The ethics of efficiency

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The Ethics of Efficiency

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The Ethics of Efficiency[1]

Introduction

This paper is concerned with ethical evaluations inherent in economic methodology, theory, and methods. Efficiency is one such ethical evaluation – and different concepts of efficiency imply different ethical evaluations of an economic state of affairs. As various economists have argued, especially Vivian Walsh (2000; 2003) and Hilary Putnam (2003) in this journal, ethics is not separate from economics but part and parcel of it, just like fact and value are entangled in other social sciences. In addition, as Amartya Sen has argued for various decades now, nor is a dualistic portrayal of ethics and economics desirable. On the contrary, he has stated in his book *On Ethics and Economics*, two decades ago, "… that economics, as it has emerged, can be made more productive by paying greater and more explicit attention to the ethical considerations that shape human behaviour and judgment" (Sen, 1987: 9).

This paper will focus on the ethics implicit in the notion of efficiency, and the different ethical views implied by different concepts of efficiency. The paper try to will argue that, contrary to what is commonly believed, Pareto Efficiency is not a necessary, nor a sufficient criterion for the efficient allocation of resources – it even allows for the waste of resources. Moreover, it will argue that it favors those with substantially more endowments over those with substantially less endowments. Two alternative efficiency concepts will be discussed and evaluated on the basis of two ethical principles which together shape the contours of a thicker efficiency concept: no waste and no harm. The two alternative proposed to Pareto Efficiency, arising from happiness studies and the capability approach, seem to do better than Pareto

[1] I am very grateful for very helpful comments made by Des Gasper on an earlier version of this paper.

Efficiency on these two scores, but they have also shortcomings. The final section of the paper, therefore, proposes an efficiency concept that integrates the criteria of no waste and no harm, rather than treating them as trade-offs. It will do so by referring to examples such as efficiency wages, rent-seeking, and control of uncertainty.

The Ethics of Pareto Efficiency

The efficiency criterion of Pareto Efficiency – the situation in which no one can be made better off without making at least one other person worse off – is so commonly used, that it may well be taken to be a reasoned convention in economics[1]. Conventions can be very useful in scientific discourse, as they facilitate mutual understanding and reduce the amount of time and effort spent on lengthy explanations of widely shared beliefs. However, as institutional economists have explained so well, conventions can also have a dark side, expressing norms that can dominate, exclude and remain intact when outdated as a result of path-dependence. The various critiques of Pareto Efficiency, which have been expressed for decades, suggest that this is, indeed, not a harmless convention[2]. More precisely, various authors have recognized that it is not a value-neutral criterion at all, but that it has implicit judgments which, in the words of Mark Lutz, "at best, they express the values of some atomistic, materialistic, and acquisitive 'utopia'" (Lutz, 1999: 120). Here, I will briefly review the main critiques of Pareto Efficiency, and distinguish these into four distinct but related categories.

The Conditions of the First Fundamental Welfare Theorem[3]

The first welfare theorem operates under very restrictive conditions. They are those of a perfectly competitive equilibrium: no externalities (in production as well as in consumption), no barriers to entry or exit (and, hence, no coalitions between agents), and no economies of scale (so, no

increasing returns from lower unit costs, or human capital spill-overs). Obviously this is a very restrictive set of assumptions which rarely holds in the real world and which, in addition, are complemented by a set of technical conditions about marginal rates of substitution for the underlying utility functions[4]. Moreover, those theoretical solutions that have been proposed to violations of these conditions are rather tautological, as Walsh (1996) has made clear, because they assume another perfect competitive market to come in, allocating newly established property rights in order to eliminate externalities. But such internalization of externalities through the commodification of hitherto non-market goods, only shifts the problem to an auxiliary set of assumed perfectly competitive markets, with its own, or the same but reinforced, externalities, ad infinitum.

Apart from the unrealistic assumptions of perfect competition in the first welfare theorem, there is another layer of assumptions underlying the notion of Pareto Efficiency. This set of assumptions, however, is hidden. The most crucial implicit assumption stems from the exclusive focus of Paretian Efficiency on exchange, rather than on production. Pareto Efficiency is shaped as an evaluative criterion for efficiency in exchange, thereby assuming that all agents maximize their utility through exchange, rather than through their own production, redistribution, or gifts. In turn, the focus on exchange takes for granted that agents will be able to survive when an exchange is not mutually beneficial. In other words, and paradoxically, Pareto Efficiency supposes that autarky is always a feasible option. It thereby assumes that those for whom exchange is not mutually beneficient, can survive without exchange, presumably living off their savings or property. But in the real world, most people who experience a disadvantaged exchange position have very few resources to live off, except their labor power. And even this may not be in demand, as it may be only potential rather than actual labour power, due to lack of nutrition and health (Dasgupta, 1993), or it may not earn sufficient market value to survive (Kurien, 1996), or a combination of factors including lack of aggregate demand (Walsh, 1996). The reason why this assumption of Pareto Efficiency is taken for granted is, according to Walsh (1996: 175-6),

that the underlying view of competition has become an article of faith. “If every agent in an economy were an individual person, and if every person had an initial endowment which made it possible to survive without trading, then we would know the sense in which any equilibrium of such a model must reflect the choices or actions of each of the individual persons.” This is precisely where the paradox of Pareto Efficiency is sited: while it is an efficiency criterion about exchange, it assumes that every agent possesses a sufficient level and variety of endowments, in order to voluntarily refuse an exchange as soon as it would not be mutually beneficial. In other words, what is taken for granted is that agents have more or less equal bargaining power, deriving from a relatively equal distribution of endowments, an assumption that Kurien (1996) has challenged for the Indian economy. Dasgupta (1993: 171) has analyzed this in more detail, arguing that “[a] household with limited endowments, living in a society where the public realm offers little, will not have much power to ensure that its interests and advantages are sufficiently realized in the state of affairs that emerges under the price mechanism.” This implicit but forceful part of the reasoned convention of Pareto Efficiency hides yet another assumption, which is the evolutionary belief that competition will eliminate less efficient producers. But competitive markets may well drive out the relatively more productive producers, who happen to work with lower quality production factors, such as less skilled labour, less capital intensity or lower levels of technology (Khalil, 2000)[5]. Hence, it will be their lack of command over competitive production factors that will outcompete them over time, not their productivity as such[6]. In addition, Morris Altman (2004) has argued that the presence of potential x-inefficiency may lead to inefficiencies when factors are compensated by lower prices due to excess supply (for example lower wages in labor markets with unemployment). At the same time, remaining with the example of labor productivity, work effort may be influenced by wages, but also by workers’ influence over a firm’s decisions, as Bowles and Gintis (1993: 29) have argued, referring to this as the ‘wage incentive effect’. Hence, efficiency is not a natural result of competition but depends on political and social influences, moral values, as well as institutions. Finally, Nina Shapiro,

elaborating Joan Robinson's argument that perfectly competitive markets may be just as inefficient as oligopolistic markets, has pointed at the risk that "ruinous competition could become a 'ruinous' deflation" (Shapiro, 2005: 543). In particular, she has pointed out that (global) competition may lower wages, with negative consequences for productivity and product improvement, as well as a disadvantage for small scale firms who may not be able to survive competition, even though they may be more efficient producers.

A disbalance between efficiency in exchange and in production (productivity) is enabled by the real-world phenomenon of market power, which the more resourceful producers accumulate through their greater command over more productive resources. This, in turn, provides them with economies of scale, enables further specialization, and allows them to create entry barriers for newcomers. The gap between efficiency in exchange and in production is aggravated, as Joan Robinson (1933) has analyzed so well, in situations in which labor is not a scarce production factor. In that case, firm size is likely to become sub-optimally large, with the more resourceful but relatively less productive firms becoming of larger size than that at which they would produce at minimum average costs, while the smaller firms will be constrained by the larger firms' power to produce at their optimum size. Hence, strategic behavior in exchange may allow or even support inefficiency in production.

In conclusion, the first welfare theorem is not a sufficient condition for efficiency, as it allows for inefficiencies to occur and persist in production and allocation through presumably competitive markets.

The Implications of the Second Fundamental Welfare Theorem[7]

The Kaldor-Hicks compensation added to Pareto Efficiency has the function to avoid that the losers in the optimum would prevent the optimum to arise by refusing exchange with the winners. So, although the compensation implies a redistribution (only of the lump-sum type), its objective is not so much *fairness* between winners and losers in the optimum but the *feasibility* of reaching

the optimum from a political economy perspective. Hence, fairness becomes an instrument to ensure the optimum outcome. The limitation of redistribution to lump-sum transfers is based on the assumption that progressive transfers from winners to losers would create disincentives, and hence, reduce the optimum to a lower level of production. So, while not affecting incentives, the compensation rule does affect the first theorem's extreme loss aversion. It replaces the infinite weight given to losses, prohibiting any form of redistribution, with a lump-sum compensation of losers, as long as the winners will still come out with a net-gain. Interestingly, and in line with the view of fairness as an instrument rather than an end in itself, the second welfare theorem does not necessarily require interpersonal utility comparisons. There is no need for an identification of winners and losers as it is assumed that compensation happens automatically in the bidding during the arbitrage process. That is, compensation is assumed to take place when winners will offer above-market value in their exchanges with losers, in order to get the voluntary cooperation of losers in transactions, leading to the optimum[8].

However, the idea of a lump-sum compensation has two problems, which affect both variants – the automatic compensation through bidding, and the forced compensation through taxation. First, it will depend on the bargaining power between the winners and losers whether the compensation will be offered and how much. The theorem does not include any guarantees to ensure compensation, either through voluntary bids in exchange or through agreement on a compensation rule. In the case that the losers have weaker bargaining power – for example when they are workers threatened with job loss in times of high unemployment, there is very little compensation to be expected. In that case, losers will cooperate with winners simply because they have no other option. Second, even if compensation will be granted to the losers, the measure is income. Thereby, the theorem assumes the marginal utility of income to be the same for everyone, independent of the level of income, which is rather unlikely given the plausibility of decreasing marginal utility of money. This transition from utility space to income space appears to get around the problem of interpersonal utility comparison, but it cannot: the assumption of

equal marginal utility of income for all is already a measure for interpersonal comparison, assuming that the rich derive just as much utility from their last euro as the poor do (Lutz, 1999: 117). So, it is unclear what the value of the compensation is to winners and losers, as it is calculated in money terms, whereas Pareto Efficiency itself is measured in utility space.

In conclusion, the second welfare theorem is not a necessary condition for reaching the optimum, as low bargaining power of the losers will simply not trigger any compensation.

The Prohibition of Interpersonal Utility Comparisons

The third level of critique of Pareto Efficiency concerns the break of welfare economics with the original theory of utilitarianism, by prohibiting interpersonal utility comparisons in the absence of an objective utility measure. So, although the space in which efficiency is measured in Pareto Efficiency is still a utilitarian space, it limits itself, since Lionel Robbins' break with interpersonal comparisons in 1932, to comparing states of affairs according total utility and not aggregations comparing different distributions of utility between individuals or groups.

The rejection of interpersonal comparisons makes it impossible to adequately compare economic states – not only for their *distributional* effects but also for the optimal *allocation* of resources. This is because in case of multiple equilibriums, it excludes the possibility to select a Pareto efficient equilibrium on the basis of differences in marginal utility gains and losses for different distributions. As a consequence, and rather paradoxically, with the prohibition of interpersonal utility comparisons welfare economics is no longer capable of selecting an optimum that generates the greatest happiness for the greatest number. In other words, the prohibition of interpersonal utility comparisons may not only result in very unequal distributions (that may or may not be compensated through lump-sum transfers), but also in the selection of a status quo optimum that may actually not maximize aggregate utility due to sub-optimal marginal utilities for large groups in the optimum. Hence, it may very well be that the Pareto Efficiency will not be efficient in a purely utilitarian sense[9].

In other words, Pareto Efficiency may not coincide with the maximum possible total utility that would occur with redistributions that would equalize everyone's marginal utilities, and therefore, it may not maximize efficiency of utility.

Utility Space for Measuring Wellbeing

Finally, the fourth category of critique of Pareto Efficiency concerns the choice for utility as the appropriate space for welfare economic analysis. Utility is a fully commensurable measure of wellbeing, including desires that may be other-directed, such as altruistic preferences, or in Sen's words (2002: 177n) "self-interested benevolence". Ultimately even such 'moral' preferences are self-directed as the preference satisfaction that underlies the utility maximization concerns one's own utility function, risking paternalism as there can be no check on the other's satisfaction by one's doings toward her – that is, the effect on the others' utility maximisation[10], because of the prohibition of interpersonal utility comparison, that was explained above. As the old institutional school already recognized, Putnam (2002: 52-53) repeats that such a portrayal of wellbeing ignores an objective fulfillment of desires, capacities and efforts. In other words, it denies that it matters who and what we are, not merely that we maximize our pleasure.

The choice of utility space is not only problematic because of the many difficulties related to utilitarianism, but also because in practice, welfare economics relies not on utility but income in order to measure Pareto Efficiency. This measure excludes, as is well-known, wellbeing derived from unpriced production such as self-account production of goods and services (such as food or childcare) and gifts (within and between households), as well as the utility of leisure time and psychological wellbeing deriving from feelings, beliefs, and other intangible factors that are cannot be expressed in income terms as their opportunity costs are unclear or unmeasurable. Hence, utility as the unit of measurement of Pareto Efficiency allows for inefficiencies in consumption, as it is not the use of resources that matters for utility maximization, but satisfactions, including those that imply a waste of resources (through the

satisfaction of luxury or perverse desires) or that are unrelated to resources (enjoying listening to birdsong).

In conclusion, the above four sets of criticisms of the reasoned convention of Pareto Efficiency indicate that it is not at all a value-neutral concept and that it is not a necessary or sufficient measure of efficiency. To the contrary, Pareto Efficiency expresses a particular ethical position that can be summarized by two features. First is the position of libertarianism, a position which claims that self-interested behavior (including the pursuit of moral preferences) through voluntary exchange in perfectly competitive markets will lead to a socially optimal outcome. The status quo distribution of endowments is regarded as just as long as it arises from voluntary exchanges. But such voluntariness only makes sense in the presence of sufficient endowments to refuse non-beneficial exchanges – the first paradox that was recognized above. Second is the assumption that voluntary exchange is not only just but also efficient, as it allocates resources to those who derive most marginal utility from them. But this assumption only holds at the intra-personal level and denies that a redistribution of resources between persons may well lead to higher aggregate utility – the second paradox that was recognized above.

This ethical position of the Paretian efficiency criterion contrast with the efforts of heterodox economic traditions in analyzing the conditions under which the economy may lead to a reduction of poverty and inequality, the limitation of environmental damage, the waste of human resources through unemployment, and the improvement of human development for everyone. Hence, there is a need to develop an alternative efficiency criterion that is characterized by a different ethics, addressing the two paradoxes. In other words, a genuine efficiency criterion should be about a meaningful participation of all in production and the limitation of possibilities for wasting resources. This guides us to two ethical criteria for a more meaningful efficiency measure, a thick rather than thin notion of efficiency. One is the Kantian principle that people should not be used as means for other people's ends but that they are always ends in themselves.

This moral view is reflected in classical economic thought by John Stuart Mill's no harm principle[11]. The other implication is that efficiency is about not wasting resources, which includes human resources. This moral view can be traced to Adam Smith who recognized that the economy needs to provide sufficient employment as well as sufficient wages in order to allow everyone to live a life with dignity[12]. Together, the no harm principle and the idea of the minimization of waste, form the two criteria that would arguably provide a firmer basis for a more substantial efficiency concept, one that is concerned with what efficiency is really about: preventing waste and harm.

Recent Adaptations to Pareto Efficiency

In this section, I will briefly discuss two alternatives to Pareto Efficiency, arising from two recently developed alternative approaches to welfare economics: happiness studies and opportunity freedom. In this discussion, I will try to assess the extent to which each acknowledges the no harm principle and the imperative of the minimization of waste.

Efficiency Criterion in Happiness Studies

In happiness studies, subjective measures of wellbeing are made comparable through the use of qualitative scales of wellbeing indicators measured in self-reports of life satisfaction (Frey and Stutzer, 2002)[13]. Happiness, other than preferences in utility functions, tends to be regarded as important in itself, as the historical literature on happiness, going back to Aristotle, indicates[14]. Such a substantive view of happiness accepts the legitimacy of personal evidence on mental states and thereby makes it possible to re-introduce interpersonal utility comparisons in welfare economics. The subjective wellbeing measures allow for the identification of winners and losers in a particular economic state of affairs, and hence, they enable an effective redistribution policy.

This would also help to solve the problem arising from Arrow's Impossibility Theorem, because it would allow for the application of "rules of social judgment" (Sen, 2002: 273) for the redistribution of resources from winners to losers. Such redistribution is not necessarily in terms of income, as various dimensions of people's wellbeing will not have a monetized form, but may as well relate to their health or social relations and other non-monetized valued ends. These ends may be purely individual and idiosyncratic but they may also follow social norms, and therefore reflect the subjective valuation of a society's institutions. Indeed, empirical studies of happiness suggest that subjective wellbeing depends positively on institutional factors, in particular democracy, next to economic variables such as income, while unemployment and inflation appear to lower happiness (Alois Stutzer, 2001). In addition, personality factors appear to matter too, as well as socio-demographic factors and situational factors (Frey and Stutzer, 2002: 10-11). In a review of the literature on economic psychology, Diener and Seligman (2004: 25) summarize the major elements they found contributing to subjective wellbeing:

- live in a democratic and stable society that provides material resources to meet ends
- have supportive friends and family
- have rewarding and engaging work and an adequate income
- be reasonably healthy and have treatment available in case of mental problems
- have important goals related to one's values
- have a philosophy or religion that provides guidance, purpose, and meaning to one's life

As a consequence of the pluralist character of happiness, and contrary to what has recently been proposed for measuring efficiency by Zerbe (2001), distributive rules for happiness cannot rely very well on cost-benefit analysis, including willingness to pay studies. Cost-benefit analysis is inadequate for the assessment of efficiency in the space of happiness, for three reasons: (1) income is a poor indicator of wellbeing across different classes, (2) some valued subjective goods can simply not be measured in monetary terms and be made commensurable with other valued

ends, and (3) compensation is not always possible, as is the case with tragic human or environmental losses[15].

So, in the happiness approach, income is regarded only an intermediate variable and not a very good one. It has been shown, that beyond a certain level of income, subjective wellbeing does not longer improve (Easterlin, 2001; 2002). At the same time, happiness studies have confirmed what Veblen already recognized a century ago, namely that relative income is likely to be more important for people's perception of wellbeing than absolute income levels. Combining these insights from happiness studies on the satisfaction of income and a variety of non-income wellbeing indicators, an efficiency criterion evolves: the maximization of total subjective wellbeing, which results from a combination of free choices and redistribution up to the point that the marginal rates of substitution of wellbeing between individuals would be equal. In other words, the efficiency criterion arising from happiness studies is the impossibility to increase aggregate subjective net wellbeing, which is the state of affairs in which no one's subjective wellbeing can be improved without worsening others' wellbeing to the same extent. It is likely that such an optimum will reflect relatively high income equality, because of the decreasing marginal utility of income. But, as was argued above, income is only partially a means toward happiness – having a rewarding job is important in itself, and so are other dimensions of wellbeing that even have less to do with income, such as good friends and family relations. So, happiness researchers do not advise extreme income redistribution, but rather other forms of redistribution, that would emphasize the creation of jobs and the support of democratic institutions. Relatively high income equality would then be a *consequence* of maximising subjective wellbeing – through low unemployment rates – and not a *precondition* for it. In technical terms, the happiness optimum would reflect the maximisation of a social welfare function in the space of subjective wellbeing and not an optimum arising from cost-benefit analysis of public policies.

The two moral principles mentioned above seem to be addressed to some extent in the alternative efficiency criterion of subjective wellbeing. The no harm principle is expressed through the interpersonal comparison required for reaching the social welfare optimum: it is precisely through redistribution of resources and opportunities to the least advantaged that the optimum is achieved. At the same time, however, the purely subjective space in which the optimum is assessed allows for a perverse optimum. That is because a society may have institutions that may make the disadvantaged believe that they are better off than they objectively are. Sen refers to poor Indian women suffering from malnutrition, assessing their situation better than it actually is, compared to the situation of their better fed husbands (Sen, 2002). Alternatively, a society's institutions may be thus that social status requires inequality in the distribution of some key resources. For example, big landowners may derive status, and hence, subjective wellbeing, from the mere possession of land, not its productive use. This brings us to the no waste principle. The purely subjective space of self-reported life satisfaction allows for the allocation of resources that is not efficient from a production perspective. Hence, the happiness approach leading to a subjective wellbeing optimum is not necessarily efficient: it may waste resources and may hide harm being done through asymmetric institutions that make vulnerable groups believe their wellbeing is better than it actually is, compared with others. In fact, the subjective wellbeing approach shares suffers from the same problems as utilitarianism.

Efficiency Criterion of Opportunity Freedom

In *On Economic Inequality*, Sen (1997) has suggested various alternative criteria to Pareto Efficiency, all concerned with redistribution toward more income equality. In his most recent book, however, he departs more significantly from mainstream welfare economics by looking for an efficiency criterion in the space of opportunity freedom, which should be measured as capabilities. In his proposed alternative formulation of Pareto Efficiency in freedom space, Sen characterizes an increase in freedom as requiring the presence of a more preferred alternative, or,

as he has formulated it in his Arrow Lectures (Sen, 2002, chapters 20 and 21), as an increased range and significance of the options available to individuals. In other words, choice becomes "maximizing over comprehensive outcomes" (Sen, 2002: 607). This view of freedom as opportunity leads him to formulate the criterion of "weak efficiency of opportunity-freedom: a state of affairs is weakly efficient in terms of opportunity-freedom if there is no alternative feasible state in which everyone's opportunity-freedom is surely unworsened and at least one person's opportunity-freedom is surely expanded" (Sen, 2002: 518).

This understanding of freedom is not unrelated to subjective wellbeing, as has been indicated by survey results showing that political, economic and personal freedom are strongly correlated with happiness (Veenhoven, 2000). Indeed, Sen's concern with freedom as opportunity is a highly liberal concern, as it does not define what opportunities it should contain. For Sen, opportunity freedom includes anything people have reason to value and remains therefore subjective. He explicitly does not release the Paretian prohibition of interpersonal comparisons but keeps this requirement in place in his proposed alternative. As a consequence, the efficiency criterion of opportunity freedom suffers from the same problem as Pareto Efficiency: only the aggregate of opportunities counts, not distributions of opportunities. Of course, some freedoms have no zero-sum character, such as enjoying the sunset or having friends – opportunities for these freedoms can be enhanced without reducing the freedom of other people to enjoy these semi-public goods. Other freedoms, however, involve scarce resources and hence cannot escape redistribution in order to improve the wellbeing of the disadvantaged. By favoring the aggregation criterion of welfare economics over interpersonal comparability of opportunities, Sen's alternative Pareto criterion remains very close to the welfare economic one. Of course, he is not against redistribution, but he prefers to keep this out of an efficiency criterion, and leave the formulation of redistributive rules to public debate (Sen, 2002: 454). When such a rule has been agreed, its redistributive consequences may then be compared with the efficiency criterion of opportunity freedom, and lead to redistributions that would affect efficiency. So, equity is not part

of Sen's alternative Pareto criterion, but kept out of it, as a separate issue, as it is standard in welfare economics. In an attempt to formalize Sen's alternative efficiency criterion, Qizilbash (2005) has linked it to the First Fundamental Welfare Theorem with the additional criterion of 'no resentment'. This theorem, when applied to opportunity freedom, implies that the optimum of opportunity freedom can be attained in perfectly competitive markets when agents do not regret the choices, among feasible alternatives, that they have made. The question is, of course, what are feasible alternatives. Is feasibility limited to the initial distribution of endowments, or does it imply a redistribution of endowments that will enlarge the opportunities for the least advantaged? If it is the first, then how can the optimum of opportunity freedom enable the increase of opportunities of the least advantaged if comparability with, and redistribution from, the most advantaged is not allowed? If it is the second interpretation of feasibility, wouldn't we need also an alternative to the Second Fundamental Welfare Theorem about redistribution that would improve the opportunities of the least advantaged without taking away a net gain in opportunities of the most advantaged? Apparently, Sen's choice to remain very close to the original Pareto criterion with its prohibition of interpersonal comparisons, requires a more detailed formulation of the conditions under which it will hold, in order to be able to perform really as an efficiency criterion that helps the least advantaged to substantially improve their opportunities. Moreover, one wonders why he defends an alternative Pareto criterion that suffers from the same problem of rejecting interpersonal comparisons that he himself has criticized so righteously?

The moral principles of no harm and no waste seem less satisfied in this alternative efficiency criterion than they are in the one deriving from the happiness approach. Obviously, the change from utility space to the space of opportunity freedom is an improvement, as it allows for a more substantial notion of efficiency: the allocation of resources for the enhancement of real opportunities rather than of pleasures. At the same time, Sen makes clear that the efficiency of opportunity freedom implies that the production of more commodities will improve opportunities, as it does with utility (Sen, 2002: 523). But, obviously, more commodities will not necessarily

increase the opportunities of the disadvantaged (how more and better quality running shoes would improve the capabilities of someone in a wheelchair is not clear). And what about the problem when compensation of capability constraints would be very expensive (such as providing every person in a wheelchair with robot-legs than enable her to run as fast as an average healthy person)? Or what if some people are so smart, healthy and lucky that their capabilities expand faster, with the same number and quality of commodities, in comparison with others? Or what to do about valued opportunities that involve conspicuous consumption, worse, harming others? Finally, does the freedom space solve the policy problem of cherry picking? If capabilities to increase life expectancy can be increased by providing people of medium health condition with better regular services at cost of those whose health condition is bad and would require intensive, costly, long term treatments (HIV, malaria, and other chronic diseases), how would this policy be prevented in the opportunity freedom efficiency criterion? The no harm principle, hence, is as limited as in the original Pareto criterion. The minimization of waste criterion does better, however, because in the optimum resources are less likely to be wasted on status or what Veblen (1994) named conspicuous consumption[16].

The two alternative approaches to welfare economics – happiness studies and opportunity freedom – do better than the original welfare economic criterion of Pareto Efficiency. The first has more concern for the no harm principle, by allowing redistribution of resources that matter most for people's life satisfaction and recognizing diminishing marginal utility of income, whereas the second has more concern for minimizing waste, by assessing welfare in terms of opportunities rather than utility, with less likeliness of waste on perverse preferences.

Efficiency as Minimization of Waste without Harm

In this final section, I would like to explore how the notions of no harm and minimization of waste may be developed a bit further so that both will become more explicit in our understanding of efficiency as an ethical notion. A good starting point for this exploration is Walter Schultz's (2001) argument that the First Fundamental Welfare Theorem requires a set of moral conditions that would help to ensure that the underlying assumptions of perfect competition and absence of market failures would become realistic, and hence, Pareto Efficiency would become a bit more plausible. Therefore, he has argued that, first, agents are not exclusively self-interested utility maximisers but also responsible and autonomous[17], and second, that agents use strategic means to produce and transact and to control risk, which will create market imperfections. In other words, Schultz has recognized for welfare theory what institutional, Post Keynesian and social economists have known for a long time, namely, that economic agency has a variety of motivations, including altruistic and coercive ones, and that scarcity is not a natural state, but largely shaped by strategic action. It is Schultz's contribution to connect these insights explicitly to the moral conditions for efficiency.

Here, I would like to go further, however, than the conditions for the First Fundamental Welfare Theorem, because there are deeper problems with Pareto Efficiency, as I have discussed above. Instead, I would like to proceed by *relating* the two ethical criteria of harm and waste. Connections between the two have been recognized for some time by economists. For example, Walsh (2000: 21) reminds us that Adam Smith "is savage when he sees the surplus being squandered by the profusion of the great" and that Marx' concept of exploitation included the recognition of waste of the surplus when it is shifted from labor to capital. Or, to refer to the founder of institutional economics, Thorstein Veblen (1958: 126) has commented on the waste of conspicuous leisure and consumption, arguing that "the utility of both alike for the purposes of reputability lies in the element of waste that is common to both. In the one case it is a waste of time and effort, in the other it is a waste of goods." But the most explicit understandings of efficiency as minimization of waste and reducing harm come from two female economists who

published, independently from each other, at the end of the nineteenth century until the mid twentieth century: Charlotte Gilman and Margaret Reid[18]. Both clearly connected harm to waste, referring to inequalities in the household division of labor and the efficiency gains of communal subsistence production over the volatility and inequalities implied in a fully commercialized production system. Whereas Gilman (1920; 1972) explained how inefficient it is to leave home production to housewives rather than to organize it through the market and communal forms of production, Reid (1934; 1943) was most explicit about efficiency as the minimization of waste without harm. She referred to waste in consumption when the rich consume far more than the poor; she rejected inefficient methods of production, including in unpaid work in the household; and she rejected inefficient allocations of resources leading to the under-use of means of production and negative side-effects, such as on health.

Let's take these ideas a bit further for the formulation of an efficiency criterion that is about the minimization of waste without harm – towards a thick concept of efficiency. A thick concept refers to one that functions sometimes as normative and sometimes as descriptive and derives its meaning from application to a particular context (Putnam, 2002: 35; Walsh, 2003: 334). Such an understanding of efficiency is not purely deductive, based on assumptions of ethical egoism and justice of distributions following from voluntary exchange, but contextual. Hence, the efficiency criterion to be proposed here will not be fully defined for all circumstances, but rather inductive, developing from the partial and gradually evolving insights on how waste and harm are related in real world economies[19]. Moreover, such a contextual notion of efficiency is dynamic rather than static, recognizing feedback effects over time and space, in particular because of uncertainty and power that are present in economic processes. So, dynamic efficiency would not only reduce harm and waste in the present but also would reduce the likeliness of harm and waste in the future.

Traditionally, efficiency is divided over three economic processes: consumption, production, and allocation. An alternative, dynamic, notion of efficiency should pay attention to

these three processes as well, but not in utility space. In fact, the space will be different for each process. For consumption, I will focus on capabilities, not only opportunity capabilities as in Sen's efficiency's criterion, but also capabilities that involve skills, attitudes and dispositions, as in the work of Nussbaum (2000). Minimization of waste without harm implies that an efficient economy will try to ensure some minimum level of capabilities for all, or borrowing the words of John Rawls, fairness of capabilities. I agree with Martha Nussbaum who has interpreted his idea of fairness as a lower threshold for capabilities that should be attained in any economy, before resources should be used for improvements of capabilities for the better off above this threshold. For production, minimization of waste without harm implies that human resources will not remain unused, even when their productivity is low: humans are the ends of the economy, not (primarily) its means. Having a job directly improves people's capabilities (self-esteem, exercise of capacities, learning-by-doing), and for most people a job is the only source of acquiring the means for their livelihood – without this, either human resources are wasted through bad health, suffering, or even death, or redistribution is required to provide people with a livelihood without making use of their contributions, which is also wasteful. Finally, for the allocation process, minimization of waste without harm implies that resources be allocated through that transaction mechanism which best serves to reduce waste of resources in providing for at least minimum levels of capabilities for all, arising from uncertainty and power.

Diagram, 1 below will sketch for each of the three transaction mechanisms of which economies consist – exchange, redistribution, and giving – which factors drive increases and reductions in waste without harm, that is, efficiency in the context of uncertainty and power.

Diagram 1. Efficiency in context of uncertainty and power

	Exchange & competition	**Redistribution & regulation**	**Giving & caring**
Increasing efficiency	- mobility of production factors - division of labor and economies of scale - prices signaling demand and supply - risk taking (innovation, creative destruction) - extrinsic motivation (money, power)	- natural monopoly (economies of scale) - merit goods - public investment crowding in productivity (public education, health care) - quality standards	- no need for marketing and transport due to personal interaction - personal relationships signaling demand and supply - intrinsic motivation (responsibility, trust, self-esteem) - positive externalities through relationships (social capital leading to collective action, trust, learning spill-overs)
Reducing efficiency	- tendencies toward monopoly power (above-optimum sized firms, entry barriers, high marketing costs) - negative externalities (pollution, unemployment, bad labor standards) - transaction costs (collection of information, entry/exit costs of switching suppliers) - rent-seeking & moral hazard (risk-shifting, cherry-picking)	- planning costs for supply and demand matches - limited innovation - government failure (corruption, rent-seeking)	- immobility of labor - small scale production, limited division of labor - risk reduction by sharing resources (reducing innovation and mobility)

The factors mentioned in the diagram are influenced by different levels of uncertainty and power. This higher uncertainty and the more asymmetric power is in an economy, the less efficient will the domain of exchange & competition be, as monopoly power is likely to increase, negative externalities will expand, transaction costs will increase, and the opportunities for rent-seeking and moral hazard will expand. At the same time, more uncertainty and power asymmetries may improve the efficiency of the domain of redistribution & regulation, by crowding in productivity and enforcing quality standards, while at the same time, efficiency may reduce due to increased planning costs and rent-seeking within the state. For the third domain, giving & caring, it is likely that an increase in uncertainty and asymmetric power will improve efficiency because it does not have costs of signaling demand and supply, transport, and marketing. Moreover, in a highly uncertain environment, personal relationships will provide the necessary social capital and risk reduction by sharing information, resources, income and goods, in order to keep up levels of production and provisioning.

Efficiency as minimizing waste without harm, hence, is a contextual notion of efficiency that depends on the extent of uncertainty and power in an economy. The three economic domains distinguished above are, of course, ideal-types, and do not exist in pure form in real world economies (van Staveren, 2001). In the real world, the borders between the three domains are blurred, and we will often see elements of one domain present in another. But the diagram does suggest that for the production, allocation and consumption of particular goods and services, under certain conditions, one domain is likely to be more efficient than another one. This, however, does not only depend upon the level of uncertainty and power asymmetry, but also on a range of other contextual factors characterizing an economy. These will be factors such as location, stage of development, culture, social structures, governance, and values. Finally, particular goods and services may have characteristics that make them more suitable for efficient allocation in one domain than in another, irrespective of differences in uncertainty, power and the other factors mentioned above. Or, as a variation on this, it is quite likely that for a particular

good or service, one domain is more efficient for the provisioning up to the socially agreed threshold level of livelihood, whereas another domain may do better in providing the economy with the good or service above this threshold.

The various efficiency-enhancing or limiting factors listed in the diagram connect to more and less well-known insights from recent developments in economics. These range from transaction cost economics to the theory of efficiency wages, and from feminist economic insights on caring to social capital theory and studies of vulnerability and destitution. At the risk of becoming too formalistic, it seems that the idea of efficiency as minimization of waste without harm may be tentatively formulated as follows. Efficiency as minimization of waste without harm occurs when goods are produced in sufficient quantity and quality to satisfy at least socially agreed thresholds for socially agreed basic capabilities for all, in the allocative domain where waste is minimized. Comparing this definition with Pareto Efficiency, the alternative version including interpersonal comparisons arising from happiness studies, and the weak efficiency criterion of opportunity freedom, it differs as follows:

- no utility space, but capability space for consumption and resources space for production, and three allocation spaces (exchange, redistribution and giving)
- no opposition of efficiency to equity, but mutual relatedness of the two through the recognition of the role of uncertainty and power in the economy
- no inefficiencies allowed from status, bad habits, or other perverse preferences as long as these limit the attainment of the threshold of capabilities for all

Of course, the above sketchy outline for a more substantial, less thin, concept of efficiency is sketchy, tentative, and requires much more reflection and deliberation. It is only a first step, and perhaps not a very clear one, but hopefully in the right direction …

Conclusion

Efficiency is inherently ethical – whether we want to recognize this or not. The point of assessing different concepts of efficiency, hence, is not so much whether we should look for a value-neutral one or not, but rather, how values affect efficiency. Here, I have suggested two ethical criteria: no harm and no waste, and have plead for an understanding of efficiency that recognizes their interconnection rather than pulls them apart in an unhelpful efficiency – equity dichotomy. This has led to a concept of efficiency that seems a bit more realistic by acknowledging uncertainty and power to be operating in real world economies. Taking these two forces into account, together with the recognition of three domains in the economy – exchange & competition, redistribution & regulation, and giving & caring – this paper has suggested a concept of efficiency that is contextual and recognizing the relatedness of fact and value. Depending on the level of uncertainty and power, as well as on other environmental factors and characteristics of goods, one domain may be more efficient than another in providing a particular good and thereby contributing to the attainment of threshold levels of capabilities for all.

Of course, this is only a first exploration of how a contextual understanding of efficiency may look like. Much more needs to be done, both in terms of further clarifying the efficiency conditions under different levels of uncertainty and power, and in terms of testing this idea by applying it to the analysis of particular processes of production, consumption and allocation. I am afraid this is only a minor step, perhaps a leap in the dark, and it may turn out to be on a path heading into more problems than we found with Pareto Efficiency. That is to be seen. The least I can hope for is for more economists developing alternatives to an out-dated efficiency criterion that does more harm than good and should no longer waste so much time of academic teaching and research.

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Notes

[1] I take the term "reasoned convention" from Sen (2005: 110), where he introduces it in order to show how strong the role of convention is in economic discourse. I think it particularly holds for theoretical values such as efficiency, freedom to choose, or equilibrium, to name just a few examples of such reasoned conventions.

[2] Pareto Optimality can rightly be interpreted as a reasoned convention, I think, as it is standard in economic texts on efficiency. For example, it is present in 53% of 74 economic textbooks that have been reviewed by Fred Lee and Steve Keen (2004) for what they regard as problematic core economic concepts.

[3] The First Fundamental Welfare Theorem states that every competitive equilibrium is Pareto efficient.

[4] The technical conditions of utility maximization that need to be satisfied for a Pareto Optimum are the following: (1) same marginal rate of substitution for all consumer goods (2) same marginal rate of substitution for all production factors (3) marginal rate of transformation for any two goods must equal the marginal rate of substitution in consumption of those two goods. These conditions have met with serious criticisms, which can be summarized in three categories:

- transaction costs of continuously adapting exchanges in volume, seller, and buyer may exceed the benefits from exchange, and hence, marginal rates of substitution will not be the same;
- changing preferences and institutions that guide choices in different, often discontinuous and incommensurable, ways than through tendencies equating marginal rates of substitution;
- continuously adapting and entirely self-interested exchanges undermine trust in market relationships, reducing the number and extent of transactions.

[5] There may be a parallel here to the notion of 'bad money drives out good money', a recognition that an independent authority needs to guarantee the value of money for money to remain an acceptable means of payment in markets.

[6] Khalil (2000: 207) distinguishes efficiency from productivity thus: "productivity expresses potential ability to produce output, while efficiency denotes the materialization of such potential as measured by the maximum surplus."

[7] The Second Fundamental Welfare Theorem states that every Pareto efficient allocation can be achieved as a competitive equilibrium if the winners compensate the losers and still receive a net gain.

[8] George Akerlof's (1982) famous study on above-market wages as 'gifts' to employees, buying their commitment, and hence, higher productivity, may be a good example for such fairness as instrument for efficiency, whereby the transfer of part of the firm's surplus from capital to labor can be regarded as a lump-sum transfer compatible with the second welfare theorem.

[9] This point refers, of course, to the decreasing marginal utility of income, expressed in a situation in which a marginal utility loss from one euro for a rich person will be less than the marginal utility gain for a poor person from a euro, and hence, an aggregate utility improvement from redistribution from rich to poor.

[10] If one's own satisfaction from self-interested benevolence would depend on the extent to which one's doings towards another would satisfy the other person's preferences, the assumption of preference independence would be violated. Hence, the idea of moral preferences tends to be limited to the case in which one includes preferences that, from one's own view, hope to improve the utility level of someone else – a view which may be false from the perspective of the other.

[11] In his On Liberty, Mill (1975) justifies the exercise of power only in cases when it reduces harm to others. Recently, George DeMartino (2005) has phrased this moral principle in terms of an oath for economists, paralleling the Hyppocratic oath.

[12] Adam Smith, in the *Wealth of Nations*, recognized two objectives for the economy: "first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the public services" (Adam Smith, (1981) [1776] Book IV. Introduction: 428). Moreover, he plead for sufficient wages: "… in order to bring up a family, the labour of the husband and wife together must, even in the lowest species of common labour, be able to earn something more than what is precisely necessary for their own maintenance"(ibid, Book I. VIII: 85-6).

[13] This should be distinguished from objective measures of happiness, as pursued in cardinal measures of utility, for example using the measurement of brain waves.

[14] Frey and Stutzer (2002) rightly refer to Aristotle's view that a happy person is a moral person, to Aquinas' idea that the quality of life includes closeness to God, and Adam Smith's insight on the limits of income and material goods to create utility.

[15] How would one answer a question such as "how much are you willing to give up in order to change your religion?", or "how much are you prepaired to pay in order to acquire a belief in the fairness of equal treatment of women in the labour market?"

[16] There is still the risk, as in the happiness approach, that some people's freedom depends on perverse use of resources, as Sen leaves open what people have reason to value. It is thus possible that scarce resources are used for wasteful activities that people believe increase their opportunities.

[17] In the words of Schultz (2001: 96): "Even if strict rational egoists agree in principle on a set of rights, they will not observe them or fulfill an obligation to enforce them. Compliance is a matter of motivation."

[18] For a discussion of Gilman's view of efficiency, also in relation to Reid's work on this, see van Staveren (2003).

[19] This in no way implies giving up the standard of objectivity. As Putnam (2000: 45) has explained, " … recognizing that our judgments claim objective validity and recognizing that they are shaped by a particular culture and by a particular problematic situation are not incompatible".