Achievements, Capabilities and the Concept of Well-Being

A Review of *Commodities and Capabilities* by Amartya Sen

K. Basu

Delhi School of Economics, Delhi-110007, India

1. Introduction

In modelling human welfare and choice, Amartya Sen has always been careful to make room for the imprecisions and inexactitudes which abound in life. Thus his books and papers in welfare economics[1] would almost invariably mention 'partial comparabilities', 'incompletenesses' and 'quasi-rankings'. However, in his early works, the kinds of imprecision he considered were amenable to very precise formulations and the inexactitudes with which he was concerned could be written about using an exacting language.

The present book also parts with the pristine world of textbook economics but it is of a different genre from Sen's earlier works. The subject matter now is too diverse, too complex to be amenable to the relentless precision of social choice theory. The book examines a society peopled with characters whose entire welfare can no longer be captured in a unique real number, characters who have distinct notions of well-being, happiness and desire-fulfilment. The aim is to evaluate such societies and the conditions of people and groups within such societies. Sen draws on different disciplines, uses several examples and develops some empirical illustrations in order to persuade us that though this new approach to evaluation does not yet have an algebra, let alone systematic statistics, it is a direction we must pursue. The present book, Sen reminds us towards the end, is "no more than a beginning".

The purpose of the present essay is three-fold: to present the essence of Sen's argument, to criticize it and to suggest directions for developing it further.

2. Sen's Argument

There are (at least) three sources of information for evaluating the welfare or standard of living of individuals or groups in society. These are

(i) Market Data (People's incomes and consumptions, their expenditure patterns, etc.)

(ii) Direct Surveys (That is, information from directly asking people how well-off they are.)

(iii) Social Data (Life expectancy, morbidity, malnutrition, literacy, etc.).

In economics our concern has been almost exclusively with (i) – with some exceptions, like the use of (ii) by the 'Leyden school' pioneered by Van Praag. While admitting that each of these three kinds of data have a role to play, Sen sets out to make a special case for the use of social data – or what he refers to as 'non-market data'. Of course, outside traditional economics, there is plenty of evidence of non-market data being used to criticize or praise social states. Newspaper editorials lament the poor quality of life in some societies because of the lack of freedom of speech; we often express dismay concerning some society for its high crime rate; demographers praise nations where infant mortality is low. However, such comments and discussions usually occur in fragments and somewhat in the shadow of the economist's practice of evaluation based on national incomes or utilities for which the economist can claim to have a consistent methodology and even a philosophy. A large part of this monograph is an effort to develop a philosophical base and systematic method for the use of non-market data in evaluating societies.

One reason why such data is scant is, according to Sen, that there is no cogent methodological foundation for the use of such information. So this monograph is supposed to provide a fillip not only to this method but also to the collection of the kind of data required for its practice. On this ultimate position, i.e. the usefulness of non-market data, Sen is extremely persuasive. From a reading of this book and from my earlier interest in analysing living-standards in South Asia, I am convinced that non-market data ought to be used and more than currently is the practice among economists. However concerning some of the specific methods and underlying philosophy I have disagreements. Before going into these, it is useful to briefly recapitulate Sen's argument.

The central character in this study is the concept of 'well-being'. In traditional economic analysis one may jump to equate well-being with happiness. But that would be incorrect. A person who is poor and has some crippling ailment may nevertheless be happy because he has learnt to curb his desires, but clearly we would not describe him as having a high level of well-being or (what is related but nevertheless distinct) a high standard of living. Similarly well-being must not be equated with utility. This is so for many reasons. In modern economic theory utility is often treated as a mere calibration system which reflects choice. If a person chooses x over y, then we say (by definition) that the utility he gets from x is greater than what he gets from y. Under this interpretation, utility cannot be equated with well-being because the motivations underlying a person's choice could be diverse and need not be consonant with his perceptions of his own well-being. Moreover, a person's preference may depend on his current condition. A woman who is exploited may choose (and prefer) to live in a society where such exploitation exists and it is quite possible that the same woman if she was based in a society where women were not exploited would prefer to live in such a society. As far as the notion

of well-being is concerned, barring some fairly exceptional characterisations, we would not like to assert that whether i achieves a higher well-being in state x or in state y depends on which state i happens to be in currently. But as the above example shows, a person's choice or even preference may depend on the state he happens to be in.

For a more specific definition of well-being it is essential to understand the concept of 'functioning'. Sen defines functioning as "an achievement of a person: what he or she manages to do or to be". This idea is captured in commonplace observations like: I had so far ignored the pain in my elbow but I'd better see a doctor now because it is beginning to affect my functioning. This remark also illustrates what is important for Sen's story, that the functionings a person achieves depends partly on his choice. In the above example, I have the choice of not seeing my doctor and leaving my arm's functioning impaired.[2] Sen then goes on to define a person's 'being' as the vector of functionings he achieves and his 'well-being' as a valuation of his being. It should be clear that Sen does not attempt to give any specific way of doing this valuation. His aim is to persuade us that the valuation should be done on a particular domain, namely that of functionings. Sen warns us, on several occasions, that these are complex terms. And so they are. In fact one of my complaints is that Sen himself treats these concepts as simpler and more measurable than they actually are.

Data for this kind of valuation is not easily available. In the mean time one possibility is to use whatever meagre data is available for some preliminary exercises. This is what is done in two appendices. Appendix A compares living standards across countries by looking not only at per capita incomes but mortality, literacy and life expectancy. A more literate people has the "capability" of more diverse functionings than a less literate people. Similarly a longer life gives us a greater capacity for the activities of life. This justifies looking at these extra-economic variables. In Appendix B, Sen examines the well-being of females relative to males within the family in India. Both these empirical studies are of great interest in themselves and I shall return to some of these issues later; but I make one comment here.

While Sen is right in asserting that a society's well-being cannot be captured by simply looking at income levels, we must not make the mistake of thinking that income measures are totally devoid of registering improvements which lie beyond the realm of economics. Suppose that a direct measure of income shows that Kerala is behind, say, West Bengal but Kerala's health provisions are much better. *In principle*, an economist's computation of a Keralite's income (as opposed to the much-maligned accountant's calculation) should include the amount a Bengali would be willing to pay to achieve a Keralite's health provisions[3]. Though such

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[2]   There is a serious question here as to whether what appears to be a choice cannot be reduced to an inherent characteristic of a person. This may be done by asking why a person chooses differently. If this can be traced to some inherent feature of the person then questions can be raised about the legitimacy of treating any functioning as chosen. This relates to the well-known problem of determinism and also to an interesting work on achieving equality by Roemer (1986)

[3]   There are some intricate index number questions involved here but it is harmless to gloss over these in the present context

computations are not done in practice and even if they were, they would not capture
the entirety of the concept of well-being, it is worth noting that an economist's
measure is, atleast in principle, not totally oblivious of quality-of-life questions.

3. The Measurability of Functionings

There are two related questions concerning the measurability of functionings and
capabilities. First, can a person's entire functioning status be characterised as
an n-tuple? The use of the term "a *vector* of functionings" suggests a kind of
measurability which in reality may be elusive. Also it is not clear that the level of
each functioning can be calibrated on a linear scale, as is implicit in the geometry on
p. 37. As in the case of utility, the measurement of functioning is a complex question
(e. g., should they be measured cardinally or ordinally?) and there will have to be
research into this before Sen's approach becomes fully usable.

The second problem is best raised in the context of Appendix A. Here Sen studies
inter-country data based on certain kinds of capabilities, namely those related to the
length of life and education. He observes that the exercise is illustrative. A full-
fledged analysis will have to look at a more complete list of capabilities. But (i) what
constitutes a complete list of capabilities and (ii) how can we be sure that items in the
list do not overlap? Consider problem (ii). Infant mortality and life expectancy at
birth are distinct features of society but they also have a great deal of overlap. Thus
to praise a society for having cut its infant mortality rate *and* for having raised its life
expectancy at birth may involve more praise than ought to be heaped. On the other
hand to praise society for only one of these may be to praise it less than what it
deserves. How do we separate out what seem to be inherent overlaps between
concepts? Failure to do so would result in either double counting or under counting
some innate quality of a society[4]. I have no answers to this problem but pose it as an
open one.

4. The Incompleteness of Rankings

In this subsection I raise some issues concerning the incompleteness of rankings.
First, using a problem discussed in Chapt. 5 of this book, I shall try to establish the
need to distinguish between different kinds of incompleteness. In pp. 33f., Sen
argues that two persons' subjective rankings, even if they are inconsistent with each
other, may both be consistent with a unique objective ranking. He tries to establish
this with the help of the following example.

Suppose A, B and C are three possible personal states. Person 1 ranks A above B
and 2 ranks B above A. (I assume in addition that both rank C at the bottom.) Now
suppose the objective ranking, denoted by R, is as follows:

$$R = \{(A, C), (B, C), (A, A), (B, B), (C, C)\} \ .$$

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[4]   The problem is especially important to sort out if we are considering the use of formal measures like
the weighted average of different characteristics

(x, y) is an element of R means x is at least as good as y on the basis of the objective ranking. Sen argues that since R is silent over the conflicting pair, $\{A, B\}$, R is consistent with both 1's and 2's orderings. If by consistent we mean the relation of 'subsuming' then of course this is so. But clearly Sen uses the term consistent here in the more primitive sense of compatibility. In this sense the consistency of R with 1's and 2's preferences depends on how we interpret the incompleteness over the pair $\{A, B\}$. There are at least two possible interpretations of this. The absence of (A, B) and (B, A) from R could be taken to mean either that A and B are unrankable or that the ranking of A and B are (as yet) unknown. Under the second interpretation it is right to say that the individual rankings are consistent with the objective one (meaning that at the present level of information, there is no conflict between any of the subjective rankings and the objective one). Under the first interpretation however it is reasonable to argue that the individual rankings are inconsistent with the objective one because what the latter considers *unrankable* is ranked by the individuals. More important than its bearing on Sen's Chapt. 5 is the fact that this argument highlights how incompleteness can have different interpretations with different implications for welfare analysis.

Secondly, in dealing with partial information we need to distinguish between the axioms of completeness and exactness. Sen has emphasized that in conducting welfare analysis, whether across persons or nations, the conventional practice of searching for (complete) orderings may be a futile one. From this, he goes on to argue against the completeness axiom. It can however be shown that conventional methods of rankings not only assume completeness but also, implicitly, exactness. That is, if beginning from a fuzzy binary relation we are to arrive at an ordering we have to impose the axioms of not only reflexivity, transitivity and completeness but also exactness. Viewed in this manner it becomes clear that both completeness *and* exactness may be candidates for criticism based on precisely the kinds of insights that (though well-known today) originated in Sen's writings; and I have argued in Basu (1986) that for certain kinds of rankings, e. g., that of societies based on income inequality, exactness may be the more untenable assumption.

5. Opportunities and Achievements

It is argued in this monograph that in evaluating societies we should not be concerned only with the functionings that each individual *achieves* but also with the *set* of functionings available to each individual from which he makes his choice, that is, his 'capability set'. This raises a host of very interesting technical questions on how to rank sets based on a primitive ranking of elements. This problem has received considerable attention of late and it can boast its share of elegant 'impossibility' theorems[5]. Sen provides an excellent and characteristically lucid discussion of this difficulty (in Chapt. 7) but his main interest in this book is to defend the conceptual basis of a method which compares opportunities rather than achievements; and therefore it is this conceptual issue that this section focuses on.

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[5]   See e.g. Kannai and Peleg (1984), Barbera and Pattanaik (1984)

A concern with opportunities rather than actual choices is not new. Though the traditional literature assumes a different space ('commodity' space, in contrast to Sen's 'functioning' space) the cores of the two sets of arguments are analogous. My comment in this section is sufficiently general for the space to be unimportant. I therefore choose the domain for ease of exposition.

One important problem of focussing attention on opportunity sets is that there is something illusory about the way 'opportunity' is defined in economics. This is best explained with an example. Let Fig. 1 be a usual Edgeworth box of a 2-person 2-good exchange economy.
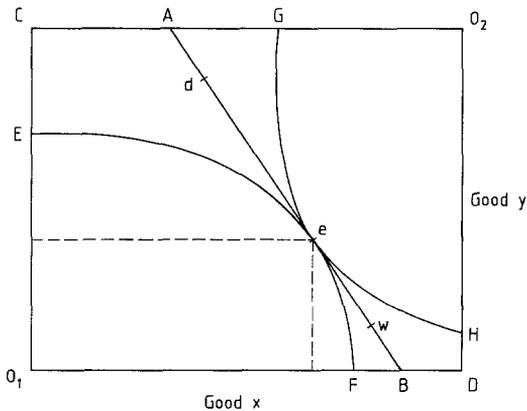

Fig. 1

The figure depicts a general equilibrium. The endowment of persons 1 and 2 are at w. They face prices depicted by the line AB, and given their indifference curves, equilibrium occurs at e. In this economy person 1's choice is point e but his opportunity set in given by the area $CABO_1$. Similar comments apply to person 2, whose opportunity set is $ABDO_2$. But are these individuals really free to choose any point within their opportunity sets? The answer is no; because what is actually open to one person depends on what the other person actually chooses. Thus in Fig. 1 it is not possible for 1 to choose d and for 2 to choose w. Similarly, if 2 chooses point e, 1 cannot choose point d. 1's belief that he *can* choose d is illusory. Once 2 has chosen e, the only choices actually open to 1 are those in the rectangle between e and O_1 (shown by broken lines).

Given that opportunity sets as traditionally defined include illusory choices, how much significance can we attach to the conventional opportunity sets? Also once this problem is appreciated, it becomes clear that opportunities can be increased vastly without changing anything. Consider the closed set bounded by $DFeECO_2$. From this remove all points on the curve FeE, except e. Let us call the set that remains Z_2. If instead of restricting 2's opportunity set to $ABDO_2$ we allow him to choose from Z_2, the equilibrium would remain unchanged. If we were evaluating this society on the basis of opportunities open to individuals, this exercise of making 2's opportunity set Z_2 would make this society appear better, but clearly our evaluation of this society should not hinge on such a ploy.

If we are to evaluate societies on the basis of opportunities open to each individual, we shall have to develop a definition of opportunity which is different

from the traditional one. This definition will have to take into account the interdependence between one person's choice and another's opportunity set; and since a person's choice depends on his opportunity set, ultimately we shall have to deal with the interdependence of opportunity sets.

My own inclination would be to go along with Sen and evaluate well-being on the basis of functionings, but be content with achievements, instead of capabilities. One of Sen's principle reasons for wanting to evaluate capability sets is because this captures the extent of freedom open to a person. What I am suggesting here would therefore entail foregoing such a measure of freedom. However to base evaluation on achievement is not to ignore freedom altogether. There are two reasons why freedom is important: (i) for what it allows us to achieve and (ii) for its own sake. By ignoring capability sets we miss out on (ii) but not on (i). For reasons of interdependence, aspect (ii) of freedom is difficult to measure. Also, it seems to me that (i) is the more important aspect of freedom. Consequently, this is a loss which appears to me to be worth incurring.

6. Intra-Family Discrimination

Appendix B of this book illustrates well the originality of Sen's approach to evaluation. The theme of this appendix is the alleged bias against females within the Indian household. If we were trying to study this in terms of the standard utility-based approach of welfare economics we would run into difficulties. This is for two reasons. First, as some anthropologists have pointed out, in much of South Asia people conceive of welfare in terms of *groups* or *families*; and so the concept of *personal* welfare may not be meaningful or relevant. Secondly, women themselves are usually a party to the decisions which lead to bias against women. They may do this out of altruism or empathy, that is their welfares may depend on the welfares of the male members of the households. What the well-being approach allows us to do is to assert without contradiction that the well-being of women relative to men is low even if the utility level of women relative to men is not.

This is the strength of Sen's approach. But this same appendix also demonstrates how difficult it is to translate this abstract method to empirical measurement. How does one establish the relative well-being of females within the Indian family? There are many ways of going about answering this. One way is to look at mortality and malnutrition statistics and this is what Sen does in the appendix. He notes that the sex-ratio i.e. the ratio of female to male population is not only less than one but has declined secularly since the beginning of this century. As far as malnutrition within the family goes, Sen himself has done several studies and he reports on these and others. But there are so many competing methods of doing this that one has to be cautious in generalising the results of any particular study[6]. I comment here on some specific problems.

One important problem for such studies is the difficulty of collecting information on people's age in Asia and Africa. Though in Sen's own studies great

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[6]   Indeed a recent survey by Harris (1986) of empirical studies shows that the verdict on whether there is intra-family discrimination is mixed

care is taken in collecting age data, this is, in general, a serious problem. And in case there is a systematic bias in age-reporting across sexual boundaries (e. g. if women's perceived age increases slower than men's perceived age) then this would introduce biases in a weight-for-age study of sex bias within the family. To try to avert this problem by doing a weight-for-height study raises other difficulties. For instance, a boy suffering from *chronic* malnutrition would be shorter than he would have been otherwise. Hence on a weight-for-height standard his malnutrition would appear to be less than it actually is.

7. Conclusion

Sen's book raises a variety of new and important issues concerning human well-being and its measurement. However it also leaves plenty of open questions and uncovered ground. Its argument for shifting our attention from commodities to functionings is powerful and I hope this will find increasing favour among welfare economists and other social scientists. Regarding its argument for shifting attention from achievements to capabilities, I am more skeptical.

Some of the concepts developed in this book can have important applications to questions beyond that of measurement, questions which Sen does not touch on in this book. For instance, the concept of 'exploitation' is difficult to describe in a utility-based framework. This is because people who are chronically exploited learn to adjust to their predicament and may achieve a reasonable level of utility and may not even strive for change. A definition of exploitation based on utility or choice would fail to identify such people. The concept of well-being can be useful in identifying the chronically exploited. This is just one of many possible directions that can be pursued from here.

References

Barbera S, Pattanaik PK (1984) Extending an order on a set to the power set: some remarks on Kannai and Peleg's approach. J Econ Theory 32:185–191
Basu K (1986) Axioms for a fuzzy measure of inequality. Math Soc Sci (forthcoming)
Harris B (1986) Intra-family distribution of hunger in South Asia. Mimeo
Kannai Y, Peleg B (1984) A note on the extension of an order on a set to the power set. J Econ Theory 32:172–175
Roemer J (1986) Equality of resources implies equality of welfare. Quart J Econ (forthcoming)
Sen AK (1970) Collective choice and social welfare. Holden-Day (Republished by North-Holland in 1979)