Robbins versus Malthus' view of scarcity: absolute and relative scarcity[1]

By

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[1] This manuscript has been prepared for AHE 2009. This is version number 1 of the manuscript, an updated version will be provided prior to the conference.

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Introduction

It is commonly viewed that resources or means are scarce no matter the situation. There is only a given amount of oil hidden beneath the surface, the production of food is limited, and there are only twenty-four hours per day to utilize. Conflicts, poverty and anxiety are all results of scarcity. In this view, finite resources are equated with scarcity, and scarcity is more or less given; a natural state of the human condition.

Nevertheless, if we consult the literature on scarcity a somewhat different picture may emerge. Firstly, it may be claimed that limited means does not equate with scarcity. Scarcity is a property that emerges in relation to human activity. Secondly, it seems that there are at least two different views of scarcity; namely, absolute and relative scarcity. These are, however, only implicitly used in the literature and thus needs to be further underlaboured. Where the distinction is used explicitly, then it mainly corresponds to the distinction between human needs and desires (Baumgartner et al. 2006; Raiklin and Uyar 1996); I will argue that this is not a necessary condition. These arguments will be unfolded by fulfilling the following purpose.

The purpose of this paper is to explore two different views of scarcity, abundance, and sufficiency (SAS), and in which way they overlap. These two views will be denominated as absolute SAS and relative SAS. This exploration will outline the essential characteristics of these views, which will result in definitions of absolute and relative SAS.

I will anchor this study in the literature on SAS. However, for the sake of stringency this study will mainly use two different theories or accounts to exemplify absolute and relative scarcity; but this does not mean that the definition of SAS is restricted to these accounts. Absolute and relative scarcity can be contrasted through Malthus and Robbins' accounts, respectively. I believe that Malthus' account is the most representative of absolute scarcity, and not because he focuses on a fundamental human need (food) but because the way he uses the analytical categories is essentially for what I mean by absolute scarcity. This argument is also true for Robbins' account. I believe that his account is a clear example of a situation of relative scarcity, and not because the focus is more on human desires but because the use of the analytical categories is one of relative scarcity. Consequently, I argue that the distinction between absolute and relative scarcity has nothing to do with the distinction between needs and desires. Nevertheless, as shall be shown, absolute and relative SAS is more about how the problem of scarcity is viewed rather than a categorical distinction; and it refers to a potentiality of any resource, good or mean.

I will begin with the Malthusian approach and thus about absolute scarcity. Relative scarcity will then be studied trough Robbins' approach. After that I will explore the relation between absolute and relative scarcity. Lastly, I will discuss some of the implication of these different views of scarcity.

Absolute scarcity (one-relational): exemplified by the (neo)Malthusian approach

With his book *An essay on the principles of population* (1826) Thomas Robert Malthus laid the theoretical foundation of the "conventional wisdom" that has dominated the debate on global hunger and famines for almost two centuries (Kutzner 1991).[3] The increasing food

[3] Challenged mainly by Amartya Sen's entitlement approach Sen, Amartya Kumar. 1981. *Poverty and Famines: An Essay on Entitlement and Deprivation*. Oxford: Clarendon..

requirements of any given population will sooner or later result in scarcity, and thus hunger and famine. This is the principle of population:

> Taking the whole earth…emigration would of course be excluded; and, supposing the present population equal to a thousand millions present population equal to a thousand millions, the human species would increase as the numbers, 1, 2, 4, 8, 16, 32, 64, 128, 256, and subsistence as 1, 2, 3, 4, 5, 6, 7, 8, 9; two centuries the population would be to the means of subsistence as 256 to 9; in three centuries as 4096 to 13, and in two thousand years the difference would be almost incalculable. In this supposition no limits whatever are placed to the produce of the earth. It may increase for ever and be greater than any assignable quantity; yet still the power of population being in every period so much superior, the increase of the human species can only be kept down to the lev*e*l of the means of subsistence by the constant operation of the strong law of necessity, acting as a cheek upon the greater power. (Malthus 1826, p. 11)

Accordingly, the strong drive of reproduction in relation to the weak expansion of food production possibilities will very rapidly result in a situation of scarcity and hunger. This fundamental relation between food requirements and the capacity of food production is the ultimate check to population. But there are more immediate checks conditioning this fundamental relation, which consists of preventive and positive checks. The former refers to the human capacity to reflect over future consequences of various course actions. For example, the fact that forming a large family requires more resources and therefore one abstains from forming such a family. It refers to custom and morality in society, as marriage restricts mating possibilities or other kinds of norms that restricts reproduction. Attitudes towards contraceptives are another example.[4] But the positive checks, as the quotation indicates, are more extreme and involuntary to its nature. He argues:

> The positive cheeks to population are extremely various, and include every cause, whether arising from vice or misery, which in any degree contributes to shorten the natural duration of human life. Under this head, therefore, may be enumerated all unwholesome occupations, severe labour and exposure to the seasons, extreme poverty, bad nursing of children, great towns, excesses of all kinds, the whole train of common diseases and epidemics, wars, plague, and famine. (Malthus 1826, p. 15)

Even a small unforeseen disruption in this fundamental relation, as a bad harvest (caused by for example torrential rain, drought), may cause severe famine (Sen 1981). Consequently, the sum of the preventive and positive checks forms the set of immediate check to the population (Malthus 1826, p. 17). Hence, it is the underlying causal mechanisms of requirements (R) that causes an exponential increase of *R*. Available quantities(A) are more or less fixed; or the underlying mechanisms of *A* is weak compared to *R*'s underlying mechanisms.

As it seems, there are two fundamental categories which define scarcity in the Malthusian approach. The first is food needs, denominate this category as food requirements or more generally *requirements* (R). The second category refer to the objects that provides direct satisfaction of these requirements; which is food stuff, denominate these as *available quantities* (A). It is thus a fundamental relation between R and A that determines scarcity, abundance and sufficiency (SAS). From this, the following quantitative relations are possible:

[4] Even if this was less developed at Malthus time.

- Absolute sufficiency: human requirements (R) and available quantities (A) are quantitatively equal: (R = A).
- Absolute scarcity: human requirements (R) are quantitatively more than available quantities (A): (R > A).
- Absolute abundance: human requirements (R) are quantitatively less than available quantities (A): (R < A).

These relations are quantified over one given system; for example, a nation, a region, or more generally globally (earth). In the case of hunger or famines, aggregate food needs and food production are measured and evaluated. Questions about thresholds, limitations and prospects of a given system are investigated.

In its modern version, the neo-Malthusian approach, the main thrust of Malthus' argument is not restricted to food stuff, it is more general; it could with the same token refer to the final limitations in common resources (e.g. Garret Hardin), the carrying capacity of nature (see e.g. Club of Rome; Meadows et al. 1972), or it could be as general as the availability of low entropy resources (diffusion of energy, namely entropic processes) (Nicholas Georgescu-Roegen).

Accordingly, the premise of scarcity and the logic of Malthus are echoed by Hardin in his idea of the Tragedy of the Commons and his lifeboat ethics. He sets the scene:

> So here we sit, say 50 people [requirements (R)] in our lifeboat. To be generous, let us assume it has room for 10 more, making a total capacity of 60 [available resources (A)]. Suppose the 50 of us in the lifeboat see 100 others [more requirements (R)] swimming in the water outside, begging for admission to our boat or for handouts. We have several options: we may be tempted to try to live by the Christian ideal of being "our brother's keeper," or by the Marxist ideal of "to each according to his needs." Since the needs of all in the water are the same, and since they can all be seen as "our brothers," we could take them all into our boat, making a total of 150 in a boat designed for 60 [A-R relation]. The boat swamps, everyone drowns. Complete justice, complete catastrophe. (Hardin 1974)

It is with reference to this metaphor that Hardin work out his argument. The overuse of common resources leads to no, or insufficient supply, of future goods (Hardin 1968). Different population checks have to be manufactured for the prevention of overuse. It does not matter if it is education or famine; the imperative is the survival of parts of (fittest) humanity. With kinship in arguments Kenneth Boulding (1973) argues that the current world system (economy, society, and nature) has now become a closed system, or rather a system that reached its limitation. It is not possible, as in the early civilizations, to conquer new territories and resources and thus push the frontier further out (the expandability of A). In order to solve humanities global environmental problems, people cannot simply move from one place to another and so hoping to leave these problems behind. Rather, we have to envision the human race living in a spaceship were the natural resources have to be used in a cyclical manner.

Malthus', Hardin's and Bouldings' approach is generalized even further by Georgescu-Roegen, one of the pioneers of ecological economics (Daly and Farley 2004). He vindicates Malthus' statements and criticizes contemporary economics for neglect about this issue:

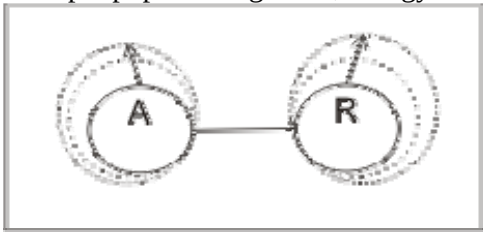
> If the entropic process were not irrevocable, i.e., if the energy of a piece of coal or of uranium could be used over and over again ad infinitum, scarcity would hardly exist in

> man's life. Up to a certain level even an increase in population would not create scarcity: mankind would simply have to use the existing stocks more frequently. (Georgescu-Roegen 1971).

The focus on the actual use of low entropy resources, rather than the focus on the alternative use, illustrates one of the crucial differentiating elements between absolute and relative scarcity. A low entropy resource is scarce in a different sense than (non-renewable) say land (renewable). Both land and coal are limited in amounts. Even if a piece of coal and an acre of land have an alternative use as factors of production; a piece of coal can only be used once, whereas an acre of land can be re-distributed re-allocated later on.[5] This shows a fundamental limitation of merely reallocating resources (relative scarcity); because reallocation does not consider the absolute dimensions of a resource. Moreover, using uranium instead of oil, oil instead of coal, and coal instead of real horse power, merely exponentially increase the depletion of low entropy resources. Re-allocation to more modern factors of production, whether it is done via the market or via government measures, may merely lead to even deeper depletion of low entropy resource and thus aggravate absolute scarcity. Accordingly, extraction of natural resources (low entropy) is a seen as necessary act to enable industrial growth, but it leads, gradually, to sever absolute scarcity of natural resources. The total set of low entropy resources (A) is shrinking, whereas the total set of requirements of humanity (R) is expanding exponentially. This is Herman Daly's most general absolute scarcity, the absolute scarcity of ultimate means (A) in relation to ultimate ends (R). Her writes:

> Absolute scarcity…refers to the scarcity of resources in general, the scarcity of ultimate means. Absolute scarcity increases as growth in population and per-capital consumption push us ever closer to the carrying capacity of the biosphere. The concept presupposes that all economical substitutions among resources will be made [this is relative scarcity]. While such substitutions will certainly mitigate the burden of absolute scarcity, they will not eliminate it nor prevent is eventual increase.(Daly 1977, p. 39)

Hence, in this outlined way the (neo)Malthusian views the problem of absolute scarcity. Their cases focus more on resources of subsistence (food, public good, energy) (see e.g. Meadows et al. 1972). But the view of absolute scarcity is not restricted to these kinds of cases. Plainly speaking, the categories of absolute scarcity (A-R) resemble the concepts of the market, namely supply and demand. However, demand and supply denotes a more specific of relation only manifested on a market; whereas the A-R relation is not dependent on a market situation. Figure 1 is a graphical representation of absolute SAS as defined in this study. First, it refers to the quantitative relation between one kind of A and one kind of R. Second, it captures the underlying possibilities of expanding and shrinking any A-R relation; limitations, thresholds, and alike is of interest. The object of study is the underlying mechanisms for example population growth, energy consumption, and its impact on the system in question.



[5] It seems to me, that this is equivalent to saying that coal is a non-renewable resource and land renewable, but also, the entropic approach seems to add to the explanation of why a resource is attributed a given property.

Figure 1: one-to-one relation: the problem of actual use(thresholds)

Relative scarcity (multi-relational): exemplified by Robbins' approach

Robbins famous definition of economics is that "Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (Robbins 1932/1945, p. 16). This is the relative dimensions of scarcity and the key for understanding it lies in the terms *alternative use* or substitutability (Baumgartner et al. 2006). It is the allocating or distributing act of individuals which is of interest in a case of relative scarcity. This could be illustrated with reference to Robinson Crusoe, the isolated economizing individual (see Robbins 1984, pp. 10-12).[6]

Imagine Crusoe living alone on an island, where his only needs are dependent upon the supply of fresh water. Crusoe requires: (1) one unit of water daily for the maintenance of his need for liquids, (2) nineteen units of water for the animals, which provide him with milk and meat, (3) forty units, for the preservation of his health and well-being, namely to clean his body, his clothes, and his implements, and (4) forty additional units, some to supply his flower garden with water and some for additional supply for some animals to provide him with mere companionship. Crusoe needs consequently a total of hundred units of water to cover all this wants and needs.[7] Now assume two cases. The first case, where the supply of water on the island is enough to support at least thousands of individuals with needs and wants very similar to Crusoe's – a situation of abundance. Then Crusoe would have no reason to economize. Additionally, in this case the subject matter of mainstream economics does not apply.

The second case is where the supply of water on the island is only sixty units of water – a situation of scarcity. In this case Crusoe is forced to economize and manage best he can; his well-being and ultimately his existence are threatened. How does he manage in the most optimal way? In principal the problem is about allocating the limited (scarce) water of sixty units to his four needs (or ends in Robbins view). Now four different ends are competing relative to scarce means. Consequently some needs, or ends, have to be foregone – but which ones? According to Menger, it is very likely that Crusoe will value his first and second need more because of the larger utility he derives from such consumption (because they are human needs). If so, he will consume twenty units of water and left with forty units. Moreover, it seems that the third need has some priority over the forth. Therefore a greater amount of the rest of the units of water will be consumed on the third need – however, incomplete – and the forth need either left totally unsatisfied or beggarly satisfied.[8] Even if Crusoe is an unrealistic approximation of real life events, he is the model of how to solve optimization problems under relative scarcity. This kind of optimization applies regardless of the character of the needs, wants or ends.

As outlined, the "ends" must have varying importance and accordingly be distinguishable (priority). In this context, the meaning of the concept of ends is largely synonymous to human wants, objectives or human requirements. The "means" are the way people (and Crusoe) intend to uses the resources, goods or services, to accomplish these different requirements optimally.

Robbins summarizes the human condition in four essential points, this is his view of scarcity: (a) the ends are various; (b) we have the ambition to fulfil these various ends (c) the time and the means for achieving these ends are limited and capable of alternative application;

[6] As Robbins builds on Menger, I will use Menger's Crusoe example.
[7] Ibid., p. 133.
[8] Ibid., pp. 133-36.

(d) the ends have different importance and can be prioritized (Robbins 1932/1945, p. 12). Therefore, human beings have to choose. They have to "economise". This is the essential economic phenomenon which is the unity of the economic science. Robbins writes:

> …when time and the means for achieving ends are limited *and* capable of alternative application, *and* the ends are capable of being distinguished in order of importance, the behaviour necessarily assumes the form of choice. Every act which involves time and scarce means for the achievement of one end involves the relinquishment of their use for the achievement of another. It has an economic aspect (Robbins 1932/1945, p. 14).

To reiterate, it is the alternative use of means that condition the emergence of relative scarcity. According to Gordon, this kind of problem, of relative scarcity, the problem of choice, applies not only to this world of finite resource but also to the afterlife which is a world of infinite resources (Gordon 1980). This is similar to Zinam's internal scarcity (Zinam 1982). For each moment, each time unit, choice must to be made. Consequently, all human actions have an economic aspect because they are conditioned by alternative conduct or alternative use (Robbins 1932/1945, p. 28).

Nevertheless, Robbins argues, not all means are scarce. This is crucial. To make choice is not necessarily the same thing as the problem of relative scarcity, which questions Gordon and Zinam's argument.[9] There are things in the world that is in abundance; for example the air we breathe. An individual can have on unit of air without losing a unit of another good (e.g. water, or food). The abundance of the air makes it a "free" good. We do not have to sacrifice time or means in order to acquire air. If Crusoe had both the time and means to fulfil his wants, then he does not have to economize despite the fact that he must make choices (Robbins 1932/1945, pp. 14-15, 35). This, I argue, shows that a solution to relative scarcity hinges on choice but choice as such does not hinge on the problem of relative scarcity.

In general, however, abundance is a rare case Robbins claims. We have a multiplicity of objectives or requirements in relation to limited time and means. There are only twenty-four hours in the day. Life is short. Nature is niggardly:

> We have been turned out of Paradise. We have neither eternal life nor unlimited means of gratification. Everywhere we turn, if we choose one thing we must relinquish others which, in different circumstances, we would wish not to have relinquished. Scarcity of means to satisfy ends of varying importance is an almost ubiquitous condition of human behaviour (Robbins 1932/1945, p. 15)[10]

This is the universalization and naturalization of scarcity. Hence, according to Robbins, this is the unity of the economic science. It is a relation between *given* means for the attainment of *given* ends, according to Robbins. It is with reference to this that neoclassical economics formulates its subject matter found.

I believe that the following definitions summarize the quantitative situation where relative scarcity applies:

[9] But could be a case of absolute scarcity.

[10] This also exemplifies the naturalness of scarcity, natural scarcity; which could be contrasted to social scarcity Hirsch, Fred. 1977. *Social Limits to Growth.* Cambridge, Mass.: Harvard U.P.

- Relative sufficiency: A set of human requirements consisting of different kinds **R´**= (R_1, R_2…R_n) in relation to available quantities (A) with alternative use which are quantitatively equal: (**R´** = A).
- Relative scarcity: A set of different human requirements consisting of different kind **R´**=(R_1, R_2…R_n) in relation to available quantities (A) with alternative use which are quantitatively more: (**R´** > A).
- Relative abundance: A set of human requirements consisting of different kind **R´**=(R_1, R_2…R_n) in relation to available quantities (A) with alternative use which are quantitatively less : (**R´** < A). [11]

This view of relative scarcity may be illustrated graphically, see figure 2. It is one kind of A with alternative use related to *n* different requirements. Nevertheless, what seems to be as a categorical definition of absolute SAS and relative SAS actually overlaps.

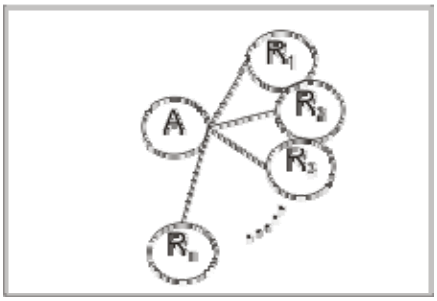


Figure 2: one-to-several relation: the problem of alternative use (allocation)

The relation between relative and absolute scarcity

It seems to me that the link between relative and absolute scarcity is intimate. A resource or a good may have both an actual and an alternative use; it may for example be absolute abundant but relative scarce and vice versa.

It is clear from the definitions of both relative and absolute scarcity that a resource (A) *by itself* is not enough to be defined as scarce. There must be a want, a need, or a requirement of some sort that stands in a relation to that good or mean. This entails that a limited amount of a good does not say anything about the scarcity character of that good. It is not until it is related to a want or a requirement that it may be denominated as scarce, abundant, or sufficient (SAS). A limited amount of a good simply means that there are given quantities of that good. Robbins argues that:

> …the mere limitation of means *by itself* [is not] sufficient to give rise to economic phenomena. If means of satisfaction have no alternative use, then they may be scarce, but they cannot be economised. The Manna which fell from heaven may have been scarce, but, if it was impossible to exchange it for something else or to postpone its use, it was not the object of any activity with an economic aspect.[12]

This passage clarifies the distinction between absolute and relative scarcity. It is the meaning of alternative and actual use which is of key importance of understanding relative and absolute scarcity. If there is no alternative use (no opportunity cost), there is no relative

[11] The index $n \geq 2$.
[12] Robbins, *Essay*, p. 13.

scarcity, and thus means cannot be economised in Robbins' term.[13] But a good may still be scarce in absolute terms. Scarcity in the Malthusian sense, absolute scarcity, conversely, does not require any alternative use. It is adequate to have a situation where the quantitative relation is R > A. Herein lays the major difference between the different ways of perceiving scarcity.

The first entail a situation of choice between desired alternatives, the second relates human requirements to their satisfiers and ask about the causal nature of this constellation; the first treats A-R as given whereas the second regard it as changing; as a resolution to a situation of scarcity, the first will seek optimal allocation of A over the whole set **R´**, whereas the second is more interested in how far A is sufficient over one kind of R (or over the whole set **R´**, see further below).

Nevertheless, to actually determine whether a good is scarce in either an absolute or relative sense is an intricate issue. How could a social economist determine the alternative use of a good? According to the marginalist Menger, Jevons and Walras a more subjectivist approach is taken. The alternative use of a good is determined by the economizing individuals themselves. If a good could satisfy more than one want of an individual's preferences than it also carries alternative use (and thus marginal utility); this is strictly subjectively defined by the individual. But what if an individual is ignorant about the known causal connections of goods? Or more problematically, even if an individual is aware about causal connections, in a complex reality the unintended consequences of any choice are unknown per definition (Beckert 1996). Not only this, what about potential casual connections that have yet not been discovered? These are true but intriguing challenge in the study of relative scarcity because, among other things, it entails a study of alternative futures.

To determine the actual use of a good seems to be less complicated. It calls for an investigation of how given resource is used in a particular case. For example, comparing food production figures with food needs gives a picture of the actual use of the food production apparatus.

Nonetheless, contrary to Baumgartner *et al*, I do not believe that it is fruitful to claim that a good is either relatively scarce or absolutely scarce (Baumgartner et al. 2006; cf. Daly 1977). Both potentialities are probably always present. Some resources have in virtue of their natural properties in relation to human intersubjectivity, higher rate of alternative use (e.g. the factors of production, that is land, capital, labour, time, or low entropy resources); others have low rate of alternative use (diamonds, waste, or high entropy resources).

Most importantly, what seems to be a categorical distinction between absolute and relative SAS is actually not; these are overlapping. The two different views emerge because of the different questions asked about an event of scarcity. Robbins' is more interested about the economizing behavior that emerges because of the alternative use of mean; scarcity emerges in virtue of the competing ends. Choice entails opportunity cost. Scarcity, for Malthus, emerges as a relation between a population's consumption needs and the carrying capacity of the environment. As a consequence, absolute scarcity emerges on a systemic level; whereas Robbins' scarcity refers to the individual level. It is the economizing act that leads to a rational choice.

Table 1 summarizes some essential characteristics of the different ways of viewing scarcity. This also highlights the relevance of both approaches. A fuller study of will require both approaches, and possibly an integration of these. Nonetheless, the major limitation of both approaches is that they assume the naturalness of scarcity and thus largely omit the institutional or sociocultural mechanisms.

[13] Observe, that even if there is an opportunity cost. The question is who pays it; the individual that experience it, the social group, or some other third party.

	Absolute scarcity	*Relative scarcity*
Level of analysis	Systemic	Individualistic
Main research problem	Defining thresholds and final limitations.	Finding optimal allocation
Focus	Actual use (non-substitutability)	Alternative use, opportunity cost (substitutability)
Conclusions	Causal impacts	Rational (optimal) choice
Disciplinary affinities	Biology, Ecology	Economics
Scarcity is…	…a relation between resource(s) (A) and requirement(s) (R). A-R.	… a relation between competing requirements and means. A-(R_1, R_2,…R_n).
The human condition and the view of SAS	Scarcity is naturalized. • Scarcity is inevitable • Sufficiency may be reached in a steady-state economy • Abundance is unattainable.	Scarcity is naturalized. • Scarcity is inevitable • Sufficiency is unattainable. • Abundance is unattainable.
Typical case	Carrying capacity of an ecosystem (A) in relation to human consumption (R).	Crusoe-like situations, where an individual allocates means (A) to a set of competing requirements (R_1, R_2…R_n).
Ontology	Materialistic	Idealistic

Table 1: a comparison between different views of scarcity: absolute and Relative scarcity

Conclusion

In this study I have argued that there are at least two different views of scarcity. The first view, denominated as absolute scarcity, focuses on the actual use of a resource in relation to a want, objective or a requirement. This kind of scarcity was exemplified by the Malthusian approach. It provides an account of how the relation between R and A changes and what causal mechanisms effect these. The problem of alternative use is not of primary interest this approach. The second view, relative scarcity, which focus on the alternative use of a resource in relation to more than one competing want. I have used Robbins' account to illustrate this kind of scarcity. Moreover, this study has also shown that the definitions of absolute and relative scarcity does not hinge on the distinction between needs and desires (Baumgartner et al. 2006; Raiklin and Uyar 1996).

Even if I have mainly focused on Robbins' and Malthus' approach, the developed definition of SAS is not restricted to these approaches. For example, Carl Menger's approach on SAS contains elements of both relative and absolute scarcity (cf. Polanyi 1971). In fact, I believe that Menger definitions of SAS resonate rather well with both Robbins and Malthus' view (see Daoud 2007). But as Polanyi rightly argues:

> Instead of compounding as Robbins did, the scarcity and the subsistence meaning into one universally applicable concept of the economy, Menger, on the contrary, constructed a comprehensive definition of "economic" which while leaving room for both meanings, would permit them to be related to one another according to the empirical conditions which caused them to be present. The crucial sentence of Robbins' argument admits the presence of a gap, which it nevertheless fails to bridge. Menger noted the gap, and accounted for it by the two meanings of economic which he calls "the two elemental directions of the human economy." Robbins proceeds to ignore the consequences of the gap, and produced a definition of economic exclusively suited to the needs of [formal] economic analysis. (Polanyi 1971, p. 23).

Therefore, the economic problem of the neoclassical approach became equated with the formal meaning of the economy, which is the problem of relative scarcity. All in all, I have argued that both these kinds of scarcities are important for the study of the economy and society.

Neglected issues in both Robbins and Malthus' account are abundance and sufficiency. This is probably so because of the assumption of the naturalness of scarcity. In his famous essay *The Economic Possibilities for our Grandchildren* Keynes argues that the past has been characterized by plague, war, and famine; in short, a struggle for subsistence. The economic problem of scarcity was pressing. The future, however, may bring about the abolition of it. He writes, "Now for my conclusion, which you will find, I think, to become more and more startling to the imagination the longer you think about it. I draw the conclusion that, assuming no important wars and no important increase in population, the *economic problem* may be solved, or be at least within sight of solution, within a hundred years. This means that the economic problem is not-if we look into the *future - the permanent problem of the human race*"(Keynes 1972, p. 326). Progress, he argues, is mainly a function of capital accumulations and technological innovation. The first a cause of compound interest, production, and trade; the latter is a cause of science, innovation and entrepreneurship. Hence, with continued technological and scientific development through, accompanied by sustained capital accumulation, the human race will overcome scarcity.

Both Marshall Sahlins and John Kenneth Galbraith are familiar with Keynes' argument. They are both critical of the assumption of scarcity in mainstream economics. Galbraith argues in *The Affluent society* (1958) that affluence prevails in society and particularly in the United States. He claims that the conventional approach of economics erroneously maintains the notion of scarcity in affluence. As this is not recognized, an endless stream of production is encouraged: or more correctly, production leads to further wants, which leads to further production. This is the dependence effect:

> As a society becomes increasingly affluent, wants are increasingly created by the process by which they are satisfied. This may operate passively. Increases in consumption, the counterpart of increases in production, act by suggestion or emulation to create wants. Or producers may proceed actively to create wants through advertising and salesmanship. Wants thus come to depend on output. In technical terms it can no longer be assumed that welfare is greater at an all-round higher level of production has, merely, a higher level of want creation necessitating a higher level of want satisfaction. There will be frequent occasion to refer to the way wants depend on the process by which they are satisfied. It will be convergent to call it the Dependence effect. (Galbraith 1958, p. 124)

Sahlins evocative title, *The Original affluent society* which is a essential chapter in his book *Stone age economics* (1972) was inspired by Galbraith's book title (Bird-David 1998, p. 133). Neoclassical economics assumes that man has *unlimited needs and wants* in relation to

limited resources, and so universal scarcity arises. People always prefer more instead of less. Sahlins shows that hunter-gatherers have lived, and live, allegorically articulated in a reversed relation, that is, limited wants and needs related to unlimited means, and thus affluence arises instead of scarcity. Thus, in many ways the hunter-gatherers enjoy lives more enriching than ours (Western people). Therefore, they represent the *original* affluent society. Sahlins claims, "to assert that the hunters are affluent is to deny then that the human condition is an ordained tragedy, with man the prisoner at hard labour of a perpetual disparity between his unlimited wants and his insufficient means (Sahlins 1972, p. 5). Nurit Bird-David, when commenting Galbraith and Sahlins, argues that "…the assumption of scarcity continues to influence economic conduct in the increasingly wealthy West and thereby act to preserve poverty." (Bird-David 1998, p. 133).

I have deliberately avoided referring to scarcity manifested solely in a market situation; especially when it comes to relative scarcity. It is generally believed that Robbins' kind of scarcity is only present in a market situation (XXX). That it requires price mechanisms in order to calculate alternative use (opportunity costs). Of course, relative scarcity in a market situation is conditioned differently than relative scarcity in a non-market situation (e.g. family structures). But I do not believe that markets are necessary for the manifestation of relative scarcity (cf. Becker). Relative scarcity is present for any individual reflecting upon how to allocate or distribute a resource; for example, a person reflecting upon how to plan his day (R_n equals to different activities and A equals to time, money or similar), a family thinking about to buy a house (R_n equals to other requirements of the family, R_{n+1} is housing and A is the resources of that family), or the members of a society arguing democratically about whether they should accept further immigration or not (R_n equals to the aggregate requirements of society, R_{n+1} is more emigration, and A is the total resources of that society).[14] Accordingly, all action may have an economic aspect. But the mechanisms underlying decisions of (re)allocation is not merely instrumental rationality.[15] Institutions, norms, and habits are some important mechanisms. These sociocultural structures both precede and succeed an event of SAS. In other words, these structures both generate SAS and resolve SAS problems in the socioeconomic system; but not reduced to it. Questions of SAS will condition the emergence of these structures. This means that SAS is embedded in the economy in society. Effected by these but effecting it as well. This is an important conclusion. Because it shows that economics and sociology is intimately linked.

[14] The various resources (A) taken in this example is not restricted to capital, but could be anything that has the potential to satisfy these requirements (R_n). A person's cognitive capacity, a family's social position (class), or that society's collected resources.

[15] It is even questionable whether instrumental rationality is feasible as a normative theory (Beckert XXX).

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