Special Series:

The Challenge of Global Transformation—Humanity and the Environment (1)

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Starting with this issue, The Journal of Oriental Studies *will be presenting the two concluding installments of "The Challenge of Global Transformation—Humanity and the Environment," a dialogue on building a sustainable global society between German environmentalist Dr. Ernst Ulrich von Weizsäcker and Daisaku Ikeda, president of the Soka Gakkai International (SGI) and founder of the Institute of Oriental Philosophy (IOP).*

One of the foremost authorities on global environmental policy, Dr. Weizsäcker serves as co-president of the Club of Rome. Mr. Ikeda is also an honorary member of the acclaimed think tank and has published dialogues with its cofounder Aurelio Peccei and honorary president Ricardo Díez-Hochleitner.

Dr. Weizsäcker met Mr. Ikeda for the first time in Tokyo in March 2010, with the two agreeing to continue their discourse by correspondence since then. Their dialogue was serialized in the Japanese commentary monthly Ushio *and then in* The Journal of Oriental Studies *(Japanese Edition), from December 2011 through May 2014, over eight installments. Among the subjects they examine in this issue are the imperatives of achieving both social and environmental justice, ending "market fundamentalism," and devising alternatives to GDP in measuring wealth.*

Ikeda: Since 2011, our dialogue has been published in six installments in the magazine *Ushio*.

From the seventh installment onward, it will be published in English for the first time here in *The Journal of Oriental Studies*. Taking into consideration our discussions up to this point, I hope to explore with you, Dr. Weizsäcker, in even greater depth the key factors for building a sustainable global society.

The Journal of Oriental Studies celebrated its golden anniversary in 2012 as an academic publication on Eastern philosophy and studies that examines the manifold issues confronting our world today, from peace and human rights to the environment, bioethics, and interfaith dialogue, and searches for ways to resolve these challenges. My hope is that this dialogue will prove to be of some worth in providing fresh insights into and perspectives on humanity and the environment, which is the central theme of our discussions.

I must therefore ask for your continued counsel and cooperation as we move forward.

Weizsäcker: I very much look forward to the continuation of our dialogue. I fondly recall the enjoyable opportunity in March 2010 of being invited to participate in the Institute of Oriental Philosophy symposium on the theme "Global Environmental Problems and Ethics" and taking part in very satisfying and productive discussions with other scholars and researchers.

In my keynote speech on that occasion, I noted that while science and technology can do a lot to lead to a peaceful and sustainable world, there is an additional need to effect critical changes in economics and politics.

This is a subject that I would like to discuss further with you.

Justice for Society and the Environment

Ikeda: It is a very important point, and one that should not be restricted to policy changes in a single nation but that global society as a whole must engage with in earnest.

At this very moment, the United Nations (UN) is focusing on what kinds of agenda should be adopted following 2015, the endpoint of the UN's Millennium Development Goals (MDGs).

In May 2013, a high-level panel at the UN delivered a report on the goals to be achieved by 2030, suggesting five major aims: (1) putting an end to extreme poverty; (2) taking quick action with sustainable development as its primary objective; (3) transforming economies to create employment and inclusive growth; (4) creating peace and accountable governance; and (5) forging a new global partnership based on shared recognition of our mutual equality as human beings.[1]

In February, prior to the UN report, the European Union (EU) announced that the 2013 agenda following the MDGs and the Sustainable Development Goals (SDGs) initiated by the Rio+20 conference in June 2012 should be tackled together through a combined

approach, and called for such efforts as guaranteeing "a decent life for all" the inhabitants of the planet and managing the Earth's natural resources on a sustainable basis.

In the process of examining the contents of these new goals, I believe it is vital to not only discuss them in terms of public policy but also explore them from the broader perspective of human civilization.

As such, in my 2013 Peace Proposal, I urged the importance of remedying the pathology of civilization decried by the great German writer Johan Wolfgang von Goethe (1749–1832) in his masterwork *Faust,* where he depicts the human drive to employ any method to fulfill one's desires by the quickest means possible, with no regard for the suffering that may inflict upon others.[2]

It seems to me that this pathology of civilization underlies many of the threats facing our world today. We see it in nuclear weapons, whose use would "defend" the nation possessing them at the price of humanity's extinction; in a society where free market competition is glorified at the cost of widening economic disparities and the conscious neglect of its most vulnerable members; in the unabated pace of ecological destruction driven by the prioritization of economic growth; and in a global food crisis brought about by commodity speculation.

I am reminded of the conclusion in your work *Earth Politics,* in which you stressed the following with regard to these problems: "We would also need a new view of civilisation and culture in the Century of the Environment."[3]

My question for you, Dr. Weizsäcker, is: What are the key parameters of a new civilization we should aspire for in the 21st century—for example, what points in particular should we focus on in reconsidering the aims and roles of government and economics?

Weizsäcker: I think there are many different factors that need reconsideration, but I would suggest in particular the importance of establishing social justice and ecological justice.

President Ikeda, you mentioned the global food crisis as one of the threats facing our world today. Taking that as an example, one of the major causes for the crisis is the waste of food resources in the West and other affluent nations such as Japan.

There are those who argue the need for the genetic engineering of foods to increase production, making the assumption that increased consumption of food demands increased production. But I believe that very assumption is in fact erroneous. Genetic engineering of food may be effective in producing more food for the rich, but that is not the

answer to the larger food shortage problem.

If one's goal is to produce food for the hungry, a far more effective method is to give them land to grow their own food. The truth of this was already well established by Frances Moore Lappé, in her book, published in the 1970s, *Food First: Beyond the Myth of Scarcity*.

Ms. Lappé was focusing on the Sahel zone, a belt south of the Sahara Desert running east and west across northern Africa that was at the time suffering terrible food shortages. In her study, she discovered the shocking fact that the countries of the Sahel zone, which were undergoing extreme famine, were actually exporting food to the United States and Europe, and the amount of their exports exceeded the amount of food they were receiving through international hunger relief.

Why did this happen? Because the impoverished residents of the Sahel zone didn't own the land. The majority of the land was owned by foreign food growers, who had no interest in producing food to feed the local people but were focused solely on growing cash crops for export.

Though the situation is different today from that described by Ms. Lappé in the 1970s, the essence of the phenomena remains unchanged.

The food shortages in various parts of the world today are created by what is called land grabbing. In other words, foreign interests such as investors and banks buy up all the fertile land suitable for food production, and then use it to grow crops that benefit their markets, such as corn, to produce ethanol for automobile fuel. The developed nations are grabbing up the farmlands of the developing nations in the pursuit of profits.

This entire situation, in my opinion, is a product of market fundamentalism, which ranks profit above everything else and has no concern for social justice.

Ikeda: When considering the problem of food shortages, then, we should not focus solely on balancing supply with demand but instead reframe the question to ask why those who are in genuine need for food are not availed to it.

According to a study conducted in Japan, what is known as food loss —food which is edible but, because it is either left over or unsold, is discarded by households and businesses—amounts to 8 million tons annually.[4]

The total global amount of food aid given to countries with food shortages comes to some 4 million tons. Japan alone discards twice that amount of food. This is the situation you are referring to when you cite the waste of food.[5]

Although Japan is relatively advanced when it comes to the 3Rs of reducing waste, reusing finite resources, and recycling what we can, we need to remedy the present situation by making an active effort to reconsider our dietary practices and resolve this problem of food wastage.

The land grabbing you refer to is also intensifying with each passing year. According to one international non-governmental organization (NGO), foreign investors now own approximately 27 million hectares of farming land in Africa, with an estimated 10 percent of the arable land of Ethiopia and 15 percent of the arable land of Sierra Leone under foreign ownership.[6]

A similar situation is spreading in Asia and Central and South America, and some have raised the alarm that it is in danger of becoming a new form of colonialism.

Even if work to achieve the MDGs ameliorates the food shortage problem, these efforts will remain little more than a stopgap measure unless we devote attention and action to rectify this developing trend.

In my peace proposals, I have repeatedly emphasized that the effort to achieve the MDGs must not become preoccupied merely with meeting their cited objectives; instead, we should not forget that the highest priority should be assigned on restoring the well-being of suffering individuals. If we fixate solely on macro goals in the form of numerical targets and overlook the real-world plight of people, our priorities will have been fatally skewed.

I have also stressed that rather than looking upon threatened populations as passive recipients of aid and development assistance, it is even more paramount to focus on their empowerment, enabling them as active protagonists to resolve their own challenges and bring their boundless potential and strengths to fullest flower.

In that regard, I strongly agree with your view that the key is to provide land to those suffering from food shortages, so they can grow their own food.

In recent years the idea of food sovereignty—that the people of developing nations have the right to grow the crops they want on their own land, through their own efforts—is gaining momentum. Respect for this kind of “ownership” is, in my opinion, a crucial factor not only with regard to the problem of food shortages but also for achieving social justice in global society in general.

Bonds between Humanity and Nature

Weizsäcker: I agree. As a matter of fact, I was strongly influenced in adopting the viewpoint I have just expressed about the food shortage by the economist Ernst Friedrich Schumacher (1911–77). I used to know him personally, and he was a wonderful person.

In one of his lectures, after speaking on food issues, he asked his audience, "Do you know the TLC factor?"

"What chemical is TLC?" I asked him.

"It's not a chemical," he replied. "It stands for 'tender, loving, care.'"

He explained that when people owned their land, they managed to produce five times as much food per acre as industrial farmers.

The TLC factor that Dr. Schumacher was referring to did not register on the radars of industrial farmers, and it had not occurred to researchers in the agricultural sciences.

What Dr. Schumacher pointed out made me realize that the solution to the world's food problems has less to do with markets than self-motivation, less with employing more farmers than with fostering more self-employed farmers.

Ikeda: The TLC factor represents a key aspect of the problem, which I believe emerges from a strong bond between people and nature—in this case, the soil. In his renowned work *Small Is Beautiful: A Study of Economics as if People Mattered*, Dr. Schumacher explained his views on agriculture as follows:

> A wider view sees agriculture as having to fulfill at least three tasks:
>
> —to keep man in touch with living nature, of which he is and remains a highly vulnerable part;
>
> —to humanise and ennoble man's wider habitat; and
>
> —to bring forth the foodstuffs and other materials which are needed for a becoming life.
>
> I do not believe that a civilisation which recognises only the third of these tasks, and which pursues it with such ruthlessness and violence that the other two tasks are not merely neglected but systematically counteracted, has any chance of long-term survival.[7]

Rereading this now, one can take it as both a prediction and caveat issued by Dr. Schumacher that a phenomenon similar to landing grabbing would occur.

His reference to the "ruthlessness and violence" with which civilization pursues its goals also resonates with the "pathology of civilization" that I noted in the context of Goethe's *Faust* in my 2013 Peace Proposal. Without making a full-fledged attempt to remedy that pathology, I believe the way to creating a genuinely sustainable society may be unattainable.[8]

Dr. Schumacher warned that the cause of this pathology is "due to the fact that, as a society, we have no firm basis of belief in any meta-economic values, and when there is no such belief the economic calculus takes over."[9] What we need to do now is to reexamine what the proper relationship between human beings and nature should be and what we must not neglect, either by omission or commission, in society.

The Buddhist view of nature regards human beings and nature, human beings and the land, as being inseparable. As Nichiren (1222–82) writes: "The living beings and their environments are not two things, and one's self and the land one inhabits are not two things."[10]

In other words, all life, including human beings, exists in a relationship of mutual interdependence and support, the natural environment and living beings joined by deep and indivisible bonds.

"In the same way, life is shaped by its environment,"[11] Nichiren also writes, stressing that we human beings must never forget to have a deep spirit of gratitude for the blessings of nature and that our lives are supported by our relationships with all other living things.

Our ties to nature must be based on the realization and ensuing sense of responsibility that "[without the body, no shadow can exist, and] without life, no environment."[12] Or to borrow Dr. Schumacher's words and express this idea in contemporary terms, we must devote the utmost tenderness, love, and care for the environment, and by striving to protect nature and the ecosystem, lead a life in which our own humanity shines its brightest.

In that sense, I am in profound agreement with your emphasis on the need to establish social justice and ecological justice in the effort to create a sustainable global society.

The UN has set the period from 2005 to 2015 as the International Decade for Action, "Water for Life," and 2013 as the International Year for Water Cooperation.

I believe that social justice and ecological justice are also very important factors in considering the issue of water resources as well.

Maximizing Water Resources

Weizsäcker: Yes. I'm not a water expert, but I believe there are four major ways in which water shortages can be ameliorated.

The first is related to the cost of water in a country and the cost of water used in agriculture in that country. In chapter 4 of *Factor Five,* we explore this issue using a diagram.

The unbelievable fact is that in most countries, the cost of water used in agriculture is zero. With the exception of the Netherlands and a few other countries, most countries set the cost of agricultural water at zero or something very close to zero. Yet in spite of that, people everywhere complain about the shortage of water.

Australia and Israel use drip irrigation instead of flood irrigation. By using this water-saving method, they are able to produce at least three times more food per gallon (about 3.78 liters) of water. That's one important aspect.

One would of course still have to make sure that farmers would not be impoverished by having to pay the actual cost of the water they use. But if they are able to produce three times the food per gallon of water, they shouldn't be impoverished.

The second way to maximize water resources is to purify water that has been used. This is an inescapable duty for creating sustainable urban living environments.

Before reaching the North Sea, the water of the River Rhine travels through numerous cities in Switzerland, France, Germany, and the Netherlands and tends to be used and/or recycled about ten times on its journey, which is perhaps the reason that Germany does not suffer from a water shortage, even in the low-lying North Rhine-Westphalia region.

The cities of the North Rhine-Westphalia area receive Rhine water in a reasonably clean state. Actually, to the best of my knowledge, the water leaving the North Rhine-Westphalia region is in fact cleaner than when it arrived there.

Germany has amazing water purification technology—another important measure for dealing with the problem of water shortages.

Unfortunately, most countries of the world do not employ such technologies. It is important for them to do so as quickly as possible.

The third way to deal with water shortages is to increase water efficiency in the private sector.

In chapter 2 of *Factor Four,* we cited the example of a certain German paper manufacturer that, by the adoption of internal purification systems, managed to demonstrate a ten-fold increase in water pro-

ductivity in the paper-production process. This company was constantly recycling its water. It was motivated to do so by the high costs imposed on waste-water discharge. Large waste-water discharges would have been very expensive for the company, and to avoid those costs, the manufacturer stored all its water inside the factory, purifying and recycling it, which increased the company's profitability.

The same approach can be used in steel foundries and other industries. The efficient use of water in manufacturing is very important.

The fourth approach to dealing with water shortages is building more dams to provide more water, or to pump more water from underground. These are the two approaches that jump immediately to mind for most people when considering how to respond to water shortages, but pumping more water from underground sources depletes the water table and is a method that should be avoided from the perspective of sustainability.

Ikeda: All of the points you mention are important if we are to make the most of our precious and irreplaceable water sources and establish conditions for the sustainable use of natural resources.

Water shortages, like food shortages, threaten the very survival of many people around the world.

The United Nations Development Programme (UNDP) Human Development Report 2006 states: "Water, the stuff of life and a basic human right, is at the heart of a daily crisis faced by countless millions of the world's most vulnerable people—a crisis that threatens life and destroys livelihoods on a devastating scale."[13] It warns: "Like hunger, deprivation in access to water is a silent crisis experienced by the poor and tolerated by those with the resources, the technology and the political power to end it."[14]

Improving the situation concerning water use was included as one of the issues within the Millennium Development Goals Report 2012, which declares the goal of "halving the proportion of people who lack dependable access to improved sources of drinking water" was achieved ahead of the 2015 deadline. In the year 2015, however, more than 600 million people around the world will still be using unsafe water sources.[15]

Given this set of circumstances, in July 2010 the UN General Assembly adopted a measure declaring access to safe and clean drinking water as well as to sanitation a basic human right, and growing numbers of people around the world are insisting that water should be made a public or semi-public resource.

In February 2013, more than one million people in Europe signed a petition endorsing a public movement to have water declared not as a commodity but a public good, marking the possibility that it will become the first European Citizen's Initiative in the EU to garner the necessary support for adoption.

Speaking of "public goods," you called for its increased recognition in *Factor Five:*

> We welcome the emergence of a new, more balanced Zeitgeist. We do not want a return to the extreme counter model of the exaltation of the state and the denigration of the market. What our world needs is market efficiency and liberation from the ideology of market fundamentalism, together with a state that is committed to the public interest and is capable of long-term action.[16]

Germany is widely known for having adopted many national policies based on this concept of public goods from the period immediately following World War II. What factors do you see as underlying this?

Putting an End to "Market Fundamentalism"

Weizsäcker: To discuss this, it is necessary to look into the history of the social market economy in Germany.

This was adopted as a political strategy in the early years following World War II under the immense threat of the expansion of communism in Europe.

The former US general and later Secretary of State George C. Marshall (1880–1959) realized that in order to contain or to stop communism, the West had to adopt policies that offered generous support to the poor, to prevent them from being attracted by the promises of socialism.

Socialism addressed itself primarily to the poor and underprivileged, and there were many poor in Europe and worldwide at the time.

The market economy had the advantage of market efficiency, which also appealed to the poor. The Marshall Plan for reviving Europe was a remarkable symbol of American generosity. Having lost more than 100,000 soldiers in the fighting in Europe, instead of taking brutal revenge on its former enemies, the US gave them aid.

It was a brilliant move that was extremely well received by those who later came to be the majority force in the new German democracy, with close ties to the Catholic Church. Konrad Adenauer (1876–1967),

serving as chancellor of West Germany from 1949 to 1963, was the first political leader in this country who was not a Protestant.

With keen political insight, Adenauer realized the importance of overcoming the old factionalism among the conservatives and was able to rally his political allies to achieve that.

During the German Empire and the Weimar Republic, the catholic German Center Party (Deutsche Zentrumspartei) and the protestant German National People's Party (Deutschnationale Volkspartei), which both represented conservative thinking, were rivals that never really cooperated.

Adenauer, although very much a Catholic, felt that his party should not be the *Catholic* Union but the *Christian* Union (Christian Democratic Union). The Protestants were very happy with his political thinking.

One of the manifestations of his strategy was his foreign policy and his thoroughgoing support of the Marshall Plan. Another was his social welfare policies, based on Catholic tradition, which can be traced back to Biblical times.

Jesus, who demonstrated consistent concern for the poor, would be a socialist in modern terms. This longstanding tradition was reinvented, and it took the shape since the 19th century of what is called Catholic Social Teaching (Katholische Soziallehre).

This tradition, though never dominant among the Church hierarchy or clergy, had a strong political influence. In a sense you could say Adenauer, with his excellent political instincts, developed a social market economy rooted in the Catholic Social Teaching.

There were others aside from Adenauer who made important contributions to the idea of the social market economy. Perhaps the most important was Alfred Müller-Armack (1901–78), who was in a sense the father of the concept.

Essentially what I'm saying is, the idea of the social market economy was the product of a clever and instinctual opportunism of the time to confront socialism with an emphasis on social welfare, as opposed to classical conservative thinking.

Ikeda: You are saying that in addition to the international situation in which postwar West Germany found itself, the emphasis on social welfare rooted in religious traditions by Chancellor Adenauer and other German political figures played a major role in the adoption of national policy.

In April 1990, after the end of the Cold War and just prior to the

reunification of Germany, I had the opportunity to meet with Heinrich Barth, former state secretary of West Germany and co-founder of the Konrad Adenauer Foundation (Konrad-Adenauer-Stiftung).

On that occasion we discussed how Chancellor Adenauer, while still the mayor of Cologne, adopted various initiatives of great public benefit in the areas of education and the environment. He was instrumental in the reopening of the University of Cologne, which had been closed for more than a century, for example, while launching an initiative for the greening of the city in response to growing concerns over environmental pollution. In June 1991, after Germany's reunification, I met Dr. Barth again in Bonn, and he expressed high hopes for Richard von Weizsäcker, the first president of the Federal Republic of Germany.

Looking back, I recall that I first met with President Weizsäcker shortly after my second meeting with Dr. Barth.

With a steady, serious demeanor, President Weizsäcker said that we should be concerned not just with material prosperity, but with the humanity itself as well as its solidarity and harmonious coexistence—words which made a deep impression on me.

He then asked me about Japan and how it regarded materialism and the way which human beings should lead their lives.

I responded with my frank opinion that society in Japan is evolving at a very rapid pace. The changes are coming on so fiercely that the Japanese themselves sometimes get lost and are confused as to where they now stand. The majority of these changes, sadly enough, have been in the direction of an expanding materialism. Like so many others elsewhere in the world, their lives have become dominated by material pursuits that, in one sense, have encrusted the human spirit with encumbrances.

When choosing a job, I continued, many young people base their decision on such things as whether the job pays well, whether it is easy, and whether it offers long vacations. Young people have all but forgotten the spirit of working for the good of society, and a degenerate individualism has risen up in its place. To expect a tree to flourish when its deepest roots wither does not stand to reason. Thoughtful and conscientious people are deeply concerned about Japan's future. The struggle to achieve something worthy takes a lifetime, while destruction takes but an instant.

I concluded that we are battling to reverse this destructive trend in the hope of expanding the bounds of human spirituality, enabling it to surge throughout society like a mighty river.

When President Weizsäcker visited Japan in August 1995, on the 50th

anniversary of the end of World War II, he spoke before a large group of citizens at a public symposium. He described the Germans and Japanese as being industrious with an economic orientation, yet while both nations follow the principles of the free market economy, they have at times gone too far. Their orientation, for example, has forced people to compete against one another from an early age, reinforcing a materialistic worldview.

What we need to do, he said, is to learn to think and work together from an ecological perspective and tackle the manifold challenges in building a better future while maintaining our solidarity.[17]

Germany and Japan were once militaristic societies that invaded other countries while ruthlessly engaged in thought control and xenophobic persecutions of their own citizens. This led to ultranationalist absolutism, one of the lessons of the 20th century that we must never forget. Now in the 21st century, the market fundamentalism you mentioned earlier is in danger of becoming a new form of absolutism—a development to which we must put an end.

Weizsäcker: Yes, that's right.

Allowing national ideology to become an absolutism was a characteristic of communist states in the past. Such dictatorships led to corrupt regimes.

It is important to recognize that when ideology takes priority over everything else, it also negatively affects the environment.

When the state intervenes in the private lives and the thoughts of its citizens, it not only violates their human rights, I stress that it is also counterproductive to building a rich and strong society.

What we need is a liberal state, in the European sense. "Liberal" in this sense means tolerant and forgiving. It also means an awareness of long-term public goods, investment in and maintenance of infrastructure, and state support for all other aspects of society that would not prosper under a pure market regime.

For example, the market will never provide primary education and basic health care for the poor. I mentioned infrastructures. The markets won't build roads, provide sewage treatment, or law and order.

The market won't create the police force we need to protect the citizenry from criminal activity, or the public justice, or judicial and legal systems. The state needs to establish and maintain these systems and receive enough revenue to do so.

At the same time, markets need to be similarly tolerant of and amenable to such services the state provides. They cannot be allowed to

pursue maximum profit and ignore the adverse impact that the logic of the market, when left unchecked, has on people and societies

Market fundamentalism has the tendency to lead to two very unpleasant extremes, dictatorship and loss of freedom.

Alternative Index of Wealth to GDP

Ikeda: The global financial crisis that started in 2008, triggered by the US subprime loan debacle and the bankruptcy of Lehman Brothers, was an immense blow and cause of great turmoil to countries around the world.

Behind the collapse of trust in the financial system that provoked the crisis was the explosive expansion of the highly speculative market for derivative financial products, which far exceeded the real economy in scale, and when this market collapsed, the damage it caused threatened the very foundations of the real economy.

Though it cannot be denied that to a certain extent the pursuit of wealth has been a driving force for social progress, the lessons of the crisis, in which millions of people suddenly found themselves in a desperate predicament, are that we need to reexamine the real purpose of the economy as well as the true meaning of wealth.

In a dialogue I engaged with Hazel Henderson, the futurist once said:

> The Gross National Product (GNP) is a material measure. Beyond a certain level, it's like judging adults by a growth index. What we want from adults is not more physical growth but maturity and wisdom.[18]

I find this to be a very accessible way of explaining the issue. Just as we can't judge a person's true worth only by their height, we need to look at things from a multiplicity of perspectives to determine whether they are genuinely beneficial for the people in a given society.

With regard to this point, you observed: "Health, happiness and personal fulfillment are not of necessity closely linked to a growth in GNP or employment."[19] Instead, you urged that we need a more relevant measure of real wealth, which you refer to as Net Economic Welfare (NEW).

Weizsäcker: I believe that the term Net Economic Welfare comes from Herman Edward Daly, who used to be with the World Bank and is in fact also a member of the Club of Rome. In his writings, he described

the increasing discrepancy between the welfare of the populace and the Gross Domestic Product (GDP) of the nation.

Another report to the Club of Rome, *Taking Nature Into Account* by Wouter van Dieren, touches upon similar themes. These and other thinkers are part of a worldwide trend to seek alternative measures to the GDP. The EU in 2011, I believe, organized a conference in Brussels entitled "Beyond GDP." The German Bundestag has created a Study Commission on Growth, Well-being, and Quality of Life. One of the questions the commission pursues is new measures of well-being.

However, the only country to actually adopt a measure of welfare other than the GDP is Bhutan, with roughly 700,000 inhabitants. They have introduced what they call a Gross National Happiness (GNH) Index.

Actually, I have been asked to join a team led by Herman Daly's friend and colleague, Robert Costanza, who is presently working in Australia, to help globalize the GNH Index.

The team will look at what the GNH really means to the people of Bhutan and how much of that can be transferred to other economies. This is a significant effort, I believe.

Ikeda: Speaking of Bhutan, in the fall of 2011 the young king and queen of Bhutan visited the Tohoku area that had been struck by the March 2011 earthquake and tsunami, where they encouraged elementary school students and other residents of the area. It was a memorable gesture that remains fresh in the minds of many Japanese.

There is also growing interest in Japan in Bhutan's use of GNH as a measure of the welfare of its people. As you know, GNH is based on the four pillars of sustainable and equitable socioeconomic development, environmental conservation, the preservation and promotion of culture, and good governance. It is measured by surveying the populace on 72 specific indicators based on those four pillars.[20]

Among those indicators are some interesting questions. For example:

> "Do the members of your family care about each other?"
> "How much do you trust your neighbors?"
> "On an average how many days did you spend during the past 12 months doing voluntary activity on your own?"
> "Do you plant trees around your farm or houses?"
> "Rate the performance of the central government in reducing the gap between rich and poor."
> "To what extent do you trust media?"[21]

Herein lies the notion that, while economic growth and social development are vital to a country and her people, these factors must be evaluated in the context of harmonious relationships with the natural environment, traditional culture, family and friends, and the community.

Buddhism serves as the foundation of traditional Bhutanese culture, and the concept behind the GNH to find the proper balance between material and spiritual well-being reflects, I believe, the Buddhist teaching of the Middle Way that transcends polar extremes.

Considering the factors built into the GNH, one can see an underlying Buddhist spirit of mutual interdependence and support, as well as the philosophy of striving to create a community built on mutual respect.

Looking back in history, King Ashoka (r. c. 268–232 B.C.E.) of the Maurya Empire in ancient India governed his dominion with the teachings of Shakyamuni as his guide.

After experiencing terrible regret at the large numbers killed in his military assaults on other kingdoms, Ashoka underwent a profound change of heart and actively adopted various policies for the welfare of his people. He provided relief to the poor, established hospitals and parks, had wells dug and roads built, and also had trees planted and encouraged the cultivation of medicinal herbs. He instituted fair and egalitarian treatment under the law and protected freedom of religion. In the area of economics, he encouraged a life of restraint and frugality, one drawing satisfaction from modest means and resources.

All of these policies are based on such Buddhist principles as dependent origination, compassion, and the Middle Way. Ashoka extended these principles to protect animals and the rest of nature as well.

Ashoka firmly believed that the king (that is, political leaders) should rule by Dharma—the principle of a right life—and had the duty to promote the happiness of his subjects—the people.

The first and foremost duty of those engaged in government should be to build a society in which people can experience happiness, rather than seek to establish a nation's greatness by military or economic aggrandizement. This is a principle that is surely just as important now as it was in Ashoka's day, different as the two periods of history may be.

While questions remain whether GNH may be applied as presently constructed to nations other than Bhutan, it will be interesting to see what conclusions Robert Costanza and his team arrive at. At the very least, my hope is that the way will open to achieve genuine social progress by incorporating the GNH index or similar indices of human happiness and dignity.

Weizsäcker: I agree.

Aside from the GNH used in Bhutan, Herman Daly and Wouter van Dieren, whom I mentioned earlier, as well as Manfred Max-Neef, another member of the Club of Rome, have offered brilliant ideas on this subject.

Why, in spite of this, is no contemporary political leader (with the exception of Bhutan) willing to adopt any new measure of wealth?

My answer to that question is very clear and concrete. Employment and fiscal income are two politically very important parameters, and they are regarded by political leaders as the top priorities.

It is universally asserted that the economic troubles afflicting Greece at present can only be overcome with economic growth.

Unemployment has reached disastrous levels in southern Europe today. In such a situation, people do not hope for happiness, they hope for economic growth, and find their hope for the future in that. Generally, economic growth has high priority in situations of economic crisis.

The next question is: How can we harmonize happiness with stable public finance and steady employment? Unfortunately, those who have studied alternatives to GNP as a measure of welfare have not yet dealt with or considered this problem.

Importance of the Informal Economy

Ikeda: In the conclusion to *Earth Politics,* you speak of the need to move beyond discussions of economic policy to address these issues on both a deeper and more encompassing level from a civilizational perspective.

In that context, you say that while the idea of work has been reduced in today's world to wage-earning labor, there is a need to recognize the importance of such forms of self-motivated work *(Eigenarbeit)* as childcare and social activities:

> Finally, and above all, even now the formal economy based on employment would be totally helpless if the 'informal sector' did not still exist. Sleeping, eating, loving and bringing up children are not subordinate activities we could do without but the indispensable foundation of all human existence. Economic theory has a shocking tendency to repress this simple fact.[22]

You go on to say that "the formal and informal economy ought once

again to be on a par with each other,"[23] which would represent a major step toward a new model of wealth.

In that connection, I'd like to ask you your thoughts on the world situation today with regard to the informal economy.

Weizsäcker: My observation is that this informal economy is actually stronger in poor countries and in the US than it is in Germany.

The reasons for this in poor countries are simple. If people are impoverished, if they have very little money, the better survival strategy is to do some gardening and cooking of their own instead of waiting on money to buy things or services.

Yet, politicians of developing countries in general, and among those running the international agencies and organizations promoting development, see it as a goal to sever the attachment to the informal economy that citizens of poor countries have.

This assumption is made because, historically, overcoming the informal sector has been the road to prosperity, under the imperative of the division of labor, in Europe, Japan, and other countries.

The most extreme form of this has manifested itself as Taylorism, or scientific management; in less extreme form, it is the division of labor as articulated by Adam Smith (1723–90)—in other words, it is good for the baker to make more bread than he can consume, because in so doing he frees others from the need to bake bread, and they can turn their energies to other occupations, such as being barbers, farmers, and other professions.

The insight has been credited since the 18th century with bringing prosperity to many countries, and is likewise regarded as indispensable for placing developing countries on the path to economic growth.

This economic model, however, must be recognized as inherently antagonistic to the informal sector.

Since the informal sector of the economy has been regarded as being antithetical to genuine economic development, one cannot talk realistically about a revival of the informal sector without knowing why it was destroyed.

In the US, the situation is different from developing countries. There you have a very weak state. Therefore there is a substantial loss of public goods, which, as you will remember, markets never produce.

In this situation, where some people amass great wealth, their sense of personal responsibility leads them to do unpaid civil work for their community, church, and all kinds of other venues and causes, substituting for the public sector, which would shoulder those functions in

Germany or in Japan, where the public sector still works.

These two cases of the strength of the informal sector of the economy need to be distinguished. The developing countries' situation is a little bit more like Germany in the 18th century, and from the American situation where the state was in a very good situation in the days of Franklin D. Roosevelt (1882–1945), Abraham Lincoln (1809–65), or Thomas Jefferson (1743–1826). But after Jimmy Carter, with the advent of Ronald Reagan (1911–2004), the state was deliberately weakened; that was Reagan's credo.

Today, the US needs all those unpaid services, because the state can no longer provide them. Still, we believe what we wrote in *Earth Politics:* in order to reestablish prosperity outside the economic measurement of GNP, the informal sector is necessary.

Ikeda: The key to grasping the importance of the economy's informal sector, as I see it, is the concept of self-motivated work you spoke of earlier. It is utterly disassociated from any self-interest in which remuneration is not a consideration, the kind of labor you alone choose and evaluate. In addition to being "work that belongs to you, that you mostly shape yourself, and that may also shape you," it is also work that is "done for your family or for yourself, for your neighbors, and for future generations."[24]

While work for wages—paid labor—may alienate us from our humanity or demean our dignity and sense of personal worth, self-motivated work, though in most cases unpaid, is a source of self-worth and self-validation and instills a feeling of fulfillment from having helped our family members and others in our lives.

It seems to me that the initiative informing such self-motivated work is consonant with a life lived in accord with the Buddhist spirit of compassion.

The Buddhist concept of compassion contains two aspects: the desire to share joy with others and bring about their well-being and happiness *(maitrī)* and the desire to embrace the suffering of others as one's own and ameliorate their anguish *(karunā)*. *Maitrī,* moreover, derives from the word *mitra,* or friend.

And in describing the importance of compassion, Shakyamuni employed the simile of a mother's feelings—the very epitome of self-motivated work: "Just as a mother would protect her only child at the risk of her own life, even so, let him cultivate a boundless heart towards all beings."[25]

Nichiren also says, "'Joy' means that oneself and others together

experience joy"[26] as well as, "both oneself and others together will take joy in their possession of wisdom and compassion."[27] Thus, the joy that emerges from the innermost depths of our lives when we act, not merely for ourselves but for the sake of others, is the greatest of all joys.

I feel that this joy in life and the ties between human beings as they share one another's sufferings and travails is greatly diminished in society today.

In distinction to that trend, in *Factor Four* you cite providing "a snug harbour for children in their time of growing up and exploring the world"[28] as one important aspect of the informal sector. You underscore the need to reaffirm the significance of the informal sector as a place in which people know each other very well (which cannot be measured by market value) and shape their communal society with a shared commitment.

You go on to describe the informal sector as a safe haven that includes not only the family but our neighborhoods, schools, the local shops and stores of our towns, our educational and religious institutions, our recreational clubs, and all other social gatherings. I am struck by this description, for I feel it could also be applied to the Soka Gakkai International (SGI). As the Buddhist lay organization, the SGI is actively engaged in promoting strong, warm, and supportive human relations among individuals of all races and ethnic groups, ages, and professions in countries and communities around the world.

From that perspective as well, I believe self-motivated work not only elevates people's self-worth but also plays an increasingly crucial role in reinforcing human relationships. I understand your wife Christine von Weizsäcker is the one who developed this idea of self-motivated work.

Weizsäcker: Yes, this was my wife's term. She created the term *Eigenarbeit,* I believe, in 1968 or so, quite early in the discussion.

In the later 1970s, when we were living in Kassel, we became friends with Ivan Illich (1926–2002). Illich was fascinated by the term because his lifelong theme was the alienation of people by their professional imperatives.

He wrote a book called *Deschooling Society,* in which he argued that people don't only learn from schools, they learn by themselves in families, in rings of friendship. They also learn something at school, but schools do not have a monopoly on learning.

For him, *Eigenarbeit* was an exciting, emancipatory term of the late 1970s, but unfortunately it did not have the transformative effect he had hoped.

The trend of professionalization continues unabated. The main reason is that people want jobs, and classical jobs are disappearing, so new jobs are created by professionalizing functions which, in earlier times, were done inside the family. A case in point is pre-kindergarten daycare centers with professional nurses and teachers.

They did not exist when I was a three-year-old child, and nobody cared, but now it is regarded as essential.

Billions of dollars and euros are being spent in order to create jobs for men and women. It is always the imperative of creating jobs that holds back *Eigenarbeit*.

Professionalization and *Eigenarbeit* are antagonistic. In a sense, under today's employment conditions, professional daycare centers are a blessing for women, allowing them to work.

Reexamining Concept of Work

Ikeda: Illich's book *Shadow Work,* in which he discussed the many kinds of work that are indispensable to daily life but are performed without pay, such as housework and childcare, was published in 1981. He knew and became friends with you and your wife prior to that, which I find quite intriguing.

In an interview conducted later in his life, Illich reflected on those times and commented: "Nevertheless work was increasingly identified with *paid* work, and all other work was considered some kind of toil which could be identified through only one characteristic: that it was *not* paid, or not properly paid."[29]

In the same interview he further noted: "I said that in a commodity-intensive society the human labor put into a use value is split up, one part is unpaid, the other paid, and it's the unpaid part which creates the possibility of paying wages."[30]

I can't help but feel that this seemingly inexorable trend of contemporary society is narrowing and distorting the true meaning of human labor. It reveals that the spiritual nature of humanity is in fact mired in the process of devolving.

Dr. Schumacher, whom we mentioned earlier, is known for his keen observation of the root of the illness afflicting modern industrial society. In our effort to envision a sustainable economy based on respect for the worth and dignity of humanity, I think we need to heed once again the message that Schumacher stressed in *Small Is Beautiful:*

> If it cannot get beyond its vast abstractions, the national income,

> the rate of growth, capital/output ratio, input-output analysis, labour mobility, capital accumulation; if it cannot get beyond all this and make contact with the human realities of poverty, frustration, alienation, despair, breakdown, crime, escapism, stress, congestion, ugliness, and spiritual death, then let us scrap economics and start afresh.
>
> Are there not indeed enough 'signs of the times' to indicate that a new start is needed?[31]

Weizsäcker: The words of Dr. Schumacher that you have just cited are very similar to our analysis of the problem in *Factor Four.*

There we warned: "The time may have come to recognise what was lost with the erosion of the informal sector. . . . The modern ills of loneliness, unrest, vandalism, drug addiction and related crime may have much to do with the decline of the informal sector."[32]

The still prevailing belief among the political leadership in all societies in the world is the need to create employment. In Germany and many other nations, the idea that job creation is an issue of the highest priority has become the deeply entrenched political consensus.

This situation persists in spite of the many sacrifices it demands. It will take another 50 years, I fear, before the political establishment begins to awaken to the reality of how much is being sacrificed on the altar of job creation.

In chapter 11 of *Factor Five,* we do address this problem to a modest degree by offering a compromise. We suggested designing a society in which unemployment is overcome not by an unchecked economic growth but by sharing jobs.

This actually is an idea that my wife proposed in discussions with Illich in the 1970s. She said, "Why not give all people, from infants to 90-year olds, women and men alike, the same identical permit to work in quantitative increments?"

A little calculation will illustrate this idea. Let us say that in Germany, with 80 million people, there are 40 million jobs—half as many jobs as people. In reality there are fewer jobs, but we'll adopt this formula to simplify the math.

One job would be defined as 40 working hours per week and some holidays. Then, by definition, everybody's entitlement would be 20 hours per week, from infants to the elderly.

Infants don't work, of course. But this model incorporates a system in which every person is provided the right to buy or sell his or her work entitlement on the labor market. Parents can monetize their child's

entitlement to help out the family budget, for example. Conversely, children can do the same when caring for their elderly parents, exchanging the latter's entitlement of 40 hours of labor into cash. Another permutation of this is that a parent could halve his or her workload to 20 hours to care for an infant, while a child could do the same to care for his or her parent.

In such a society, there would be no lack of employment for anyone who wanted to work, no desperate unemployment. Everybody would have her or his entitlement and could use it.

This concept of job-sharing, to which we allude in chapter 11 of *Factor Five,* was inspired by *Travailler Deux Heures Par Jour* (To Work Two Hours Per Day), a book published in France in the 1970s.

Two hours a day is about 10 hours a week—only half 20 hours per week—but the authors calculated that 10 hours is sufficient for survival.

Of course this model of job-sharing seems completely utopian from the perspective of contemporary society. Our aim in presenting it was to stress the need to overcome the fear of unemployment that is threatening all other values, including the value of family, of freedom, as well as religious values. To change society, we strongly emphasized the need to triumph over the fear of unemployment.

Providing Purposeful Work for the Elderly

Ikeda: You raise some fascinating questions.

In connection with the issue of labor, I would like to discuss the *raison d'etre* of an individual in a graying society.

Given our rapidly aging population today, it is time to examine with even greater urgency what makes for a better, more fulfilling life. At the same time, society as a whole also needs to take steps to make it possible for the elderly to engage in purposeful work and remain active participants in the world around them.

I am reminded of something that Arnold J. Toynbee (1889–1975), the British historian with whom I engaged in a dialogue, told me. He said that even after the age of 80 he would tackle the daily challenges of his research based on his favorite motto—*Laboremus,* Latin for "Let us get to work."

Inspired by Dr. Toynbee's example, I also spend my days writing and encouraging our SGI members around the world.

Though you're in your 70s, Dr. Weizsäcker, you continue to be vigorous and in high spirits, with the world as your stage.

What kind of society do you think we should build to enable the

elderly to shine with a sense of purpose and self-worth, and lead fully satisfying lives?

Weizsäcker: The next important step in Germany and Japan is to encourage people to work longer. This means to create jobs and part-time jobs that are particularly suited for the elderly.

There are two different aspects to this issue. One is the mathematical problem of providing social security for the elderly.

Let's say that in Germany we stop working, on the average, at the age of 63. But demographers say that our life span is expanding by about one month per year. That means that pensions that we can draw will be diminished by one-twelfth every year, resulting in the impoverishment of the elderly. Mathematically speaking, it is clear that we simply have to work longer.

When a social security pension system for the elderly was first introduced in Germany, in the days of Otto von Bismarck (1815–98), the time span between entry into the pension system and death used to be about five years. Today it is something like 20 years, or four times as long.

One answer to this problem is represented by the question that you and Dr. Toynbee, as well as many others, raise: "Why should we stop working because we are old? As long as we have the capacity to work, why shouldn't we?"

The trade unions, however, are highly critical of this idea. According to them, the number of jobs or amount of work is a zero-sum game: the longer an individual works, the more unemployment that individual creates among the young. I think this is wrong, however. It is not a zero-sum game.

Actually, a little anecdote may illustrate what I'm saying. When I began working as the dean, the chief executive officer, of the Bren School of Environmental Science and Management at the University of California in Santa Barbara, I was 66.

I would ask my colleagues at the University of California why no one asked how old I was. Their answer was that it was discriminatory to ask such a question.

The reason no one could ask my age, they explained, is because it could be grounds for terminating my employment based on my age, and was therefore regarded as "ageist." But I asked whether I was taking away some younger American's job.

Their response to this was, "That is a typically German question. We do not think that way in America. According to our way of thinking, if

you do the job properly you will be creating new jobs for the ten young Americans a year."

And that is what in fact I did. During my tenure of three years there, the school gained some 20 million dollars in endowments and well-funded scientific projects. Based on interest rates, that amount can finance the employment of about thirty people.

In my present situation, I am actually paying more income taxes than I am receiving from my pensions. This means that in purely financial terms my present work is good for the state. I'm not a liability; I am an asset to the state.

The other aspect is that in addition to the division of labor by profession that presently exists, we need a division of labor based on age as well. This has yet to be developed.

With regard to the pension system, my answer is twofold: we need to provide gainful employment for the elderly so that added value is created to avoid the impoverishment of either the elderly or the young.

The young are being impoverished by excessive taxation, a substantial portion of it supporting the social security pension system and the non-working elderly. To lower taxes, we need to actively create jobs appropriate for the elderly, with the appropriate remuneration and more freedom in hours.

I'm very happy now that I don't have to leave my home at 8:00 and be at my office in the morning. I can get up when I want, and still I work more than most people do in their 40s. This freedom to create one's own schedule is a high value, and satisfaction is high. Doing things that I can do better than the young is also a good thing.

Ikeda: Your record of achievement is as remarkable as it is admirable. You have been active in your service as an educator, have made meaningful contributions to solving global environmental problems, and still shoulder numerous important responsibilities.

Your suggestions for our graying society are certainly noteworthy and thought provoking. I believe it is imperative for every society to create an environment in which the elderly can work with purpose and satisfaction and lead a life of enduring hope.

I believe there is no greater joy and fulfillment in life than to be able to continue to participate in society and contribute in some way to the happiness of others and the world, no matter how old one is.

Dr. Toynbee said: "We must all become participants, whatever our degree of ability, because man is a social animal. We cannot change that."[33]

Of course working is not the only means of social involvement. I have seen many individuals who, after retiring from their jobs and resolving to spend the rest of their lives with the same passion and commitment they had in their youth, strive for the betterment of their communities, societies, and the world in general.

When one aspires to lead a truly fulfilling life, I think the freedom to create one's own schedule that you mentioned is vital.

Having time to spare is not the same as freedom, and lacking spare time is not necessarily a restriction.

What matters is to have the will to better oneself. True freedom, I believe, shines through that unceasing process of self-development. In that sense, no life is happier than one in which people can spend their final years continuing to improve and elevate themselves and devote time to striving for a great and meaningful purpose.

Dr. Toynbee said that one remains young as long as one remains interested in what will happen in the future.[34]

I pledge to continue working with the utmost vigor with you, Dr. Weizsäcker, for the generations of young people who are to follow, making each and every day count to the fullest as we search for the surest path with which humanity may forge on into the future.

NOTES

[1] Cf. United Nations Environment Programme (UNEP), "High Level Panel Releases Recommendations for World's Next Development Agenda," ‹http://www.unep.org/newscentre/default.aspx?DocumentID=2716&ArticleID=9516› (August 7, 2013).

[2] Cf. Daisaku Ikeda, "2013 Peace Proposal," ‹http://www.daisakuikeda.org/assets/files/peaceproposal2013.pdf› (January 10, 2014).

[3] Ernst Ulrich von Weizsäcker, *Earth Politics* (London: Zed Books Ltd., 1994), p. 211.

[4] Cf. Ministry of Agriculture, Forestry and Fisheries, ‹http://www.maff.go.jp/j/shokusan/recycle/syoku_loss/pdf/0902shokurosu.pdf› (January 10, 2014).

[5] Ibid.

[6] Cf. Translated from Japanese. Katsumi Hirano, *Keizai tairiku afurika* (Economic Continent: Africa) (Tokyo: Chuokoron-Shinsha, Inc., 2013), pp. 140–41.

[7] Ernst Friedrich Schumacher, *Small Is Beautiful: A Study of Economics as if People Mattered* (London: Blond & Briggs Ltd., 1973), pp. 103–04.

[8] Cf. Daisaku Ikeda, "2013 Peace Proposal," ‹http://www.daisakuikeda.org/assets/files/peaceproposal2013.pdf› (March 26, 2014).

[9] Schumacher, *Small Is Beautiful,* p. 107.

[10] Nichiren, *The Writings of Nichiren Daishonin,* vol. II (Tokyo: Soka Gakkai, 2006), p. 842.

[11] Ibid., vol. I (Tokyo: Soka Gakkai, 1999), p. 644.

[12] Ibid.

[13] UNDP, "Beyond Scarcity: Power, Poverty and the Global Water Crisis," ‹http://hdr.

undp.org/en/media/HDR06-complete.pdf› (August 7, 2013).

[14] Ibid.

[15] Cf. UN, "The Millennium Development Goals Report 2012," ‹http://www.un.org/millenniumgoals/pdf/MDG%20Report%202012.pdf› (August 7, 2013).

[16] Translated from German. Ernst U. von Weizsäcker, Karlson Hargroves, and Michael Smith, *Faktor Fünf: Die Formel für nachhaltiges Wachstum* (Factor Five: The formula for sustainable growth) (Munich: Droemer, 2010), p. 334.

[17] Cf. Translated from Japanese. *Weizsäcker nihon koenroku, rekishini mewo tozasuna* (Richard von Weizsäcker's Lectures in Japan: We Must Not Shun the Lessons of History) (Tokyo: Iwanami Shoten, 1996), pp. 130–31.

[18] Hazel Henderson and Daisaku Ikeda, *Planetary Citizenship: Your Values, Beliefs and Actions Can Shape a Sustainable World* (California: Middleway Press, 2004), p. 156.

[19] Weizsäcker, *Earth Politics,* p. 198.

[20] Cf. The Centre for Bhutan Studies, "An extensive analysis of GNH Index," ‹http://www.grossnationalhappiness.com/wpcontent/uploads/2012/10/An%20Extensive%20Analysis%20of%20GNH%20Index.pdf › (August 7, 2013).

[21] Ibid.

[22] Weizsäcker, *Earth Politics,* p. 197.

[23] Ibid., p. 199.

[24] Ibid., p. 201.

[25] *The Sutta-Nipāta,* trans. H. Saddhatissa (London: Curzon Press, 1994), p. 16.

[26] *The Record of the Orally Transmitted Teachings* (Tokyo: Soka Gakkai, 2004), p. 146.

[27] Ibid.

[28] Ernst von Weizsäcker, Amory B Lovins and L Hunter Lovins, *Factor Four: Doubling Wealth, Halving Resource Use* (London: Earthscan, 1998), p. 295.

[29] David Cayley, *Ivan Illich in Conversation* (Toronto: Anansi, 1992), p. 155.

[30] Ibid., p. 157.

[31] Schumacher, *Small Is Beautiful,* p. 68.

[32] Weizsäcker, *Factor Four,* p. 295.

[33] Arnold Toynbee and Kei Wakaizumi, *Surviving the Future* (London: Oxford University Press, 1971), p. 89.

[34] Translated from Japanese. Arnold Toynbee, *Nihon no katsuro* (For Japan to Survive) (Tokyo: PHP Institute, Inc., 1974), p. 162.

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Environmental scientist. Presently co-president of the Club of Rome, co-chair of the UNEP International Resource Panel and a member of the European Academy of Sciences and Arts. Born in 1939 in Zürich, Switzerland. Weizsäcker has served as the president of the University of Kassel, the director at the UN Centre for Science and Technology for Development, the director of the Institute for European Environmental Policy, and the founding president of the Wuppertal Institute for Climate, Environment, and Energy. He was a member of the German Bundestag and also chaired the Bundestag Environment Committee. In addition, he is recognized for his co-written report to the Club of Rome, *Factor Four* (available in Japanese), which proposes steps to double wealth while halving resource use. He is a prolific writer whose works include *Earth Politics* and *Factor Five,* the Japanese editions of which have also been published. He was awarded the German Environment Prize of the German Federal Environment Foundation, the Commander's Cross of the Order of Merit of the Federal Republic of Germany, and many others.

Daisaku Ikeda
President of the Soka Gakkai International (SGI), a lay Buddhist organization with more than 12 million members worldwide, Ikeda was born in Tokyo in 1928. He has founded the Soka (value-creating) school system, running from kindergarten through graduate school at universities in Tokyo and California, U.S.A., an educational philosophy now practiced in schools around the world. He is also founder of various cultural and academic institutions, from the Min-On Concert Association and Tokyo Fuji Art Museum to the Toda Institute for Global Peace and Policy Research. He has offered environmental proposals on various occasions, the latest of which is a proposal at the UN Conference on Sustainable Development (Rio+20) in June 2012. Based on an abiding faith in dialogue, Ikeda has met with citizens, artists, thinkers, and world leaders, exchanging views on a diverse range of topics. Many of these meetings have led to the publication of dialogues, starting with *Choose Life* with the British historian Arnold Toynbee. He has received 350 academic honors (as of May 2014) from universities and other institutes worldwide and is an honorary member of the Club of Rome.