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REVIEW ESSAY

The Perils of Cosmopolitan Intellectualism

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Like today, Cambridge University in the 1960s was a congregation of students and teachers from across the world. Which may be why I experienced no difficulty blending into the university's culture when, following an undergraduate degree in physics in Delhi in 1962, I came to Cambridge. Here, I studied for the Mathematics Tripos and remained to pursue a PhD in economics. Although I was born in Dacca (now Dhaka, Bangladesh), my parents had moved to Delhi just before India's partition in 1947 and soon after to Banaras (now Varanasi). As both cities are in Hindi-speaking India, I had little contact with Bengali culture outside my family. I was thus unfamiliar with the advanced cosmopolitan thinking among those fellow students from Bengal I now met at Cambridge.

Several of my new acquaintances had previously studied at Presidency College, a renowned undergraduate institution in Calcutta. Among them were economists, historians, and literary scholars, and they all seemed to me to be astonishingly learned, articulate, and politically conscious. I had none of those virtues, for my previous training had been so distant from the humanities and social sciences that I was unaccustomed to the social and political discussions my Calcutta friends engaged in.

Bengal in the nineteenth century had been the center of a renaissance in thinking, melding the British Enlightenment with an Enlightenment that was embedded within a strand of Brahminic culture (the Tagore family did not appear from nowhere). Ram Mohan Roy, a Bengali social reformer of astonishing boldness of thought, helped to found Presidency College in 1817. (It was originally named Hindu College but was changed to Presidency College in 1855.) Over time, the institution established itself as an outstanding center of education, on par with the best undergraduate colleges anywhere. It produced exceptional physicists, mathematicians, and biologists; and in post-independence India, it has provided many of India's internationally renowned economists.

My friends from Calcutta were progressive thinkers. Cosmopolitans all, even a whiff of national pride would be put down immediately, and any favourable mention of Hinduism as an attitude to personal or social life would be seen as beyond the pale. And my friends were argumentative, which was a novel form of social interaction for me. Students in mathematics and physics did not so much argue as try to solve problems. If a problem failed to be cracked, there would be a suspicion that it had been framed badly, or that existing techniques were inadequate for tackling it, that is, the time was not ripe for the problem. In contrast, my new friends had strong views about current affairs, and as discussions did not lead to consensus, our discussions proved inconclusive and seemingly never-ending. I began to feel that scholarship in the social sciences and humanities meant endless discussion over coffee and cigarettes: that discussion was what mattered, less on whether it would lead anywhere.

Citizenship of Everywhere

I was reminded of those years when reading Amartya Sen's much anticipated memoir, for it advances much the same conception of the life of the mind. Sen graduated from Presidency College in Economics in 1953, completed the Economics Tripos at Cambridge in 1955, was elected Prize Fellow at Trinity College in 1957, obtained his PhD in Economics in 1958, lectured at the Faculty of Economics from then until 1963, and eventually returned to Cambridge in 1998–2004 as Master of Trinity College, as prestigious a post an academic can hope to hold. In between, he has held

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professorships at the University of Delhi (1963–1971), the London School of Economics (1971–1977), University of Oxford (1977–1987), and Harvard University (1987–). His has been an astonishingly glittering career; he has been feted by Presidents, Prime Ministers, and Global Leaders, received some of the most prestigious national and international honors (including the Nobel Memorial Prize in Economics, 1998), is by his own account on intimate terms with writers and global celebrities, and has been ubiquitous over the past four decades in newspapers and literary magazines both as a subject of appreciative interviews and as an essayist promoting a form of progressive cosmopolitanism displayed relentlessly in his memoir, starting with its title, which informs readers that he is at home everywhere. An array of homages from renowned personalities on the back cover speaks to his place in the intellectual world. Among economists, Sen is far and away the world's foremost public intellectual today, the only economist in the post-War era to have rivalled him being perhaps the late John Kenneth Galbraith.

Sen's memoir is an account of his life until 1963, which is when, at age 30, he left Cambridge to teach at the University of Delhi. We are led to believe they were his formative years, that his full intellectual flowering was to take place subsequently. Coming in at nearly 500 pages, the memoir recounts Sen's personal encounters with people and events and blends the treatment of his formative period seamlessly with his preoccupations and experiences in later life. There is thus a constant back and forth between the then and the now; the tract is not a frozen recollection of his early years, it speaks to them also from his subsequent, more settled convictions. To me, this is a novel and exciting narrative form, but Sen deploys it in a not entirely satisfactory way. His recollections are teeming with people, often with only walk-on parts (as in, "At that time in Cambridge there was X, who was involved romantically with Y, through whom I met Z"), and the reader is left asking what purpose they serve in the narrative other than a mention that they appeared in Sen's life. People come and go; in some places the encounters are described, in other places the characters reappear, but as figures in a light and shadow drama. Enumeration of meetings often reads as a procession of people who had provided him with interesting conversations; Sen appears not to have exercised selection. To many that will read as modesty, to others it will feel as self-importance. Nor is there a sign of regret over any choice he ever made. There are long passages that read like having to leaf through someone's multi-volume family album. The writing displays little of the irony and self-deprecation that enlivened Galbraith's otherwise matter-of-fact account of his life (*A Life in Our Times*, 1981).

A recurrent observation in Sen's narrative is that India has since time immemorial been a meeting place for the exchange of ideas among people from distant places, the ancient university at Nalanda being a classic example. (Some years ago, Sen wrote a most readable set of essays on this theme in *The Argumentative Indian*, 2005.) There is an insistence that the author embodies a tradition that is now rare, the feeling and acknowledgement that one belongs everywhere. In fact, of course, there are hundreds of thousands of people today with qualifications in global demand who, often after several occupational moves, have made their home and feel at home far from where they were born and raised. It is easy enough to be a citizen of everywhere when you have the facilities to travel back and forth, and those around you are like minded (for example, in holding liberal cosmopolitan thoughts) no matter where you happen to be; it is altogether harder to be a citizen of the world when you do not have that luxury. In a much-admired 2006 monograph, *Identity and Violence: The Illusion of Destiny*, Sen advanced liberal cosmopolitanism as insisting that if we were to recognize identity to be primarily about the unfettered choices of individuals regarding where they belong, people would be seen as having multiple identities. And he concluded that because people have multiple affiliations, claims for the sanctity of narrow social identities by those having them are unwarranted, even delusional.

And yet, throughout the world, we see people defining themselves in narrow and exclusive terms and being so regarded by others. Religion, language, and, more broadly, ethnicity are salient features. But because there are also markers for ascribing identity that are not inherited in quite the same way (membership of evangelical churches is a prominent contemporary example), exclusivity in the way people often see themselves may be all they have as psychological support. Sen's insistence in the tail end of his memoir that we all have multiple identities boils down to not much more than that we are all humans. The contours of our emotions were etched in paleolithic times, we are small group animals, but neither of these interrelated features in our make-up enters the conception of personhood Sen advances here. In any case, living in peace with your neighbors does not require you to bang on that we all have multiple identities. Showing tolerance toward people's beliefs is different from showing respect for them, for it may be that you judge their beliefs to be false, perhaps crazy or repellent—that you do not want to have anything to do with them socially, least of all, engage in interminable 'conversations' with them. A recent publication from PEW Research Centre, based on interviews in 17 languages with 30,000 adults from the various faiths in India, has reported that an overwhelming majority declared themselves to be deeply religious, but regardless of their religion, expressed their allegiance to religious tolerance and peaceful co-existence even while insisting on religious exclusivity and social segregation.

Hindus especially declared their national identity, religion, and language to be closely connected.

Advocacy for liberal cosmopolitanism leads Sen also to make a curious methodological detour into the colonial history of India. He is not in favour of colonialism, but as it is hard to find anyone of eminence in the contemporary world who has a good thing to say about it, he turns to Karl Marx, who in 1853 pointed to the constructive role British rule had been playing in India, on the grounds that in the crumbling Mughal Empire of the mid-eighteenth century, India had needed a pathway to the intellectual and economic globalization that the Renaissance and the Industrial Revolution had initiated in the world. So, using Marx as a foil, Sen considers an alternative history of India had the East India Company not been victorious in the decisive battle at Plassey in 1757 against Nawab Siraj-ud-Doulah, the Mughal satrap in Bengal. And he points, once again, to the cosmopolitan tradition in Brahminic culture and proposes an alternative history, in which long before 1947 India had taken advantage of the intellectual and economic globalization that was underway in the West. (Sen published the thesis also in a *Guardian* essay this year, 29 June.)

The thought has a warm glow, but there is a problem with it. One can with equal ease choose as one's foil any one of the many writers on post-colonial Indian history today and propose an alternative counterfactual narrative, in which Delhi in 1757 was once again conquered by a restless West Asian warlord in search of real estate. For just as there has been a tradition of open intellectual discourse in Brahminic culture, there has been a recurring history of assaults on northern India (Delhi would seem to have been a recurrent target) by Muslim warlords from West Asia, dating back to the second half of the twelfth century. We may, in any case, ask if it would have mattered to the hapless Indian peasant whether the exorbitant land rent he was obliged to pay was demanded by the British installed Zamindar or by the local Jagirdar appointed in a revived Sultanate.

Welfare Economics

Sen was awarded the Nobel Memorial Prize in Economics (it is officially known as the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel) for his fundamental work on welfare economics. His memoir reports that his interest in this subject, particularly social choice theory, goes back to his undergraduate years at Presidency College. In a series of strikingly original papers in the late 1960s, culminating in his magisterial *Collective Choice and Social Welfare* (1970), Sen applied a system of reasoning initiated and developed in a great masterpiece of twentieth century thought, Kenneth Arrow's 1951 *Social Choice and Individual Values*, and began the construction of the normative grammar essential for understanding ideas of social well-being. Sen's book is technical (it relies on the logic of relations deployed by Arrow) but is graced with a literary text that explores in pithy prose the analytical foundations of classical utilitarianism among other ethical theories.

Arrow's book introduced the idea that democratic voting rules (e.g. rules governing parliamentary elections in the UK) should not be installed without being screened for whether they embody democratic values. A typical voting rule in the West requires voters to register only their most preferred candidate among those on the ballot. For example, in the rules governing election to UK's parliament— 'first-past-the-post' in common parlance—the candidate receiving the highest percentage of votes is declared winner even if the vote falls short of the 50% threshold. Arrow noted that such a system ignores voters' preferences over their less-favoured candidates and took it to be obvious that voters should be required to rank all candidates on the ballot.

That may seem a tiresome, technical requirement, but it matters hugely, because among other shortcomings, the first-past-the-post system allows, even encourages, 'spoiler candidates' to undermine democracy. To see how, imagine that in an election in which there are three candidates, x, y, z, 47% of the electorate vote for x, 48% vote for y, and 5% vote for z. Under the first-past-the-post rule, y would be declared the winner. But suppose each of the 5% of voters supporting z, had they been asked, would have declared a preference for candidate x over candidate y (because, say, candidate z espouses an extreme form of policies espoused by x and is thus even farther from y in his political views). That preference would not of course be registered under the prevailing election rule, but as 52% of the electorate favour candidate x over candidate y, the rule can scarcely be called democratic. Candidate z spoils the democratic mandate of x by taking advantage of a defective electoral system and hands over the election, perhaps unwittingly or perhaps owing to hubris, to candidate y. (Instances of spoiler candidates overturning democracy would appear to have occurred in recent years in Presidential elections in the USA and France.)

Arrow proposed instead a set of axioms that are widely thought to be democratic and are based *only* on voters' rankings over the candidates on ballot and asked whether there is a voting rule satisfying them that yields an election result no matter what voters' rankings over the candidates happen to be. His remarkable finding was that there is none. In the process of narrowing down the list of voting rules by requiring them to satisfy democratic values while ensuring that the rules are applied only to voters' rankings over the candidates on ballot, he found that there was none left!

In fact, the bare bones of Arrow's 'Impossibility Theorem' had been discussed by the eighteenth century thinker, the Marquis de Condorcet, in his dissection of majority rule. Condorcet asked us to consider three voters, numbered 1, 2,

3, who are to vote on three candidates, x, y, z. Majority rule declares a candidate to be the winner if and only if she beats all others in head-to-head contests. Imagine now that voter 1 ranks candidate x over candidate y and candidate y over candidate z; that voter 2 ranks candidate y over candidate z and candidate z over candidate x; and that voter 3 ranks candidate z over candidate x and candidate x over candidate y. He noted that in such a case x beats y in a head-to-head contest because two voters, 1 and 3 (a majority) rank x over y; that y beats z in a head-to-head contest because two voters, 1 and 2 (who also form a majority) rank y over z. As x beats y and y beats z, we may think that x beats z, but we would be wrong, because two voters, 2 and 3 (yet another majority) —rank z over x, meaning that candidate z beats candidate x in a head-to-head contest. We have a contradiction, for we are left with a cycle: x beats y, who beats z, who beats x, who beats y, … ad infinitum.

Arrow considered voting rules for situations where the number of candidates can exceed three and showed that such cycles as those that Condorcet unearthed arise in all democratic voting rules when voters' preferences over a triplet of candidates are markedly non-aligned. One may take Arrow's finding to be saying that democracy works only when citizens share something like a common ethical culture. In a 1966 paper "A Possibility Theorem on Majority Rule", *Econometrica*, Sen identified a formal way of articulating what a common ethical culture means for majority rule to work well. To illustrate, suppose voter 1 in Condorcet's example ranks (candidate) x over y and y over z; voter 2 ranks x over z and z over y; and voter 3 ranks z over y and y over x. The rankings do not clash in the way they do in the Condorcet example. It is easy to see that in this situation majority rule would declare x the winner because x beats both y and z in head-to-head contests. In a 2008 paper "On the Robustness of Majority Rule", *Journal of the European Economic Association*, Eric Maskin and I showed that if the number of voters is large, the restrictions on their rankings over candidates under which majority rule yields a winner are fewer than the restrictions demanded by any other voting rule satisfying Arrow's axioms on democratic values. That is the sense in which majority rule could be said to be the most robust among all democratic voting rules.

Arrow's theorem is central to any understanding of the idea of democracy and was in due course regarded by political scientists to be so. But as voting rules were not on the agenda of mainstream economics, it remained a curiosity by the profession for some two decades. It should not have been a curiosity because 'political candidates' represent the 'economic policies' they advocate, and economic policies give rise to consequences, for example, the allocation of resources, which are the central objects of interest to economists. Voting rules for choosing among political candidates are meant for deployment at the polling station. Ideally citizens would vote in line with their 'social preferences' (the economist John Harsanyi — "Cardinal Welfare, Individualistic Ethics, and Interpersonal Comparisons of Utility", *Journal of Political Economy*, 1955—would have used the term 'ethical preferences'), not their personal interest, advice my fellow students and I were given in the civics lectures I attended at my school in Varanasi, where our teacher insisted that citizens need an ethical language in which to decide how to vote in national and local elections. Arrow chose the title 'Social Choice and Individual *Values*' for his book, his intention was to draw a distinction between voting rules and the directives that should guide the citizen on whom to (more accurately, what to) vote for. Ethical considerations that are directed at identifying voting rules are thus different from the ones citizens will wish to entertain for arriving at their social preferences over alternative policies. Arrow rightly disallowed intensity of voters' preferences over the candidates on ballot because otherwise voters would be tempted to inflate their feelings about them. The riots outside polling stations in non-orderly countries we occasionally read about are expressions of that.

For a citizen to discover her social preferences over, say, economic states of affair requires a different kind of ethical reasoning. She will, for example, want to be able to compare people's needs, which means interpersonal comparisons of individual well-beings would be an essential feature in her exercise. We may imagine that in order for a citizen to discover her social preferences, she places herself successively in everyone's shoes, as it were, to get an understanding of their interests; for as Atticus Finch in *To Kill a Mockingbird* famously advised his daughter Scout, "You never really understand a person until you consider things from his point of view – until you climb into his skin and walk around it". The point of the thought experiment is that it would not only enable the citizen to construct everyone's well-being functions but also to have an inbuilt mechanism for comparing them. She would then use that information to construct every individual's well-being as a function of the various possible states of affair. Her next step would be to aggregate the individual well-being functions she has constructed. We call the aggregate her 'social well-being function' and the ranking of states of affair that corresponds to it her 'social preferences.'

Thus far, there is nothing novel in the thought experiment. Indeed, it had been routinely deployed by moral philosophers. What was novel about Sen's work is that he uncovered the assumptions regarding the measurement of personal well-being functions and the nature of interpersonal comparisons in each of several well-known moral theories. Consider, for example, the broad class of utilitarian theories in which the social well-being function is the *sum* of the individual well-being functions. Sen's point was that, as with temperature, well-being does not come in an absolute scale, and that utilitarianism requires individual well-beings

to be measurable in scales that are related to one another in a positive linear fashion.

To illustrate, recall the rule for converting temperature in the Centigrade scale into the Fahrenheit scale, which is to multiply the temperature by 9/5 and to then add 32. The relationship between the two scales tells us that it is meaningless to claim, say, that today is twice as hot as it was yesterday (because even if it were true in one scale, it would not be true in any other scale); what *would* be meaningful would be to claim, say, that the difference between today's temperature and yesterday's temperature is four times the difference between yesterday's temperature and the temperature the day before yesterday (because that statement is independent of the scale in which temperature is measured). Likewise, Sen observed that if the citizen is a utilitarian, the individual well-being functions must not only be unique up to positive linear transformations (as is the case with temperature), but also that the *units* in which individual well-beings are measured are fully comparable (otherwise summation would not be a valid aggregation of individual well-beings), though the *levels* need not be comparable.

To appreciate the meaning of this observation, consider a society of three people, including the citizen in question. Imagine that on using a particular scale of measurement the citizen discovers that the well-beings of the three individuals in state of affair s would be, respectively, 35, 20, 45, and in state of affair s^* they would be, respectively, 30, 25, 40. Choice of the scale is an expression of a value judgement on the part of the citizen and, as a utilitarian, she concludes that s is more commendable than s^* because $(35+20+45)$ exceeds $(30+25+40)$. Notice that her conclusion would be the same if she were to use a measurement scale that was a multiple of the scale she used originally, say five times. That is because $5(35+20+45)$ exceeds $5(30+25+40)$. Note also that her conclusion would remain the same if she added or subtracted constant numbers to either scale, say a, b, and c. That is because $5(35+a+20+b+45+c)$ exceeds $5(30+a+25+b+40+c)$ no matter what numbers a, b, and c happen to be (for they cancel one another in the comparison).

However, the citizen must be consistent when she moves from one scale of measurement to another, as she does in the above example. If she multiplies someone's well-being by 5 (as in the example), she must also multiply the well-being of all the others by 5; otherwise, she would not be using the same scales of measurement. To confirm, imagine that she multiplied the well-being of persons 1 and 3 by 5, but multiplied the well-being of person 2 by 10. Now state of affair s^* would appear superior to state of affair s, because $5(35+20+45)$, which is 500, is less than $(5\times35+10\times25+5\times40)$, which is 625. It would be as though she was to claim that an object whose temperature is 100° in the Fahrenheit scale is hotter than an object whose temperature is 45° in the Centigrade scale. That is the sense in which, as Sen noted, utilitarianism requires unit comparability of the individual's well-being (the multiplicative factor must be the same), but not level comparability (the additive factor need not be the same). Throughout this analysis, Sen applied Arrow's technical machinery to explore social preferences that reflect not just utilitarianism but broader normative systems, including those that invoke the language of rights. His book, an instant classic, brought the foundations of welfare economics into mainstream economic reasoning.

Sen's principal accomplishment was to show what must be assumed in relation to the measurability and interpersonal comparability of individual well-being for an ethical system to be coherent. The reverse problem, of determining the implications of sets of ethical values on the structure of ethical thought, which is the counterpart of Arrow's question regarding voting rules, is harder. The idea is to determine the structure of the social well-being function from assumptions about well-being measurement (e.g., that well-beings are unique up to positive linear transformations, as in the above example), about the extent to which interpersonal comparisons of well-being can be made, and from such value judgements as that individual well-being should enter the sought for measure of social well-being in a symmetric way. In a remarkable pair of articles Claude d'Aspremont and Louis Gevers ("Equity and the Informational Basis of Collective Choice", *Review of Economic Studies*, 1977) and Eric Maskin ("A Theorem on Utilitarianism", *Review of Economic Studies*, 1980) presented ethical axioms which direct the citizen to sum individual well-being functions for discovering her social preferences. Their papers, and several elaborations by others, took Sen's work as their starting point and placed the axiomatic formulation of judgements on social well-being in parallel with the axiomatic formulation of voting rules.

Sen's other major work, *Poverty and Famines: An Essay on Entitlement and Deprivation* (1981), was an empirical investigation into the causes of famines. Sen has frequently written that the experience of witnessing a dying man during the Great Bengal Famine of 1943 left a deep impression on him. In a careful study of quantitative historical material, Sen traced the causes of that famine to a policy failure of the British government, not to a fall in rice production. (Food was being shipped out of Bengal even when they were leading to shortages.) Sen's focus on the rules governing who was able to access food, not how much food was available in total, grounded the study of famines squarely in the study of what economists refer to as 'resource allocation mechanisms'. But instead of describing the famine as a resource allocation failure, Sen described it as an 'entitlement failure', an inspired choice of term, because it appealed to people tired of the technical language that is used in much mainstream economics. It was also an unfortunate choice for

economics, for Sen soon thereafter became a public intellectual, a cult figure.

Capabilities

Critical appraisal of their work helps keep scientists alert. Public intellectuals are in constant demand to say something original and interesting even when they may not have much that is new or important to say. Nor are disciples inclined to examine their ideas critically. In two publications that won wide and immediate acclaim in newspapers and literary magazines—*Development as Freedom*, 1999; *The Idea of Justice*, 2009—Sen took 'human capabilities' to be the basic object of interest in moral reasoning. The books were designed to offer an alternative not only to utilitarianism, where the core object of interest is 'utility' (or 'well-being'), but also to the philosopher John Rawls' proposal in *A Theory of Justice* (1971) that the basic structure of a just society involves the fair distribution of 'primary goods' (civil and political liberties, income, and wealth—the social basis of self-respect).

Sen defined (human) capabilities as the alternative combinations of 'functionings' that are feasible for a person to achieve. Functionings are in turn the different kinds of life (Sen calls them 'beings and doings') a person rationally values. A person's capability represents the effective freedom she enjoys in selecting from different functionings, meaning that capabilities are *sets* of functionings. Despite the theory's acknowledgement that functionings are the objects people rationally value, the distinguishing feature of c*apabilitarianism* is that the value of a capability to someone is not derived from the worth to her of the functionings that are included in the set—otherwise capabilitarianism would be simply a version of utilitarianism or of one of the many variants of utilitarianism, as is confirmed below; rather, the set is valued directly.

Capabilities are examples of what economists refer to as 'opportunity sets'. Applying them to Sen's theory, we may say that the elements of an opportunity set are the 'beings and doings' of an individual. Imagine that a person places a value, measured in terms of her well-being, on every element in an opportunity set presented to her. The value she ascribes to the opportunity set would then be the worth to her of the element in it she values most highly. It follows that if the person were offered a choice between alternative opportunity sets, she would be able to rank them and identify the one most valuable to her (as we see below).

However, capabilitarianism does not subscribe to that way of reasoning. As indicated above, it values capabilities directly, which is why the theory faces an insuperable problem: it admits no machinery for comparing capabilities if none is a subset of any of the others. The theory can of course say that slavery is bad, that health is a basic need, that in the modern world education is necessary for a flourishing life, and that freedom of speech is a cherished goal, but it is unable to say much more. As those value judgements are in any case accepted by virtually all moral theories capabilitarianism has been designed to contend with, Sen's theory comes with no additional mileage.

The distinction between an intrinsic value and an instrumental value of an object can be razor thin, for what appears to be an intrinsic value may be instrumental in realizing a more fundamental value, which is why it is not illuminating to claim that 'freedom' has an intrinsic value and leave it at that. So, the question arises why a person will wish to value opportunity sets when she has a sense of the value of their elements to begin with; why does the person simply not choose the best element from the opportunity sets available to her? There is good reason for her not do so, for she typically has insufficient knowledge about herself and about the world but knows she will learn more about both with the passage of time. The person is therefore aware that she would be able to make more satisfactory choices by waiting rather than tying her hands by choosing an ill-informed best element from an opportunity set now. No doubt waiting has a cost, but if the cost is smaller than the gain from keeping her options open for a while, she would rationally choose to keep her options open. That is why there is a case for selecting an opportunity set now and waiting to choose an element from it when she can better identify the element she rationally desires or values most.

As an illustration, consider that the acquisition of skills (an aspect of what economists have named 'human capital') involves the use of resources, which means there are tradeoffs among them. But not all skills are of equal value to all, nor even to the same person. Numeracy and literacy are basic skills in the modern world, they prove vital to people no matter what they wish to be and do and no matter what circumstances they face. Investing in education in the early years of one's life (the decision is of course made on the child's behalf) is a way of keeping her options open on the choice of further education and the profession she pursues when she has become an adult. The child's future options are the elements of the opportunity set her parents are investing in on her behalf today. This is, of course, a straightforward utilitarian argument, which Arrow and Anthony Fisher in a 1974 article ('Preservation, Uncertainty, and Irreversibility', *Quarterly Journal of Economics*) used to show that natural resources (e.g. populations of species) possess an 'option value', a worth to us arising from the possibility that they would be found in the future to have a use-value (e.g. as an ingredient in a pharmaceutical product) if they were not made extinct. Arrow, in an article published in a volume of

essays in honor of Sen, presented the same argument as a way of showing that capabilitarianism is an implication of utilitarianism ("A Note on Flexibility and Freedom", in K. Basu, P. Pattanaik, and K. Suzumura, eds., *Choice, Welfare, and Development*, 1995), but the paper has not influenced capabilitarians.

A theory that values the capacity to form life plans but does not relate that value to the realization of those plans and the experiential states that go with them as and when they are carried out dispenses with material of genuine ethical substance. As the philosopher Patrick Suppes argued in a paper published in a volume of essays in honor of Kenneth Arrow ("Maximizing Freedom of Decision: An Axiomatic Analysis", in G. Feiwel, ed., *Arrow and the Foundation of the Theory of Economic Policy*, 1987), freedom to choose cannot carry ethical weight unless there is an independent machinery for valuing the objects of choice.

Nature and Persons

The poet Alexander Pope is as responsible as any thinker in having given rise to a contemporary intellectual sensibility, that the proper study of Mankind is man. I do not know whether Pope intended to interpret 'man' narrowly, but one strand of progressive cosmopolitanism is built on the conceit that the human person is a blank canvas, onto which any form of 'beings and doings' can be painted. Sen's memoir and many of his previous writings, for example his widely admired 1987 work, *On Ethics and Economics*, have much to say about the human condition, but that our lives are embedded in Nature is not one of them.

Nature is our home, we are a part of Nature, and She continually furnishes us with goods and services (climate regulation, decomposition of waste, nitrogen fixation, air and water purification, soil regeneration, pollination, and so on) without which we would not exist. A characteristic of Nature of supreme importance is mobility (the wind blows, rivers flow, the oceans circulate, and birds and insects fly). Which is why and how our activities have consequences that are felt elsewhere, and in the future. Moreover, many of Nature's processes are both silent and invisible. That makes them easy to overlook, until of course they are affected so adversely that we become aware of them, as we are currently of the value of biodiversity and climate regulation. We engage in many activities that have deleterious consequences but for which we are not charged and over whose use we have little inner urge to exercise restraint (over-use of the oceans, land-use changes leading to rising biodiversity loss, and unsustainable carbon emissions are prominent examples). Economists call the unaccounted consequences for others of our actions, 'externalities'. The human presence on the Earth system is today so dominant and the magnitude of the adverse externalities accompanying our activities so large that the demands we make on Nature's goods and services far exceed Her ability to supply them on a sustainable basis. By one reckoning the ratio of demand to supply today is 1.6, whence the metaphor that we need 1.6 Earths to satisfy our demands sustainably (M. Wackernagel and B. Beyers, *Ecological Footprint: Managing Our Biocapacity Budget*, 2019).

Sen's extensive writings on extreme poverty and economic development and the place of (human) rights in normative reasoning have been enormously influential among international development agencies. (The United Nations' Human Development Index—an aggregate of GDP per capita, life expectancy at birth, and the literacy rate—was inspired by his work on capabilities.) But there is little to no discussion of where 'rights' come from. Nor is there an acknowledgement that the language of rights sits awkwardly in the presence of adverse externalities. But even fundamental rights need to be justified. Trade-offs need to be weighed if actions are to be judged. Rights short-circuit those complexities.

Rights are peremptory, which is why they are problematic. One way to overcome the problem is to place them in a hierarchy. That was the conclusion John Rawls reached in his great work on justice when the concept is deployed for choosing the basic structure of a society. But if note is taken of adverse externalities accompanying a person's actions in her day-to-day life, it is by no means clear whose rights are to trump.

It always pays to test ideas on awkward, even controversial, cases such as those that arise in discussions about global population numbers. In a world in which the demands humanity makes on Nature's goods and services far exceed Her ability to supply them on an equal and sustainable basis, someone wedded to the idea of rights can reasonably insist on the rights of future generations to reside on a bountiful Earth. Sen has been dismissive of the thought that adverse reproductive externalities have been a factor in our demand overshoot on the biosphere and has stood firm on reproductive rights ("Population Delusion and Reality", *New York Review of Books*, 22 September 1994). In a 1982 essay, however, Sen wrote: "Lasting pollution is kind of calculable oppression of the future generation." ("Approaches to the Choice of Discount Rates in Social Benefit–Cost Analysis", in R.C. Lind, ed., *Discounting for Time and Risk in Energy Policy*, p. 346.) But if additional births are expected to contribute further to the discharge of persistent pollutants, why do reproductive rights of today's people trump the rights of future people not to be oppressed? That is the kind of ethical

and political dilemma the language of reproductive rights misses. (For a reconstruction of welfare economics and economic demography, in particular growth and development economics and the economics of poverty, in which the human economy is embedded in Nature, see *The Economics of Biodiversity: The Dasgupta Review*, HM Treasury, London, 2021.)

That the economic policies a government chooses should be based on evidence is (or should be) an incontrovertible requirement, but it is of no use if the evidence is obtained from an inadequate or misleading model of the human condition; for poor or faulty models produce spurious evidence. Systems of thought that do not acknowledge humanity's embeddedness in and reliance upon Nature when used to project the present and future possibilities open to us mislead. The received economics of poverty and development, which has been influenced greatly by Sen, remains impoverished on that count. It reads as an elaborate exercise in collective solipsism.

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