was doing, I would have said, I was doing welfare economics.").*

Sen's way of talking is characterized not only by a tremendous seriousness and passion for the ideas, but also by modesty. He is almost eager to downplay his own achievements. That showed when I asked him how he regards his own work. "Perhaps the work on famines or the measurement of poverty and inequality is more useful," he answered. "But I got more fun out of social choice theory... I find it very hard to look at my own writing. It's not a pleasurable activity for me. Going back is like opening an old wound." What is an outstanding achievement according to you? "Being outstandingly creative. Take Arrow's impossibility theorem. That is a shattering contribution."

Our conversation was interrupted by a student who appeared for his weekly tutorial. It was half past six in the evening.

Postscript

In the Fall of 1987 Sen became a Professor of Economics and Philosophy at Harvard University, a position which was soon changed to that of a University Professor—the Lamont University Professor.

During the preparation of the conversation for publication, we discussed a review of his work by A. B. Atkinson in the New York Review of Books. (Sen: "He was extremely kind, perhaps overkind. He does not criticize me much.") The review made me wonder about the connection between Sen's critique of the rationality assumption and his work on social choice theory. I asked him about this. He preferred to write down his response, because, in his words, "This is an important question about which I probably have no chance to comment in my articles."

His response follows.

There is, in fact, a fairly close connection. One of the main implications of the critique of the so-called rationality assumption used in economic theory is to accept the necessity of having several distinct binary relations representing a person's respective answers to a set of different questions. The answer to the question "Does state x serve your own interests better than state y?" need not be the same as the answer to the question "Which, in your view, is the better state of affairs for the society?" There are other questions which, too, require distinct treatment, such as what you will yourself choose, what you ought to choose, and so on. In the pioneering work of Kenneth Arrow in establishing the new field of social choice theory, Arrow had represented the attitudes of each person in terms of one "preference ordering," and had sought one "social ordering" as the outcome of the process of aggregation.

This is, in fact, a very useful mathematical format, but the interpretation of the aggregation exercise must depend on what the individual preference orderings are supposed to stand for—the person's interests, or ethical judgments, or choice behavior, or what? And similarly, it will depend on the explanation of the social ordering, that is, institutional choice, aggregated judgment, planning decisions, or what? Within the same format, established by Arrow of aggregating an n-tuple of individual binary relations into a social binary relation, various different exercises can be accommodated, depending on the interpretation chosen. The plausibility of a given set of axioms relating individual and social binary relations will depend on the specific explanations.

Of course, quite a lot of the mathematical exercise can be performed without particularly worrying about specific interpretations, and indeed a substantial part of my own work in social choice theory, such as introducing cardinality and comparability, finding conditions for transitivity of majority rule, relaxing the requirement of social transitivity or of social binariness, and so on, have been concerned with such general analytical issues. However, there are other problems in which the exact interpretation is crucial. I have tried to argue that Arrow's own axioms make more sense for aggregating the ethical or political judgments of individuals than they do for aggregating the interests, or welfares, of different persons, for which an informationally richer structure is essential. I have also tried to develop some alternative structures, incorporating such things as interpersonal comparisons of welfare, a person's liberty within his or her protected domains, a person's relative deprivation vis-a-vis others. In these exercises, the various distinctions made in the context of the critique of rationality assumptions used in economic theory become specifically relevant. The tradition of illegitimately identifying several distinct notions as the same has to be rejected first so as to be able to incorporate sufficient richness in the social choice format.

The plurality of the relations sought in a richer structure of rationality is, thus, crucially relevant for the interpretation and use of social choice theory. In this sense there is a close connection between these two areas of work.

Further Reading

In answer to my question, Sen suggested the following sources for further reading: James E. Foster, "On Economic Poverty: A Survey of Aggregate Measures," Advances in Econometrics, *1984, 3, 215–251, which contains a critical review of Sen's work on poverty measurements, and Sen's own article "Social Choice Theory," which appears in the* Handbook of Mathematical Economics, *edited by Kenneth J. Arrow and Michael Intrilligator, Volume 3. (North Holland, Amsterdam, 1985.) These refer, however, to subjects other than the rationality assumption. On that subject, Albert Hirshman, "Against Parsimony: Three Ways of Complicating Some Categories of Economic Discourse,"* Economics and Philosophy, *1985, 1, 7–21, is recommended.*

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