A Conceptual Review of the Terms Sustainable Development and Sustainability

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Abstract

The objective of the research aims to develop a theoretical study with different positions on the terms sustainable development and sustainability. Although fairly debated and accepted by common sense, the concept of sustainability does not have precision and ends up acquiring various senses, sometimes contradictory. The distinct ideological perceptions of environmental issues translate into different discourses. Each social sector presents its position on the "environmental crisis", some catastrophic other weighted, some guiding solutions inside the current economic and social system and others suggesting drastic changes. In this context, and especially in the last three decades, the ideas of sustainable development (SD) and urban sustainability began to be discussed more intensively seeking possible solutions to urban and environmental problems.

Key-words: sustainable development, sustainability, conceptual review, discussion, urban sustainability, environmental problems,

1. Introduction

Much is discussed about what comes to, and thus, different societal actors "read" the concept as it is more convenient. We attempted to address some current issues mainly lived in Western society and the various consequences brought by the environmental crisis felt in decades. From there, we will present a discussion on the topic of Sustainable Development and some of its implications, such as the origins of the term development, the different arguments and positions, and the meaning of the junction of these two words (Sustainable + Development). In addition, we sought to present the incursions of these terms on interventions in urban areas, thus analysing the urban sustainability.

From the twentieth century, the concern about environmental issues has assumed significant importance, especially after World War II, when the development of new technologies and the intensification of the exploitation of natural resources became the shortage of raw materials evident. The resource depletion modifies and interferes with the development of cities and quality of life. (UN Report, 2007).

There is a debate about what is sustainable development and sustainability, and thus, different societal actors "read" the concept of form as most convenient to them. The distinct ideological perceptions of environmental issues translate into different discourses, and consequently, in various forms of activity in cities backed up by an appropriation of the political "environmental" speech.

2. The term: Sustainable Development

The term Sustainable Development (SD) is widely used in the current political and environmental discourses. The vagueness of the term allows it to be appropriated by different social groups with different positions regarding development. Part of the imprecision is inherent in the concept itself, which depending on the approach and by whom is the approach may take different connotations.

2.1. The Origins of the Term Development

The contradictions of the concept of "sustainable development" are given mainly by contradictory definitions of the term "development" and also by the inaccuracy that comes to the term "sustainability".

One part of the world population, mainly those who live in the north and west of the planet, started, from the 1950s on, a discussion questioning the model of modern society, whose civilization pattern is guided by technological procedures that in some cases cause harmful effects to the environment. The concern about the environment has resulted in the environmental movement, mentioned before, driven, from the 1960s on, by American groups who saw the need to maintain the pristine nature (W. Sachs, 1996).

The result of the previous discussions was recorded in 1972, when governments positioned themselves officially and jointly in relation to the environment. The UN General Assembly discussed, in that date, the environment as a global issue in the First Conference of Stockholm. The general principles for the preservation of the environment were established and it was discussed, for the first time, the term Eco-development, as the forerunner of the term sustainable development.

The term was introduced by Maurice Strong, the UN general secretary, and widely disseminated by Ignacy Sachs (1993).

About the same time, it is published the report of the Club of Rome, which also became known as Meadows Report. Both the conference and the report showed an expectation of reversing the environmental framework and a concern for the future, but none of them demonstrated a perspective of changing the production model existing in the societies. Both appreciated the preservation and improvement of the environment and established an ecological discourse that qualifies and prints judgments but committed beforehand with the rules of industrial capitalism.

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At this time, the tensions among economic growth, urban expansion, technological advancement and preservation of nature became more evident. As a result, the World Commission on Environment and Development (WCED, 1991), also known as the Brundtland Commission, chaired by Norwegian Gro Brundtland Halen, in the preparatory process for the United Nations Conference - also known as "Rio 92" – it was developed the report that became known as "Our Common Future" or the Brundtland Report. This report contains information gathered by the committee during three years of research and analysis with emphasis on social issues, particularly with regard to land use, their occupation, water supply, shelter and social services, education and health, as well as management of urban growth. This report presented one of the most widespread definitions of the concept: "sustainable development is one that meets the needs of the present without compromising the ability of future generations to meet their own needs". However, there are many issues that encompass the discourse of sustainable development and, therefore, a unique concept will always be incomplete

An important milestone for the discussion in Brazil was the United Nations Conference on Environment and Development held in Rio de Janeiro in 1992 (Eco-92). On that occasion, it was published Agenda 21, which is a document resulting from the conference, "establishing a covenant by the changing pattern of global development for the next century". Thereafter, the interest in making sustainable communities increased and the involvement of all human activities in this process became sharper, especially in urban planning and new architectures. The concept of sustainable development signed at the Agenda 21 had also been incorporated in other agendas of world development and human rights, but as it is evidenced by this article, the concept is still under construction.

The academic debate about the concept of development is quite rich, especially about the differences between economic growth and development. However, "despite the differences between the concepts of development, they are not mutually exclusive. In fact, at some points, they are complementary" (Scatolin *apud* Oliveira and Souza-Lima, 2006). It is common some authors ascribed to the expression "development" only the increased incomes as a condition to be considered as developed, without worrying about the distribution of that income. However, in the most recent debates, development is being addressed in a more comprehensive, recognizing, and economic growth, improved quality of life. This second criterion introduces to the development parameters the possibility of improving the economic and social indicators such as poverty alleviation, unemployment, inequality, better food, health, housing and education.

The development concept is one of the most debated and controversial in the social sciences. The debate intensified, especially after the World War II, when many countries tried to reduce problems such as poverty, unemployment, and racial discrimination policies and economic and social inequalities and establish themselves in the global context. The concern with both economic progress and with the improvement of quality of life has been advocated since 1945 in the United Nations Charter, one of the most important documents in the post war era about development issues. In the same year of the conference where the letter was disclosed (San Francisco Conference) the United Nations (UN) was officially established, initially composed of fifty-one countries. This organization was intended to strengthen the allied countries and contribute to higher levels of quality of life, using international institutions to promote economic and social progress.

Discussions about development intensified after the creation of the UN. Other programs and agencies were created to assist countries to address economic and social problems of international order, keeping mainly economic and military superiority of the constituent countries of the United Nations. The International Bank for Reconstruction and Development (IBRD), the International Monetary Fund (IMF), the General Agreement on Tariffs and Trade, the World Health Organization (WHO), among others, were created.

The development debate at that time became even more the focus of economic growth. Economists see the possibility of creating models of economic development that may lead countries wealth accumulation. For the economist Furtado in 1961, "development is basically increased flow of real income, i.e., increase in the amount of goods and services per unit of time available to certain collectivity" (Furtado *apud* Oliveira and Souza-Lima, 2006).

Two streams marked economic thinking on the subject of development. The first sees growth as development synonymous, while the second believes that growth is essential for development, but not enough. This second stream is formed by Marxist scientists or ECLAC (follow the teachings of ECLAC - Economic Commission for Latin America and the Caribbean), who see growth as a quantitative variation of the product, while development is characterized by changes in quality of life of individuals, institutions and production structures (Oliveira and Souza-Lima, 2006).

Wolfgang Sachs (1996) believes that the era of development had its starting point in 1945, when President Harry Truman, in his inaugural speech, defined the poor countries as "underdeveloped areas". He presented a vision where all countries were moving in the same path in search of development, which defined the degree of civilization of each nation taking into account its level of production.

With this vision of development, several countries have sought to empower themselves to increase their production rates, but the result was often catastrophic, especially in Asia and Latin America. Besides the considerable increase of the economic distance between the industrialized and the developing countries, the economic gap also increased between the population of each country, thus increasing the social and economic disparity between rich and poor.

To Naomi Klein (2008) the free market has brought disastrous consequences for many societies. During decades of market opening, from a shock or crisis, many countries have suffered and suffer until the present day with the bad consequences of the free market. The apparent freedom and democracy give rise to manipulated societies. Often "good intentions" of government can bring unemployment and social and economic disparity to the local population and enrichment for the nation "well intentioned".

The liberal promise of mid-twentieth century preached steady economic growth and lasting that could become universal and reach everyone in the world, but in recent decades it appears that

growth is limited and the race for economic development is bringing serious consequences to the world.

For some people the idea of a new sustainable city never ceases to be a capitalist idea. In many cases, such as in "private cities", environmental issues are taken into consideration, but what really matters is the profit of entrepreneurs. Few who can afford the status of living in a "green" city benefit, but a whole population remains miserable.

Ignacy Sachs (1993) points to a developing socially, environmentally sustainable and economically sustainable inclusion. To be socially inclusive is important to be supportive and ethical. On the other hand, for things to happen they need to be economically viable. "The economic issue is not a goal in itself, only the devices which advances the path of inclusive and sustainable development" (I. Sachs *apud* Nascimento and Vianna, 2007). The parameters to distinguish what can be environmentally sustainable are also very tenuous and one of the main questions is the preservation of natural resources.

The different visions of development also result in different governmental and non-governmental actions. However, it is the common consensus that the governments of various countries are targeting actions in favour of economic growth since, although not sufficient condition for development, it is still the most widely used means to reduce poverty and improve the quality of life, however not necessarily the most appropriate way to end the misery.

2.2. The contradictory discourse of sustainability

The term sustainability does not have an exact and unanimously definition accepted by different sectors of society. Both the origin of the term and its definition are unknown. Although fairly debated and accepted by common sense, the concept of sustainability, because of its lack of precision, ends up acquiring various senses, sometimes contradictory.

The vagueness of the term makes possible its common use in different discourses and actions. I. Sachs (1997) points to the manipulation of the concept according to the different political and economic interests of each society. For the author the term sustainability brings together friends and enemies and revolves around a big variety of settings and interests.

One of the first definitions of the concept of sustainability was written by Lester Brown in WWI (Worldwatch Institute) in the early 1980s. Lester wrote that "a sustainable society is one that can meet their needs without compromising the chances of survival of future generations" (Brown, 1980 In: Andrade e Romero, 2004). Already in 1987 this concept was used in the Brundtland Report to define sustainable development.

According to Acselrad Henri (1999), the sustainability expression had its first focus in the biological sciences where every living being would consist of a "capital / stock" which would allow establishing a biomass flow without compromising the maintenance of this "capital". The same logic of maintaining natural resources even with constant use of these was held in the discourse of sustainability. Many governments, companies and industries began to "greening" their projects and products in order to continue economic growth, but passing an image of durability and environmental awareness. However, some NGOs and the academia began to see sustainability as a mechanism to limit growth and form a new organizing principle focused on the human being.

To Bossel (1998) the sustainability of a system can only be observed from the perspective of future threats and opportunities. He points out that in the past the sustainability of society was hardly questioned because the anthropic activity was reduced charge and did not cause very sensitive

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damage, allowing a rapid adaptation of nature. The sustainability of a system becomes threatened from the moment in which the nature is not able to withstand and respond appropriately to receiving excessive load. Increasing the rate of change decreases the system's ability to respond and it can end up no longer feasible (Bellen, 2005). The more the system remains stable it is bigger its resiliency capacity¹.

On this view the concept of sustainability means to keep in existence, to prolong, but Bossel (1998) believes that human society cannot be maintained in a single "state". It is highly adaptive and changeable and interacts with another complex system which is the environment. Sustainability cannot be ruled only on the environment, because a society can be environmentally sustainable, based mainly on new technologies, but with social injustice, socially unsustainable and with economic differences between sectors of society. To Bossel (1998) sustainability must address the dimensions: material, environmental, ecological, social, cultural, legal, economic, psychological and political.

For Clovis Cavalcanti (2003) sustainability "means the possibility of obtaining continuously conditions equal to or greater life for a group of people and their successors in given ecosystem." For the author, the current discussions about the meaning of the term "sustainable development" show that is accepting the idea of putting a limit to the material progress and consumption, once seen as limitless, criticizing the idea of constant growth without concern of the future (Cavalcanti, 2003).

Ignacy Sachs (1997) understands sustainability as a dynamic concept that encompasses a process of change and the concept is subdivided into five dimensions: social, economic, ecological, geographical and cultural. Although there is no consensus on these dimensions it can be considered that they are quite broad and allow for a complex study on the sustainability concept. However, the partition in these five dimensions is quite subtle and their definitions are inaccurate.

This division by I. Sachs is opposed by the sight of Schumacher (WCED, 1991), which ranks only environmental, economic and personal sustainability. But these two views differ mainly in the definition of the expression environment, as Schumacher refers to the rational use of the resources, while Sachs refers to the recovering capacity of ecosystems in the face of human aggression.

In this article the term sustainability is understood as a goal to be achieved and also as a process to reach the goal. This form of goal and process differ according to socioeconomic and environmental context of each city. As a process, sustainability interferes in the structures of society ranging from a global perspective until to daily issues. Thus, the different political positions on broader environmental issues as well as individual attitudes can influence the process towards sustainability. Other factors also influence the possibility to reach the goal of sustainability; they are the form of social organization that currently, mainly in southern hemisphere countries, exacerbate social differences and the increase of them beyond the consumption pattern and economic structure existent.

Sustainability can only be achieved when acting deeply in each of those structures and in their variables and constraints, including the cycle of life of each element consumed or produced (Lemos, 2010). Thus, urban sustainability may vary when only few aspects of the overall system are sustainable and the ideal goal would be a process with a "closed" metabolic cycle. In this cycle process, virtually everything is reused and recycled and the removal of new features from the

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¹Resilience is a concept arising from the physics and refers to the ability of certain materials to accumulate charge when required but does not rupture or deform permanently. This concept is also used in ecology to refer to the ability of a system to return to equilibrium after suffering a sudden action, namely its ability to recover.

environment is greatly reduced, and consequently, the waste generation is also low. "Closed" urban cycles that supply current human needs without compromising future needs, considering the different local and global scales and economic feasibility and limits of natural resources, would be an ideal sustainable urban system. However, the question turns to what the needs of each society and what are the limits of the environment and these definitions vary according to the conditions related to culture, society, etc. of each individual group.

Urban sustainability is defined by Henri Acselrad as the ability of urban policies adapt the provision of services, the quality and quantity of social demands, seeking a balance between the demands of urban services and investment structure (Acselrad, 1999). However, it is also imperative for urban sustainability rational use of natural resources, the good form of the urban environment based on the interaction with the environment and natural resources, as well as answers to urban needs with minimal transfer of waste and tailings for other current and future ecosystems.

In addition, intrinsic to the concept of urban sustainability is the understanding that the form, the infrastructure, the way of life and economy are integrated into the local context, considering its specific ecological, social, cultural and economic variables. Thus, the project is carried out for a particular region, population and time, and can conform to principles and general goals, but with specific solutions.

Often the concept of sustainability is trivialized and treated simply as a convenient artifice for an ideology and a political issue. Furthermore, the lack of specific criteria and incisive laws within the urban environmental management in the literature indicate gaps and flaws in experiments already performed seeking sustainability for the place.

Sustainability is to find the means of production, distribution and consumption of existing resources in a more cohesive, economically efficient and ecologically viable way. Also, notice that the decrease in production and consumption of some might facilitate social adjustment between the countries from North and South and reduce social inequities within societies.

3. The spread of the ideal of sustainable development

In recent decades the term "sustainable development" became to be used by most institutions and political speeches. As the term development and sustainability word have different definitions and are used in different ways by social actors with different political and economic interests, the junction of the two words also forms a contradictory term and full of meanings.

The joint development and sustainability was formalized in the aforementioned Brundtland Report in 1987, the document "Our Common Future" (Our Common Future, 1988, In: WCED, 1991). The report considers that widespread poverty is no longer inevitable and that the development of a city should focus on the basic needs of all and offer opportunities to improve quality of life for the population. One of the key concepts discussed in the report was the "equity" as a condition for which there is effective participation of society in decision-making through democratic processes for urban development. The text of the Brundtland Report also pointed out, in relation to urban issues, the need to decentralize the application of financial and human resources, and the need for political power favouring the cities in their local scale. With regard to natural resources, it evaluated the ability of the biosphere to absorb the effects caused by human activities, and stated that poverty can already be considered as an environmental problem and as a key topic for the pursuit of sustainability.

Although the term "sustainable development" have been considered only from the Brundtland Report in 1987, several other global agreements were made in favour of the environment, including prior to the year 1987 (Table 1).

Table 1: Global Agreements about the environment.

GLOBAL AGREEMENTS ABOUT THE ENVIRONMENT	
1972	Stockholm Conference on the Human Environment
1979	Geneva Conference on air pollution. (UN)
1980	Global Strategy on Conservation (IUCN)
1983	Helsinki Protocol on air quality
1983	World Commission on Environment and Sustainability (UN)
1987	Montreal Protocol on the ozone layer (UN)
1987	Our Common Future (UN)
1992	United Nations Conference on Environment and Development - Rio92 (UN)
1996	Habitat Conference (UN)
1997	Kyoto Conference on global warming (UN)
2000	Haia Conference on Climate Change
2002	World Summit on Sustainable Development in Johannesburg
2012	UN Conference Rio + 20

Source: Edwards, complemented in 1999 by the author of the article, 2012.

The concept of sustainable development was signed in Agenda 21, a document developed at the United Nations Conference on Environment and Development - Rio 1992 (Rio, 1992), and incorporated into other agendas of world development and human rights. Although well accepted by society the concept is still under construction and involves several controversial discourses, as mentioned before.

Despite being a questionable concept for not defining what the needs of this or what will be the future, the Brundtland report called the world's attention to the need of finding new forms of economic development, without the reduction of natural resources and without damage to the environment. Furthermore, it defined the three basic principles to be met: economic development, environmental protection and social equity. Still, the report was widely criticized for presenting as the main cause of the situation of unsustainability of the planet the uncontrolled population growth and the poverty in underdeveloped countries, putting only as a secondary factor the pollution caused in recent years by developed countries.

For the World Commission on Environment and Development (WCED, 1991) the goals that derive from the concept of sustainable development are related to the process of growth of the city and aim to conserve the rational use of natural resources incorporated into productive activities. Among these goals are: renewable growth; change in quality of growth; meeting the essential needs for jobs, water, energy, food and sanitation; conservation and protection of the natural resources; reorienting technology; managing risk and reorientation of international economic relations (WCED, 1991).

For Edwards (2009) SD is guided by three perspectives: social, technological and environmental. For a project to be considered sustainable, according to the paradigms of sustainable development, it should be thought of "the shadow" of these three parameters.

The environmental issues are increasingly being incorporated in the sciences and societies. Discussions about the environment and the relationship between nature and humans are even more evident and relevant.

The most widespread SD concept, which is that of the Brundtland Report, leaves questions as: what are the needs of the present; what will be the future and sustain what to whom. The answers vary according to the way that society responds. However, in recent decades, the difficulty of defining what is to be sustainable development, it is not seen as a problem for all sectors. The Brundtland Report consider that widespread poverty is no longer inevitable and that the development of a city should focus on the basic needs of all and provide opportunities for improved quality of life for the population. One of the key concepts discussed in the report was that of "fairness" as a requisite for the effective participation of society in decision-making, through democratic processes, to urban development. In 1997 UNESCO document states that sustainable development can be a controversial concept, but allows the articulation between different economies and political relations between North and South and offers the possibility of joining the debate on equity and social justice to ecology (Magalhães, 2008).

The concept of sustainable development seeks to establish an effective possibility of an ecological and democratic social order, without necessarily implying into overdrive of the capitalism. However, a democratic ecological and social order does not match to a market order which seeks the profit and an uncontrolled accumulation.

To Mota and Silva (2009) two difficulties in the concrete sense of the consistency of this conception of SD stand out. The first is the contradiction to propose a model of endogenous development precisely in a historical framework marked by globalization of financial capital and globalization, then, "the formulation able to solve the problem of desired subordination to the interests and actions of the market economy to management of natural resources related to the quality of people's lives" (Mota and Silva, 2009).

This entire dilemma is due to the conventional notion of development where economic growth and the level of production are the factors that differentiate a developed country from a developing country (or in development). It discusses, from the 1970s, one "alternative development model" that seeks to reconcile environmental sustainability and social justice. The concept of sustainable development had as background this intention of an "alternative model", but even so the needs of each social sector become evident in its political discourse (W. Sachs, 1996). Some sectors tend to protect the "environment" and other to raise the developmental flag.

Thus, the discourse of sustainable development is in danger of being only a new term and empty of meaning. The Economic Commission for Latin America and the Caribbean - ECLAC stresses that sustainable development can be ideological and political support capable of producing a consensus classes:

"Sustainable development stands out in the whole of the proposals and initiatives implemented in the environmental area, as a fundamental mediator ideological/political and support necessary to build a consensus classes. The triad, economic, social and environmental, acts as guide to many different practices, offering them justification and support, being these actions local, national or even international. This way is that companies and institutions have been redefining

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programs and projects called environmental responsibility, including requiring specialized activities, which includes the social workers "(ECLAC, 2004, p.7).

The discussion on sustainable development can aggregate different sectors of society, but it should not receive different meanings according to each social actor. The discussion is valid for the development and definition of the term, but the acceptance of various meanings and approaches can make the term frivolous and empty.

For Edwards (2009) the exchange of information and discussion that occurred in these international events is an essential part of the notion of sustainable development, but sustainability goes beyond the concept of SD and presents as a systemic process that can contribute to more visible results in urban projects considering not only new technologies but also social equity.

W. Sachs (1996) highlights three different visions of sustainable development. The first he calls the "perspective of competition" that presents the idea that the development can be lasting and the environmental concerns emerge as driving force of economic growth. In this view there is a demand for the preservation of the development and not to the environment. For Arturo Escobar (1994) this view is called liberal and is the most widespread in recent years, including the Brundtland Report. Liberal discourse presents the idea that social reality can be adjusted from new technological knowledge. It is believed that new technological standards and new ways to manage social issues could "save" the nature and prevent environmental collapse. This environmental commodification can be seen when large companies cause environmental disasters and pay fines to compensate for the damage or when countries are negotiated between the carbon emission credits.

The environment is increasingly being used as marketing for economic growth and the consequent consumption. It is proposed to the entrepreneurs, as growth strategy, achieving "ecological efficiency" and companies use the slogan "eco" to sell more and more. Thus, the "emphasis was switched from the environmental protection to the preservation of the productivity of natural resources for economic use" (W. Sachs, 1996).

In this vision of "competition", the industrialized countries would maintain their hegemony and competitively and the society would be seen as a company. The goal of businesses and industries would be the "eco-efficiency" and environmental technology could lead to this purpose. This perspective also refers to a techno centric vision and the authors which are linked to this point of view believe that "sustainability refers to the maintenance of the total capital available on the planet and that it can be achieved by replacing natural capital by capital generated by the human capacity" (Bellen, 2005). The vast majority of businesses and industries argue that all environmental problems can be solved with new technologies.

The World Bank, for example, is a proponent of this economic view about the environment and argues that "sustainable development is development that lasts". About this sentence W. Sachs complains that is not the environmental conservation which wants government agendas, but the maintenance of human utilitarianism, taking environmental goods as commodities that can be traded and sold. W. Sachs asks:

"Until which point the nature's services are indispensable for future development? Or which services of nature are expendable or replaceable, for example, for new materials for energy or genetic? Thus nature becomes a variable. In this perspective; nature is reinterpreted as capital". (W. Sachs, 1996, p.105).

The nature is constituted in an available capital that expects a value and can be replaced or used to guarantee economic growth. Thus, there was a change in the relationship with the most natural and "consumption of nature" that has no boundaries. According to W. Sachs (1996) "environmentalists

wanted to reform the capital to save nature; economists now want to reform the nature to preserve capital".

The second vision of sustainable development highlighted by W. Sachs is the "astronaut's perspective", widespread, mainly by environmentalists. This was so named to make a reference to the vision of the earth as the object in question. It is an outsider vision. From the moment that astronauts brought images and photographs of the globe, some environmentalists highlighted the finiteness of the earth's resources. This view has developed a discourse that puts the planet as a scientific and political object and the societies and human aspirations become irrelevant in front of the issues facing the planet. With this trend, sustainability is increasingly designed as a global challenge of managing that will identify the balance between the extracted and manmade and regenerative capacity of nature.

One of the biggest disseminators of this vision is the "Global Plan Marchal" (Gore, 1992), where the ecology is the milestone of a global policy, which should have a commitment to tackle the crisis of nature without forgetting the crisis of justice (Sachs, 1996). There are many scientists and environmentalists who advocate this view, seeking at the same time to reconcile human activities with the maintenance of the biosphere.

Scientists as Richard Rogers (2001) and Girardet (2001) stand out as advocates of this view. In their books, they conceive a perspective of the need for maintenance of land resources in favour of the possibility of maintaining the protected biosphere. The main criticism of the astronaut's perspective is its extremely quantitative proposal, from a more objective view of sustainability (Magalhães, 2008). Many sceptics of this view believe that there is a lack of awareness of social problems and of different cultures and ways of organizing human societies. A very objective and quantitative approach does not reach the social problems which is one of the main issues raised by sustainability.

In this perspective the natural resources are in first place and not humanity. Thus, the issue is back again to the differences between the South and North. Because facing the environmental problem through numbers starts a discussion among industrialized countries that have benefited enormously and still continue to enjoy the material goods and the countries in development which want to have the right to use such property as much as the others. It becomes a problem which could be seen as mathematical. It became a matter of quantity of resources that one or other may draw from the environment. This account falls mainly on the industrialized countries due to many years of uncontrolled extraction of resources and the pollution caused by their waste. Moreover, with their economic power, industrialized countries can maintain their high production, and still have the ability to "buy the right to pollute" from poorer countries, as envisaged in the Kyoto Protocol. However, the growing economic impact of decades of developing countries, especially Asians, also worries environmentalists because the pollution to achieve this growth is affecting the entire globe.

The last vision of development mentioned by Wolfgang Sachs (1996) is the "domestic perspective", where sustainable development is not a factor for economic excellence, or the stability of the biosphere, but the overall livelihoods.

"The practical and theoretical efforts aim at alternatives for economic development ... Internationally, it is expected that conservationists societies from North give space for societies South flourish while lifestyles to the urban middle classes ... this perspective, looms the question that needs are met by sustainable development and to whom." (W. SACHS, 1996, p.19).

In the point of view of the "domestic perspective" to protect the environment and society is necessary to delimit the extractive development. Wishing to decentralized societies and not focus on accumulation. However, the vision "domestic" is a big challenge, especially for the richer countries, by proposing a decrease in production. However, the negative consequences of economic growth without limitations are bigger if compared with the positive ones and this is a great incentive for the change of attitude of the industrialized countries. The main concern of "domestic perspective" is to search for a society that is able to remain at an intermediate level of production and consumption.

In this perspective the traditional development is viewed with suspicion, and the excesses of capitalism appear as harmful. "In this view, global good neighbours require, above all, the reform of the own home in a cosmopolitan spirit" (W. Sachs, 1996). The "domestic perspective" proposes a reduction of 'eco-footprint', especially in northern countries. It is expected an organized reduction and a reduction of the global effects of capitalist actions.

"In the "domestic perspective", is required that the North reduces the environmental burden it places on other countries and that he pays the debt accumulated by excessive use of the biosphere for decades and centuries. Thus, the main arena for the environmental setting is neither the South nor the world, but the very North "(W. SACHS, 1996, p. 21).

In this perspective Sachs encompasses a focus of great importance which is the idea of self-limitation: "... the quest for a society which would be able to remain in an intermediate level of performance. In other words, a society that is able to not want something that could produce". W. Sachs seems to lean towards this perspective and compares with others: the "domestic" perspective tends to focus more on values and institutional standards, in short, in the symbolic universe of the society, while the "prospects of competition" and "the Astronaut" highlight energetic and material processes, i. e., the world of material quantities". It is a comparison between sustainability objective and subjective. The objective sustainability is concerned more with the quantitative problems of resource use, waste disposal, toxic fumes and material production. Scholars tend to believe objectivity of environmental issues in technological efficiency as a solution to many problems between human activities and the environment. On the other hand, the sustainability subjective cares more about the social and political problems that are difficult to quantify and adjust its sight for a qualitative approach focusing on changes in economic practices and policies.

W. Sachs believes that development should use fewer natures and include more human. Furthermore, he points out that the decline in production would not necessarily lead to decreased well-being. Alternative models of development without much accumulation and waste could lead to fairer and more environmental society. To W. Sachs social problem is not poverty but wealth. The gap between rich and poor is that provides an environment of social and environmental injustice. Likewise, "the environmental problem is not inside the nature, but in the excessive development (economic)" (Sachs, 1996).

In studies by Acselrad (2001) three matrices described by him are close to this third approach advocated by Wolfgang Sachs: ethics, self-sufficiency and equity. The first is the "ethics" which proposes a rational containment of the desires. This view puts the ethical issue as "evidenced interactions of the material basis of the development with the conditions of continuity of life on the planet". Acselrad (2001) does an analysis between the values of good and evil showing the interactions of "development with the conditions of continuity of life on the planet."

Long time before Acselrad highlighted ethics as a matrix for the development, Spinoza (Deleuze, 1984) highlighted the concept of ethics as a guide for training and human experience. Building an ethical behaviour may be a way to think about sustainability. Ethical behaviour is that which is

considered good and good can be set to deal with the conflicting priorities of individuals related to the whole. Thinking about sustainability requires thinking on the welfare of a whole and not of an individual. For Spinoza "there is no perfect and imperfect, good and evil. Such concepts are just comparisons that man makes between the produced object and other in nature (when in fact it's all part of nature)" (Rose, 2010).

The second matrix described by Acselrad (2001) is the self-reliance, "unrelated to national economies and traditional societies of the world market flows, as appropriate strategy for community capacity for self-regulation of the conditions of reproduction of the material basis of development". It's about the importance of local issues and promoting local products, preaching the denial of global market opposite to the local market.

Finally he highlights the "fairness" as a condition for which there is effective participation of society in decision-making, through democratic processes, to urban development. Brundtland Report also highlights the need for equity between societies and human being. Thus, there is a need to decentralize the application of financial and human resources, and the need for political power favouring the cities in their local scale.

Sustainable development is a benchmark for all human activities. This concept must be intrinsically linked to urban design. Urban studies have a basic role in this scenario, because cities are the most affected areas in the context of the current mismatch between human activities and the environment.

One possible way to sustainable development can be a change in the economic structure of the means of production; due to the relationship between society and nature have always been a relation of domination. In both capitalist and socialist mode of production the natural resources are and were present in the same way, i.e., the "man" dealing with the nature in a mercantilist way.

It is believed that changes are needed paradigm changing modes of production, economic structures, political and social actions, thus creating a new relationship between human activities and nature.

Although the theme is rather complex, the conceptual review of sustainable development should be thoroughly discussed and reflected, always seeking a path to social, environmental and economic equity among countries and their citizens.

4. Final Considerations

This study aimed to present a discussion on the origin and variations of definition of sustainable development (SD). Also the relevance of the discussion on sustainability and SD within the cities was treated, because it is inside the cities that the vast majority of human relationships occur. There are many contradictions and challenges to deal with when prioritizing urban actions which aimed at the SD. Sustainable development is a social learning process of long term, which in turn is driven by public policies for development plan.

Because of the complexity of this issue the presentation of the positioning on sustainability and sustainable development is important. Despite the many urban uncertainties, performances guided by SD are presented as a viable option for improving the quality of life in cities and their citizens.

It is accepted that the precise definition of which comes to be urban sustainability or sustainable city is still very uncertain. However, the sustainable city is also an ideal to be sought. The idea of sustainability also depends on the social group that is idealizing. Social, economic and environmental parameters may even be similar, but the ideal sustainable urban is changed according

to each culture. Thus, although there is no consensus on the exact definition of the term sustainability it is a broad acceptance that what is said sustainable seeks a balance between human needs and the environment. Maintaining resources for future generations and social justice issues are also accepted consensus on the ideal of urban sustainability.

For many concepts are given different dimensions according to each social actor, for example, the term "freedom", that does not mean the same thing for Brazilians and Cubans, for example. Also the expression sustainability acquires differentiated connotations, but some parameters are consistent with all the speeches. By comparison, as discussed "freedom", regardless of culture or social class, most of the people could associate the word to terms like: free, accessible, free will, among others. Also when discussing sustainability it is easily associated with some terms like: nature, balance, support and maintenance of life.

From there, it is argued in this article that sustainability is a guiding principle able to contribute to development centred on the human being and the environment. The search for a balance between economic growth and social justice may indicate pathways for urban sustainability. Furthermore, the interaction between local and global issues and the concern for future generations contribute to the ideal of sustainability. It is believed in the possibility of social and human development with environmental supporting capacity, generating producing cities with activities that can be accessed by all as a form of appreciation of space incorporating the natural and social elements.

One of the challenges of sustainability is the awareness that this change is a process to be followed and not something definite to be achieved. The search for a conceptualization of what is to be sustainable brings a series of propositions and strategies seeking to operate in both local and global levels.

Thinking about new possibilities and reflecting on the real needs of the human being can be a way to define sustainability and development. From the rational and ethical principles is possible to convince governments and citizens to think, reflect, act and invest on a new opportunity to drive their actions.

Sustainable development is a social learning process of long term, which is characterized, therefore, not as a fixed state of harmony, but rather as a process of change. The concept is broad and can always be appropriated by different actors. However, the various discussions about the term "sustainable development" turn open to the question of what can be developed without destroying the environment. The SD can be described as a consequence of environmental preservation, social justice and economic equity.

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References:

- Acselrad, H. (1999) Discursos da sustentabilidade. *Revista Estudos Urbanos e Regionais*, no 1, Rio de Janeiro, pp. 79-90.
- Andrade, L. M. S. de, Gabriel, V. G. and Dias, M. B. (2008). The Ecosystemic View of the Urban Occupation of Fernando de Noronha Island in Brazil. *Ecocity World Summit* 2008. Available: http://www.globalislands.net/userfiles/_brazil_FdNpdf6.pdf
- Bellen, H. M. (2005) Indicadores de Sustentabilidade. Rio de Janeiro: Editora FGV.
- Bossel, H. (1998) Earth at a crossroads: paths to a sustainable future. Cambridge: Cambridge University Press.
- Cavalcanti, C. (org.). (2003) Desenvolvimento e Natureza: estudos para uma sociedade sustentável. São Paulo: Cortez.
- Comissão Mundial para o Meio Ambiente e Desenvolvimento CMMAD ONU Comissão Brundland (1988) Nosso Futuro Comum, (1991). Rio de Janeiro: FGV, 2º edição, 1991.
- Deleuze, G. (1984) Spinoza: filosofía práctica. Barcelona: Turquets.
- Edwards, H. (2009) Guia práctico de la sostenibilidad. Barcelona: Editorial Gustavo Gili.
- Girardet, H. (2001) Sustainables Cities. Madrid: Editorial Celestial.
- Gore, A. (1992) Earth in Balance. Boston: Ecology and the Human Spirit.
- Klein, N. (2008) A doutrina do choque: a ascensão do capitalismo de desastre. São Paulo, 2008.
- Lemos, M. F. R. C. (2010) Adaptação de cidades para mudança climática: uma metodologia de análise para os planos diretores municipais. Tese (Doutorado) UFRJ/PROURB/Programa de Pós-Graduação em Urbanismo.
- Magalhães, R. (2008) *A constituição de Políticas Públicas de Desenvolvimento Urbano Sustentável*. Tese de Doutorado, PROURB\FAU\UFRJ.
- Mota, A. and Silva, M. (2009) A questão ambiental e o contraditório discurso da sustentabilidade. *Revista Praia Vermelha*, Rio de Janeiro, vol.19, July-December, no. 2, pp. 21-36.
- Nascimento, E. and Vianna, J. (orgs.). (2007) *Dilemas e desafios do desenvolvimento sustentável no Brasil*. Rio de Janeiro: Garamond, 2007.
- Oliveira, G. and Souza-Lima, J (orgs.). (2006) Desenvolvimento em Foco: uma contribuição multidisciplinar. Pinheiros: AnnaBlume.
- Rogers, R. and Gumuchdjiam, P. (2001) *Cidades para um pequeno planeta*, Barcelona: Editorial Gustavo Gili.
- Rose, R. E. (2010) A Filosofia de Baruch Spinoza. 2010.
- Sachs, I. (1993) Estratégias de transição para o século XXI: desenvolvimento e meio ambiente, São Paulo Studio Nobel.
- Sachs, W. (1996) Anatomia Política do Desenvolvimento. Democracia Viva, no. 1.
- CEPAL Panorama Social da América Latina 2004. División de Desarrollo Social, Estadisticas y Proyecciones Económicas (Accessed: March, 2011) New York: CEPAL Naciones Unidas. Available: http://www.eclac.org.