

Introduction

The concept of sustainability raised form 1960s to address the concerns of environmental degradation caused by poor resource management in times of rapid economical development. Over the past 40 years, this concept gradually evolves by incorporate another dimension, social aspect, into the initial idea. For decades, however, much of focus was shared among economic development and ecological conservation, while less was placed on sustainable social development by itself. Not until recently the emergence of the concept of “triple bottom line” gives equal attention in environmental, economic as well as social sustainability. People start to explore what the social sustainability is by itself. In many recent literatures, the concept of social sustainability and the way to build a sustainable society has become a main topic, yet each of which has a different insight and interpretation. By taking a close look at various perspectives on the concept of social sustainability, from other literatures, this paper will first produce a definition of social sustainability and then summarize and examine elements that are crucial in constructing a socially sustainable community.

Literature review

There are many books, articles, government documents, and websites that discuss about the meaning of being sustainable. Within past few years, more literatures start to put focus on the social dimension of sustainability. Given that no universal definition has been applied, many of the articles are trying to define social sustainability in ways which how they interpreted and they provide a good perspective of understanding what a sustainable society and community is in urban areas. The concept of social sustainability can be understood by thinking in categories, types, levels or system.

In the Report to Vancouver City Council released in 2005, it defined social sustainability as the ability to build and maintain it own resources, and have the resiliency to prevent and/or address problems in the future in order to meet basic needs. This report put the “resources” into two social justice categories as the two main features of sustainability. One is individual or human capacity that refers to “the attributes and resources that individuals can contribute to their own well-being and to the well-being of the community as a whole”. Another is social or community capacity which is defined as “the relationships, networks and norms that facilitate collective action taken to improve upon quality of life and to ensure that such improvements are sustainable”.

Trevor Hancock in the article Social Sustainability (1993) points out both “hard” and “soft” infrastructure contribute to the maintenance of sustainability in a community. He

argues that while physical design of a place can make sustainable choices easier, soft infrastructure, such as formal human services and community's informal structure, enable the society to have a sustainable lifestyle.

Some bodies of literature suggest that the understanding of sustainability should be shaped in a way that comes from both top-down and bottom-up efforts levels. In the article Resilience and Sustainability in US urban areas (Pierce et al, 2011), study examine the sustainability plans and policies as well as citizen commitment to sustainable initiatives as important elements when assess sustainability. It implies that sustainability management requires the efforts from diversity level of social structure. Government and community can work together to help the society to approach or stay in a state of sustainable. A website (http://www.sustreport.org/issues/sust_comm.html) that is dedicated to demonstrate sustainability cites a paragraph from the National Round Table on the Environment and the Economy. It perceives sustainability derived from efforts that incorporate both top-down government support and citizen-led process

As more frequent occurrence of disasters in the world devastate the communities, people attention were pull on the topic of resilience. A more holistic way to understand sustainability is to first view the human-society as a system, which is in relation with resilience. Different ideas about the relationship between sustainability and resilience arise among literature. J.C. Pierce et al (2011) found that the great sustainability efforts could be evidenced with higher level of resilience through study done among 40 American urban cities. In other words, attribution of resilience contributes to the sustainability positively. However, Andrew Zolli proposed a different view between the two (2012). He clarifies the disparity that “where sustainability aims to put the world back into balance, resilience looks for ways to manage in an imbalanced world”. He argues that the world is in a disequilibrium state, and thus it will naturally go through the cycle of trying, failing, adapting, learning, and evolving. Zolli, Therefore, indicates that to keep the system working, all the efforts should be devoted into changing with the changes instead of keep it in status quo.

I come up with definition of social sustainability that integrates all the insights provided above: a state where the system, which is facilitated resiliently by both top-down and bottom-up process, is supported by the network in which individual and society as whole and can in turn enable current and future generations to meet their needs.

The topic of how to achieve social sustainability also has been discussed a lot along with how to define it. By looking across various forms of literature, I conclude several components that contribute to the formation of such a harmonic society. First one is equality embedded in the context of social justice. This includes every member of the community should have equal accessibility to life sustaining activities and social services such as education, public transportation, medication. Gar Alperovitz (2005) states that income inequality challenges social sustainability in a way that causes over-

consumption pattern. He addresses that the increased income disparity between the poor and the rich generates power inequality in which those who on top are driven by the wasteful materialism. Given that the total material production in the world is limited, this unsustainable consumption pattern associated with income equality cannot ensure local economy stability and thus cannot support the development. Alperovitz then provides some potential solutions that can avert materialism; these include community-oriented strategies for fostering personal relationship and a sense of community so that people can have sufficient time to pursue creativity and fulfilling. Mathematical Analysis using from James K. Boyce et al. (1999) also testifies the relationship between income inequality and sustainable development. It uses income inequality as one of variables that determines the power distribution and the result shows that the greater power inequality leads to weaker environmental polices, which in turn lead to greater environmental degradation and worsens public health outcome. Chan Lean Heng, an associate professor from University Sains Malaysia, mentions gender equality heavily in the article (2006). She argues, "Gender inequity/inequality is caused by and results in other inequalities and social problems that are not sustainable. She emphasizes that gender equity is the heart of justice and sustainability because it ensures " both men and women to realize their full human right potential to contribute to national political, economic, social and cultural development, and to benefits from the results". In addition, Winston (2011) talks about equality embedded in corporate social responsibility by emphasizes fairness business practices to labors it a key to approach sustainable business.

Participation and solidarity as whole is another elements to foster a strong connection within a society. Chan Lean Heng (2006) explains that people are active agency instead of merely passive beneficiaries, thus all members of the society should participate in making decision and have voices of their own to best present themselves. A study mentions the importance of having a moralistic, communitarian culture, which involves participation and solidarity (Pierce et al. 2011). It talks about sustainable efforts are collected through a moralistic culture in which people have inclusive and communitarian value and greater commitment to political, economical and social life. People will think more about the how they are related to community as opposed to merely care about their own behavior. This culture is built on the trust and shaped by a shared vision within the community. The authors imply that community members' involvement and commitment are crucial to the shared place and by getting participated people can together build a strongly cohesive society with a common vision embedded in solidarity.

Creativity and innovation is a crucial tool to cope and adapt to system change (Pierce et al, 2011). Bjorn Stigson (2004) from World Business Council for Sustainable Development denotes that innovation can bring new technology that provide better choice for people to live life which goes toward sustainable pattern. At the same time, creative and better practices shared by firms can encourage pollution reduction and improve financial results that can provide a healthy living environment shared among

every one in the community and enable more people to access necessities in a affordable manner. While Stigon strengths the improved life quality of being innovative in both economic and environmental senses, Andrew Zolli (2012), in his article Learn to Bounce Back, puts more focus on creative ways of dealing with crisis. One of an example he gives is an insurance program in Kenya that uses wireless weather sensors to inform farmers about the climate volatility and protect them from being economically suffered.

In most literature, safety and security are briefly mentioned in align with Equality, participation and solidarity, creativity and innovation in constructing social sustainability. It is a fundamental point stressing people are secured from, or after, threats, which provide a platform for the other three elements to build on. For example, Andrew Zolli (2012) mentions about the importance psychological and physiological recovery for people who had hard times after threats. This can better prepare people from both mental and physical destruction after shocks. In another article, social support is redeemed to play a critical role in assisting community member's mental and physical health in post-disaster circumstance (Norris et al, 2008). That individual receives love and care through both tangible and emotional assistance embedded into a web of social relationships protects and secures community from collapsion, which can lead to sustainability of resilient community with resilience.

All these literature in area of sustainability have shared different views on the definition of social sustainability but similar components that are essential for achieving this state. No matter how people interpret the concept, the elements contributed to the construction of sustainable society should be all taken into considerations.

Annotated Bibliography

Alperovitz, Gar. 2005. "Time to Get Serious about Inequality and Sustainability". *Synthesis/Regeneration* 38.

<http://www.greens.org/s-r/>

This article by Gar Alperovitz, a professor of political economy at University of Maryland, argues that the inequality of income level and wealth are the most drivers of unsustainable growth. He uses data to show the huge increased income gap between people who live at the top and people who at the bottom. He then explains how this unequal income distribution generates unsustainable consumption pattern. This article provides me information and ideas on how income inequality would not lead to social sustainability and provide a potential solution to address this problem.

Boyce, James K., Andrew R. Klemer, Paul H. Templet, and Cleve E. Willis. 1999. "Power Distribution, the Environment, and Public Health: A State-level Analysis." *Ecological Economics* 29.1: 127-40. Print.

This article is dedicated to examine the relationships among power distribution, the environment and public health by looking over 50 states in the US. It use hypothesize that the power distribution is a function of income inequality, the level of per capita income, and a vector of non-income determinants and a vector of non-income determinants. According to this function, it supports the hypothesis that the greater environmental degradation and adverse public health outcomes. This can be used as one of the examples to demonstrate why equality is critical to reach sustainability.

Director of Social Planning, 2005. "Social Development ". City of Vancouver Report.

This report from the Director of Social Planning to Vancouver city council reported in 2005 gives a definition of social sustainability along with detailed interpretations that puts the sustainability concept into two large categories. It provides way to define sustainability that I would use as an example for my literature.

Florida, Richard. 2012. "The Rush to Resilience: 'We Don't Have Decades Before the Next Sandy'" - *Jobs & Economy*.

<http://www.theatlanticcities.com/jobs-and-economy/2012/11/building-resilient-cities-conversation-andrew-zolli-and-jonathan-rose/3839/>

This online article is written by Richard Florida. It is an interview with Andrew Zolli, an author of *Resilience: Why Things Bounce Back*, and Jonathan Rose, developer of green affordable housing, and the founder of the Jonathan Rose Companies, on the

topic of resilience. They define resilience and illustrate how a city can be resilient. Andrew mentions that there are a lot of pathways toward resilience, and what we need is diversity of scales and of modes of operation. This flux of information on resilience helps me understand what does a resilient community mean and how should it look like.

Hancock, Trevor. 1993. "Social Sustainability." *Social Sustainability*.

http://newcity.ca/Pages/social_sustainability.html

This article written by Trevor Hancock, a founding member of the Canadian Green Party and a principal exponent of the 'healthy communities' movement in North America, gives a general understanding of what social sustainability is. It denotes that both physical and design of the community and the soft infrastructure of the community can lead to a healthy and sustainable life style. Both this and Zolli's online article provide a view of looking at what sustainability is.

Lean, Chan. 2006. Re-orienting Teach Education for Socially Sustainable Development. *UNESCO Expert Meeting On Education for Sustainable Development: Re-orienting Education to Address Sustainability*.

This paper explores the meaning and contexts of social sustainability, and how to reorient teacher education to take on board aspects of social sustainability. It gives different definitions of social sustainability from literatures. It points out the fundamental aspect of social sustainability is sustainable human development, which addresses the social dimensions as the most important element, and views materialistic efforts as one of the means to for achieving this. It later detailed explained why gender equity is central to human development as an important dimension in social sustainability. This provides me another example of how inequality causes unsustainable life patterns.

Norris, Fran H., Susan P. Stevens, Betty Pfefferbaum, Karen F. Wyche, and Rose L. Pfefferbaum. 2008. "Community Resilience as a Metaphor, Theory, Set of Capacities, and Strategy for Disaster Readiness." *American Journal Of Community Psychology* 41, no. 1/2: 127-150.

This article focuses on the recovery of aftermath of disaster for a resilient community. It presents the feathers of being resilient, which include understanding of temporary stress, adaptation, wellness, and source dynamics, in post-disasters circumstances. Having these key components in place will lead to a resilient community that can be sustainable in the long run. One of the dimensions of being resilient is to have social support, both physically and mentally. I would perceive that as a good example of why safety and security are critical to maintain the development of a community/society.

Pierce, J. C., W. W. Budd, and N. P. Lovrich. 2011. "Resilience and sustainability in US urban areas." *Environmental Politics* 20, no. 4: 566-584.

This article examines the relationship between the resilience level and the level of sustainability plans and policies found in 40 American urban areas. The resilience index reflects motivation, capacity and information and the sustainability plans & policies are measure by the content analysis of city documents. The result is the resilience leads to the presence of sustainability plans & policies. Also a good point the article made Resilience is more likely to present in a communitarian political culture. This article provides information that gives me an idea on how to define sustainability in relation to resilience. Also, it provides a unique view on the function of communitarian political culture under participation and solidarity context.

Winston, Morton. 2011. "Sustainability and Social Justice." *International Journal Of Business & Social Science* 2, no. 16: 33-37.

The author who is a professor of philosophy proposes an analysis of the concept of sustainability that links it to the moral concepts of exploitation and social justice. He applies this analysis to corporate social responsibility issues: respect for the labor rights for the employees and reducing GHG emissions. He argues that Sustainable business enterprises are those who can maintain profitability without practicing forms of unjust exploration of either nature or human capital. He interpreted the intergenerational value in a new way: to avoid the contempt of future generations and earn their gratitude as our generation's legacy. Therefore, he perceives social justice, one treat others fairly, underlies these sustainable business practices. It provides me a different view on equality which can contribute to business practice dimension.

Zolli, Andrew. 2012. "Learning to Bounce Back." *The New York Times*. The New York Times.

<http://www.nytimes.com/2012/11/03/opinion/forget-sustainability-its-about-resilience.html?hp&pagewanted=all&r=5&>

It is a profound article by Andrew Zolli demonstrating the disparity between sustainability and resilience. The former focuses on minimizing the impact from people to the environment and achieving (and keeping) in a balanced system socially, economically, and environmentally. The latter highlights the capability to adapt in the constant disequilibrium and the potential to bounce back after shocks. Zolli denotes that not only hard infrastructure can be adapted to the change, soft infrastructure also is a key to maintain the tension. Also in this online article, he points out that innovation

helps to improve adaption. It is a very useful source for me that it presents a unique distinguishment between resilience and sustainability.

2004. "How Innovation Supports Sustainability." *Chemical Week* 166, no. 20: 16.

It is an interview with two people, Jean-Marc Gilson from Dow Corning Corporation and Bjorn Stigson from World Business Council for Sustainable Development in economic arena. The both of them explain the importance of innovation and points out the good outcome new technology can bring to the economics and the environment. This article is useful for me to demonstrate the importance of creativity and innovation.

2012. "What Is Social Sustainability?" *HubPages*.

<http://ithabise.hubpages.com/hub/What-is-Social-Sustainability-basic-needs-equity-human-capital>

This online article explains the concept of social sustainability. A chart on the webpage lists the indicators of basic needs of human. Indicators are classified under four areas: supply (domicile, food, clothing, health, satisfaction, personal freedom, safety, product safety), social resources (welfare, community programs, governance, democracy, politics, justice, solidarity), equal opportunity (equity, employment, income, education, housing, voting rights, labor rights), and diversity (community, pluralism, cultural education, appreciation, interaction, integration). However, this chart only gives a general idea of what should we look for to indicate sustainability. But the specific measuring system need to tailor to the community given that communities are differ from one another.

2004. "Sustainability Issues." *The Sustainability Report*.

http://www.sustreport.org/issues/sust_comm.html

This website is dedicated into introducing the concept of sustainable communities with links to measuring sustainability at communities levels in Canada. It denotes that the measuring systems need to be differ from community to community because

community itself decide which measures are the most appropriate for them. It

illustrates that community sustainability indicators, differ from traditional community reporting which measures changes in economic, social and environmental progress separately, show the connection among these.

2010. "Eco-Social Sustainability of the Murray-Darling Basin." *Position Paper: Redefining Social Sustainability*. University of South Australia

<http://w3.unisa.edu.au/hawkeinstitute/research/ecosocial/eco-position.asp#social>

It is the website of University of South Australia. It points out that many of indicators systems on social sustainability that employ features are merely statistics, such as percentage of literate persons, the number homicides per million people, are useful when comparing the performance of countries and can indicate which areas need increased resources, but cannot directly explain why these areas are in these conditions and how to allocate the resource to improve. It then introduces two main Australian projects that have well established indicator systems. First one is Western Australian government's Sustainability Indicators Project that takes account what research participants see as being desirable indicators of sustainability in their region. The second one is the Academy of Social Science Community Sustainability Project that determines a system where has a structure of five key areas of "capital" (natural, human, social, institutional and produced) and the managed data according to the indicators for each key area. Sample indicators include sense of future, sense of community or belonging, community activities, even age structure, political representation, economic viability, employment opportunities, meeting places

2013. "Sustainability Indicators." *Environmental Challenges in Farm Management*.

<http://www.ecifm.rdg.ac.uk/inofsd.htm>

This webpage introduces and provides a model of the sustainability indicator with examples. It sorts indicators into 21 categories. Big categories are economy, transport use, leisure and tourism, overseas trade, energy, land use, water resources, forestry, fish resources, climate change, ozone layer depletion, acid deposition, air, freshwater quality, marine, wildlife and habitat, land cover and landscape, soil. Mineral extraction, waste, and radioactivity. This list heavily focuses on the environmental and economic metrics. The indicators under each category provide very specific items to look for.