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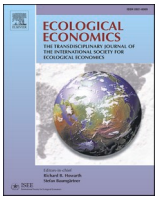

Sustainability and development through the humanistic lens of Schumacher and Sen

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ABSTRACT

A particularly visible aspect of multidimensional approaches to human development and ecological boundaries has been the elaboration of various types of indicators. But such an activity has often proceeded without much scrutiny of: (i) the theory and philosophy that underpins the multidimensional conception expressed through those indicators; and (ii) the socio-economic structure behind those indicators. This article addresses those questions, through a comparison of two authors who pioneered multidimensional approaches aimed at a more humane and sustainable approach to development: A. K. Sen, who focused essentially on human development; and E. F. Schumacher, who also advocated a humane approach to development, but within a conception where ecological sustainability is at the core of the analysis.

1. Introduction

The contributions of Amartya Sen and Martha Nussbaum have been instrumental in bringing a multidimensional conception of human development to centre stage, through its influence on the Human Development Reports produced by the United Nations Development Programme (UNDP), which advanced the Human Development Index (HDI). More recently, a planetary pressures-adjusted HDI (PHDI) has been provided, reflecting a widespread concern with multidimensional planetary boundaries (Rockström et al., 2009).

The existence of planetary boundaries is neglected by the very presupposition, widespread in modern mainstream economics, that human beings are permanently trying to maximise their subjective utility. The latter form of behaviour implies the use of an increasing (and ultimately unsustainable) quantity of natural resources. In order to address this problem, various attempts can be made to include biophysical constraints within economic models. But this is typically done while conceptualising biophysical processes in terms of a valuational metric based on subjective utility (Dasgupta, 2021), which does not deliver a form of valuation that captures the objective impact (or at least the relative weight of each form) of human activity on biophysical processes.

Another route is to adopt a radically different form of valuation altogether, rejecting the use of a subjectivist metric. Sen (1982, 2002) proposes assessing human development in terms of more objective functionings and capabilities, while rejecting the use of subjective preferences as a measure of human well-being, and advancing an alternative conception of rationality in economics. Nevertheless, Sen has not provided an integrated approach to sustainability. And the elaboration of multidimensional indicators of human development inspired in Sen's contribution has often neglected the underlying socio-economic structure behind the various components of those indicators, and the causal interactions between those components.

Other contributors have provided a more integrated view of sustainability, and of how underlying socio-economic structures contribute to it. Amongst the more prominent forerunners of the topic of sustainability in economics (Boulding, 1966; Daly, 1973; Georgescu-Roegen, 1971; Schumacher, 1973), the contribution of E. F. Schumacher (1973) is perhaps the one more directly focused on what we may term, following Ha-Joon Chang (2010), a *humanistic* approach to development, which has also been Sen's (1999) central concern (Martins, 2020).

Schumacher (1973) provides a broad vision of what a humanistic approach to ecological economics would look like – to paraphrase the subtitle of his most famous publication (the 1973 book *Small is Beautiful*), a study of economics as if people mattered – while providing a more explicit account of human nature, and its relationship to the environment. Schumacher (1973, p. 73) writes, when criticising "many of the so-called humanistic subjects", that "a subject that does not make explicit its view of human nature can hardly be called humanistic."

In so doing, Schumacher pays also close attention to the underlying socio-economic structure behind productive processes, especially to

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technology. However, Schumacher does not engage in the more specific economic analysis undertaken by Sen (1982, 2002) – for example regarding the topic of human preferences and rationality – and thus leaves aside the specificities of economic theory required for an effective development of sustainability economics.

It is argued here that the views of Schumacher and Sen are convergent towards what may be termed a humanistic approach to sustainability and development, which can help further enriching an analysis of human development within planetary boundaries. While Schumacher provides a broader vision of what a humanistic approach to sustainability economics would look like, Sen offers a humanistic view of development that is relevant for achieving a more specific analysis, through his critique of the subjectivist approach to valuation found in modern mainstream economics (Sen, 1982, 2002).

To explain their humanistic view, both Schumacher and Sen resort to Buddhist philosophy, central tenets of which seem to be consistent with the structured (or relational) ontology their views seem to converge to. This structured (or relational) ontology can help achieving a more integrated approach to the study of the socio-economic structures behind the set of disparate dimensions we find in various indicators of human development (Martins, 2020), as argued below.

Section 2 explains Sen's critique of mainstream economic theory and his multidimensional perspective. Section 3 explains the influence of Buddhism on Sen's humanistic approach. Section 4 provides an interpretation of capabilities as causal powers that interact in a structured ontology, and section 5 provides a brief outline of Schumacher's humanistic view, expressed in his idea of a Buddhist economics. Section 6 addresses the implications of the preceding analysis for an analysis of labour process, and section 7 compares Schumacher's Buddhist economics with what he calls modern economics. Some concluding remarks follow.

2. A. K. Sen's conception of well-being and rationality

An important contribution to the analysis of human well-being has been advanced by Amartya Sen (1982, 1985, 1987, 1999, 2009), who criticises the use of a subjective mental metric for assessing human well-being. Sen focuses on human capabilities – which are potential functionings, where a functioning is what a person is or does – that we have reason to value as the adequate space for assessing well-being and human development. Sen's perspective, developed together with Martha Nussbaum (2000), points towards a return to the more objective analysis of well-being that prevailed in economics before Lionel Robbins's (1932) critique of interpersonal comparisons of utility (Bruni, 2004, 2020; Martins, 2013).

Robbins argues, in an influential essay (Robbins, 1932) and subsequent contributions (Robbins, 1938), that utility is an irreducibly subjective phenomenon, and thus there is no basis to compare the utility of different individuals (Putnam and Walsh, 2012). The subjectivist and unidimensional approach to utility that prevails in economics after Robbins (1932) stands in contrast to that of earlier utilitarians. Early utilitarians like John Stuart Mill and Henry Sidgwick, and economists influenced by them, like Alfred Marshall (1890) and Arthur Cecil Pigou (2020), made a distinction between more objective needs concerning well-being on the one hand (which can be more easily compared), and subjective wants on the other hand. Sen's approach can be seen as a return to the richer analysis of human well-being of Mill, Sidgwick, Marshall and Pigou (Bruni, 2004, 2020; Martins, 2013).

Sen (1987, 2002) also has a different conception of rationality from the one we find in modern mainstream economics. In modern mainstream economics, rationality consists of acting consistently with a unique and complete preference ordering, so that it can be represented through a utility function. To the extent that the solutions advanced in behavioural economics rely on mathematical formulations that presuppose a unique and complete preference ordering – such as utility functions, as it is typically the case – we still find a unidimensional approach to the representation of subjective desires (Sen, 1982, 1987, 2002).

Sen (2002) argues that it is very unlikely that a unique and complete preference ordering, which is presupposed in the use of a utility function, describes successfully the various reasons and motivations behind choice, driven by social commitment, moral imperatives, conventional rule-following, or the pursuit of welfare, for example. Each of those reasons for choice may correspond to a different preference ordering, and there is no reason to assume that one unique and complete preference ordering provides an adequate account of human choices in this context.

More than that, for Sen (2002) rationality is not even a matter of acting consistently with a given preference ordering. Rather, for Sen (2002) rationality means the ability to revise our preferences, and the very basis on which those preferences rest. That is, rationality is the freedom to scrutinise our goals and values (Sen, 2002). Even the selection of human capabilities we have reason to value relies on this ability. For Sen (2002), rationality is an exercise of freedom, which is also connected to development as an expansion of human capabilities that allows for freedom to achieve human development and well-being (Sen, 1999).

Sen's approach to rationality and development has implications for how we conceptualise sustainability. Sen (2013) argues that the definition of sustainable development of the Brundtland Report, by focusing on the needs of future generations, presupposes we already know those needs. This may, according to Sen, lead us to constraining the choices of future generations by formulating policy goals according to our own conception of what their needs may be. Sen argues we should focus instead on providing future generations with enough freedom (also in the form of human capabilities) to engage in reasoned scrutiny of their goals and values (whatever those may be). Sen's argument echoes a similar point by Sidgwick (1874), who also notes that we have no basis to infer the preferences of future generations (Martins, 2011).

Putnam and Walsh (2012) argue that Sen's contribution is best interpreted as a revival of the moral anthropology of the classical political economists (centred on the classical conception of human development and well-being), which can be fruitfully seen in conjunction with other studies of classical political economy such as Piero Sraffa's (1960), who engaged in a revival of the analytical structure of classical economic theory (Meek, 1961).

An important similarity between Sen and Sraffa, which is very relevant for the analysis of sustainability, is that both criticise the subjectivist theory of value adopted in modern mainstream economics, while adopting what they believe to be a more objective, and multidimensional, conception. The subjectivist theory of value leads to a valuation metric generated through processes quite disconnected from biophysical processes, and only by chance will we find a congruence between subjective valuation and the objective biophysical processes at play.

Sraffa's overall project is aimed at recovering an objective conception of cost that goes back to William Petty's analysis of cost of production in terms of the quantity of land necessary to sustain the labourer (Davis, 2012; Martins, 2013). The latter can be seen as an ecological footprint, and thus more directly linked to the biophysical processes (including regenerative processes) at play. Sen's (2009) contribution is much influenced by Sraffa (1960), as Sen (2009, 2021) himself notes, and both provide interesting insights as to what could be a multidimensional analysis within a classical perspective (Martins, 2013; Putnam and Walsh, 2012). When adopting a more objective approach to human well-being such as Sen's, it remains necessary to address also human impact in the biosphere from a more analytical perspective, and Sraffa's (1960) contribution may be useful in this regard.

3. Sen's humanistic approach and Buddhism

Sen's contribution became influential – jointly with Mahbub Ul Haq's – in the Human Development Reports produced by the United Nations

Development Programme. The latter reports are interpreted by Sen (2014) as an endeavour driven by a humanistic concern. In order to understand Sen's humanistic view, and its relation to sustainability, it is important to note the influence of the teachings of Gautama Buddha on Sen (Sen, 2005, 2009, 2014). As Sen (2014, p. 16) writes: "I remember thinking immediately of Buddha in 1989 when my friend, the visionary thinker Mahbub ul Haq, wanted me to join him in initiating his great brain child, the Human Development Report, which became an annual publication of the United Nations from 1990 onward."

Whilst Sen (2009, 2021) has identified various authors connected to the Cambridge economic tradition as important inspirations for his work (Bruni, 2020; Martins, 2013) – especially the Cambridge economists more influenced by the classical political economists – Sen has also engaged with Indian traditions, especially: (i) more heterodox and innovative thinkers (Sen, 2005, 2009, 2014); and (ii) the traditions where public debate takes precedence over the opinion of privileged officials (Sen, 2005, 2009, 2014). Within the Indian traditions, Sen (2009, 2014) highlights the influence of Buddhism in particular.

It must be noted, however, that Sen does not subscribe to Buddhism if understood as a religion. Rather, his point is to draw upon its philosophy to develop a more humane approach to economics. In fact, Sen (2009, 2014) draws on other humanistic views, including Christianity, and seems to adopt generally an agnostic stance, which he also attributes to Buddha and other Indian thinkers. Thus, Sen sees Gautama Buddha as "the agnostic champion of the "path of knowledge"" (Sen, 2009, p. xiv), while also drawing on other Indian traditions connected to agnosticism or atheism such as the "Lokayata school (committed to relentless scrutiny of every traditional belief)" (Sen, 2009, p. xv).

Sen's reference to Buddhism is relevant to the extent that it helps understanding Sen's humanistic approach, and also his views on the relation between human beings and other species in Nature. Sen (2009, p. 251) draws on Buddhist analysis of the interconnection between sentient beings to highlight human responsibility towards other sentient beings, and writes: "Since we are enormously more powerful than other species, we have some responsibility towards them that links with this asymmetry of power."

Sen's statement above seems to presuppose some commitment to the generalised flourishing of all species. In the capability approach to human development, however, the emphasis is typically on human flourishing, a topic developed more expansively by Nussbaum (2000). But Nussbaum (2019, p. 125) also argued more recently for divesting the human development approach from its "human-centered narcissism" while noting the need to take into account "the planet and its sentient beings".

The argument presented by Sen (2009, p. 271) above, which he calls the "argument on the responsibility of effective power", is an important argument for understanding Sen's idea of human capabilities, and why it cannot be reduced to a subjectivist approach. When noting the need to go beyond a merely subjectivist analysis of happiness, Sen (2009, p. 270) emphasises that "capability is also a kind of power, in a way that happiness clearly is not."

Happiness can, of course, also be interpreted in Aristotelian terms, as the outcome of a certain activity or exercise of virtuous dispositions (eudaimonia). Under this interpretation, which is very much in line with Nussbaum's (2000) own development of her capabilities approach, happiness can be described in terms of human functionings and capabilities. But the more common interpretation of happiness, at least in economics (whenever the notion is considered), is in terms of a subjective state. Sen's (2009) reference to happiness in this context seems to be the latter one, and it is important given the tendency to assimilate Buddhist teaching into studies of happiness.

The development of a measure of Gross National Happiness (GNH) in Bhutan, inspired also in Buddhist philosophy, is a case in point, not least because it resorts to a multidimensional approach inspired in Sen (Alkire et al., 2012). The GNH certainly constitutes an important step beyond the tendency to focus on materialist measures such as the Gross National Product (GNP), and in its multidimensional approach, happiness can be easily connected to activity and virtue, rather than be seen merely as a subjectivist state. The point to note is that Sen (2009) conceptualises capabilities in broader terms than what is usually assumed in studies on happiness, due to the fact that a capability is also a power.

As noted above, Sen's (2009, p. 271) "argument on the responsibility of effective power" leads to a conception where obligations, arising from the capability or power to effect a change, lead to responsibility towards other human beings, and also towards other species. Ballet et al. (2014), p. 56) argue that Sen does not clarify this issue sufficiently, since "rather than attempting to elucidate the link between commitment and freedom, he settles for simply noting the existence of this type of behaviour".

Ballet et al. (2014) provide further developments of how this issue could be clarified, in line with the contribution of Pelenc, Lompo, Ballet and Dubois (2013, p. 85), who argue that in Sen's conception responsibility is exerted by a free agent (who may decide to limit freedom voluntarily by committing to certain obligations), in a conception where "freedom as the power of initiative is equivalent to the interpretation of the CA [Capability Approach, in which capability is seen] as a causal power (Martins, 2006, 2007; Smith and Seward, 2009)".

A fruitful route to clarify this matter is indeed to interpret capabilities as causal powers (Martins, 2006), where the responsibility connected to obligations, associated with the corresponding rights, leads to a relational structure of rights and obligations (Lawson, 2019), which is associated with the power to cause changes (Martins, 2006, 2007; Smith and Seward, 2009). This topic is addressed in more detail now.

4. Capabilities as causal powers

Sen's multidimensional approach inspired a disparate set of indicators aimed at measuring human development. The various components of the HDI, for example, are aggregated assuming a given vector of weights which, Sen (1985, 1999) argues, should be decided taking into account public debate on the human capabilities we have reason to value. But different socio-economic structures may mean different causal interactions between various capabilities – which dynamically interact within a socio-economic structure, as causal powers to effect change – leading to the need of prioritising different components depending on context.

We may find, for example, that in certain socio-economic structures the most effective way of improving health consists in providing education, which helps making choices more conducive to health improvement. Sen (1999) often suggests that women education has an important effect on social change that influences various dimensions, and an important consequence of it is that empowering women leads to improvements in family planning that influence health greatly. In such a case, even if the HDI would suggest focusing on health, it could well be the case that what needs to be prioritised is education instead.

Nancy Cartwright (2002, p. 143), when discussing Sen's (1999) comparison of various countries such as Sri Lanka, Taiwan and South Korea, writes that in Sen's conceptualisation of the problem "[e]ach of the countries studied has a different socio-economic structure constituting a different socio-economic machine that will generate different causal relations true in that country". Cartwright (2002) finds the analysis of this causal interaction between components of a structure a central aspect of Sen's multidimensional analysis.

The mechanism through which poverty is reduced in South Korea, for example, relies on the existence of an educated workforce to be employed by the export sector, and some public control over the financial sector, amongst other factors identified by Sen (Cartwright, 2002). The mechanisms for poverty reduction identified by Sen in Sri Lanka, and its different socio-economic structure, act quite otherwise, and are connected to the provision of basic entitlements more directly to the population (Cartwright, 2002).

As Cartwright (2002) notes, the tendency to apply the same

statistical methodology to various countries is inconsistent with Sen's usual approach, which consists of finding contrasts amongst countries – or within a given time period in a given country, such as in Sen's (1981) analysis of famines in India – in order to identify differences in socio-economic structures as expressed in different causal relations. But the very existence of different socio-economic structures, presupposed in Sen's analysis of contrasts between (or within) countries, brings insurmountable difficulties to the application of the same statistical treatment across countries, due to the different causal interactions at play between (and within) different socio-economic structures (Cartwright, 2002).

This type of causal interaction between components of a structure has been neglected when constructing indicators that aggregate those components, rather than explaining their causal interactions. The final result is an attempt to measure human capabilities that neglects how capabilities are causal powers that interact in a given socio-economic structure, which can be best interpreted within a structured (or relational) ontology (Martins, 2006, 2007; Smith and Seward, 2009).

A careful look at the philosophical underpinnings behind Sen's perspective can help clarifying this matter. The idea of a structured, or relational, ontology, characterised by capabilities as causal powers in causal interaction, resonates with Buddhist philosophy (Nelson, 2004), and Sen (2009, p. 271), when commenting on the idea of capability as a kind of power that brings responsibility and obligations, is clear as to its origin: "It is a line of reasoning that I traced to Gautama Buddha's analysis of obligations that go with effectiveness of one's ability and power (the cited argument is presented by Buddha in *Sutta-Nipata*)".

While Sen (2009, p. 271) refers to "power" without mentioning causation, the idea of causation plays an important role in Buddhist teaching, concerned with the analysis of dependent origination, and is extensively analysed in central texts of the Pali Canon – the original canon of Buddhist writings – like the *Mahanidana-Sutta*. The *Sutta-Nipata*, mentioned by Sen (2009) in the quote above, is also part of the Pali Canon. So interpreting capabilities as causal powers (Martins, 2006) is certainly in line with Sen's reference to Buddhist teachings in this connection, within a structured (or relational) ontology of interconnected sentient beings.

It must be noted, however, that Sen's (2009, p. 41) own writings on the connections between ethics and ontology limit the scope of ontology to the identification of "ethical objects", very much in line with a more taxonomic approach to ontology that focuses on the identification and definition of objects, rather than on an analysis of their relations. In Buddhism, in contrast, relations take centre stage, as the goal is to study how (whatever we identify nominally as) objects are actually co-constituted by their relations to one another, and do not have an intrinsic nature beyond those relations (in this sense, any intrinsic nature beyond those relations is emptiness or vacuity).

Here it is important to distinguish two main traditions in Buddhism. One is the Theravada, which means "Doctrine of the Elders" (Cunliffe, 2015, p. 313), and follows only the texts of the Pali Canon (where we can find the text mentioned by Sen above). Theravada Buddhism places the emphasis on an individual's path towards Nirvana, which entails, amongst other things, eliminating human suffering. This approach is usually contrasted to the Mahayana, which means "Great Vehicle" (Cunliffe, 2015, p. 313), due to its emphasis on Buddhist teaching as a vehicle great enough to accommodate all sentient beings in a journey to Nirvana.

Sen's (2009) overall perspective is grounded on a broad humanist perspective, and the aspects of Buddhism that attract Sen pertain more directly to the removal of human suffering, rather than a very immediate concern with all sentient beings. Furthermore, Sen's emphasis on the asymmetry of power between human beings and other species, while focusing on human development, leads to a more anthropocentric perspective. The absence of a more explicit commitment to a structured (or relational) ontology, in turn, makes the various dimensions of Sen's multidimensional approach seem disparate elements, rather than an integrated totality – with causal interaction between the components of a multidimensional reality – which includes all sentient beings. This is also a reflection of the fact that, albeit of Indian origin, Sen's (2021) own formation reflects a humanistic perspective that draws on many other sources connected to western thinking too, with its inherent anthropocentric tendency.

5. E. F. Schumacher's Buddhist economics

Resorting to Buddhist teaching when studying our relationship with other species and Nature is not a new idea in economics, and goes back at least to E. F. Schumacher's (1973, p. 38) "Buddhist Economics", a term first coined in a homonymous essay, subsequently included in his well-known book *Small is Beautiful* (Schumacher, 1973). Like Sen, Schumacher's (1973, p. 75) most central goal is to advance a more humane approach to economics, while noting that "man's task", or "man's happiness", is "to attain a higher degree of realisation of his potentialities".

But unlike Sen, Schumacher is quite explicit on the ontology behind his view, in which the realisation of human potentialities consists of a higher "level of being" within the "scheme of the universe" (Schumacher, 1973, p. 75). Schumacher (1973, p. 75) notes that in spite of the "Aristotelian division of metaphysics into ontology and epistemology", the notions connected to ethics "really belong to metaphysics, although they are normally considered separately" (Schumacher, 1973, p. 78). Metaphysics, which for Schumacher includes then ontology, epistemology and ethics, addresses our fundamental convictions, which Schumacher (1973, 1977) sees as a centre from where other ideas emanate.

What Schumacher finds in Buddhist teaching and practice is an expression of such central ideas he finds inspiring (Leonard, 2019) but which, he argues, can also be found in other philosophies and religions. Thus Schumacher (1973, pp. 36–37) – who became a Catholic – writes, regarding the choice of Buddhism as the religion to focus on in his analysis: "The choice of Buddhism for this purpose is purely incidental; the teachings of Christianity, Islam, or Judaism could have been used just as well as those of any other of the great Eastern traditions."

Still, Schumacher makes his case with extensive reference to the Buddhist practices he finds in Burma (Leonard, 2019), where the dominant approach is the Theravada. The presence of the Theravada in Burma is connected to the different routes through which Buddhism spread from India (Cunliffe, 2015): a northern route associated with the Mahayana tradition (thus the name *Northern Buddhism*), and a southern route associated with the Theravada tradition (hence the designation *Southern Buddhism*), which is the route that reached Burma, where Schumacher became fascinated by Buddhist practices. Given the Indian origin of those practices, we may say that while Sen's references to Buddhism reflect the views of a "westernised" Indian, Schumacher's perspective is that of a "Indianised" westerner.

In spite of Schumacher's critique of the ecological consequences of the fact that "the whole world is now in a process of westernisation" (Schumacher, 1973, p. 3), Schumacher's general view is – like Sen's – one centred on human beings, who exert dominion (but not tyranny) over other species. Nevertheless, while Sen focuses on responsibility towards other species, Schumacher (1973, p. 86) emphasises also care and compassion, for example when quoting the following description of the Burmese attitude made by H. Fielding Hall (1920, p. 3): "It is because man is so much higher than the animal that he can and must observe towards animals the greatest care, feel for them the very greatest compassion, be good to them in every way he can."

Therefore, for Schumacher, like for Sen, the central aspect of the analysis is human beings, and connections to other sentient beings are conceptualised in a hierarchical view with the human species at the apex. This somewhat anthropocentric view is certainly questionable, especially when considering a structured (or relational) ontology of interconnected sentient beings, which is a central aspect of (at least particularly prominent interpretations of) Buddhist philosophy. But

Schumacher and Sen are more immediately concerned with another aspect of Buddhist philosophy, namely the alleviation of human suffering.

When resorting to Buddhism, Schumacher's emphasis is on the advantages of what may be seen as a simpler way of human life, but not necessarily an austere one. As Schumacher (1973, p. 41) writes, "Buddhism is 'The Middle way' and therefore in no way antagonistic to physical well-being." Schumacher (1973, p. 41) also writes, in line with Buddhist teaching: "It is not wealth that stands in the way of liberation but the attachment to wealth; not the enjoyment of pleasurable things but the craving for them."

The analysis of desires in Buddhism is ultimately concerned with whether an action is driven (overtly) by *tanha* or by *chanda*. Drawing on extensive knowledge of the Buddhist texts of the Pali Canon, Prayudh Payutto (1998) – who, like Schumacher (1973), also develops the notion of Buddhist economics focusing on the idea of a middle way – notes that *tanha* consists of a negative desire, such as craving, ambition, restlessness or thirst (Payutto, 1998), and is directed at pleasurable sensations (Essen, 2009). The reactions caused by *tanha* are automatic, at the level of pleasurable sensations and do not require a conscious intention, knowledge or understanding (Payutto, 1998).

The pursuit of pleasurable sensations, however, does not lead necessarily to human development and well-being. According to Payutto (1998), the negative desire or craving for pleasurable objects (*tanha*) springs ultimately from ignorance as to the true nature of the causes of well-being. Knowledge and understanding of the true causes of human well-being leads to the replacement of ignorance with wisdom, and the emergence of a positive desire towards well-being, which is termed *chanda* (Payutto, 1998).

Chanda arises through intelligent reflection, which frees human beings from the chain of ignorant reactions that constitute *tanha*, and leads to action aimed at truth and goodness, to be achieved through effort. Wisdom is reached when desires are naturally aimed at truth and goodness (Payutto, 1998), leading then to a positive desire or need for well-being (Essen, 2009). This emphasis on intelligent reflection is very much in line with Sen's (2002) definition of rationality as an ability to scrutinise goals and values. And the idea is also broadly in line with Schumacher's Buddhist economics.

Juliana Essen (2009, p. 33) makes a useful articulation between the distinction between *tanha* and *chanda* on the one hand, and Schumacher's (1973) analysis of Buddhist economics on the other hand, highlighting "right livelihood" as a way to satisfy the positive need for well-being and benefit, while overcoming negative desires that lead to suffering. Schumacher (1973, p. 38) finds the notion of right livelihood at the very basis for an idea of Buddhist Economics, noting that if "'Right Livelihood' is one of the requirements of the Buddha's Eightfold Path", then it is clear that "there must be such a thing as a Buddhist Economics."

When discussing wisdom, Schumacher (1973, pp. 62–63) focuses on a broader horizon, and argues that "there is no doubt that the whole of mankind is in mortal danger, not because we are short of scientific and technological know-how, but because we tend to use it destructively, without wisdom." Wisdom, in turn, is to be achieved within a more humanistic approach to economics for, as Schumacher (1973, p. 200) argues: "Economics, and even more so applied economics, is not an exact science; it is in fact, or ought to be, something much greater: a branch of wisdom."

6. Human labour

Schumacher (1973) focuses on an economics that allows not only for human development, but also for nonviolence towards all sentient beings. Schumacher (1973) notes that human life is part of an ecosystem of many different forms of life. This ecological concern is also behind Schumacher's (1973) advocacy of smaller units of production constituted through an intermediate technology that stands as a middle way between a pre-industrial technology and a large-scale technology.

Julie Nelson (2004) notes that Schumacher's (1973) own analysis suggests a dichotomy between small and large forms of technology, and such a dichotomous approach goes against the idea of an interdependent reality in a relational ontology, where dichotomous approaches that suggest separation should be avoided. To be sure, Schumacher (1973, pp. 202–213) also develops a "theory of large-scale organisation", and his emphasis is on an "intermediate" form of technology (Schumacher, 1973, pp. 141–157) that can be seen as a middle way between pre-industrial technology on the one hand, and modern technology on the other hand.

As Schumacher (1973, p. 203, original emphasis) puts it regarding large organisations: "The fundamental task is to achieve smallness *within* large organisation." That is, Schumacher's (1973, p. 205) goal is to reshape production processes, and the associated technologies, so that even "large organisation will consist of many semi-autonomous units". The role of such semi-autonomous units can be quite relevant not only for the functioning of the economic system, but also for assessing and managing their social and ecological impact at a local level.

The development of human capabilities, as Sen calls them, or human potentialities, as Schumacher calls them, can be seen as a main criterion for assessing social impact in such a context, and the choice of the technology to be used in productive processes. And within a relational conception where all sentient beings are interconnected, the only goal consistent with human development is generalised flourishing of all sentient beings, within the ecological limits set by planetary boundaries. But this requires grounding Schumacher's Buddhist economics more clearly in a relational ontology, which takes into account the mutual interdependence of sentient beings, as Nelson (2004) rightly argues, so as to assess more clearly the impact of productive systems on all sentient beings.

As noted above, one of the central tenets of Buddhist teaching and practice consists in trying to eliminate whatever craving or desire may be the source of human suffering. This aspect of Buddhist practice has sometimes been interpreted as a form of attenuating the negative impacts of capitalism on human suffering while preserving a capitalist logic, by endowing human beings with a therapeutic method for overcoming the negative desires brought by capitalism (Møllgaard, 2008; Žižek, 2001).

Thus, Slavoj Žižek (2001) argues that Buddhist teachings and forms of meditation play an important function in contemporary capitalism (not least given the capitalist expansion to Asia and, conversely, the western appropriation of Buddhist meditation techniques), since they help accepting social reality as it is, and enduring the suffering caused by the labour process in capitalism (without trying to change capitalism into a system more compatible with human well-being).

In this interpretation, the adoption of Buddhist practices such as meditation and mindfulness in the workplace function essentially as palliatives for suffering, without having any transformative potential regarding changes in the economy and society. Rather, the point is to contribute to the existence of a workforce able to withstand capitalist exploitation, serving the needs of capitalist accumulation.

We find a similar critique of the approach to human development inspired by Sen's writings. Paul Cammack (2017, p. 4), in particular, argues that "the attempt of the United Nations Development Programme (UNDP) to sustain a broader conception of human development than that enabled by a regime of global competitiveness in product and labour markets has been abandoned." Cammack (2017) argues that while "Human Development Reports (HDR) since 1990 have championed a conception of human development that goes beyond the notion of human beings as 'instruments for commodity production' to encompass broader notions of the good or flourishing life" (Cammack, 2017, p. 3), the more recent emphasis (for example in the 2009 HDR report focused on mobility and development, setting a trend that starts to be accentuated especially after 2013) has been on providing "a global regime for labour mobility across borders" as "the logic of predicted labour supply

needs overrode the 'concept of human development as the expansion of people's freedoms to live their lives as they choose'" (Cammack, 2017, p. 10).

That is, humanistic approaches to sustainability and development can easily be interpreted or reframed as mere palliatives that help enduring or even legitimising capitalist accumulation, while focusing on expanding capabilities essentially as a means to enhance worker performance, with little concern for human well-being (much less the well-being of all sentient beings).

A possible way to address this critique is through Sen's conceptualisation of capabilities as a form of power, which can be seen within a relational ontology structured through power relations (Lawson, 2019; Martins, 2006; Smith and Seward, 2009), as suggested above. Focusing on the structures of social relations that generate capabilities, understood as a form of power, can provide an angle of analysis into how power relations in the productive system can be conducive either to flourishing, or to exploitation.

But Sen does not explain how the notion of capability as a form of power can be applied to the study of social relations in the productive system. Schumacher, in contrast, has placed productive processes at the core of his analysis, an analysis which can help overcoming instrumental uses of the notions of human capabilities (Cammack, 2017), or of the western appropriation of Buddhist mediation techniques as a palliative for the suffering caused by human labour in the capitalist process (ŽiŽek, 2001). To see how this can be done, it is necessary to explain in more detail now Schumacher's critique of modern economics, which he criticises for giving priority to consumption, while noting how priority should be given to human well-being, rather than to the production of goods and services to be consumed.

7. Modern economics *vs* Buddhist economics

Schumacher (1973, p. 2) starts his book *Small is Beautiful* with the following sentence: "One of the most fateful errors of our age is the belief that 'the problem of production' has been solved." Schumacher (1973, p. 39) starts thus his analysis with the study of production, arguing that "[t]here is universal agreement that a fundamental source of wealth is human labour." He then contrasts what he calls modern economics, and its approach to labour, with the Buddhist approach.

By modern economics Schumacher (1973) means (as it is usually the case, and as one can infer by reading Schumacher's critique of it) the tradition of economic theory that developed after the marginalist revolution undertaken in the 1870s by Carl Menger, Stanley Jevons and Léon Walras. Marginalist economics, and its mathematical techniques, subsequently developed within the twentieth century into what is usually termed mainstream economics (Lawson, 2003), and is also often designated as modern economics (Dasgupta, 2002).

Schumacher is also critical of the way in which central concepts of classical political economy, like Smith's (1776) analysis of the division of labour, are employed in modern mainstream economics. Thus, Schumacher (1973, p. 39) describes Smith's analysis of the division of labour as "not a matter of ordinary specialisation, which mankind has practiced from time immemorial, but of dividing up every complete process of production into minute parts, so that the final product can be produced at great speed without anyone having had to contribute more than a totally insignificant and, in most cases, unskilled movement of his limbs."

To be sure, Smith (1776) himself is quite critical of the effects of such an extreme division of labour on human well-being. Those aspects of Smith's work tend to be forgotten as Smith became increasingly portrayed as a forerunner of modern mainstream economics. Sen (1987) has done much to criticise this caricature of Smith, following other contributions that also show the radical difference between the analytical framework of classical economic theory on the one hand, and modern economic theory on the other hand (Sraffa, 1960; Meek, 1961).

The modern approach, according to Schumacher, consists in seeing labour as a necessary evil, which brings disutility, while trying to get rid of it by making it sufficiently simple so that it can be performed at great speed, with minimum effort and skill, and ideally by a machine, thus avoiding labour altogether through automation. In the Buddhist approach as portrayed by Schumacher, in contrast, the goal is to organise labour in a way that enables the development of human faculties (quite in line with Sen's idea of expanding human capabilities), while also engaging in social interaction so as to overcome selfishness, and producing the goods and services that are necessary for human existence. It is clear that Schumacher's (1973) goal is not to accept the capitalist labour process as it is and simply learn to endure the suffering it causes; rather, the goal is to transform the labour process.

Sen started his academic career with a doctorate at Cambridge University on the choice of techniques (Sen, 1962), a topic which was heavily debated also in the Cambridge controversies in the theory of capital (Cohen and Harcourt, 2003), brought to the public debate by Joan Robinson (1953–4), who was Sen's supervisor at Cambridge, UK. In this context, Sraffa (1960), another important mentor of Sen at Cambridge, advanced a multidimensional approach to the study of switching and reswitching between techniques of production.

But as Schumacher (1973) argues, a central aspect to take into account when choosing amongst competing techniques, and technological systems in general, is their impact in human well-being and ecosystems. This provides a broader view of production, and one which is also more in line with Sen's (1978) more descriptive approach to the production process, and its impact on well-being (Martins, 2020).

The goal is to achieve not only a more humane approach to economics, but also one that can be sustainable from an ecological perspective. Schumacher (1973, p. 44) writes: "Modern economics does not distinguish between renewable and non-renewable materials, as its very method is to equalise and quantify everything by means of a money price." Schumacher (1973, p. 44) then criticises this approach from the standpoint of Buddhist economics, and notes: "From a Buddhist point of view, of course, this will not do; the essential difference between non-renewable fuels like coal and oil on the one hand and renewable fuels like wood and water-power on the other cannot be simply overlooked."

The methods employed in modern mainstream economics can be more readily seen in the attempt to insert the biosphere within economic activity, by attributing monetary valuation to natural resources, ecosystem services, and the like (Dasgupta, 2021). The end result is not so much a conception where economic activity is seen as a component of the biosphere, but rather a case where the biosphere, and its various ecosystems, is subsumed within an economic model of human activity driven by consumption and capital accumulation.

In a similar vein to Schumacher, Peter Söderbaum (2019, p. 22) criticises "one-dimensional monetary analysis", noting how "the idea of putting prices on all kinds of non-monetary impacts to reduce them to monetary impacts has its limits", since, as he notes: "Reducing all impacts to their alleged monetary values will often make non-monetary impacts less visible for decision-makers and others concerned." Söderbaum (2021, p. 5) also argues that "various non-monetary dimensions should be described and considered in their own terms and 'monetary reductionism' avoided", within a "multidimensional analysis".

The more visible outcome of the tendency to "equalise and quantify everything by means of a money price" (Schumacher, 1973, p. 44) is the emphasis on unidimensional measures such as Gross Domestic Product (GDP) *per capita*, the increase in which is taken to mean economic growth. But even growth cannot be adequately conceptualised through a unidimensional metric, which suggests a proportional change of various components. Economic change is typically a multidimensional phenomenon, which consists in structural change characterised by changes in proportions, as Luigi Pasinetti (1993) shows drawing on Sraffa's (1960) multidimensional approach, and his critique of unidimensional conceptualisations of capital.

The impact of structural change on social achievement and planetary

boundaries can only be assessed adequately in a multidimensional way, taking into account causal interactions within a multidimensional structure, rather than through unidimensional measures of growth and capital. The unidimensional monetary valuation is, in and of itself, already an imposition of a specific form of valuation of a multidimensional reality, as Joan Robinson (1953–4) noted when, together with Sraffa (1960), criticising the unidimensional notion of capital. In so doing, Joan Robinson (1980) notes how her critique echoes Thorstein Veblen's (1908) earlier critique of the unidimensional approach to capital (Cohen and Harcourt, 2003), and the need of engaging in a conscious exercise of valuation of a multidimensional reality (Martins, 2013).

The very notion of natural capital is a problematic one, for seeing Nature as capital brings a tendency to take Nature essentially as an instrument of production, while neglecting its intrinsic value. This is a similar problem to the one encountered with such notions as human capital, which portrays human beings as instruments of production, neglecting their intrinsic value (Sen, 1999). When Schumacher (1973, p. 4) refers to "natural capital" his aim is essentially to make an analogy with notions used in economics such as capital and income, to convey the idea that Nature is more akin to a stock of capital that is irreplaceable, rather than to a flow of income which is renewed every year. Schumacher's (1973, p. 4) point when using the metaphor "natural capital" was not the incorporation of Nature into economic models of valuation (Dasgupta, 2021).

The insertion of the biosphere within economic mathematical models where valuation is undertaken in subjective terms – while assuming that market exchange (or some process that mimics it) can be used as a solution to ecological problems – is thus deeply problematic (Schumacher, 1973). It ultimately springs from a conception where the interconnections between various sentient beings must be subordinated to the human desires that drive subjective utility revealed in market exchange, rather than by an objective and reasoned analysis of the causal interdependencies that influence well-being and development.

Using the Buddhist terms employed by Payutto (1998), we may say that modern economics construes a worldview driven by what was termed above as *tanha* (ignorance, that is, unscrutinised subjective desires taken as exogenous data), rather than by what was termed above as *chanda* (intelligent reflection on goals, values and well-being, in line with Sen's conception of rationality). An alternative approach requires a multidimensional approach to valuation, such as the one we find in Sen's analysis, and a broader vision of how production processes could be organised, such as the one we find in Schumacher.

8. Concluding remarks

The calculation of the monetary values in modern mainstream economics draws on a theory where value depends ultimately upon subjective utility, and even the biophysical processes implied in production are assessed through a valuational metric based on subjective utility. But the contemporary ecological problems require an approach to valuation that captures social achievement, and human impact in the biosphere, in multidimensional terms.

Sen's contribution provides important clarifications on valuing social achievement in multidimensional terms, but has not delivered an integrated view of sustainability. In fact, even regarding human development, Sen's contribution has been increasingly used as a basis for the development of disparate measures and indicators of well-being, without much analysis of the causal interconnections between the various components considered. Thus, one of the central tenets of more humanistic approaches to development (including Sen's) consists of measuring final goals of development at the expense of a more detailed analysis of the socio-economic structure of productive systems (Chang, 2010; Martins, 2020) and their social and ecological impact.

It is here that the contributions of Schumacher regarding the organisation of the production process, and the appropriate use of technology, become important. Schumacher provides an integrated view of production, focusing both on its global nature and local impacts, while locating such an analysis within a structured (or relational) ontology that takes into account social achievement and ecological boundaries.

Part of the reason why Schumacher (1973) is so antagonistic to modern economics is because he is focusing on mainstream economics as developed after the marginalist revolution undertaken in the 1870s by Menger, Jevons and Walras, drawing on a subjectivist theory of value that does not distinguish different kinds of desire. But once we focus on the conception brought by Sen's revival of classical political economy (Putnam and Walsh, 2012), we find a basis for distinguishing more objectively between various kinds of desires, and a more objective basis for a theory of value too, within a multidimensional conception.

However, to avoid ending up with disjoint segments of what should be a coherent analysis, multidimensional conceptions must be understood in terms of a structured (or relational) ontology, as noted above. We can find the latter explicitly defended by Schumacher, and implicit also in Sen's approach. But we find a tendency, both in Schumacher and Sen, to see human beings at a somewhat higher plane (within Schumacher's analysis of levels of being) or as somehow more powerful (within Sen's analysis of responsibility and obligations) than other sentient beings.

However, if human beings and other sentient beings are deeply interconnected, and indeed mutually co-constituted by their (intra and inter) connections, the idea of a dichotomy, or even a very sharp asymmetry, between human beings and other sentient beings, is perhaps one of the first presuppositions to be questioned when further advancing a multidimensional conception of sustainability and development. Finally, it must be noted that Schumacher and Sen provide, of course, not so much a ready-made theory to be applied, but rather a philosophy and methodology that can help further developing a multidimensional perspective to sustainability and development, hopefully in a more articulated way than it has been hitherto.

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