Developing the local, engaging the global through the Sustainability Approximation Model: seen from Asia and Latin America

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Benefits and challenges of the global age

The global age has provided many technological fruits. In spite of the digital divide, it has given large segments of the human population exponentially-increased access to information. The medical sciences have made significant advances toward improving human health and quality of life. Trans-oceanic transportation has made it possible for increasing numbers of individuals to traverse the globe and to explore frontiers well beyond their native soil.

Despite the myriad fruits of the global age, the world community is currently faced with major challenges, including the threat of massive environmental destruction, as well as multiple sorts of political, military, economic and intercultural strife. In his analysis of the current state of world affairs, Lerche (1998) affirms that "globalization cannot continue indefinitely in its contemporary form. Either processes of national and global governance will evolve to better accommodate the basic needs and values of those groups now mobilizing against current patterns of change, or the frequency and intensity of disruption and reaction will continue to accelerate with unpredictable, but decidedly negative, short to medium run effects" (http://www.gmu.edu/programs/icar/ijps/vol3_1/learch.htm; accessed: 12-11-13). Heynen *et al.* (2007) add that "the [current] 'Neoliberalization' of environmental governance will produce predominantly environmentally undesirable and socially regressive political and economic outcomes" (p. 2). Meanwhile, Jomo and Baudot (2007) point to the rising levels of inequality within countries and among countries which are a result of the global neoliberal order. They express deep concern for the system's inability to generate sufficient employment for the world's people of working age, saying that without employment the much touted indicator of *economic growth* is utterly a moot point. Kapstein (1996) argues that the neoliberal structures "crunch workers," leading to inevitable conflict if the powers that be continue to insist on imposing this model. He observes that systemic pres-

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sures inherent in the free market ideology demand reductions in government expenditure, so when working people most need for the nation state to buffer them from swings in the market, it abandons them, as states are less and less able to respond with new spending (King, 2011). Concerning cultural shift in the global era, Pieterse refutes the McDonaldization thesis (Ritzer, 2007)—which predicts that all corners of the world will be absorbed by the imposition of American culture across the globe. He is equally critical of the notion of an inevitable clash of civilizations (Huntington, 1993). He instead posits that "hybrid modernities" are emerging which are not hegemonic, suggesting that there is an "East-West osmosis where each mutually influence and transform the other, weaving between East-West, Islam-West, through Easternization, to Westernization and back again" (Pieterse, 2009, p. 136). Shekhawat critiques the narrowness of current social and economic indicators about human development and social progress, claiming that definitions are hegemonic and limiting. He argues for broader multidimensional understandings of what it means to be developed and modern, positing that human capabilities can be much more fulfilling if they lead to real empowerment and multidimensional well-being. For Shekhawat, "wellbeing" would be better conceived, not as self-centered happiness, but more in the sense of human flourishing and virtues, which would be poured out for the good of the broader community, the natural environment, and an economy which would provide enough for all within the limits of environmental sustainability (2010).

In agreement with this line of thinking, University of Malaya's Living Lab: For the Sustainability Sciences and its Centre for Dialogue & Transformation (LL/CDT) are academic centers which seek to engage both experts and community members to strive, precisely, toward these aforementioned goals. While the LL/CDT are located in the heart of a predominantly Muslim country in Southeast Asia, the parent center—Center for Dialogue & Human Wellbeing (CDBH—Centro de Diálogo y Bienestar Humano) is housed at Tecnológico de Monterrey University in México. The three centers work together toward a life-giving non-hegemonic form of globalization, best summarized by Francois L'Yvonnet, who eloquently states that,

> we are actors of a form of diplomacy of thought, a diplomacy of open seas that goes to meet the other who is at the other shore, in a shared refusal of the fatality of an announced world, that of the exclusive kingdom of the fortunate and the powerful. (www.alati.com.br/ing/eventos.html; accessed: 1 November 2013.)

In the present paper we attempt to move beyond regionalism, crossing shores in order to see what Islam, "the East" and Latinity might offer in the search for a non-hegemonic globalization. Specifically, it will examine the vision, the mission, and the work of the Living Lab/Centre for Dialogue & Transformation-University of Malaya-Malaysia, and their parent center, Center for Dialogue & Human Wellbeing—at Tecnológico de Monterrey University in México.

**Developing the local, engaging the global
as a conscious choice: three university
research centers designed to serve
the community, environment and economy**

Whether at the centers in Malaysia or on the other side of the Pacific Ocean, researchers and community members at the three facilities consciously choose what aspects of the global age they wish to embrace, and how they wish to adapt them for the betterment of their localities and societies. In this regard, the three centers are *activist*, given their orientation toward working with people in their localities in order to embrace the "global fruits" that they choose, and to harness them for the good of the local community, environment and economy. The *academic* component of the centers researches problems, processes and outcomes—submitting all findings to scientific journals in order to disseminate useful knowledge about how the communities in question have used global tools to shape local realities toward reaching their stated goals and objectives. If other actors in the global milieu—including yourself, dear Reader—wish to join with us in the work of shaping our environment toward the local understanding of the greater good, we welcome you to work together toward a life-giving plurality in the creation of a non-hegemonic globalization.

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Living lab: for the sustainability sciences/ Centre for Dialogue & Transformation: integrating humanity–environment– economy, University of Malaya, Malaysia

Research and activities at Living Lab and Centre for Dialogue & Transformation seeks to integrate the humanity community, the natural environment, and human economic activities in a sustainable and symbiotic manner. The starting point for research projects through the Living Lab is the natural environment, while work at Centre for Dialogue & Transformation begins with the human community and our economic activities.

National and international scientists in collaboration with the local community

The Living Lab engages in joint research with national and international scientists within a range of sustainability-related areas. Sustainability is viewed in a holistic fashion, considering environment, humanity and economy as the three primary variables to be taken into account as researchers work with local actors toward a more sustainable future for Malaysia, for México and for the world. All research is applied toward problem solving, improving quality of life, the environment and/or the economy. Research results are studied to see how the findings can help usher in changes in the relationship between the human community, human economic activities and the natural environment. A tough question here concerns how a balance can emerge where economic activities are carried out within the rubric and limitations of sustainability while enhancing community and environmental wellbeing in the process.

Children at the living lab

Personnel at the Living Lab pay special attention to children by providing hands on experiences in the sustainability sciences adapted to the age and educational levels of participating groups. These groups are often sent to the LL/CDT by schools, mosques, churches temples, orphanages, etc. While there are many activities available for the children, a favorite way to begin is by "playing" scientist at a level adapted for each age group. Each child is given a simple notebook and a writing instrument. The group is then taken into the forest to conduct "empirical observation," recording perceptions gleaned through their senses of sight, hearing, smell and touch. After completing the observation phase, they sit outside in groups of three and discuss the experience with their peers. Returning to the lab, each child then dons a lab coat, protective goggles and gloves, after which they will conduct simple hydrological, soils and Biochemistry tests, as well as studying specimens of flora and fauna at the microscopic level. Children are not allowed to pluck or to harm any form of flora or fauna on the trail. Instead, all necessary specimens are kept in the lab for their perusal and child-safe experimentation. We take care to photograph each child scientist at work, and to send the photos back with accompanying adults. We ask that these be displayed prominently in a place where each child will be able to see him or herself as a scientist. Primary objectives of activities such as these are: to instill a love of the environment and an attitude of stewardship, to instill a love of science, and to help children perceive

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themselves as capable of continuing into higher education if they so desire. Meanwhile, attention is drawn to the lab coat, gloves, goggles and the fire extinguishers found in the lab in an effort to highlight the importance of safety when working in the scientific milieu. The Living Lab/Centre for Dialogue & Transformation has also set up the Fraser's Hill Nature Club, which meets once a month with the three local schools to engage in community and nature-based activities.

Centre for Dialogue & Transformation: integrating humanity–environment–economy

The tagline "Integrating Humanity–Environment–Economy" is actually the Mission Statement of both the Living Lab and the Centre for Dialogue & Transformation. While research projects related to the natural environment are housed under the Living Lab, those whose starting point concerns the community and/or sustainable economic development are housed under the Centre for Dialogue & Transformation. Both Centres work together toward shared goals, and all projects are "trans-disciplinary," meaning that all environmental projects have human and economic components, while community and economic projects will have an environmental component as well.

The Centre for Dialogue & Transformation (CDT) designs projects on demand for groups requesting its services. In order to create and offer a workshop, conference, course, lecture, etc., CDT researchers ask clients what their objectives are and how much time is available to work with the

participants. An initial draft of the course, workshop, etc. is created and sent to the client for critique and re-drafting. Once the client is completely in agreement with the program, participants are sent to the Centre for Dialogue & Transformation where the custom-designed activity is carried out. However, if the participating group is large—making the cost of coming to Fraser's Hill prohibitive, CDT staff may travel to the clients' location where they will proceed to offer the service requested. These custom-designed services bring money into the coffers of the LL/CDT—which may be used for improving the physical infrastructure, for equipment acquisition, staff family weekends or other activities at the discretion of the LL/CDT director.

Services currently offered through the CDT are listed below. Please note that additional services are provided when visiting researchers bring new areas of expertise, to be offered during their tenure at the LL/CDT. At the time of writing, services offered include: sustainable economic development research and application; international negotiation, mediation, facilitation, and dialogue; conflict transformation, de-normativizing violence, healing collective trauma, and community training for self-help in the aforementioned areas. Policy cycle studies are systematically conducted from the beginning to the end of each project; these include policy formation, implementation and evaluation studies. More will be said about the approach and the importance of policy cycle studies in an ensuing section of this chapter. CDT personnel work extensively in the area of education as we believe this to be a key area on

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the path to genuine and lasting transformation in each locality. Education-related services include teacher training in student-centered instructional methods; constructivist, problem-solving teaching methods, integrated curricular design, and place-based curriculum—which helps ensure that educational activities are highly relevant for the needs, the concerns, and the context of the local community.

In the ensuing section, we will cross to the other shore of the Pacific Ocean, where the Center for Dialogue & Transformation is located at Tecnológico de Monterrey University in Chihuahua, Mexico.

318 Center for Dialogue & Human Wellbeing at Tecnológico de Monterrey University, Mexico

The Center for Dialogue & Human Wellbeing in Mexico operates on the same principles as the Malaysian Centre for Dialogue & Transformation. Hereafter this center will be referred to as CDBH due to its initials in Spanish (Centro de Diálogo y Bienestar Humano).

The CDBH in Mexico is the parent center to the Living Lab/and Centre for Dialogue & Transformation, as the two Malaysian centers were developed based on the philosophy, approach, objectives and the theoretical foundations of the CDBH, which are discussed below.

Since its inception at the turn of the century, personnel at CDBH have striven to engage in dialogue, joint applied research and exchange activities, both locally and with communities and institutions around the world.

Philosophy

The philosophy underlying this g/local orientation states that:

- Joint research is an activity which deeply enriches the knowledge and life experience of all involved. When different worlds and research processes are brought together, the view of researchers is greatly broadened through the diverse analytical perspectives offered by members of a multinational, multicultural team, where each researcher brings his/her unique abilities and experiences to the process of scientific discovery and innovation, to be applied for the betterment of human wellbeing (CDBH, 2003).

Objectives

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To:

- Utilize scientific research to better understand points of convergence and divergence among individuals and human communities, with the aim of sowing mutual respect and enhancing healthy coexistence among members of local populations and the global community.
- Share theoretical knowledge through conferences, workshops and short courses aimed at contributing to inter-community unity and collaboration, having as its basis inter-civilizational dialogue, education, and the peaceful resolution of conflict.
- Strive for holistic capacity building and sustainable economic development at the community level in México, Malaysia and the world.

- Develop new approaches to peace education, dialogue and psychosocial healing through ongoing interactions with civil society and local authorities.
- Publish the results of all research findings pertaining to services offered in peer-reviewed scientific journals.

Primary research areas at the CDBH[1]
- Intercivilizational/intercultural Dialogue.
- Sustainable Economic Development and Human Wellbeing.
- Peace Education.
- Individual and Collective Trauma Healing.
- Psychosocial Reconstruction: Transforming Normativized Violence.
- Peaceful dispute resolution and conflict transformation.
- Psychosocial Healing through Artistic Expression.

Research approach

Although they are academic entities, the Mexican Center for Dialogue and Transformation, and the Malaysian Living Lab, and Centre for Dialogue & Transformation work directly with communities and local authorities to solve concrete problems. All three aim to develop the local community, environment and economy while consciously engaging what is deemed useful from the global milieu following the shared set of processes described below.

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1. Please note that the Ideological-Structural Analysis serves as the theoretical foundation for individual and collective work conducted through the CDBH, LL & CDT.
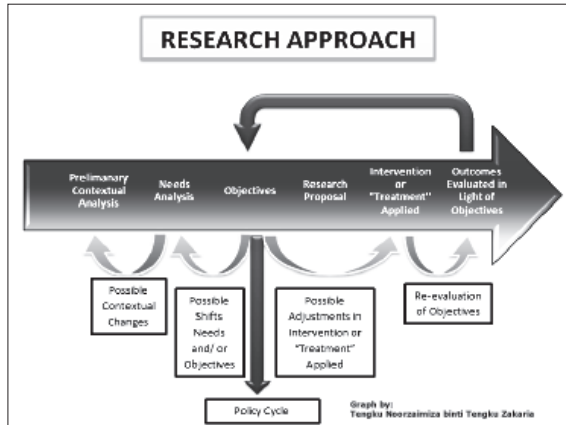
FIGURE **1: Research approach**—*When a problem or a concern has been identified for intervention, researchers begin by conducting a Preliminary Analysis which provides a broad understanding of the history and the particulars surrounding the topic of study. The second step is to carry out a needs analysis in order to understand people's concerns, desires, goals and fears pertaining to the issue. Objectives are then developed in conjunction with community members and authorities. A Research Proposal is presented, which includes a section specifying what perceived benefits the project will provide for the locality. The Intervention is applied, and data analyzed in light of the stated objectives. Based on the findings, policy recommendations are presented to appropriate legislative bodies, and resulting manuscripts are submitted for publication in refereed journals, books, or other sources of knowledge dissemination. If necessary, adaptations may be made as indicated by the green feedback arrows depicted in the graph above.*

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In collaboration with community members and authorities, researchers identify and analyze a specific problem, or problems concerning the g/local community, environment, economy, or a combination of these variables. A Preliminary Contextual Analysis and a Needs Analysis are conducted. Project objectives are established which aim to address the issues and the needs ascertained in the pre-intervention analy-

ses. A research proposal is presented and, once accepted, the intervention or "treatment" is applied. The outcomes of all research projects are assessed for their effectiveness in light of the project's stated objectives. Data is systematically analyzed from the very beginning to the end of the project, from which policy studies are derived. In compliance with our requirements as academic centers, research articles from each project are sent for publication in refereed journals, books, edited volumes, or other forms of research publication.

Encouraging structural changes: the policy research component of the Mexican and Malaysian centers

Based on the aforementioned process, policy studies are carried out from the onset to the completion of each project, since CDBH personnel believe that in order for changes to be lasting, they must become institutionalized through the legislative process. Policy recommendations derived from the research findings are presented to the pertinent legislative bodies in written form and, ideally, through an oral presentation as well.

CDBH researchers approach the *lawmaking body* and request permission to present the findings in actual legislative gatherings. If granted, a brief presentation of findings and recommendations is given, and the written policy study and recommendations are formally submitted to the body. If speaking time before the Chamber is not granted, the written study is simply presented to the law makers, in the hopes that part or all of the recommendations will be heeded.
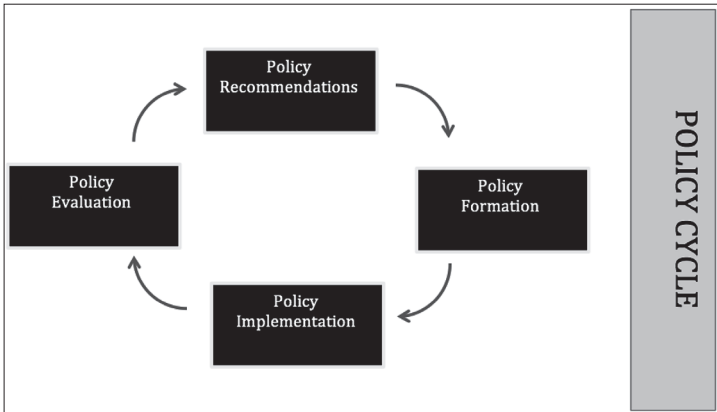
FIGURE 2: Joining in to the policy cycle—*Research carried out at any of the three centers is conducted in collaboration with relevant actors, including ordinary people, local authorities and the private sector. The Centers' researchers join in to the Policy Cycle by providing recommendations based on research findings. They then approach administrative bodies and offer to conduct ongoing evaluation of the implementation process with the aim of providing feedback designed to help reach the policy objectives as enshrined in the law, or legislation. Outcomes are systematically assessed for their effectiveness, further recommendations are given, and on goes the policy process.*

The next step entails approaching the *implementing body/ bodies* and requesting permission to conduct policy implementation studies. These are based on the legislation pertaining to the subject at hand, and on the stated goals and outcomes of programs to be implemented for the public good. At times, our staff may be hired as consultants, or the students may do internships with the implementing bodies. This proximity to policy implementers gives the advantage of direct observation of the implementation process. However, a drawback of this sort of arrangement lies in the implicit pressure to present positive outcomes in our evaluations. On other occasions, staff and research students simply visit the imple-

menting bodies and assess performance and results in light of the body's stated goals, objectives and desired outcomes. Further recommendations are presented based on outcomes of the evaluation, and in this manner the policy cycle continues.

The Sustainability Approximation Model as a policy instrument, as a framework for CSR decision making, and as a tool for integrated problem-solving education

The Sustainability Approximation Model (SAM) is a dynamic conceptual model which allows its users to visualize the ever-shifting relationship between economy, humanity and environment at a glance.
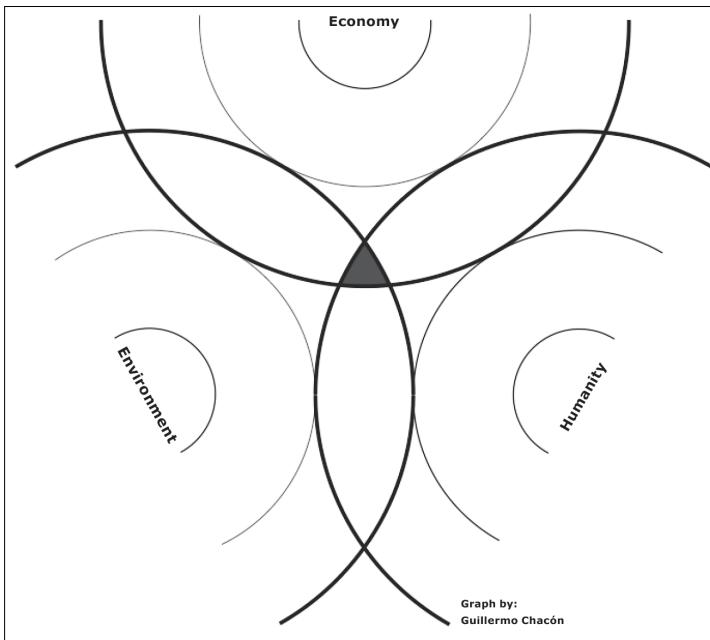
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FIGURE 3: The Sustainability Approximation Model.

The model emphasizes the key role that human beings play as "guardians" of sustainability. It helps policy makers and implementers to be ever mindful of the importance of balancing economic development with the well-being of the human community and the natural environment while they are developing policy legislation. This is done by providing a simplification of reality which represents the impact that human actions have on the economy, environment and society. SAM highlights the possibility of balance between the variables in a symbiotic and sustainable way reminding us, nevertheless, that once a balance is achieved it will not remain, as the nature of our actions and the reactions they create are dynamic and ever changing. As such, SAM encourages policymakers and implementers to plan for the shifts and adjustments needed in order to keep the variables of humanity, environment and economy in balance. SAM is also utilized for the ongoing measurement of the impact of our human actions in search of said balance. In the private sector, the instrument is employed by companies wishing to analyze and fulfill their corporate social responsibilities. Finally, it serves as a teaching tool for integrated, place-based problem solving models of education, where students and educators study their locality as a "living lab," where skills are learned and knowledge gained in the process of analyzing the locality, identifying challenges, and implementing programs designed to improve the local economy, environment and community.

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SAM's simplified visual model reminds its users of the interdependent and symbiotic relationship between the human community, our need for economic sustenance, and the natural environment which sustains our lives, while also providing the raw materials used for economic production. Figure 4 below shows a SAM Worksheet designed to help decision makers strike and maintain a sustainable balance among the three variables.
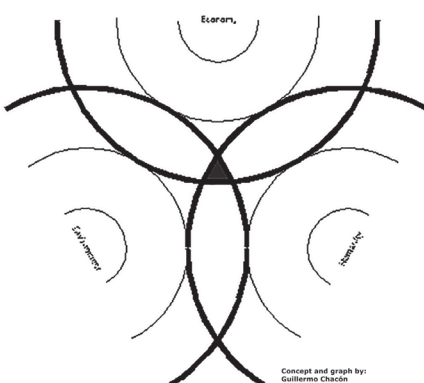
The SAM worksheet and its applications

As a tool, SAM allows for both quantitative measurement and qualitative assessment of interactions among the variables *vis-a-vis* our human role and agency in the process of achieving and maintaining a sustainable symbiosis among them. SAM is widely used throughout the policy cycle—in preliminary analyses, policy recommendations, formation, implementation and evaluation. It is also applicable for private sector enterprises attempting to factor corporate social responsibility into their decision making process. At the university level it is useful for training Public Policy, Public Administration and Developmental Economics students. It is also used as a teaching and evaluation tool with primary school pupils in the Fraser's Hill Nature Club, Malaysia—where activities are designed to help children see our human impacts on the environment, and our agency to strive toward sustainable livelihoods while enhancing human and environmental wholeness in the process.

The SAM worksheet

Sustainable symbiosis, integrating Humanity, Environment and Economy

Roadmap:
What is to be done? Where is it to be
positioned as a point inside the Graph?
What consequences are expected?, etc.

1.
2.
3.
4.
5.

Economy

Environment

Humanity

Concept and graph by:
Guillermo Chacón

Roadmap:
What is to be done? Where is it to be
positioned as a point inside the Graph?
What consequences are expected?, etc.

1.
2.
3.
4.
5.

Participants·

Roadmap:
What is to be done? Where is it to be
positioned as a point inside the Graph?
What consequences are expected?, etc.

1.
2.
3.
4.
5.

Project:

Date:

FIGURE 4: A sample SAM worksheet—*The Sustainability Approximation Model allows decision makers to quickly notice how the impact of a proposed policy is distributed through the three variables, taking into consideration the interrelation that exists between humanity, economy and environment, while seeking to strike and maintain a sustainable balance among them.*

As decision makers work with the wording of the legislation, different options are jotted down in the "roadmap" section of the worksheet according the impact they are expected to have on the community, environment and economy. Anticipated results of the legislation are articulated, and the wording is fine-tuned in a way which seeks to achieve and maintain a sustainable balance among the variables. The worksheet acts as a tool for brainstorming as decisions are being made and the resulting policies are formulated.

As policies are implemented through the administrative bodies, researchers make use of the SAM for monitoring the effectiveness of policy outcomes in light of their stated objectives, and in terms of their impacts on the community, the environment, and the economy. Data from the evaluation process is input into a software, which calculates the impacts of actual implementation on each of the variables. This provides feedback which allows implementers to make the adjustments needed to maintain balance among the variables.

Figure 5 below is a hypothetical computer-generated model which quantifies the impacts that a new Ministry of Tourism "English Tea House and Rose Garden" is having in the Fraser's Hill locality where it was constructed.

The computer-generated model provides a concise visual summary of the overall impacts of the Tea House in the locality. Starting with the numerical data, implementers sit down with the SAM Worksheet and make any adjustments needed in order to address imbalances made apparent among the three variables. The Sustainability Approximation Model is proving to be a very useful instrument
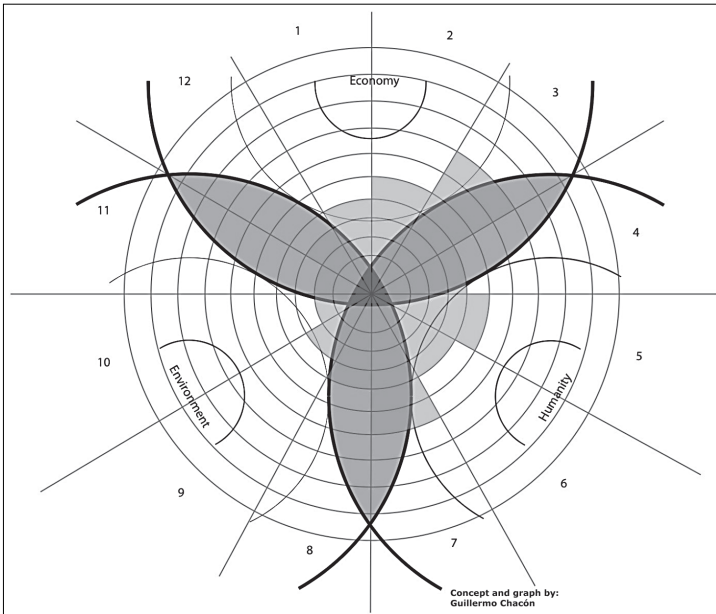
Figure 5: Computer-generated quantitative uses of the Sustainability Approximation Model—Hypothetical computer-generated summary of the impacts of the "English Tea House and Rose Garden" on the community, i.e. employment; the environment, i.e. land cleared, rubbish generated, effluent and run off; and the economy, i.e. revenue generated through consumption at the tea house, admission to the Rose Garden, visitor outlay for lodging in Fraser's Hill, etc.

for creating and sustaining an ongoing balance the human community, the natural environment, and human economic activities carried out in a given locality.

An alternative approach to academic research: choosing how we dance with the G/local milieu

As a conscious decision, research at the three centers—LL/CDT-University of Malaya, Malaysia and the CDBH-

Tecnológico de Monterrey University, Mexico—is not conducted as a mere academic exercise. Instead, it is oriented toward enhancing integrated holistic development in the immediate localities of the centers and much beyond. Concrete problems are identified, solutions are proposed and outcomes are evaluated in an ongoing and systematic manner. In this sense, all three centers are both academic and activist, as they engage with communities and authorities in an attempt to maintain a sustainable symbiosis between the need for economic sustenance, the natural environment, and human development and wellbeing. The fruits of the global age are utilized in as much as they are deemed useful for moving forward toward desired goals and objectives. The technologies, economic premises and cultural aspects of the dominant paradigm may be adapted to meet the needs of the local milieu, or they may simply not be incorporated, based on their utility or the lack thereof to the local circumstance. Work is ongoing and we are free to decide what, how and in what measure is to be applied locally and in our global interactions. Staff at the Living Lab, the Centre for Dialogue and Transformation, and the Center for Dialogue & Human Wellbeing believe that this continuing research and collaboration keeps us moving and adapting to the ever-changing and dynamic world. We'd like to work with like-minded people to bring about the emergence of a sustainable symbiosis, tailored to each locality, while engaging with the global community for the good of all.

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