

Consumption Efficiency: A Missing Concept in Mainstream Economics*

Abstract

This paper attempts to explain why the concept of consumption efficiency is missing in mainstream economics. The absence of such a concept plays a major role in supporting the current situation dominated by consumerism. Under consumerism, resources and the environment have been depleted at an alarming rate threatening the continuation of the human species in the foreseeable future. Without consumption efficiency, the emphasis on production efficiency only is rather useless, as it cannot prevent the over utilization of resources at the current rate. Fortunately, the concept of consumption efficiency can be explained convincingly in Buddhist Economics. The difference between mainstream economics and Buddhist Economics is that mainstream economics does not try to differentiate between human needs, human desire and human greed while in reality the three concepts are distinctively different. Also, mainstream economics incorrectly assumes that more consumption increases the welfare of a person. Such an assumption has been supported by the belief or ideology that following self-interest is rational behavior. These two false assumptions reinforce each other. An understanding of Buddha's teaching or **Buddha Dhamma** is needed to provide a realistic assessment of the actual situation. With the concept of consumption efficiency, together with production efficiency a new path way for sustainable development can be found leading humanity out of possible catastrophe and back to a green meadow.

Introduction

The problem of climate change (more popularly known as global warming) has its origin in consumerism, one of the triad made up of capitalism, industrialism and consumerism. The triad first established roots during the time of mercantilism in the Middle Ages, and grew into a strong tree during the industrial revolution, coming into full bloom as consumerism during the age of high mass consumption in the decades after World War II. In the period of the last 50 years, the triad has led the world to a point very close to human catastrophe through rapid depletion of natural resources and destruction of an environment suitable for human life. The problem of climate change or global warming is only one among many problems created by consumerism.

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How has the human race has been brought to the edge of this steep cliff without sufficient warning? In fact the warning was sounded in 1962 in Rachel Carson's well known book *Silent Spring*. As the first warning did not receive adequate attention, the voices of warning have become much louder as time has gone by. Unfortunately many have turned a deaf ear to these warnings and have continued their businesses of consumption as usual. Such ignorance is not without good reason. One of the supporting ideologies in mainstream economics known in disguise as "consumption theory" says that the more a person can afford to consume, so long as his utility from such consumption is still positive, the more that person will increase his utility even though the rate of increase of his utility is decreasing. Simply stated, the more you consume, the more you will enjoy even though your per unit enjoyment will decrease with each unit of additional consumption; in other words, more is better. This theory is also supplemented by the belief that the act of following self-interest is "rational behavior". The sum is that greed is an acceptable or even a good human behavior. In reality, while greed by an individual may not be very harmful for the society, the aggregate greed or societal greed can be fatal for all.

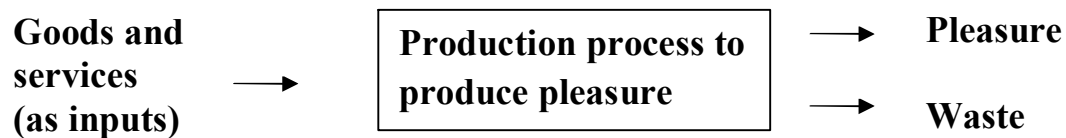
One reason that the restraint of greed has not been encouraged in mainstream economics is because the concept of consumption efficiency cannot be dealt with in a meaningful way by the subject. Strangely, while mainstream economics can to a certain degree deal effectively with production efficiency, it says almost nothing at all of the similar optimization of consumption. On one hand mainstream economics keeps preaching on production efficiency in order that input resources can be used optimally while on the other hand, it ignores the concept of consumption efficiency. It is hard to justify the optimal use of resources in the production process only to ignore wasteful use of resources in the consumption process. The wasteful use of resources through consumption is the major cause responsible for leading human beings to near catastrophe in spite of the loud warnings. This is the reason why we should contemplate, try to understand and try to reformulate the concept of consumption efficiency.

Understanding Consumption as Production

Although mainstream economics prefers to differentiate a consumer from a producer, one can still use the framework of mainstream economics to analyze consumption from a different angle. Actually the process of consumption can also be viewed as a production process. Goods and services ready to be consumed can be considered as inputs to a production process. The outputs of this process are pleasure or utility and waste. From this angle, the consumer also prefers to have the least amount of inputs while achieving maximum pleasure. In this way, consumption can be viewed as another production process. Instead of being goods and/or services plus waste, outputs from this production process are pleasure and waste. In this way, one can apply production theory to consumption as well. More

importantly, with this new way of looking at consumption, one can clearly discuss the concept of **efficiency of consumption**. It implies that one ought to produce maximum pleasure with the lowest production cost. Mainstream economics rushes to the market system results in overlooking this important aspect of consumption that could lead to a much more profound implication.

For clearer understanding, the consumption process can be shown in the simple diagram below.



If the above diagram is explained in a Buddhist way, the output should be defined as the maintenance of a healthy body and a healthy mind instead of “pleasure” or utility. Such output is a necessary condition for the further development of the mind in order to achieve *sukha*¹ which is the desirable outcome from this process. In order to achieve such an outcome the ability to develop the mind is a necessary condition. The development must be achieved through the process of *sikkhattaya*². Given the above explanation, there is no difference at all between the production and consumption processes.

Looking further at mainstream economics (with its unrealistic set of assumptions) and Buddhist Economics, we see that in both cases we are looking at a concept of desire where satisfaction of the desire is measured by “pleasure”. According to *Buddha Dhamma*, *taṇhā* (specifically unskillful desire) can never be fulfilled; it can only be satisfied temporarily. Unfortunately, the attempt to fulfill the desire will generate an expectation for higher and higher levels of consumption. The mind always looks for what it imagines is better. With no better alternative, it may be temporarily content with what it has experienced but as soon as a new opportunity arises, the desire will escalate to a higher level. Mainstream economics has a different understanding. It only explains that as soon as the desire is backed up by purchasing power or credit that can be anticipated to be paid back in the future (demand) and is met by the supply it will be satisfied resulting in the pleasure of that consumer.

The difference between the two thoughts of Buddhist and mainstream economics is that Buddhist Economics is based on a dynamic analysis of any

¹ (the quality of mind that is opposite to that of *dukkha* which means uneasiness, conflict, contradiction, alienation or suffering)

² known as the three-fold training leading to having a purified or clean mind, and a clear mind

event known as *paticcasamuppāda*³. Every result has its original causes and other related factors. The result at this moment will turn into a cause of a future result. In a Buddhist analysis, the time dimension of past, present and future must also be considered. Generally, the analysis in mainstream economics is a static one. It can be clearly seen that static analysis often does not reflect the real world because time has been frozen. As such analysis does not reflect the real world; it is not capable of understanding everything in its own nature. A theory that is not based on reality can be considered as a wrong or incorrect theory. This problem is a major short coming of mainstream economics.

Sukha and Dukkha as the same thing in different degrees

A much deeper root of the difference between mainstream economics and Buddhist Economics than the difference in the use of static and dynamic analysis can be seen by looking at the meaning of the words *sukha* and *dukkha*. In Buddhist Economics, *sukha* can be explained in terms of *dukkha*. The difference between the two is only in degree. More *dukkha* implies less *sukha* and vice versa. Mainstream economics considers pleasure, (which most of the time is referred to as utility) to be the same as "happiness". Unfortunately happiness in English is not the same as *sukha*, which is an entirely different concept. The word "happiness" is closer to hedonism than *sukha*.

In Buddhist Economics, hedonism is the same as *kamasukha*, or pleasure from acquisition. It is also known as *samissukha*. It is a kind of *sukha* that can eventually lead to *dukkha*, as it can generate a desire spiral. As soon as the desire is originated, the inner heat has also been generated while the desire has not yet been fulfilled. Therefore, satisfaction from the fulfillment of the desire is in fact the "food" for *dukkha* in the next round. If the production process is used as an analogy in this case, hedonism is the input in the process that produces *dukkha*. Therefore pleasure from acquisition cannot be considered as *sukha* as it leads to further *dukkha* in the next round. Anything that can lead to *dukkha*, cannot be considered as the state of *sukha*. As a result, in Buddhist Economics pleasure from acquisition should be correctly called *dukkha*. This difference between the understanding of pleasure in mainstream economics and *sukha* in Buddhist Economics is the main point of departure between the two.

Such problems can be demonstrated with the attempt to solve the problem of poverty through the process of economic development with the hope that the growing economy will be accompanied by increasing income. As income for everyone is increases, the ones who receive more income will have "more

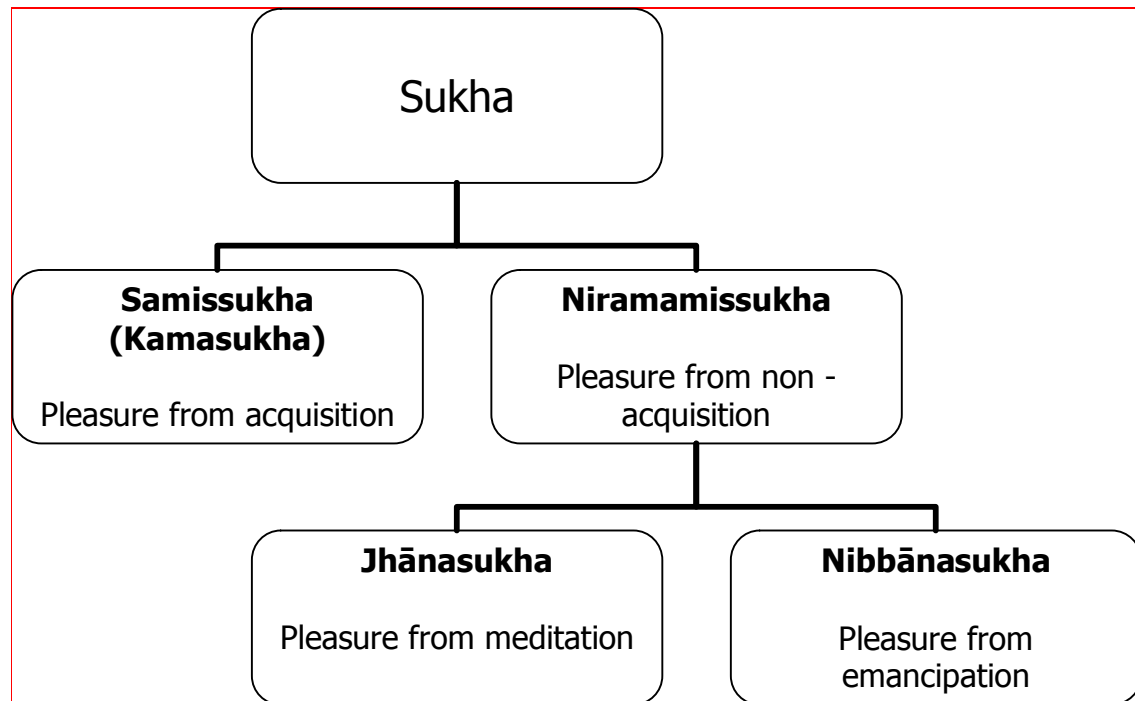
³ The law of causation

happiness". This belief in the ability to achieve pleasure from acquisition in mainstream economics ultimately results in the rapid disappearance of resources and degradation of the environment.

Unfortunately, such anticipation has never been a case. In reality, all societies have an uneven distribution of political and economic power. Those who have more politico-economic power will receive more for consumption than others. Those who try to find *sukha* from consumption will never find it. Those who have fewer resources for consumption usually imagine that the ones who have more will have more *sukha*. As a result, those with less naturally demand a larger share of the resources. In the end the whole nation never finds *sukha*, even though the economic status of everyone and the gross national income has, in fact, increased. However, some people may end up in a better economic situation in relative terms. This effort though can never actually solve the real problem of poverty. This result comes from having a wrong theory to begin with. David Loy (1999: 46) used the analogy of grasping the snake by the wrong end. Loy suggested that the nature of this problem should not be identified as the problem of poverty but rather the problem of *dukkha*. Solving the problem of *dukkha* is much different than solving the problem of poverty. The problem of *dukkha* can actually be solved regardless of different politico-economic status.

For a clearer understanding of this concept of *sukha*, it is necessary to review the meaning of *sukha* in *Buddha Dhamma*. *Sukha* consists of *samissukha* and *niramissukha*. *Samissukha* is the same as *kamasukha*. *Niramissukha* includes *jhānasukha* or *sukha* from meditation and *nibbānasukha* or *sukha* from complete emancipation. The goal of *Buddha Dhamma* or even Buddhist Economics is to encourage everyone to reach the stage of *nibbānasukha*. However, in reality it is almost unrealistic to hope for everyone to reach *nibbānasukha* when each one has different level of *pañña* or the ability to understand everything in its own nature. Under the conditions of severe limitation of natural resources and environment, the level of *niramissukha* is acceptable. It is *sukha* from non-acquisition. There are various forms of *sukha* from loving-kindness (*metta*), from compassion for others (*karunā*), from relieving *dukkha* of the others, from sympathetic joy (*mudita*) in seeing others happy. They all are the kinds of *sukha* from practicing the first three principles of *brahmavihara* or the four noble sentiments that most people can easily understand. Having *sukha* from such practice will at the same time reduce the desire for *kamasukha*.

Diagram 1: Definition of Sukha in Buddhist Economics.



Efficiency of Consumption

Without worrying about pleasure or *sukha* from acquisition, it can be easily understood that efficiency of consumption is similar to that of production, as a consumption process can be analyzed in the same way as a production process. Consumption and production can be viewed as the same economic process. As soon as the efficiency of production is understood, efficiency of consumption can also be easily understood in the same way. The fact that mainstream economics cannot explain efficiency of consumption as clearly as that of production is because the goal of consumption has already been set to maximize pleasure or utility rather than optimize consumption efficiency. It should be clear by now that such a goal is still in the realm of *dukkha*.

A further question to be raised is how to consume without having anything to do with pleasure. At this point Buddhist Economics can provide the answer by looking at the meanings of the two words, "needs" and "wants". It can be traced back to the explanation of Abraham Maslow where needs are classified into three levels, physiological needs, social needs and moral needs. In *Buddha Dhamma*, there is only one form or one level of needs; that is physiological needs. The other levels in Maslow's hierarchy are not needed. They all can be accounted for through the understanding of *pañña*.

The word *pañña* has no equivalent word in English. The closest meaning is wisdom, but wisdom is not the same as *pañña*. Since about the 17th century, moral knowledge has always been taken into consideration with all other knowledge in Western culture. Although the concept of *samādhī* or

concentration has not often been mentioned, the word meditation in Western civilization can be used as a proxy for it. Therefore, before 17th century the concepts of **knowledge or wisdom, morality and meditation** together with total submission to God, were comparable to the concept of *sikkhattaya*. Without *sikkhattaya* there would be no *pañña*. Without *pañña*, social needs and moral needs arise for human beings, especially in a society where "self" is still the main focus. Maslow's understanding has been gained through observation of human behavior without appropriate tools to analyze the mind. Under these circumstances, there is no way to explain how a human mind can be developed to the point that a person does not actually have social needs and moral needs. The understanding of *sikkhattaya* will lead to the understanding of the process of the mind's development is raised by developing *pañña, sila and samādhi* that will eventually lead to more accumulation of *pañña* that will achieve the higher levels of Maslow's needs discussed earlier.

To summarize, according to *Buddha Dhamma*, consumption is needed to relieve the pain from physiological needs and is to be distinguished from the consumption for desires and wants (*kamasukha*). If a person has sufficient *pañña* to understand that *kamasukha* is in fact *dukkha*, they will understand that consumption for *kamasukha* is not really needed. Consumption, informed by needs, can be considered the most efficient as it is the only consumption **needed** and minimizes resource consumption.

The ultimate goal of most human beings is to be completely free from *dukkha* or to reach the stage of *nibbāna*. The most direct way to *nibbāna* is through the middle way or *majhima patipada*. This is the way that does not involve either of the two extremes (sensual happiness and self-mortification). Insufficient access to any of the four basic needs, namely, food, appropriate clothing, a living place and medicine is a cause of pain or suffering. Such pain must be relieved by consumption or the assurance that all those basic needs will be available when needed. In this way, that insecurity will be eliminated. When the *sikkhattaya* can be practiced without any feeling of insecurity, the pathway is cleared to develop the mind to a higher level. In this way then, *samādhi* can serve as a base for the generation of *pañña*. Consumption to satisfy desire or craving is not conducive to this mind development. It only relieves craving temporarily, but stimulates craving to a higher level in the next round. It also promotes excessive utilization of limited natural resources. Thus, it is not a way to bring about true *sukha*. Such consumption is clearly inefficient. At the same time consumption that is inadequate to maintain a healthy body and a healthy mind cannot be considered as efficient consumption either since it does not optimize the output of *sukha*.

Therefore, efficient consumption is consumption according to the principle of middle path or *majhima patipada*. This consumption cannot be analyzed by mainstream economics. That is because there is no analytical tool available. Without such a tool, one can be misled, resulting in a wrong or incorrect theory. The end result will be human catastrophe that becomes increasingly

evident as time goes by. It should be observed that a certain level of *pañña* is a necessary condition to being able to consume by the principle of the middle path. As a result, *pañña* is a crucial factor for the most efficient consumption: that is the least utilization of resources given the goal of being free from *dukkha*. The mainstream economic term that is closest to the concept of efficient consumption is cost effectiveness. It shares a meaning similar to efficiency of production but looks from a different angle.

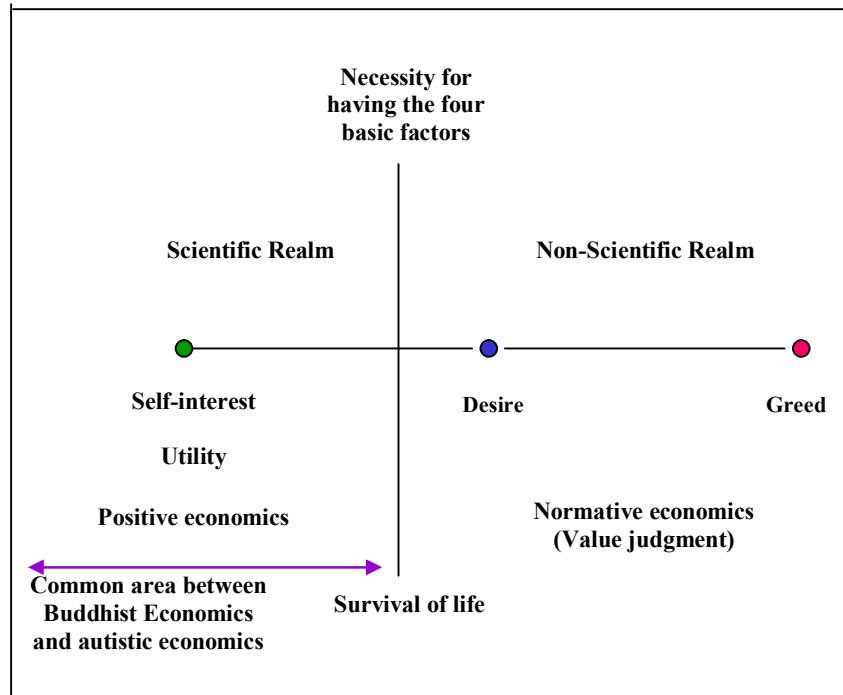
In conclusion even though a producer and a consumer can be different persons, the most efficient way that both processes can take place at the same time is that both processes must be controlled by *pañña*. Since both processes depend on each other, the two processes cannot be completely separated.

Apart from the reasons explaining why mainstream economics cannot adequately discuss efficiency of consumption while Buddhist Economics can, the real cause of the problem lies around the concept of self interest explained by mainstream economics.

Common and Different Explanation of Self-Interest

Mainstream economics defines self-interest as a rational behavior for a human being. Mainstream economics can be described as a discipline based on self-created assumptions in a self-created world. It may have some truth but not the whole truth. The realistic part can be in common with Buddhist Economics but the assumptive parts naturally have nothing in common. All can be explained by the following diagram.

Diagram 2: The Difference in Degree Among Self-interest, Desire and Greed.



Mainstream economics has its roots in material based science. Anything related to matter and energy can be classified as the scientific realm. Things related to the human mind are considered as the non-scientific realm. This classification is based on physics that has been applied to economics, a subject that tries to be part of the "hard sciences". This scientific realm is classified as **positive economics**. The rest is called **normative economics**. Normative economics is based more on value judgments, rather than solid scientific evidence. Things such as desire and greed are actually different than self-interest. This fact is well understood by positive economists. Unfortunately, the two terms are very difficult to differentiate from self-interest using existing measurement tools. To simplify the analysis in a positive way, desire and greed are treated as value judgments and should be classified within the realm of normative economics.

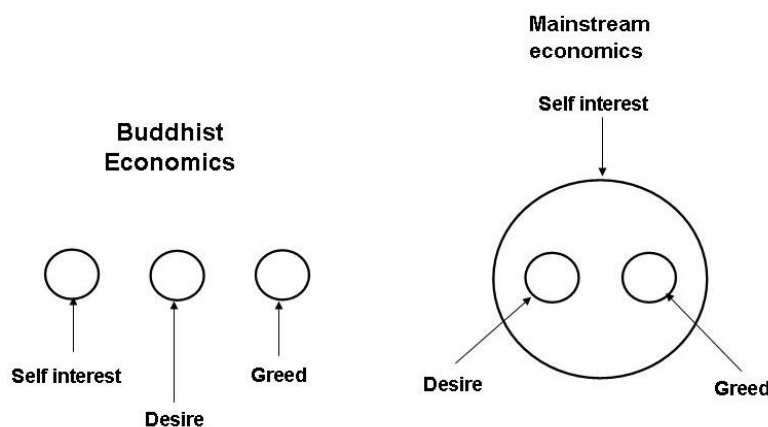
Self-interest is not always a bad thing. It is necessary for the survival of all living things. Thus, it has its place within positive economics. Such necessity can be measured by the need for the four basic factors for sustaining life. If any living thing has no self-interest to survive, it can no longer maintain its own species. For example, in the case of human beings, without a sense of self-interest, there would be no human beings left on earth. All of the knowledge useful to human beings will become useless. Hence, self-interest is both a necessary and a sufficient condition for valuing human knowledge. However, Buddhist Economics proposes an additional condition based on being free from suffering (*dukkha*): any action of self-interest must not cause any burden on oneself or anyone else.

On the other hand, without adequate supplies of the four basic factors for the sustainability of life, there will be physiological suffering. The only way out of such suffering is for the needs to be satisfied. This form of suffering can be also be called poverty. If a person is disturbed or anxious about survival, their mind can never be developed. It can be seen clearly that there is a common agreement on this sphere of self-interest by both mainstream economics and Buddhist Economics.

The economics that is currently taught everywhere only pays attention to a material based science without any attempt at further development based on mind based science; it has decided to ignore the part that it considers inaccurate or non-measurable. Hence, the concepts of desire and greed are ignored, and the only relevant concept remaining in economics is self-interest (diagram 2). All activities related to desire and greed as well as needs as are treated as self-interest. By ignoring reality, economics deliberately distorts fact. The subject is no longer able to reflect reality. Because of this fact, mainstream economics should instead be correctly called autistic economics.

Diagram 3: The Making of Autistic Economics

In order to make economics into a material based science, the scientific realm is extended.



In mainstream economics the definition of self interest (needs) is expanded to include desire and greed.

The inability to recognize and acknowledge such different concepts as need, wants/desires, and greed and then lumping all of them into the concept of self-interest and describing the motivations of this "self-interest" as rational is, in fact, an irrational practice. If everyone were greedy, the world would not be a happy place for human beings to live. Greed should rather be considered as an irrational behavior and should not be explained as a rational undertaking.

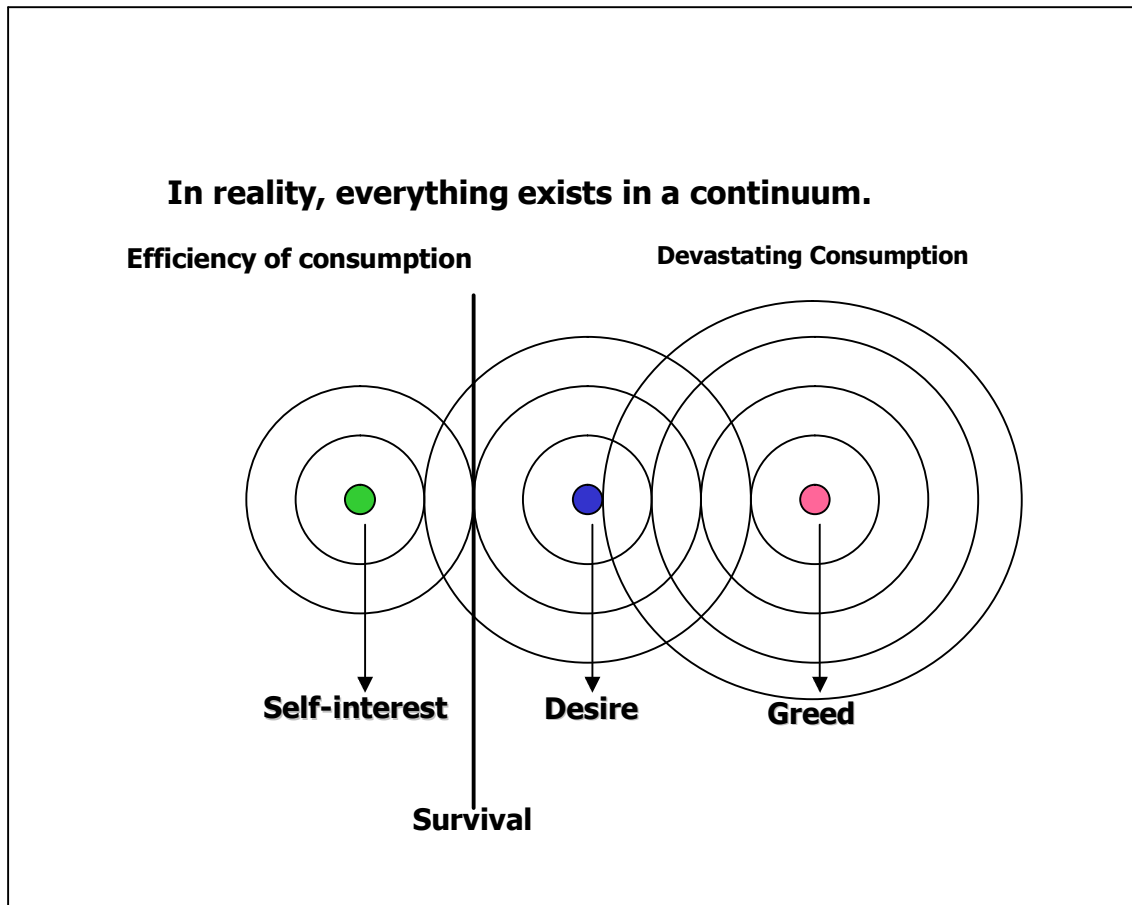
The differences in the understanding of human motivation result in the clear distinction between autistic economics and Buddhist Economics. The inability

to validly measure desire and greed hardly justifies their inclusion into a category (self-interest) that implies necessities for basic survival. This is not rational and not the correct way to represent human behavior.

It can be demonstrated in Diagram 3 how the inclusion of desire and greed changes the acceptable view of consumption. In the real world most things exist in continuum. Each one has its own core that can be clearly observed to be distinctively different from the others, the same way as throwing a stone into still water in the pond. The stone will break the water at the point of contact and create a noticeable wave moving outward in all directions. The waves diminish and eventually disappear. (In reality however, the mainstream economics stand of maximizing consumption implies that the wave never ends.) As a result, it is very difficult to clearly define the limit of each concept with clarity. However, material based sciences want to define everything with clear, specific and precise definitions. It cannot adequately deal with things that exist in a continuum. This kind of thought results in denying the reality of the world.

However, if we are really talking about self-interest as only self-interest that is physiological survival, efficiency of consumption can actually be clearly identified. The amount of consumption required to eliminate the human suffering caused by poverty (defined as lack of the four essentials required for survival) can be calculated by measuring or estimating the survival requirements for food, clothes, shelter and medicine for persons based on age, gender, climate and that person's health status. Consumption at that amount should be considered as efficient consumption. *Sukha* in a human being does not come from consumption beyond the point of efficiency but from *pañña*, the ability to understand everything in its own nature, as explained in great length in *Buddha Dhamma*. The encouragement of consumption beyond the point of consumption efficiency is a clear difference between Buddhist Economics and the mainstream economics also known as autistic economics. Self-interest in Buddhist Economics has a clear cut-off point (needs), while mainstream economics also includes wants and desires.

Diagram 4: A Clear Demonstration of the Power of Buddhist Economics' Explanation of Consumption Efficiency

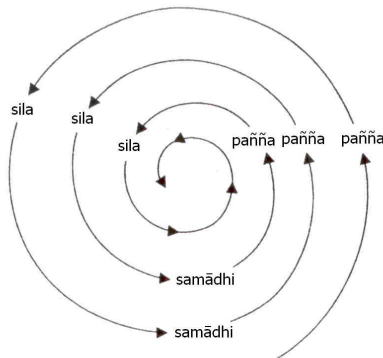


Combined Production and Consumption for Sustainable Development and Increased Wellness

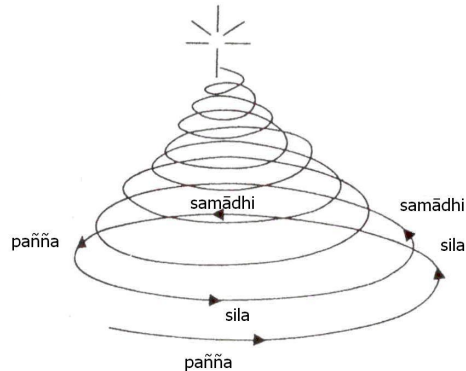
After looking at these production and consumption concepts of Buddhist Economics, one can link all of them together. This linkage will demonstrate the conditions for sustainable development as well as improvement of wellness in society. It should now be evident that wellness or *sukha* does not come from consumption. Consumption only serves as a process to provide for the basic necessities and the elimination of the pain due to their absence. Without this level of consumption (sufficiency), there would be a negative impact on the further development of *samādhi* and *pañña*. Consumption beyond sufficiency will stimulate *tanhā* (craving or more desire). Apart from being the cause for *dukkha* or suffering, excessive consumption will also lead to the wasteful use of resources, or inefficient consumption.

The real wellness or *sukha* of a human being results from the development of *pañña* through *sikkhattaya*. It is not a linear development but more like a

virtuous spiral that will not return to the origin spot but will uplift the mind and *pañña* to new levels.



**A Cross Sectional
Diagram of
*Sikkhattaya***



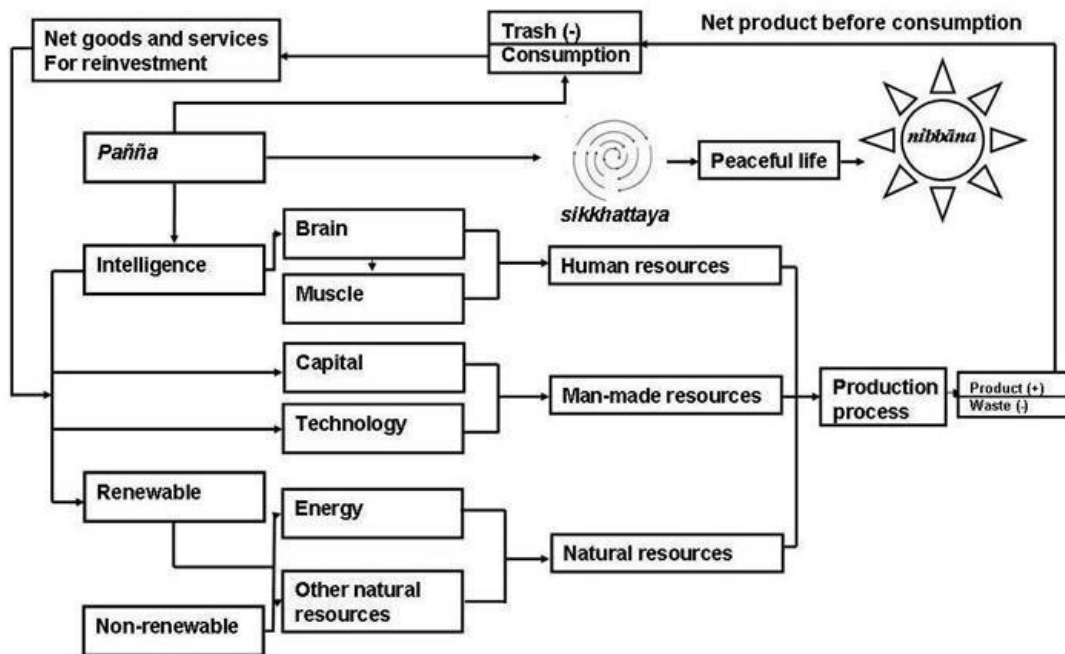
**A Vertical Vision
of *Sikkhattaya***

It can begin from the lowest level of *pañña*. At this level, it is not necessary for *pañña* to be able to understand everything in its own nature. It may begin from *samaditthi* (having right view or understanding). For example, a person may begin with having a faith that good conduct within the framework of *sila* will result in good living or wellness. Having practiced *sila*, the result will be a more stable mind with fewer disturbances by *kilesa*. The mind can be more concentrated or have more *samādhi*. As the mind becomes more focused, it will have the power to learn or to understand things much easier. One of the most useful things to be understood by the mind on the part of *pañña* is *aniccata* or impermanence. This understanding will lead to the understanding of *dukkha*, conflict or contradiction from within or outside. *Dukkha* also results from holding fast to something that is impermanent by its very nature. *Dukkha* is a conflict or contradiction from not understanding the true nature of things and trying to enforce permanence, which is an impossible task. With a clearer understanding, one will accept *anatta*, the situation of void or nothingness, and not try to act against the nature of things. This way living will become consistent with nature. Conflict or contradiction against nature will decrease. The less conflict, the more wellness there will be as well as more stability in the mind. *Sila* also becomes a normal condition. The more one lives according to *sila*, the more the mind will work at its normal pace, will be stable and be better able to concentrate so as to better understand things in their own nature. Such training of the mind will lead to less *dukkha* and less *dukkha* implies more *sukkhā* or wellness. Under this method of training, eventually one will live the purified life of the purified *sila*. The mind will be completely stable, calm and full of concentration or the achievement of *samādhi*. At this stage, *pañña* will always illuminate a much clearer understanding of things. This is the stage of having a purified mind, a calm

mind and an illuminated mind at the same time. It is the mind that attains the state of *nibbāna*. It can be clearly seen that *sukha* or wellness can be developed from *sikkhattaya* and this is not directly related to consumption. Consumption only serves as a necessary condition that enables us to live in the way of *majhima patipada* or the middle path. The true wellness or *sukha* can only result from the development of *pañña* through the rigorous training of *sikkhattaya*.

Having gained a clear understanding of these related components in Buddhist Economics (production, consumption and wellness or *sukha*), Diagram 5 can be used to see the way that one can achieve the conditions for sustainable development and the improvement of wellness through the development of mind.

Diagram 5: Consumption and Production Theories of Buddhist Economics. The system of production and consumption providing the conditions for sustainable development and promotion of a peaceful life.



When net goods and services produced are more than enough to maintain the existing system of production, sustainable development and the reduction of conflict of contradiction yielding a more peaceful body and mind is the result. Excess production can be used to reduce the pain and suffering of those who need it. With the help of technology, production efficiency can be improved.

The above diagram demonstrates the interaction of production and consumption in Buddhist Economics that can eventually lead to a peaceful life or *nibbāna* and sustainable development on the production side. *Pañña* is the mode of production in the sense that it controls all input factors ranging from human resources to man-made resources and natural resources. All these resources can be further divided into brain and muscle power for human resources, and energy and other natural resources for natural resources. Man-made resources are the product of human intelligence and energy and other resources that can be either renewable or non-renewable. *Pañña* will in turn control human intelligence in a way that man-made resources are produced only in a creative and positive way and natural resources should be used in such a way that non-renewable resources are used minimally. All these are aimed at producing products most needed for production needed to sustain lives with minimum amount of harmful waste. Production in this way is considered to be the most efficient production in Buddhist Economics.

It can be seen from this diagram that the consumption process, the first part yields net products to be used in consumption through the assumption that part of the products can be used to clean up waste from the production process. The second part is waste resulting from the consumption process itself. Consumption in Buddhist Economics is not to gain "satisfaction" as explained by mainstream economics but rather for the maintenance of the physical needs of human beings as well as the physical production process to continue on its own course. The goal of the whole production process is actually to produce wellness that eventually leads to the state of *nibbāna*. The main emphasis in this diagram is a circular flow of goods and services for the maintenance of the whole production process. The nature of this flow will indicate whether the system is sustainable or not.

In the diagram, *pañña* serves as the main control mechanism of both production and consumption. What ought to be emphasized in this diagram is that no matter how *pañña* has been used in both production and consumption processes, unsustainable development could still be one of the possible outcomes. This can result from inadequate resources due to their deterioration to the point where they are insufficient to maintain the full functioning of the system. It might also take place in a very difficult environment that cannot actually support a human life. It could also be caused by the fact that the technological development of the community is not at a sufficiently high level, for example, in some difficult areas on the earth or on the moon. In these cases the survival of human beings must depend on external sectors that still have surpluses to support the non-viable system for a certain period of time while waiting for the improvement in technology. In these cases self-reliance might come later on.

The second case demonstrates base-line sustainability. In this case goods and services available are just sufficient to maintain the system to continue at the existing level. It is the likely case where the existing resources and the level of technology (resulting from human intellectual ability) if human intelligence

is used well under the control of *pañña*. IT is the most likely case because at the moment the resources have already been used beyond their natural renewal rate. The sustainable scenario is possible when *pañña* is the mode of production. The global awareness of unsustainability is the factor that will stimulate human *pañña* to take control for the common survival of all beings. However, in reality, if resources can be improved through continual development of technology the third case will be the most likely one where the net product exceeds the needs required for maintenance of the system. The surplus can be used to support those who are still in pain or *dukkha* caused by having inadequate resources to maintain their basic needs (those who are still poor in the true sense). The wellness of this group can be improved from the existing surplus. If the surplus is still excessive, it can be used to improve the existing environment and eco-system as well. The efficiency of production factors can also be improved from the said surplus.

The real wellness of human beings only depends on *sikkhattaya*, which is a separate process but directly related to *pañña*. *Pañña* also controls production and consumption processes in this diagram as already discussed. Please observe the two-way arrow-head between *sikkhattaya* and *pañña*. It demonstrates the dynamism between the two concepts. The two represent the possibility to solve the current crises that is causing great damage of resources and the environment on earth by both the production and consumption processes. Without any attempt at improving the existing situation, the whole system can easily move in the direction of self-destruction. The only way out of this undesirable situation is to develop "global *pañña*" in this system as rapidly as possible.

Having analyzed production and consumption under the framework of Buddhist Economics, it can be clearly seen that peace and tranquility can actually be achieved with sustainable development. The rest is how to apply such a framework to the real world. Action toward such an idea seems to be formidable. Nevertheless, the light already appears at the end of the tunnel. The most important task is to develop *sikkhattaya* into an actual operating tool that will result in much more improvement of *pañña*. At the same time transformation from capitalism to *pañña-ism* must be accomplished as soon as possible.

Epilogue

In spite of its emphasis on production efficiency, the fact that mainstream economics (more correctly known as autistic economics) cannot deal effectively with the concept of consumption efficiency has led to wasteful utilization of resources that does not necessarily lead to *sukha* for humankind. Mainstream economics' consideration of only production efficiency is like trying to cut paper with only one blade of the scissors. It cannot cut the paper effectively. Likewise, production efficiency without consumption efficiency can never simultaneously result in the most efficient use of resources and the

achievement of well-being for human beings. As Buddhist Economics can introduce the concept of consumption efficiency in a much more meaningful way the scissors will have two blades and can cut the paper effectively. In this case, it can provide both a better path to well-being and the minimum utilization of natural resources. This way humanity can be rescued from the edge of the steep cliff and dwell more happily in the green meadow.

The most difficult part is to change the mind set of humanity that has been dominated for such a long time by mainstream or autistic economics. Under the existing condition of post-modernism, it could be an appropriate time to remove the old and unrealistic ideology of consumerism that can only lead humanity to a dead-end and start a path-breaking journey. This path was discovered by the Buddha a long time ago. The most difficult part of this journey is the cultivation of *pañña*. Fortunately, with existing knowledge and the tools for knowledge generation together with the old path of *sikkhattaya*, *pañña* can be generated much easier now than in the distant past. These facts should provide new hope to lead humanity from the edge of the steep cliff back to the green meadow again, hopefully, before a severe catastrophe hits. If that scenario does not materialize, one should be comforted by accepting the law of impermanence or *aniccata*. In this case our mind can still be at peace in the face of grave danger.