Deep Ecology and the relevance for Gross National Happiness and Bhutan

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Introduction - "Let the rivers live!"

When the Norwegian government in the 1960'es started its modernization and rebuilding after the Second World war, Norway needed energy. Due to a unique combination of much rain, high mountains, and powerful waterfalls, there were excellent opportunities to generate electric power. However high mountains may also be seen as majestic homes and habitats for eagles and snow tigers, sentient beings with dignity, and high waterfalls might be seen as spectacular masses of water that collapses into wild, beautiful rivers which is the life-giver of mother earth. Generating power by electricity needs domestication of the rivers and building of large scale dams which transforms the topography and threatens all life in the ecosystem. The Norwegian philosopher, Arne Næss, also enthusiastic mountain climber, together with a small group of environmentalists resisted the domestication of some of the most beautiful waterfalls and rivers, using the motto: Let the rivers live!" In a non-violent way the group actively demonstrated against the domestication of the waterfalls. This was the beginning of a new green movement and philosophy named Deep Ecology.

In 2015 Deep Ecology is not a finished ready-made theory, but an outline, open to be filled out. According to Deep Ecology, every person has a responsibility to work out his own ecosophy, a reasoned process of ecocultural harmony. This kind of sophia or wisdom is openly normative, and contains both norms, value priorities, and hypothesis. Wisdom is policy wisdom, prescriptions, and hypothesis, not only scientific description and prediction.

How should we proceed to develop our own ecosophy, the wisdom to see ourselves as being small actors in an amazing world where we have to choose between different roads? One road "we have long been traveling is deceptively easy, a smooth superhighway on which we progress with great speed, but at its end lies disaster. The other fork of the road – the one "less traveled by" offers our last, our only chance to reach a destination that assures the preservation of out earth" (Carson, 1962 p 277).

One might start criticizing the common and very popular instrument to measure and compare human welfare, the Gross National Product (GNP), which is a one-dimensional measure of economic growth, reflecting the size of the commercial market. Næss aptly writes that GNP is equivalent to Gross Domestic Pollution, emphasizing that GNP does not imply any progress along the course of Self-realization , community vitality or environmental health.

Another positive road is to look to Bhutan: A country that proclaim to measure the well-being of its population in a direct and holistic way. The intriguing question then is how does Bhutan's government conceptualize human happiness and how do they ultimately

measure it? Since 1972 Bhutan's government has attempted 'to expand the wellbeing and true happiness of its people' and accordingly articulated the goal of Gross National Happiness (GNH). The Constitution of Bhutan (2008) directs the State 'to promote those conditions that will enable the pursuit of Gross National Happiness.'(Ura et al 2012, p 6). Bhutan's concept of GNH merits sincere exploration since GNH is described as "holistic, balanced, collective, sustainable and equitable" (Ura et al 2012 p 7). In addition, it is very promising from a Western point of view since GNH attempts to balance the material and spiritual development in such a way that they can complement and reinforce each other (Ura et al 2012 p 7). Bhutan's GNH measure attempts to meet the strong critics of the prevailing measure for development and welfare, the Gross Domestic Product.

Bhutan's measurement is timely since there is a growing interest to measure the subjective well-being of a population. The international governmental organization, the OECD (2013) has developed "OECD Guidelines on Measuring Subjective Well-being, and states that it has a particular interest in encouraging international comparability of such data. The OECD report defines subjective-well-being to encompass three elements. i) Life evaluation - a reflective assessment on a person's life, ii) Affect – a person's feeling or emotional states, and iii) Eudemonia- a sense of meaning and purpose in life, or good psychological functioning (p 10).

As a first hypothesis it seems as if Bhutan and Deep Ecology both are strong opponents of the use of GDP and the whole political and ideological context behind. Deep Ecology (DE) claims to be an alternative way to a sustainable society where the flourishing of all life on earth is the ultimate goal. Could it be that Deep Ecology and Bhutan's way to pursue wellbeing may complement and enrich each other? The aim of my investigation is to explore whether these two approaches to sustainability and deep happiness can inspire and learn from each other.

Methodologically the core of Deep Ecology, the eight platform points, will structure the paper in the attempt to explore similarities and differences between Deep Ecology (DE) and GNH. First a short overview of Deep Ecology formulated by the Norwegian philosopher Arne Næss (1913 -2009), will be presented. Thereafter a view on some of the inspirational sources of Deep Ecology, the "Deep Ecological Tree", and the core level – the eight points of the platform will be summed up. (see Naess, 1989, 1995) and Ims (2011).

For each of the "eight points" some similarities and differences with the nine dimensions or domains used to measure happiness or well-being in Bhutan will be explored. GNH's nine dimensions are i) Education, ii) Living standards, iii) Good health, iv) Environmental diversity and resilience, v) Good governance, vi) Time use, vii) Community vitality, viii) Cultural diversity and resilience, ix) Psychological well-being. Since my knowledge about Bhutan and GNH is limited, I will draw heavily on the research "Well-being, Happiness, and Public Policy" by Sabina Alkire (2015), and the two reports by Ura, Alkire, Zamgmo and Wangdi (2012 a, 2012b) to gain insight into the nine dimensions of GNH. Alkire's research (op.cit) emphasizes human flourishing which also is key element in deep ecology. With notions like sufficiency, mindfulness, and the multidimensional way of approaching happiness, Bhutan's way of thinking may bring new light and inspiration into the development and understanding of deep ecology.

One fundamental insight deep ecology and Bhutan's GNH approach have in common is to view the environment as fundamental to the survival of humanity (Alkire pp 78-79, 2015). Alkire writes that "like each of the other domains, the study of human happiness adds something new. For harmony with nature has intrinsic value. ...Also of intrinsic value are relationships with non-human life forms" (p 79) ...Alkire stresses the need to change the underlying instrumental and materialistic mindset of humanity from maximization of living standards towards sufficiency. This view is in accordance with "live a rich life with simple means" which is a central motto of deep ecology.

Deep Ecology - roots and core concepts

Environmental thinking in the Western countries was mainly concerned about short run measures. However, a "Long Range Deep" approach is what the Western societies really needed. This critic was formulated by Arne Næss in the 1970'ies. A distinction between the deep and the shallow approach to environmental problems was made. Shallow ecology represents a technocratic attitude to pollution and resource depletion, assuming that by treating the symptoms through technological quick fixes, using brutal rules like the polluter pays in order to reduce the ecological footprints. This technocratic attitude assumes an anthropocentric worldview in which the affluence of the people is vital. As a contrast Deep ecology assumes a relational, total field perspective that fits into a holistic, non-reductionistic, non-anthropocentric worldview. Deep ecology focuses on the underlying causes, the roots of the problems, and represents a change in mindset. It means that in order to solve the environmental problems, the basic political, economic and ideological structure have to be changed. Ultimately, it means to change ourselves.

There are many obvious reasons why the deep ecology thinking has obtained many supporters the last decades. The Living planet report for 2008 gives sophisticated evidences that the exploitation of resources and the level of consumption in all the Western countries have an overshoot of several hundred's percent. US is on the top of this dubious ranking of ecological footprint. Per capita, US use 800 percent beyond a sustainable state. There is an urgent need to look for an alternative course.

Deep ecology represents inspiring insights as an alternative to the Western materialistic society. The essence of deep ecology is a fundamental respect of diversity, that all life on earth should flourish, and that the very notion of self as a subject should be redefined. The new self should be an eco-Self. The "unit of survival," is not organism alone, but "organism plus environment." In short, deep ecology is both a philosophical perspective and a campaigning platform.

In short, deep ecology is both a philosophical perspective and a campaigning platform. It is "a prosses of reflection leading to action".

The ideas behind deep ecology is ancient. A deep ecological tree with long and deep roots, and with different branches may be imagined. The tree is on the one hand grown 3

up from ideas from Hinduism, Confucius, and Buddha and, and on the other hand it is drawing on Aristotle, Heidegger, and Spinoza. It is inspired by Gandhi's metaphysics which is based upon the concept of oneness, and that everything are interrelated. Such a holistic worldview leads logically to non-violence. And, in accordance with Aristotle, every plant has a telos, a goal - and is expected to realize itself – that is to be in a state of flourishing. Spinoza is an ontologist, and claims that we have an ability to identify with others and thereby come close to all kinds of life. Part of this claim is Spinoza's ideas about the circle of friendship that continuously may grow and finally unite everyone!

Deep Ecology proceeds in two directions; it tries to create a change and it tries to develop and an alternative philosophy, called ecophilosophy. In order to understand the deep ecological worldview, it may be fruitful to consider four levels. The most basic level is the metaphysical level. The second is the platform level, and the third and four levels consist in the policy level and finally the level of political actions.

Level two, the platform, is the core - and unites all kinds of radical ecocentrists, like ecofeminists, direct action groups, as well as religious groups. Activities ranges from "ecotage" (sabotage to liberate exploited ecology) to support of politically oppressed people in countries under development.

Four Levels of Questioning and Articulation

Level I	Ultimate Premises	Taoism, Buddhism, Hinduism, Christianity, Ecosophy T, etc.
Level II	Platform Principles Movements	Peace Movement, Deep Ecology Movement, Social Justice Movement, etc.
Level III	Policies	A, B, C, etc.
Level IV	Practical Actions	W, X, Y, etc.

[The above chart is a simplification of Naess's Apron Diagram. See Drengson, A., and Y. Inoue, (eds. 1995). *The Deep Ecology Movement: An Introductory Anthology.* Berkeley, North Atlantic Publishers. In particular pp 10 – 12. (Drengson and Inoue's book has been revised and translated for publication in Japanese.)

The logic behind the framework is that there should be a continuous dialogue between the levels – to keep our philosophy and practice in harmony.

One core activity is to pose deep questions to explore ultimate premises and norms. When we have a more or less articulated position on the first level, we may move toward the lower levels.

The framework admits a great diversity at the level of "Ultimate Premises (philosophies). We do not have to subscribe to the same ultimate ecological philosophy in order to work cooperatively. According to Arne Næss, 'the front is very long' - and each person may contribute on his own premises.

It is illustrative to give some hints on the particular position of Arne Næss. His view starts with only one norm, Self-Realization! This norm means "Self-realization for all beings!" The Self to be realized for humans is not the ego self (self with small s), but the larger ecological Self (Self with capital S).

Arne Næss does not 'difficultivate' the concepts of the self. His focus is on the human ability to identify with a larger sense of Self. Humans naturally have this capacity. This can be observed cross-culturally.

The piece movement is also a part of Næss's philosophy. But he argues that social justice cannot be enough. We have to produce and consume less – thread lighter and wiser on the earth. "Simple in means, and rich in ends," is his motto. It implies to put quality of life over and against standard of living, and celebrating the virtues of slowness and smallness contrary to our Western ideology of speed and scale.

To sum up, Næss holistic worldview negates the dominant metaphysics which sees humans as essentially different from the rest of nature. Næss claims that humanity is inseparable from nature: If we injure nature, we injure ourselves.

Even if Gandhi was one of Næss inspirational sources, there are certainly some differences between them. Metaphorically Gandhi used to look upon everybody as drops of water and writes: "This ocean is composed of drops of water; each drop is an entity and yet it is a part of the whole; the one and the many. In this ocean we are little drops..." Arne Næss on the other hand, states that for him it is more natural to look on himself as a little tree in a large forest.

The core level is level two: *the platform level*, which is usually summed up in eight points:

- 1. The well-being and flourishing of human and nonhuman Life on Earth have value in themselves independent of the usefulness for human purposes.
- **2.** Richness and diversity of life forms are also values in themselves.
- **3.** Humans have no right to reduce this richness and diversity except to satisfy vital human needs.
- **4.** We need a substantial decrease of human population.
- **5.** The present interference with the nonhuman world is excessive
- **6.** Policies which affect basic economic, technological, and ideological structures, must be changed

- 7. The ideological change is mainly that of appreciating life quality (dwelling in situations of inherent value) rather than adhering to an increasingly higher standard of living. There will be a profound awareness of the difference between big and great.
- **8.** Those who support these points have an obligation to directly or indirectly try to implement the necessary changes, in a non-violating way.

Can Deep Ecology (DE) have relevance for Gross National Happiness (GNH) and Bhutan? A comparison of deep ecological thinking and GNH

I will interpret the eight points of DE into the multidimensional measures of the quality of life and wellbeing as used in Bhutan but not dig into the technicalities of the advanced and complex measurement that forms the basis of GNH index. My approach will be to explore similarities and differences mainly on the conceptual level. The findings from the GNH index will be used when it is appropriate to support my arguments.

The three first points of DE will be presented in the same section, called "The diversity and wildlife category", and the point four to point eight of DE will be subsumed under the category "Human oriented points". The last point 8 will be treated separately. Point eight is about the responsibility to put one's beliefs s into political action.

The diversity and wildlife category.

Point one in Deep Ecology (DE) emphasizes the value of all life in general. This view may be a common denominator of DE and the Buddhist and Hindu traditions in Bhutan. However, there might be an important distinction in terms of an ecocentric perspective in DE and a moderate anthropocentric perspective that I interpret in the GNH measurement. Alkire (2015) writes that "For harmony with nature has intrinsic value.." She also adds that "..the natural processes of co-existence...a sense of harmony between people, the animals and the earth; the deep respect for the land, reverence for a specific sacred grove,...a feeling of affiliation with nearby cliffs. Also of intrinsic value are relationships with non-human life forms, various animals we live with or alongside.(p

Point two in DE emphasizes that diversity has intrinsic values. Diversity, complexity, symbiosis and unity contribute to resilience. In the GNH index, domain eight, "Ecological diversity and resilience" is measured. GNH index have four indicators for this domain. One of them is wildlife. The GNH index measures this as "damage to crops" (p 166). It is a growing concern in Bhutan, since "Wildlife damage can have catastrophic economic consequences for farmers, especially for vulnerable households;

it also disrupts sleep patterns and may create anxiety and insecurity (p 166) "This is a farmer specific perspective, and it is based upon that only 21 % of the farmers were reporting 'no' wildlife damage in the past 12 months. GNH index states that it is not easy to ascertain the true cost of damage. On the other hand Bhutan is undergoing rapid urbanization, and urban respondents are asked on "inadequate green spaces".

This way of measuring the wildlife as crop damage might be in line with Deep Ecological Thinking, since *DE's point three* accepts that vital human needs may justify the right to reduce the richness and diversity of life and wildlife. However, we see deep conflict between the farmers in Norway that have damage on crops, and in particular where sheep are killed by bears and wolfs, and the Norwegian government that proclaims that bears and wolfs should be part of the Norwegian fauna, because they naturally belongs to the Norwegian land. A testcase has recently popped up in Norway since a wild boar has started to invade the southern areas of Eastern Norway. Due to the milder climate, the wild boar has established itself in the southern part of the neighbor country Sweden, where there are several hundred thousand. This is a "new" specie that challenge Norwegian hunters, The wild boar is very destructive to the crop because it comes in big groups and are very effective to dig up the crops during the nights. The Norwegian Government declares that this new animal does not historically belong to Norwegian fauna and that we therefore should not allow this new specie to enter into Norway. At the same time there is a new movement of "rewilding" the nature via accepting or even introducing species of wild animals that originally were living in the wild nature. We see this trend in different countries in Western Europe.

Human oriented points (four to seven) of DE

What does DE require concerning necessary change in mindset in terms of ideology, political participation, technology, and life style? Næss's own ecosohy T tries to balance the two main ecological concepts unity and diversity. To find the appropriate balance of those two concepts is a great challenge.

Point four in DE states the need for a substantial decrease of human population. It is a logical step since the most Western countries have an overshoot of many hundred percent of the carrying or bio capacity on earth. If we extrapolate this consumptions pattern it is absolutely too much for a sustainable earth. We need to reduce our pattern of consumption, and the question of optimum population is relevant (1989 pp 140-141).

Næss emphasizes that the view of nature has evolved from looking at the land in terms 'empty' and 'desolate' when there were no human settlement to using terms like 'free nature' and 'untouched 'nature, where individuals now see the 'desolate' nature full of life. The evolution is due to the steadily shrinking areas of free nature, and that natural

parks is slowly ruined through excess numbers of visitors. Næss writes that a negative reaction towards an increase of human population "is not to foster any animosity towards humans as such – on the contrary, human fulfilment seems to *demand* and *need* free nature. 'Homosentrism' and 'anthropocentrism'...should be qualified by an adjective, 'narrow homocentricm' (1989 p 141). The greatest challenge in the future will be to protect the planet as a whole and for its own sake.

Point five of DE declares that present interference with the nonhuman world is excessive, and had to stop. A new concept for this state of the world is the age of anthrophocene. The destructive pattern is clearly visible in many ways. One of the symptoms of a non-sustainable economy is human created garbage mountains found around many of the big cities today. We know about the level of pollution and the high degree of smog in many of the biggest cities in the world. In Norway the biggest cities – Oslo and Bergen have been measured to be amongst the worst cities in Europe in terms of air quality during winter time. The main cause is dangerous emissions from cars, not the least diesel engines, and using of oil to warm up the water and houses. In the cities there is an urgent need of renewable clean energy. In Schumacher (1999) terms we need intermediate technology, which is appropriate to the context, fairly simple and therefore understandable, suitable for maintenance and repair on the spot. This idea of intermediate technology opposes the enormous cost and complication of production methods for the sake of labor saving and job elimination, and favors small-scale establishments. (Schumacher pp148 -158).

Point six of the DE's platform states that policies, which affect basic economic, technological, and ideological structures, must be changed. Arne Næss gives concrete examples on what this might mean by deducing a set of fundamental and derived goals for economic policy. According to Næss, some of the basic norms in economic policy is (1989 p 108);

B1: Full employment!

B2 High consumption now! (i.e. within the present electoral term)

B3 High consumption in the future!

B4: Much leisure time now!

B5 Much leisure time in the future!

Derived norms:

D7 High national product now!

D8 High national product in the future! (rapid economic growth = high growth rate in GNP)

D9 High investment!

D12 Hold prices stable!

Within this ideological frame, we find that economics concerns itself only with means but not with goals. Næss emphasizes that "such proposition is clearly untenable" (1989 p 109) because it is necessary to work with goals. Næss ends up writing that this way of thinking is anti-ecosophical and reveals the gigantic illusion that modern industrial society guarantees leisure time (op.cit. p 109). The cost of making economics a 'science' (in a narrow sense) is according to Næss a certain "barrenness from the point of view of norms, barrenness from a point of view of humanity, and extreme danger from the point of view of ecosophy (Næss 1989 p 110).

Næss criticizes the use of Gross National Product (GNP), and in particular GNP growth, which is calculated by adding up the national accounts every year. GNP is the proxy of welfare and is used "as if it were a decisive ingredient of a successful economic policy" (1989 p 111). GNP growth was relevant as a measure after the second world war in Europe where the big project was to rebuild 'Europe after five years with a destructive war', but after two decades it turns up that every activity, negative as well as positive, the number of prisons, the frequency of traffic jams, smog and traffic accidents and everything to repair the undesirable sides of the society was included. GNP is in one sense "a value-neutral quantity, a measure of activity, not of activity of any kind of value" (p 112). GNP is not related to meaningfulness of that which is created. It does not imply any growth in access to intrinsic values and progress along the course of Self-realization" (p 112). The main conclusion is that GNP is not a measure of welfare and life-quality. On the contrary GNP growth favors hard and distant technologies, wants, not needs, discriminates against people working at home, support irresponsible and unsolidaric resource consumption and global pollution (Næss, 1989 p 113-114).

The Bhutan's GNH index is one profound answer to this critic. Many of the domains behind the GNH measurement lead to a holistic perspective on happiness. Community vitality is one interesting domain. Through the related indicators we find answers that at face value gives high credibility. For example the probable general pattern of city life is confirmed; to live in cities leads to a high degree of autonomy, but at the same time to long for a community.

Another factor assessed in the GNH index is time use. To obtain a high score on this factor, a balance between work and leisure is necessary. On time use the notion of *sufficiency* is applied. The logic is to have 'enough sleep' as well as 'enough work' and 'enough leisure'. Alkire (2015) writes; "This embeddedness of sufficiency norms is interesting, because it also conveys with brilliant clarity the need for concepts of sufficiency to incorporate human diversity" (p 85), since time use to different activities will depend upon an individual's age, family and social and cultural patterns. For the destitute time poverty is often endemic. For the materially rich, 'good time balance is partly self-made'. There may be many sociocultural pressures and needs to 'accomplish' or seem 'busy' for building self-esteem (Alkire 2015 p 86). Alkire's is also

stressing that we should balance the time in a way to be able to perform at our peak. Paternity leave for fathers in Sweden is mentioned. It involves greater freedom and emphasizes a stronger relationship between fathers and children. This has increased children's wellbeing, and even a drop in male mortality (see Alkire p 89).

Concerning ideology Alkire (2015) writes; "a key pillar of the new paradigm is sufficiency". This is in opposition to "many policies both public and corporate (that) seek to maximize wealth and profit, regardless of its opportunity costs on other domains of well-being or on wellbeing in future years" (p 74). This pillar emerge also in the GNH index that measure the domain called "Living standard". The Living standard domain refers to the material wellbeing of the Bhutanese people, and "ensures the fulfilment of basic material needs for comfortable living. In 2007, 23.2 % of Bhutanese "Still live in income poverty; some lack assets such as land or adequate housing" (Ura et al 2012a p 168). They use household per capita income, assets and housing conditions. Assets include livestock, land and appliance, while housing conditions are measured by room ratio, roofing and sanitation.

Sufficiency means that GNH Index does not use the poverty line, because sufficiency threshold refers to higher conditions for wellbeing than poverty lines (Ura et al p 169). Furthermore "an absolute sufficiency threshold was chosen, since the GNH values encourage people to achieve happiness through their accomplishments, and discourage a relative approach in which one is satisfied only if one has relatively more income...than one's peers". (Ura et al 2012 a p 169.) In principle Living standards concerns meaningful and decent work and livelihoods, ii) housing that sufficiently shields from the elements: cold and heat, rain snow and sun. iii) some form of currency - money, assets or other tradeables. In accordance with Alkire, all those aspects have an intrinsic value (p 72). That money has an intrinsic value is contrary to the Aristotle's' view. For Aristotle money should be valued as a means because wealth is only useful for something else. As Alkire note, whether money has an intrinsic value depends to some extent upon context (p 73). As a general-purpose resource up to a certain threshold it gives freedom related to security, diversity, generosity and sufficiency. Alkire argues that we should re-evaluate money. The essence is to find a balance between spirituality and acquisitiveness. One ideological element is to explicitly acknowledge and respect unpaid work.

Another implication of point six of DE is strengthening local practices and local communities. The basic norm of Self-realization for all beings implies a capacity for self –determination. This means that ecological policies will favor decentralization. Centralization will tend to lower self-determination. In terms of DE self- determination does not mean ego-trop, but others are essential to the realization of Self with capital S. (Cf. Næss 1989 pp 141- 142). It also means self-reliance. Næss acknowledges that international trade has had a positive effects on material standard of living. However,

"Lifestyle and entertainment import has led to a dependence upon international economic fluctuations, leading to uniformity, passivity, more consumption, less creativity" (1989 p 143).

This trend to decrease cultural diversity on a global scale undermines the independence of different cultures, and make it difficult for them to be self-reliant. And the ecosophical position of DE wants "the possibility of maximum self-activity: creating, rather than consuming. Doing, not being done to. The basic ecosophical terms here would be activeness, inner and outer, in reaching goals." (1989 p 143). Næss argues that "Self-realization is not against cultural communication, but if favors intrinsic values, material and spiritual".

The realizations of local communities are important in DE. The German distinction between *Gemeinschaft* and *Gesellschaft* is indicative. Locality and togetherness are key term in the DE movement. Nobody wishes to be absorbed into a society that is "big but not great". Næss puts forward a number of points to describe essential characteristics of a desirable local community (pp 144- 146). One implication is that differences in income and wealth should be small. Those at the 'bottom" and those at the top should be "sufficiently near in ways of life so hat they can go together and work together". (1989 p 144).

Point seven of DE might be the most difficult point to understand from a Western point of view. In order to see its relevance, it will be supported with insights and arguments from the Bhutan perspective. Literature on mindfulness (Langer 2010) might be a key, and special attention to the concepts of spirituality measured in the GNH Index, which is based on balancing material wants with spiritual needs, will be presented.

Ellen Langer (2009) defines what mindfulness is and is not: "It is a flexible state of mind – openness to novelty, a process of actively drawing novel distinctions. When we are mindful, we become sensitive to context and perspective; we are situated in the present. When we are mindless, we are trapped in rigid mind-sets, oblivious to context or perspective. When we are mindless, our behavior is governed by rule and routine. In contrast, when we are mindful, our behavior may be guided rather than governed by rules and routines. ...Mindlessness is not habit, although habit is mindless" (2009, p 279). Based upon research Langer writes that "an increase in mindfulness results in greater competence, health and longevity, positive affect, creativity, and charisma and reduced burnout," (Langer, 2009 p 280). Mindfulness is a critical factor in determining individual performance and shaping learning experiences. In particular, mindfulness appears to be crucial in helping us deal with uncertainties in our lives and environments.

Spirituality in Bhutan "can encompass belief in spiritual values like compassion, peace, and a sense of purpose and connectedness' and include 'Acts of compassion, altruism and selflessness..." (Ura et al 2012a p 131). The GNH research group argues that Bhutan is a "spiritual nation and the influence of spirituality is highly visible in the everyday lives of the population, in spiritual gatherings, and in the numerous spiritual landmarks such as sacred temples and monasteries, prayer flags and prayer wheels. These provide a platform for people to develop spiritual maturity."(Ura et al 2012a p 132).

For the purpose of GNH, spirituality is 'intrinsic to development" which means that no meaningful development can occur without "inner spiritual growth along with peaceful environment that allow spiritual nourishment. If material growth undermines the spiritual framework of society and its values of compassion and integrity, then development has not occurred". (Ura et al 2012a p 132).

The spirituality indicator is based on four questions. One finding was that meditation practice had a very low loading. It may be mentioned that the government in Bhutan has recently initiated a school-based meditation curriculum, because of its ability to "provide balance, positive emotions and mental clarity" (Ura et al 2012 a p 133).

Mindfulness is an important practice that in the GNH Index context measures psychological wellbeing as three components; i) Spirituality – meditation or mindfulness practices, and the consideration of the consequences of one's actions. ii) Emotional balance, which is the outcome of emotional intelligence, and the cultivation of positive emotions such as generosity, empathy and compassion, and iii) Evaluative satisfaction with respect to different domains of GNH. (Alkire 2015 p 93). One example mentioned by Alkire (2015 is the results of meditation in prison in India (Tihar) and the United States. Program of meditation in prisons demonstrates that wellbeing is improved (Alkire op.cit p 97), and violence and racism are reduced. The Oxford Mindfulness Centre applies mindfulness techniques to patients with mental and physical problems. "There is great potential that widespread availability (of mindfulness tools) will have a beneficial effect on the general population, not just those who are diagnosed unwell." Alkire 2015 (p 98).

Point eight; active participation in the value struggles in society

¹ Mainly the monks and nun are practicing meditation in Bhutan. The GNH survey include 25 monks and nuns. This is not representative of monks and nuns who make up about 3% of the population of Bhutan. They live largely institutionalized lives in monasteries and 'nunneries', and are not easy to interview.

In Norway there is a representative democracy with a number of political parties and elections every fourth years. The Government implement the laws and important decisions based on majority rules in the Parliament (Stortinget). The Norwegian political system is supported by a strong technocratic tradition with a number of experts in different fields, and does not always work in an appropriate way to take the minorities interests into necessary consideration. As a result several civil disobedience actions have taken place in particular to preserve the Norwegian wilderness. Arne Næss and other pro-ecologists were partly inspired by Gandhi's example and methods,

Good governance is an important domain in the GNH index and four measures for good governance are used; i) whether people knew their fundamental rights and felt they were protected, ii) if they trust public institutions, 3) how people assess the performance of the governmental institutions, and iv) whether they vote in the national elections and participating in local government meetings. These questions are supported by Sen's important contribution in his "Development as Freedom (1999). According to Sen, participation in making decisions that affect people's life and the lives of others are fundamental to human wellbeing. Participation can also be regarded as having intrinsic value for the quality of life.

Deep ecology presupposes that every person takes a practical stand and act on it. In this value battle is science not enough, and ecology is not the ultimate science. Following Næss's example we should act in a non-violent way, and we should always argue for our position. Deep ecology draws heavily upon ecology as a science where the values of unity, symbiosis and diversity are central. However, we must avoid ecologism, the view that ecology is the final authority. This would mean that we over-generalize and universalize ecological concepts. But ecology cannot be a substitute of philosophical analysis. We have to "fight against depolitization". Ecological science, concerned only with facts and logic, cannot answer the essential ethical challenges we have to face. How we should act as responsible deep ecologists and good citizens is partly a question about how we should live, and that is an ethical question.

Good governance is an important domain in the GNH index and four measures for good governance are used; i) whether people knew their fundamental rights and felt they were protected, ii) if they trust public institutions, 3) how people assess the performance of the governmental institutions, and iv) whether they vote in the national elections and participating in local government meetings. These questions are supported by Sen's contribution in his *Development as Freedom* (1999). According to Sen, participation in making decisions that affect people's life and the lives of others are fundamental to human wellbeing. Participation can also be regarded as having intrinsic value for the quality of life.

Bhutan's GNH measuring is an attempt to develop a holistic measurements of human happiness. The Bhutanese research reports present a number of insights that have relevance for alternative ways of life and different lifestyles compared to the prevailing Western view. We should reflect deeply on these insights in order to learn and in order to pursue a sustainable life on our earth. Summing up the main findings from this exploration of deep ecology and GNH, both represents clear ethical positions, knowledge and wisdom and can reinforce and enrich each other.

Deep ecology needs GNH, because GNH's concepts of sufficiency, mindfulness and spirituality contributes to an elaboration of DE. Deep ecology may inspire GNH researchers to continue to raise basic questions on how to contribute to human flourishing in Bhutan. The non- anthropocentric assumption in DE may challenges Bhutan's GNH measurement. Deep ecological thinking implies living a rich life with simple means and Self-Realization for all beings.

GNH is a milestone towards understanding and elaboration of the deep ecological narrative, often regarded as a distant ecotopy. However, GNH is real, it is implemented in practice, represents a role model for the global community, and directly benefits the people of Bhutan. The GNH approach is innovative as well as a humanistic way to pursue happiness in a deep sense, and is a hopeful project towards a sustainable practice and a good life.

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