The ‘ugliness’ of economic efficiency: technology, species-being, and global poverty

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Abstract
In this paper, I argue that contemporary philosophical approaches to the problem of global poverty overlook a critical issue in terms of causality: the actual labor in which the poorest people of the world engage. More specifically, I challenge the current economic system’s maniacal worship of economic efficiency in production and the way in which this goal is pursued through the implementation of labor-saving technology. Although it is considered economically efficient to save as much as possible on labor costs by using new technologies, I argue (with reference to Karl Marx's concept of our human nature as ‘species-being’) that we are not being efficient on human terms. Instead, we are ‘wasting’ human beings by forcing them into poverty and denying them the opportunity to labor meaningfully. Given such results, I argue that we must revisit the role that economic efficiency and labor-saving technology should have in the productive process. To do so, I incorporate the work of economist and philosopher E.F. Schumacher and his focus on providing ‘good work’ through intermediate technology. This is a level of technology that is not wasteful in production but requires an appropriate amount of actual human labor. By altering our conception of efficiency to one that is ‘human’ and utilizing technology only insofar as it enhances the character of labor, there will be more opportunities for the poorest people of the world to labor in a way that not only helps them avoid poverty but also allows them to feel humanly productive.

Keywords: global poverty; efficiency; Marx; E.F. Schumacher; labor; intermediate technology

In his 2006 book Why Social Justice Matters, philosopher Brian Barry scathingly admonishes what he sees as the obtuse perspectives of political philosophers:

Perhaps because academics enjoy a good deal of autonomy and generally find their jobs enjoyable on balance, political philosophers are amazingly oblivious to the fact that the great majority of paid employment is a form of servitude and that those who undertake it are driven into it by sheer economic necessity.¹

While his statement does not necessarily indict every person within the discipline, I argue that such obliviousness does persist in contemporary approaches to global poverty.
poverty. In trying to combat this issue, some of the most famous liberal political philosophers focus on many facets of the problem, but without paying much (if any) attention to the issue of labor. Peter Singer, for instance, argues passionately for a moral obligation on the part of the well-off citizens of the world to provide monetary philanthropic aid to the global poor. Singer’s main concern is poor people’s lack of income, and thus he seeks to ground a duty for those of us with excess income to send it to the poor, rather than spending it on ourselves. He argues that affluent individuals will sacrifice little if they donate to poverty relief agencies, but the influx of income (via philanthropy) will greatly benefit the poor. In putting this argument forth, he spends little time discussing the precise causes of poverty or the possibility that a strategy focused solely on philanthropy may not be able to effectively combat poverty.

Another well-known contemporary political philosopher working in this area is Thomas Pogge, who argues that Westerners have a moral obligation to stop causing the impoverishment of people around the world through the imposition of one-sided global economic structures (Western subsidies and protectionist policies). Pogge contends that if individuals recognize the harm that they are complicit in causing, they will lobby Western governments and economic institutions to alter the economic playing field to provide truly free trade. Such free trade will allow the poor of the world to compete in the global marketplace and thereby pull themselves out of misery. On Pogge’s understanding of the realities of global poverty, such conditions persist because of unfair international economic rules; if individual Westerners recognize their complicity in this injustice and act to try to change these rules, conditions of poverty can be ameliorated.

I do not intend to argue in this paper that approaches to poverty like those of Singer and Pogge are wholly inappropriate or totally indefensible on philosophical grounds. Rather, I argue that by focusing solely on material deprivation such approaches overlook a critical issue in terms of the causes of global poverty: the actual labor in which the poorest classes of the world engage (or do not engage, in the case of the unemployed). While poverty at a basic level does involve material deprivation (not having secure access to basic goods), the poverty that the worst-off in developing countries experience goes far beyond a lack of goods; their poverty is experienced as a loss of humanity and an inability to feel that they are somehow a productive human being.

As I argue below, given the centrality of labor to a person’s humanity, we must therefore take the time to examine the quality of the labor that the poor engage in and the way in which labor as a whole is regarded in our current economic system. More specifically, I scrutinize an aspect of our global economic structures that is overlooked in contemporary discourse, one which exerts a serious coercive force on the poor of the world: the current economic system’s maniacal worship of economic efficiency and the way in which this goal is pursued through the implementation of labor-saving technology.

Although it is considered economically efficient to save as much as possible on labor costs (often by implementing new technologies), I argue (with reference to Karl Marx’s
concept of our human nature as ‘species-being’) that we are not being efficient on human terms. Instead, we are ‘wasting’ human beings by forcing them into poverty and denying them the opportunity to labor meaningfully. Workers in poor countries are forced into lives where they must suffer crushing poverty, while their only chance for escape lies in dehumanizing work, hardly worthy of being called human labor.

Labor-saving technology has played a critical role in this quest for maximal economic efficiency, but although it has resulted in larger profit margins and faster production of goods its implementation has also made the lives of many human beings worse. Given such results, I argue we must revisit the role that economic efficiency and labor-saving technology should have in the productive process. To do so, I incorporate the work of economist and philosopher E.F. Schumacher and his focus on providing ‘good work’ through what he calls intermediate technology. This is a level of technology that is not wasteful of raw materials in production, but requires an appropriate amount of actual human labor. By altering our conception of efficiency to one that is ‘human’ rather than coercive and utilizing technology only insofar as it enhances the character of actual labor, there will be more opportunities for the poorest people of the world to labor in a way that not only helps them avoid poverty, but also allows them to feel humanly productive.

LABOR AND HUMAN NATURE

First, I want to establish how important labor is for humans. To do this, I utilize Karl Marx’s early writings as a lens through which we can view labor’s connection to our humanity. According to Marx, labor is a key aspect of our human essence, rather than merely being instrumentally important for human life. His term for our shared human essence is species-being. This conception has Aristotelian overtones, wherein a being’s essence or nature is its potential, its ideal form. This ideal is a conception of the positive possibilities inherent in us, not only as individual beings, but as interdependent members of our species. Hence Marx’s species-being evokes an image of humans as members of a species that actively respond to changes in their environment to produce objects that satisfy their needs:

Man is a species-being not only in that he practically and theoretically makes his own species as well as that of other things his object, but also—and this is only another expression for the same thing—in that as present and living species he considers himself to be a universal and consequently free being.

This conception of species-being is meant to distinguish us from other animal species. As human beings, we are able to conceive of ourselves as individual beings that can identify with and empathize with any other member of our species and with our species as a whole (hence we are ‘universal’ beings according to Marx).

Another element of species-being that distinguishes us from animals involves our freedom and creativity in production. Drawing on his Hegel-inflected historical materialism, Marx posits human beings as productive creatures that adapt consciously and creatively to changes in their environment: ‘The practical creation of an
objective world, the treatment of inorganic nature, is proof that man is a conscious species-being'. This is the basic character of our species: laboring to create objects to meet our human needs.

Of course animals also build shelters and obtain food in order to survive, but there is an important distinction between humans and animals: whereas animals produce only because of immediate physical need, humans by nature produce in another way. Instead of always producing for our immediate needs, labor (at least potentially) functions at a higher level for human beings, beyond just satisfying basic survival needs. Labor can transform us into more fully human creatures; it is, as Marx has it, our ‘species-character’:

Labor, life activity, and productive life appear to man at first only as a means to satisfy a need, the need to maintain physical existence. Productive life, however, is species-life. It is life begetting life. In the mode of life activity lies the entire character of a species, its species-character; and free conscious activity is the species-character of man.

In the act of working we not only produce objects that satisfy our needs, but we can also develop ourselves as individual human beings and members of our species. Furthermore, such labor has a distinctly human quality to it; human beings perform such labor in a way that goes beyond merely physical, animalistic workings of the body.

For Marx, truly human labor involves the imaginative and creative faculties of the human mind, in conjunction with the physical and manual processes. Erich Fromm nicely ties together this foundational view of labor and our development as species-being:

Labor is the self-expression of man, an expression of his individual physical and mental powers. In this process of genuine activity man develops himself, becomes himself; work is not only a means to an end—the product—but an end in itself, the meaningful expression of human energy: hence work is enjoyable.

In this way, productive labor is not a necessary evil of life; rather it is the way in which human beings interact and shape their world and in turn shape their humanity. The fully human person is actively shaping his or her world and consciousness by laboring and producing objects that satisfy human needs. For a person to be fully human, he or she must labor and feel that he or she is in some way a productive being, engaging in stimulating sensuous activity that is worthy of human time and effort. I refer to this kind of sensuous productive activity as meaningful labor, insofar as it is the way in which people assert their humanity, exercise their freedom, interrelate with other people, and develop themselves as more fully human.

Yet if we pause for a moment, we can see that the Marxian description of labor sounds nothing like the activity that much of the world engages in when they ‘work’. Indeed the poorest of the world spend their time toiling in ways that few would call meaningful labor. What they are forced to engage in is, according to Marx, looks instead like this:
The worker does not affirm himself in his work but denies himself, feels miserable and unhappy, develops no free physical and mental energy but mortifies his flesh and ruins his mind.  

By laboring in this way, we are not developing our potentiality/essence as species-being. Instead, we are passively transformed, rather than being a creative force that transforms raw materials into objects that satisfy human needs. Such labor undermines our abilities to develop ourselves as species-being.

This is precisely the kind of labor that many people in the world, especially the poorest among us, engage in when they work. As Brian Barry’s quote in the introduction evidences, such work is not sought out by the poor because it helps develop their species-being, but rather because they have no other options if they want to survive. It is important to note that Marx’s term for this kind of labor is alienated labor, wherein the capitalist mode of production drives a wedge between workers and their products, their labor power, themselves, and their species.

I want to move in a slightly different direction, however; my argument is not directly based on the overarching critique of capitalism that Marx offers. The ethical problem is not that the sweatshop worker or the subsistence farmer is ‘alienated’ as a result of capitalist modes of production or that their labor power is exploited by a particular capitalist, but rather that they are coerced by the guiding value(s) of our economic system into labor that is meaningless, instead of meaningful. Such labor is meaningless because it is devoid of any ability to enhance the laborer’s life and species-being. He or she does not become more fully human by engaging in it, but rather becomes less human; his or her potential is thus wasted away.

And yet, in some sense, these are the ‘lucky’ people of the world; they are able to labor. Those unable to find any employment at all (estimated at around 30 percent in developing countries) suffer the humiliation and dehumanization of having no productive outlet. Beyond a simple lack of money, their personal identity is eviscerated. As Nobel-laureate economist and philosopher Amartya Sen observes:

> There is plenty of evidence that unemployment has many far-reaching effects other than loss of income, including psychological harm, loss of work motivation, skill and self-confidence, increase in ailments and morbidity (and even mortality rates), disruption of family relations and social life, a hardening of social exclusion and accentuation of racial tensions and gender asymmetries.

**TECHNOLOGY, EFFICIENCY, AND POVERTY**

Why are meaningless labor and unemployment so prevalent today in the poorest parts of the world? I argue that one major causal factor, neglected in current approaches to poverty, is the unquestioned assumption that labor is merely a ‘factor of production’, more or less on a par with land and capital; as Marx would have it, labor has become ‘not the satisfaction of a need but only a means to satisfy other needs’.

This minimizing view of labor has begotten two critical aspects of our current economic system that are in themselves a significant driving force in the continued
impoverishment of millions of people around the world: economic efficiency and labor-saving technology. In terms of the former, our economic system is not set up in order to produce meaningful labor for all, but is instead set up to be economically efficient: costs in the productive process should be minimized to increase profits. In order to produce maximal economic efficiency, society seeks to create and implement new forms of labor-saving technology. As a result, labor itself has thus fallen out of favor as an integral part of productive life.

I return to the issue of economic efficiency below, but first I want to examine more closely the often-unquestioned value of labor-saving technology. In the interest of trying to spend less time laboring (and thus more time in leisure activities), humans (here I am speaking generally, in terms of society) are constantly trying to invent and utilize labor-saving technology. Such innovations allow goods to be able to be produced faster and with less direct human labor. This in and of itself is not especially problematic; Marx himself saw leisure time as beneficial. In principle, increased utilization of technology in the productive process means less labor is required to produce a product, and by implication workers could enjoy the same standards of living as before, while spending less time working. Thus it would seem that any type of coercion of the poor by such an economic system would be a good thing: workers would be ‘forced’ to spend less time toiling.

Yet nothing of the sort has come to pass; in fact, the opposite is true. What has resulted from the rampant utilization of labor-saving technology is that many workers have lost their jobs, or that the labor they engage in has been reduced to mere machine manipulation. Those workers who are able to retain employment must work at a greater pace to keep their jobs (and wages). Now it is true that in the past these results did not necessarily occur: some new technologies have resulted in lost labor in one sector, while creating new jobs in others. Take for example the automobile: While its innovation put people out of work in the horse and buggy industry, the number of jobs in new automobile factories, repair shops, highway construction, and roadside businesses far exceeded any losses. However, the proliferation of computer technologies in recent years, for example, appears to have had the opposite effect: factory workers, service representatives, and shop owners have all been pushed out because their labor can be ‘saved’ through technology. In addition, it is not at all clear that there are new areas of employment available, especially when the new technologies require a lot less human labor to operate and maintain. Particularly in the case of agriculture in developing countries, a context to which I will return below, labor-saving technology has not created new productive outlets in other sectors. Those whose human labor is not needed to farm because of the use of new technologies do not go into new service jobs locally, but rather migrate in unprecedented levels to cities (India is a prime example here).

So if labor-saving technology is not helping people to live more in line with their human essence as species-being and is instead leading to meaningless labor, why do we utilize it to such a level? To answer this question, it is worth taking a step back and critically assessing technology through the lens of what philosopher Andrew Feenberg calls a ‘critical theory of technology’. In this view, technology that is adopted
within a society comes within the context of the social and political structures under which that society operates. Accordingly, technology is not ‘value neutral’, but instead echoes the values of the specific societal systems. Feenberg argues that ‘the values of a specific social system and the interests of its ruling classes are installed in the very design of rational procedures and machines even before these are assigned specific goals’. Thus technology is not a ‘rational destiny’ that societies move inexorably towards, but rather a scene of struggle between different possibilities and values.

Of course technology isn’t solely determined or adopted because of how well it fits into the logic of the dominant political/social systems; it has to work. Its utilization must provide some functionality that is otherwise lacking. Even so, Feenberg is correct in observing the following:

But it is not merely because a device works that it is chosen for development over many other equally coherent configurations of technical elements. Were that the case, then by analogy one could also explain the choice of individual sentences in speech by their grammatical coherence. The social character of technology lies not in the logic of its inner workings, but in the relation of that logic to a social context.

Utilizing Feenberg’s insights, we can see that our current economic system contains within it a logic that links the technology utilized with a clear social context and goals. More specifically, the argument in favor of the adoption of new labor-saving technologies contains a key unquestioned assumption: that in most cases, a healthy productive enterprise wants to minimize the amount of labor spent to produce commodities, because doing so is economically efficient.

When most modern economists and business people talk of efficiency, they are concerned with input costs in the productive process and producing the greatest amount of output/profit with as little waste as possible. These costs refer not only to raw materials and machinery, but also to labor. Labor is a cost in the productive equation, and it is to be minimized in situations where doing so lowers overall costs. Similarly, using excess labor that is not technically necessary to produce a product is considered wasteful.

Economic efficiency is achieved in two ways: first, by developing and implementing new technologies that are cheaper over time than the workers whose labor they replace, which thus renders these laborers unemployed. Secondly, even when other jobs are available for the displaced workers, they often involve less pay and less skill. While labor time may end up being saved, the quality of the labor involved is sacrificed. Skilled labor has become lost in the fervor of ‘deskilling’, where producers want to hire those who lack particular trade skills, as they can be paid less and replaced easily. The new work engages the creative human faculties even less than the work it replaces.

Producers and corporations tend to prize economic efficiency above all else and are willing to sacrifice almost anything, including labor, in order to produce goods at less cost. The driving force behind this reduction to efficiency is an interest in
returning the highest rate of profit. When calculating future expenditures on labor in terms of hiring/keeping on workers, raising pay, or decreasing working hours, the vetting process always boils down to the question, how will this affect our rate of return on investment? If my company can make something more cheaply, the current economic organizing principle tells me that I should do so (and perhaps must) because of the cost reduction and profit growth. Any firm that employs less-than-maximally-productive technology is considered guilty of the ultimate economic sin: inefficiency.

Such a one-dimensional focus on economic efficiency and the technology implemented to produce it are very much informed by the social and political mores of our current economic structures, rather than in any way being 'value neutral'. With the structured logic of our current system, the interest of profit maximization is the driving force behind the vast implementation of labor-saving technology (thus such technology is always a good thing, provided that it is cost-effective). Put more bluntly, to be efficient you need to minimize labor costs; this requirement puts some people out of work if labor-saving technology can do the same job for less, but employing people to do work that machines can do more cheaply is not something to be considered.23

This maniacal worship of economic efficiency has turned it into an end goal in itself, replacing any concern for how workers are affected. It is this understanding of efficiency (and the fact that it is so prevalent) that is problematic, particularly for the global poor. It is not at all obvious that the gains from economic efficiency (cheaper items for consumption) are worth the human losses occasioned by unemployment and deskilling.

Take the context of agriculture, where widespread implementation of labor-saving technology has deleterious effects on the lives of the poor in the global south, in distinct ways: first, Western mass production technologies and a flood of cheap imported goods (often subsidized by Western governments) end up undercutting the prices of goods produced by local craftspeople and farmers. As a result, people in poor countries are unable to compete with large Western producers, and thus they cannot subsist through small farming. Instead, they drift to urban areas, many of them adding to the ranks of jobless slum dwellers. (Such growth is at an unprecedented level in developing countries in Africa and Asia.)24 Those people who are able to find jobs in urban areas are often employed in sweatshops, which utilize deskilled, meaningless labor. Here then we can see the coercive element coming from our organizing economic principle of economic efficiency and its results: the poorest people of the world are forced into navigating the waters between a modern-day Scylla and Charybdis: either they waste themselves engaging in deeply alienated labor, or they allow themselves to waste away because they are unable to scratch out a living through small-scale agriculture.

So what? Should we detach our society from modern technology and discard possible innovation in the productive process? Should we spend money on ‘unnecessary’ human labor, no matter what the cost to the bottom line? No, not quite. I am not advocating a protest against technology as a whole (à la Luddites—a position
discredited by history), nor am I claiming that producers should be willing to accept large monetary losses in order to keep people employed. Business endeavors must be able to turn a profit to continue operating; profit in and of itself is not the problem. I also want to reiterate that I am not adopting Marx’s critique of capitalism as a whole. Rather than necessarily changing our entire economic system, I am arguing against the system’s guiding principle of economic organization, economic efficiency, because it fails to produce for us (as individuals and as a group) the end results that we want. Efficiency *qua* efficiency is not necessarily a problem, but rather is an important conceptual principle of economic organization; we want to be able to achieve some end in production (like producing objects to meet human needs) with a minimal waste of resources and thus a maximal output.

Drawing upon an earlier part of my argument, if we are to develop ourselves as fully human beings along the lines of Marx’s concept of species-being (as our human essence), we have one need that is of vital importance to us: a need for a productive outlet, a need to labor meaningfully. If we then look closely at the concept of economic efficiency with respect to actual human persons, we see that it contains a contradiction: In the interests of trying to be efficient in one sense (the economic one), we are in fact producing a great deal of waste. What we are wasting is the humanity and productive capacities of fully human beings that could be developed through meaningful labor. A system that creates such waste is thus organized in ways that deny individuals and our species from developing in terms of species-being. (In the case of global poverty, which I consider here, this system is denying a large swath of the global population this opportunity.) It therefore becomes clear that utilizing labor-saving technology is not always efficient; in fact, it is *prima facie* inefficient.

Instead of this state of affairs, I propose an alternative principle of efficiency, one I will call ‘species-being (or human) efficiency’. This is an understanding of efficiency that has at its base a concern for human well-being. Species-being efficiency aims to minimize the wasting of human beings by denying them meaningful labor. The key practical implication of species-being efficiency in relation to global poverty is that we should focus on providing *all* people with access to meaningful labor. Note however that merely providing menial employment to the involuntarily unemployed will only erase deficits in terms of the quantity of available labor, but it does little for their humanity if the labor is not in some way meaningful. To paraphrase an example of John Maynard Keynes, we needn’t pay people to dig holes in a field and then pay other people to come and fill in those holes. As we shall see, a focus on meaningful labor may mean striving to employ the unemployed, but it also points to a higher goal, wherein we must change the character of the labor involved.

More specifically, we must effect changes in the guiding philosophical principle of our economic organization, so that labor can be viewed in a much more positive light within society. Currently, all that is seen to have value in the productive equation is money, and thus the concern is for overhead costs, labor time, and wages. Instead of this simplistic view, we must change our organizing principle (and, in turn, our institutions) to reflect the importance of species-being, as well as my Marxian-inflected claim that labor itself is something of value for human beings (both for its
own sake and instrumentally); it is more than just a ‘factor of production’. Adopting species-being efficiency as an economic goal not only helps solve the problem of meaningless labor, but also suggests a solution to the structural problems of global poverty. Keeping Feenberg’s critical theory in mind, this alteration of the structures of labor-saving technology is admittedly not value neutral; it is influenced by a concern for species-being and labor’s value for human life, and thus its logical justification differs from a concern for monetary cost efficiency.

How do we best approach changing the organizing principle of our economic system? Given the level to which labor-saving technology has coerced many of the poor into misery, we must revisit the role that it should have in the productive process. Of course not adopting some labor-saving technology will be decried as sinfully inefficient in terms of the logic of the current economic system. However, if we are able to change the context and logic of our system, the concept of efficiency and the value of labor changes as well, from economic efficiency to species-being efficiency.

E.F. SCHUMACHER AND INTERMEDIATE TECHNOLOGY

In order to provide a critical framework that points us in the direction of species-being efficiency, I appeal to the two seminal works of economist and philosopher E.F. Schumacher: Small Is Beautiful and Good Work. Today, some 40 years after the initial publication of Small Is Beautiful, Schumacher’s work has seen significant resurgence: Many economists, philosophers, and environmentalists alike view his work as particularly relevant to antipoverty initiatives today.

E.F. Schumacher was born in Bonn, Germany, in 1911 and was educated in Oxford and New York before returning to Germany in 1934. He fled for England soon after, due to the rise of the Nazi party. There, as a result of increasing anti-German sentiment, he was relegated to the country to work as a farm laborer, even being interred in a detention camp for a few months. These experiences greatly influenced his intellectual development and his sense of the importance of labor. During his time on the farm, he began to write widely on economic issues, which brought him to the attention of John Maynard Keynes. Keynes lobbied the British government to release Schumacher from his labor and involved him in economic discussions regarding British economic policy.

In the 1950s, Schumacher spent time as an economic consultant (through the United Nations) in Burma and then in India. As a result he was moved not only by the Buddhist rejection of materialism, but also by the abject poverty that he witnessed. He came to believe that a root cause of such rampant misery was the impact of Western levels of technology and industry on smaller, traditionally self-sufficient cultures.

Drawing upon Buddhist and Christian worldviews, Schumacher echoes Marx’s claim about the central importance of labor for human beings. He takes the function of work to be threefold: ‘To give a man a chance to utilize and develop his faculties; to enable him to overcome his ego-centeredness by joining with other people in a
common task; and to bring forth the goods and services needed for a becoming
existence’. While labor is no doubt necessary for our continued survival, mean-
ingful work for individuals involves satisfying a deeper need to develop ourselves and
create relationships with other human beings.

He also connects work to a conception of human nature that highlights human
potential: ‘How does work relate to the end and purpose of man’s being? It has been
recognized . . . that every human being born into this world has to work not merely to
keep himself alive but to strive towards perfection’. While he does not explicitly
utilize nor endorse Marx’s argument (in terms of the overcoming of capitalism by
communism or the necessity of the abolition of the division of labor), there is a clear
link present between Marx and Schumacher: In order to develop ourselves into fully
human beings, people must be able to labor in some way that develops their creative
faculties.

However, as Schumacher indicates, our current economic climate views labor in an
altogether different way: ‘The basic aim of modern industrialism is not to make work
satisfying but to raise productivity; its proudest achievement is labor saving, whereby
labor is stamped with the mark of undesirability’. It is the promulgation of
this minimizing view of labor that Schumacher sees as one of the biggest factors in
the rampant utilization of labor-saving technology. It is important to note that he
does not damn technology in and of itself; rather, the problem is with the
unquestioning implementation of technology at all costs. The societal mantra has
become, ‘Whatever becomes technologically possible—within certain economic
limits—must be done. Society must adapt itself to it. The question whether or not
it does any good is ruled out’.

In the productive process, the desire to minimize labor has developed with such
zeal that no one pauses to consider the possibility that some technological devel-
opment may make people worse off, rather than better; even posing such a question
brands one as a Luddite, against the ‘progress’ of society:

How could we explain the almost universal refusal on the part of the rulers of the
rich societies . . . to work towards the humanization of work? It is only necessary to
assert that something would reduce the ‘standard of living’ and every debate is
instantly closed. That soul-destroying, meaningless, monotonous, moronic work is
an insult to human nature which must necessarily and inevitably produce either
escapism or aggression, and that no amount of ‘bread and circuses’ can compensate
for the damage done.

Rather than critically examining the effects of a given technological innovation on
the laborers it will affect, technology is unquestioningly embraced by producers, so
long as it has a positive effect on the bottom line, which our economic efficiency–
craving and labor-minimizing economists always see as a good thing. However,
this positive view holds, ‘irrespective of what has grown and who, if anyone, has
benefitted. The idea that there could be pathological growth, unhealthy growth,
disruptive or destructive growth, is . . . a perverse idea’. As I am arguing here, in
agreement with Schumacher, the growth that has occurred as a result of labor-saving
Technology is often unhealthy, disruptive, and destructive. What it has destroyed is the importance of labor for human beings.

Something doesn’t fit; a once-round peg has become square and is being crammed into a round hole, while the hole is merely being whittled away to try to make the fit palatable. Schumacher offers two possibilities: our technology is ‘brilliant’ yet our economic system is otherwise poorly constructed or the technology itself does not fit the realities of the present day, including our human nature. Taking our nature/essence in the context of species-being, we see that there is something problematic with a level of technology that tends to generate both unemployment and meaningless labor.

So what can be done? The short and simple answer that Schumacher offers is to develop and implement technology of a kind that does fit with the nature of human beings, instead of a kind of technology that dehumanizes workers.

**APPLYING SCHUMACHER TO GLOBAL POVERTY**

In the context of global poverty, mass factory production and large-scale farms are wholly inappropriate for developing nations and peoples; they directly create high levels of unemployment and encourage those unemployed workers to migrate to urban centers, where the few outlets for labor involve only drudgery. Schumacher claims that ‘Western technology has been devised primarily for the purpose of saving labor; it could hardly be appropriate for districts or regions troubled with a large labor surplus’, such as many developing countries.

Schumacher’s prescriptive proposal, which I am bringing to bear here, is that we must find a level of technology that is somewhere in between the archaic and the overzealous; it must be appropriate, and thus ‘intermediate’. Such intermediate technology will involve more labor than current productive processes, but that’s exactly the point: there will be more labor involved (so as to address unemployment), and the quality of such labor will be more in line with our humanity. In this way, I take Schumacher’s idea of appropriate to align perfectly with my concept of species-being efficiency.

Schumacher turns the current adages of development (in terms of scale, complexity, and capital-intensiveness) on their heads: ‘Let’s begin with basic human requirements . . . and there I can’t see anything that man really needs that cannot be produced very simply, very efficiently, very viably on a small scale with a radically simplified technology, with very little initial capital, so that even little people can get at it’. Although complex items (like jet engines) may require equally complex technology, the production of basic foodstuffs can be done on a small scale with low-level technological processes. To develop intermediate technology, we must seek out ‘methods and equipment that are (1) cheap enough so that they are accessible to virtually everyone, (2) suitable for small-scale applications, and (3) compatible with man’s need for creativity’. By altering the scale of production to be much smaller and adapting our technology accordingly, we can make meaningful labor much more available to individual people all over the world, especially those in developing countries.
Such production, which involves more labor than is perhaps technically necessary, will be efficient in terms of species-being, even if it isn’t economically efficient.

Let me speak more concretely here: we should endeavor to find a level of technology that requires more human labor in production, while improving the quality of that labor. Particularly in the case of agriculture, we are looking for something in between the impractical, backbreaking hoe and the expensive, labor-reducing tractor. Schumacher provides an example: the ‘walking mini-tractor’ (called the ‘Snail’). This instrument is not feasible for plowing large amounts of acreage, but in developing countries it is perfect, as farms have been traditionally a few acres in size. In addition, the fuel and capital costs are 1/100 of a tractor, and thus the Snail is easy to adopt by those in developing countries. It does not usurp human labor, as it must be controlled and commanded, but it still allows a farmer to increase his productivity.

By adjusting technology upwards or downwards as circumstances demand, we can provide more meaningful labor for people, while at the same time producing commodities in profitable enterprises. Note that what makes this approach so controversial and pertinent today is the possibility of downsizing technology in many productive arenas (something heretofore considered economically inefficient). With less technology utilized, we will have more opportunities for labor.

As it is controversial, Schumacher’s approach has faced criticisms on many fronts. One major criticism is that intermediate technology puts creating jobs before output (in terms of material goods); the emphasis on creating more labor means little if it does not allow the poor laborers to subsist. If larger advanced technologies are not utilized then the poor are less likely to be able to produce enough goods upon which they could survive (or which they could sell). This criticism, however, misconceives the goals of intermediate technology. The goal is to maximize both employment and output in terms of income; people should still produce goods that satisfy their needs and allow them to make a living. However, the one-dimensional focus on output begotten by economic efficiency has led to a level of technology that has itself made it less likely for the poor to be able to subsist. Restoring a focus on meaningful labor is not meant to push aside concerns of output, but to place both on (something akin to) level footing.

This concern leads into a second criticism: that implementing intermediate technology will put certain commodities out of reach of the poor, because of a lack of profit (due to decreased output). Although this may end up being true in certain cases, this critique misses an important point about Schumacher’s approach: increasing labor opportunities is not the only goal (or benefit), nor is increasing output. Intermediate technology also seeks to make work more interesting and imaginative, which means we are being efficient in terms of species-being by helping the poor of the world to develop their humanity through meaningful labor. Intermediate technology is thus a vehicle to increasing a person’s well-being (both materially and in terms of species-being). Allowing for increased consumption does nothing to benefit a poor person’s humanity if he or she is forced to sacrifice the quality of his or her labor (and in some cases sacrifice labor opportunities altogether).
A last related criticism has to do with the freedom of the poor and a concern that intermediate technology constitutes a version of ‘neo-colonialism’. Because this approach has its genesis in Western developed countries, there is the potential that these nations are seeking to supplant local autonomy and to gain control over the economies and productive lives of the poor in the global south. On the contrary, however, intermediate technology represents a radical refocusing of technology choice in the hands of the poor themselves. The poor are able to adopt kinds of technology that they see as contributing to the meaningfulness of their labor, rather than being coerced into adopting technology by the pressures of global economic structures. Such an approach works from and fosters the choice of the poor, rather than seeking to implement a colonial will.

Despite being able to respond to these objections, the implementation of intermediate technology still faces a practical concern: In the current global economic climate, if enterprises aren’t economically efficient, how will they survive in competition with those that are? In this regard, an alternative vision of species-being efficiency cannot merely be taken up by producers in developing countries; those at governmental levels must also be guided by species-being efficiency in developing economic policies. This necessity means that governments must emphasize meaningful labor nationally and focus less on competing internationally (which may fly in the face of the advice of the International Monetary Fund in offering structural adjustment loans). Although export-led growth has been successful when coupled with protectionist policies (e.g. Taiwan and South Korea), such growth has also wrought disastrous consequences for developing countries (e.g. the North American Free Trade Agreement’s effects in Mexico, where cheap corn imported from the United States has completely undermined the ability of local producers to compete). Countries should have an eye towards protecting skilled labor and making greater amounts of labor necessary, rather than on competing internationally. This goal may potentially necessitate that some sort of protectionist policies be put into place by these countries, or at the very least countries must foster an environment wherein organizations and movements seeking to promote this alternative view of efficiency can succeed.

Despite the criticisms discussed here, intermediate technology offers the ability to provide more meaningful labor for the poor in developing countries. In order to facilitate and promote this movement, I argue that a sense of species-being efficiency must replace the current veneration of economic efficiency. This shift in our economic organizing principle (and values) has at its base a concern for the humanity of the laborers and the ways in which technology will actually affect such humanity. As Schumacher states, ’It is therefore more important that everybody should produce something than that a few people should each produce a great deal’.

**CONCLUSION**

Labor is of central importance to our nature as productive creatures. Our current economic system, however, is not organized to produce meaningful labor for all.
With economic efficiency as the guiding principle and labor-saving technology as the vehicle, we have succeeded in devaluing labor, resulting in unemployment and meaningless labor for the poor in developing nations. These outcomes must be corrected; only when labor is appropriately valued and promoted will the poor be able to not only overcome their squalor, but also truly develop themselves as human beings.

With the implementation of intermediate technology, we increase the amount of labor in production, which thereby means more labor is available to more people. With more labor needed, especially in agriculture, the poor who are driven into massively overcrowded urban areas will be able to again subsist in rural areas. My position here, supported by Schumacher, is not a utopian ‘back to the land’ movement; this is a real issue about which countries (such as India and China) are concerned, as they have seen a massive displacement of people in rural areas, who have then crowded into cities looking for menial employment. Thus countries are seeking to reverse the trend of urbanization by making agriculture again viable as a means of subsistence. Transnational movements and perspectives such as agroecology and La Vía Campesina are also instances where poor people are organizing and putting forth concerns about the quality of their labor and the effects of the global economy on small-scale farming. In these movements, the health and well-being of participants (and education) are deeply intertwined in determining the efficiency of agricultural endeavors; in these cases, the poor are willing (and seeking) to advance aims that go beyond market-measurable goods (such as consumer goods or growing crops for export in as economically efficient a way as possible).

Overall I am not advocating just a political or a technical change, but rather a value change; changing our value system in the direction of species-being efficiency can help to address the practical problems of poverty in developing nations. Note here that Schumacher’s approach aims for more than simply eradicating unemployment by giving everyone a job; the goal is to provide meaningful human work for the poor. In this way, technology is now truly efficient (in terms of species-being), rather than coercive. This is precisely Schumacher’s point: that, given an appropriate level of technology, poor people can again produce in ways that allow them to make a living, while at the same time allowing them to freely utilize technology so as to keep themselves actively in the productive process. As Schumacher argues, ‘I have no doubt that it is possible to give a new direction to technological development, a direction that shall lead it back to the real needs of man, and that also means: to the actual size of man. Man is small, and, therefore, small is beautiful’.

I do acknowledge that a focus on species-being efficiency and meaningful labor will not, in and of itself, end poverty in developing countries. Our misguided organizing values (economic efficiency and its implementation through labor-saving technology) are but one factor in the exacerbation of poverty. That being said, they still are a key causal factor, and an effective approach to the issue needs to take this into account. My proposal here is that Schumacher’s concept of intermediate technology can form the cornerstone of a practical approach to global poverty that promotes the humanity of the poor, rather than dehumanizing them and preventing...
them from laboring to meet their own needs. Such an approach will not only be more effective in species-being terms, but also prevents us from being, as Brian Barry would have it, ‘amazingly oblivious’ to a critical causal aspect of the problem of global poverty.

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NOTES

1. Brian Barry, Why Social Justice Matters (Cambridge: Polity Press, 2006), 202.
2. Singer originally put forth this argument in his famous 1972 paper ‘Famine, Affluence, and Morality’, and he has updated it most recently in his 2009 book The Life You Can Save. See Peter Singer, ‘Famine, Affluence, and Morality’, Philosophy and Public Affairs 1, no. 3 (Spring 1972): 229–43, and Peter Singer, The Life You Can Save (New York: Random House, 2009).
3. Philosopher Paul Gomberg critiques Singer on precisely this issue, arguing that any approach to global poverty must critically assess the causal question. Although it certainly matters that people are ‘drowning’, so to speak, it also matters how those people ended up in the water in the first place. See Paul Gomberg, ‘The Fallacy of Philanthropy’, Canadian Journal of Philosophy 32, no. 1 (March 2002): 29–65. Singer actually responds directly to Gomberg’s criticism in The Life You Can Save, but he does so very briefly, saying only that while philanthropic aid may deflect attention away from institutional and causal concerns, he is ‘open minded’ about other approaches to poverty that may work better. See Singer, The Life You Can Save, 35–6.
4. See Thomas Pogge, World Poverty and Human Rights (Maldon, MA: Polity Press, 2002); Thomas Pogge, ‘Real World Justice’, The Journal of Ethics 9 (2005): 29–53; and Thomas Pogge, Politics as Usual (Malden, MA: Polity Press, 2010). In particular, Pogge proposes what he calls the ‘Global Resources Dividend’, a redistributive scheme whereby a tax placed on natural resource sales will be rebated back to poor countries.
5. Many philosophers have criticized Pogge’s argument that changing global economic structures to provide truly ‘free trade’ will necessarily lead to lessening negative effects on the poor of the world. There seem to be other advantages that developed nations enjoy that will not necessarily change, thus retaining the status quo in terms of developing nations and producers. Similarly, although the economic rules may change, those changes may not affect results in the lives of the individual poor. See Alan Patten, ‘Should We Stop Thinking about Poverty in Terms of Helping the Poor?’, Ethics and International Affairs 19, no. 1 (2005): 19–27; and David Schweickart, ‘Global Poverty: Alternative Perspectives on What We Should Do—and Why’, Journal of Social Philosophy 39, no. 4 (Winter 2008): 471–91.
6. I want to stress that I am not advocating Marx’s communist position in toto, nor am I claiming that the establishment of some version of communism would directly or succinctly lead to the eradication of global poverty. My position is that Marx’s conception of human essence as species-being with its focus on labor can call into question the goals of our current economic organizational principles and values.
7. Karl Marx, ‘Alienated Labor’, in Selected Writings, ed. Lawrence Simon (Indianapolis, IN: Hackett, 1994), 62.
8. Ibid., 63.
9. Ibid.
10. In connecting productive life to labor, I am not arguing that the only possible productive outlet for human beings is 'employment'. Many different human activities fall under my conception of meaningful labor: an artist working to produce art is meaningful in developing himself as a human being, a teacher develops herself through teaching rather than producing commodities, care workers become more fully human through their efforts, despite producing no physical product.
11. Erich Fromm, Marx’s Concept of Man (New York: Continuum, 1994), 41–2.
12. Marx, ‘Alienated Labor’, 61–2.
13. Although precise data on unemployment in developing nations is extremely difficult to obtain (due to factors such as seasonal workers, child labor, and informal labor), the World Bank estimates upwards of 30 percent of workers in some of the poorest developing nations are technically unemployed (without a job). See here World Bank, World Bank World Development Indicators 2011, 50–5, data.worldbank.org/data-catalog/world-development-indicators November 6, 2015.
14. Amartya Sen, Development as Freedom (Oxford: Oxford University Press, 1999), 94.
15. Marx, ‘Alienated Labor’, 62.
16. Even posing such a question about technology often brands one as a Luddite, a position wholly discredited by history.
17. This is a point made in some detail by Jeremy Rifkin in his book The End of Work. Some may claim that new technology will certainly put people out of work, but it will also create new jobs in other sectors, which then can be filled by the newly unemployed. However, as Rifkin argues, although there will be (and have been) new technologically intensive opportunities for employment, their numbers are not sufficient to offset the job losses occasioned by the implementation of labor-saving technologies. In today's workplace, one person with a computer can often do the work that previously required the physical (or perhaps mental) labor of many more actual human beings, and there have not necessarily been new jobs created as a result of this technology that employ those people who have been put out of work. Pushing back against this worry, some like Erik Brynjolfsson and Andrew McAfee express faith in the possibilities of technology to shift demand into new emerging areas of need (e.g. more computer programmers and educators will be required to help automated technologies function, rather than requiring package handlers in warehouses). Whereas such shifts in demand for actual human labor may be possible in the developed global north, these results seem far-fetched in developing countries where in the interim migrations and overcrowding occur. See Jeremy Rifkin, The End of Work (New York: G.P. Putnam's, 1995), 32–4; and Erik Brynjolfsson and Andrew McAfee, The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies (New York: Norton, 2014).
18. Despite a liberal focus on global markets, technological development, and a clear growth in the central economy in terms of gross domestic product, India has been unable to solve rural problems of poverty. See Diana Schumacher, Small is Beautiful in the 21st Century: The Legacy of E.F. Schumacher (Devon, UK: Green Books, 2011), 44–5. Diana is E.F. Schumacher's daughter-in-law.
19. Feenberg situates his critical theory of technology as somewhat of a middle ground between what he calls ‘instrumentalist’ and ‘substantive’ theories of technology. The former takes technology as necessarily value neutral; a given technology is simply a tool or process that reflects a movement towards universal rational truth and thus has no inherent relation to any given social context. On the other hand, substantive theory denies the neutrality of technology and instead claims that technology is value-laden, and its incorporation into contemporary society has led to structures of domination. Although Feenberg's position is much closer to a substantive theory, insofar as he does argue that technology is not value
neutral, he does not agree that therefore technology is necessarily a form of inescapable domination. This substantive view echoes the work of Horkheimer and Adorno in *Dialectic of Enlightenment*. For a more detailed description of these positions, see Andrew Feenberg, *Transforming Technology: A Critical Theory Revisited* (New York: Oxford University Press, 2002), 5–6.

20. Ibid., 14–15.
21. Ibid., 79.
22. Sweatshops are often the paradigm case here, as they rely on a great deal of human labor, but do so by exploiting and dehumanizing workers to such cruel extents that the labor becomes drudgery. Marx makes this point clear in *Capital*, where he argues that in order to create greater profit for the capitalist the ‘individual laborer must be made poor in individual productive powers’. Karl Marx, *Capital, Vol. 1* (New York: International Publishers, 2003), 341–2. Cf. Harry Braverman’s classic text on this topic: Harry Braverman, *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century* (New York: Monthly Review Press, 1998).

23. Such a concern for efficiency, although not new, has clearly exploded as a result of the global market that has developed over the last few decades. Prior to this era of globalized capitalism, such an overzealous pursuit of efficient production at the cost of labor was constrained by the physical limits of technology and the power of the labor movement. Because the marketplace for goods consisted of the working class, many of whom were a given company’s employees (think 1950s United States here), companies ended up providing labor and wages that allowed for an adequate standard of living for their employees. This relationship was a reciprocal one and could be described as the closest to Adam Smith’s ideal sense of mutually interested (or perhaps disinterested) parties.

24. Whereas urbanization rates are declining in developed countries, they are skyrocketing in developing nations: an annual increase of 3.4 percent in Africa (averaging 13 million more urban dwellers per year in 2005–2010) and 2.8 percent in Asia (averaging 38 million more per year). See the United Nations report, ‘Population Distribution, Urbanization, Internal Migration and Development: An International Perspective’, 2010, http://www.un.org/esa/population/publications/PopDistribUrbanization/PopulationDistributionUrbanization.pdf (accessed November 8, 2015).

25. To be more specific about my departure from Marx in this paper: Marx saw meaningful labor as impossible under capitalism, mainly because of the exploitation of the worker by the capitalist, but also because of the division of labor. (Thus under communism the division of labor would disappear, and by not having to sell their labor power to the capitalist, the laborer would have his human connection with his product, his labor, and his species-being restored.) However, as I have said, I am not adopting Marx’s critique of capitalism wholesale, rather I use his early writings as a lens through which we can view a causal aspect of the problem of poverty. As such, I argue that there are ways that we can alter the organizing principle of our economic system to reflect the central place of meaningful labor, and this endeavor need not require a movement beyond capitalism (which Marx thought necessary and in fact inevitable). Similarly, this need not in principle entail that the division of labor be abolished *per se*. Although there would no doubt be a continuum of ‘meaningfulness’ along which different labor opportunities would fall, a meaningful component could be developed in all different divisions, if this was the goal of our economic system.

26. E.F. Schumacher, *Small Is Beautiful* (New York: Harper Perennial, 1973); and E.F. Schumacher, *Good Work* (New York: Harper and Row, 1979).
27. Schumacher, *Small Is Beautiful*, 58.
28. Schumacher, *Good Work*, 3.
29. Ibid., 27.
30. Ibid., 30–1.
The ‘ugliness’ of economic efficiency

31. Schumacher, *Small Is Beautiful*, 38–9.
32. Ibid., 51.
33. Schumacher, *Good Work*, 39 (emphasis is mine).
34. E.F. Schumacher, ‘How to Help Them Help Themselves’, in *Small Is Possible*, ed. George McRobie (New York: Harper and Row, 1981), 28.
35. Schumacher, *Good Work*, 21. It is worth noting that here he does use the term *efficiently* to describe such production. By this he is referring to what I have called technical efficiency, not economic efficiency.
36. I will not address here Schumacher’s assumption that the scale of technology necessarily plays a role in humanizing work and that smaller-scale productive endeavors are necessarily better. For my purposes here, I will assume that this is generally, although not universally, true.
37. Schumacher, *Small Is Beautiful*, 35.
38. The place of intermediate technology in agriculture is particularly important, given the central place of rural farming in the lives of many of the world’s poor. According to the International Fund for Agricultural Development, ‘At least 70 percent of the world’s very poor people are rural, and . . . over 80 percent of rural households farm to some extent’. International Fund for Agricultural Development, *Rural Poverty Report 2011*, 3, www.ifad.org/rpr2011 November 6, 2015.
39. Schumacher, *Good Work*, 88–90. This example comes from the early workings of the Intermediate Technology Development Group (now called Practical Action), which Schumacher helped found in the early 1970s. For more detail on the successes of the group, see Diana Schumacher, *Small Is Beautiful*, 35–76.
40. See here Arghiri Emmanuel, *Appropriate or Underdeveloped Technology?* (Chichester, UK: Wiley, 1982).
41. For a discussion and refutation of this concern, see Hans Singer, ‘Appropriate Technology, Technological Dependence, and the Technological Gap’, in *The AT Reader: Theory and Practice in Appropriate Technology*, ed. Marilyn Carr (London: Intermediate Technology, 1985), 25–26.
42. This approach to global poverty follows along the lines of what David Ellerman calls ‘autonomy-respecting assistance’. In his book *Helping People Help Themselves*, Ellerman argues that most kind of aid/help that is offered to developing countries ends up undercutting their ability to effectively move forward. Citing Schumacher approvingly, he points out that an approach of intermediate technology provides aid and direction to the poor ‘in such a way that respects, fosters, and sustains the autonomy of the doers [the poor] . . . When the doers have the will, there is a way; the best role for the helpers is to indirectly enable and expedite that way, not try to substitute their will for that of the doers’. See here David Ellerman, *Helping People Help Themselves* (Ann Arbor, MI: University of Michigan Press, 2006), 7.
43. See Oxfam, ‘Dumping Without Borders: How US agricultural policies are destroying the livelihoods of Mexican corn farmers’, Oxfam Briefing Paper, August 2003, http://policy-practice.oxfam.org.uk/publications/dumping-without-borders-how-us-agricultural-policies-are-destroying-the-livelihood-114471 (accessed November 6, 2015).
44. Schumacher, *Small Is Beautiful*, 184.
45. India is a prime example here. China’s ‘New Socialist Countryside’ policy also has an eye towards the problem of rural poverty and has generated some successes. See Diana Schumacher, *Small Is Beautiful*, 44–45; and Anna Ahlers and Gunter Schubert, ‘Building a New Socialist Countryside—Only a Political Slogan?’, *Journal of Current Chinese Affairs* 38, no. 4 (2009): 35–62.
46. On agroecology, Hugh Lacey writes: ‘Agroecological farming aims to fulfill a variety of objectives simultaneously and in a balance determined by the farmers and their communities,
including: productivity, sustainability of agroecosystems and protection of biodiversity, health of members of the farming communities and their surroundings, and strengthening of local people’s culture and agency’. See here Hugh Lacey, ‘Technology for Social Inclusion’, *Peace Review* 25, no. 1 (2013): 74–82. On the social movement La Via Campesina, see María Elena Martínez-Torres and Peter Rosset, ‘La Via Campesina: The Birth and Evolution of a Transnational Social Movement’, *Journal of Peasant Studies*, 37, no. 1 (2010): 149–75.

47. Schumacher, *Small Is Beautiful*, 169.