A psychological perspective on "human well-being": An international comparison of the well-being structure

by Juri Hori

Introduction

"Well-being" involves peoples' positive evaluations of their lives, such as positive emotions, engagement, satisfaction, and meaning (Diener *et al*., 2004; Oscar, 2011). According to the definition by the Millennium Ecosystem Assessment (MA), human well-being (HWB) has multiple constituents including security, basic material for a good life, health, good social relations and freedom of choice and action (Fig. 1).

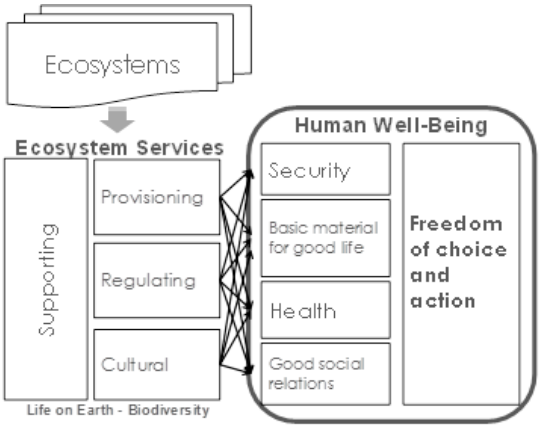

Fig. 1 Linkages between Ecosystem Services and Human Well-being (Ecosystems and human well-being: Synthesis report, 2005).

The PICES Section on *Human Dimensions of Marine Systems* (S-HD) is conducting a study on how HWB relates to marine ecosystem services in the North Pacific. This research is a part of a 5-year project on "*Marine Ecosystem Health and Human Well-Being*" (MarWeB) supported by the by the Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan.

How do we measure HWB?

Many social and psychological methodologies have contributed to a better understanding of one's sense of value or well-being. While economists focus mainly on economic utility or material wealth (Stevenson *et al*., 2008), psychologists have been concentrating more on cultural values in individualism (Diener *et al*., 1993; Hofstede, 2001; Diener *et al*., 2002).

Here, we present results from two approaches for assessing HWB. First, we measured people's levels of "satisfaction" using the MA's five components of HWB as dependent variables (see Fig. 1, right-hand panel) and analyzed the inter-relationships among them. Second, we developed the "Well-being CUBE", composed of 35 "human needs" determined by psychology, which can evaluate the detailed characteristics of people's desired choices and actions (Fig. 2).

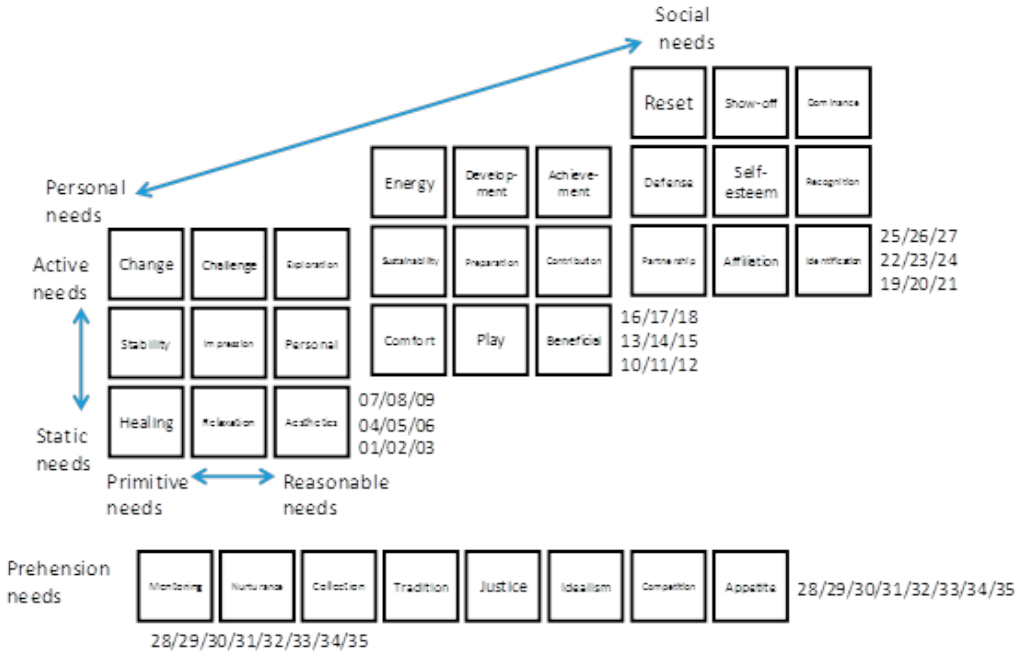

Fig. 2 Well-being CUBE composed of 35 human needs.

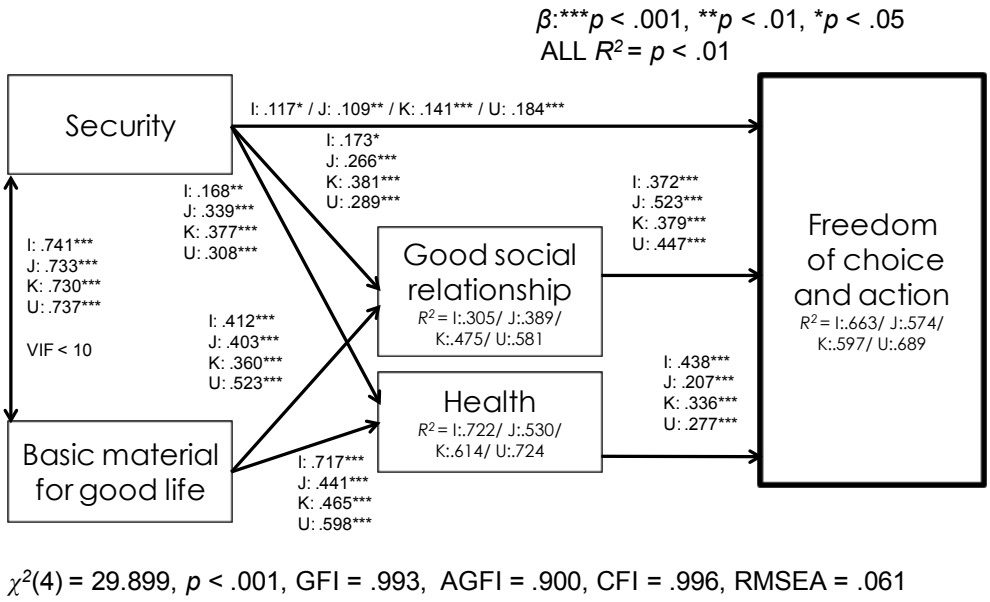

Fig. 3 Structural Equation Modeling (SEM) of the Millennium Ecosystem Assessment (MA) human well-being (HWB) (I = Indonesia, J = Japan, K = Korea, U = United States).

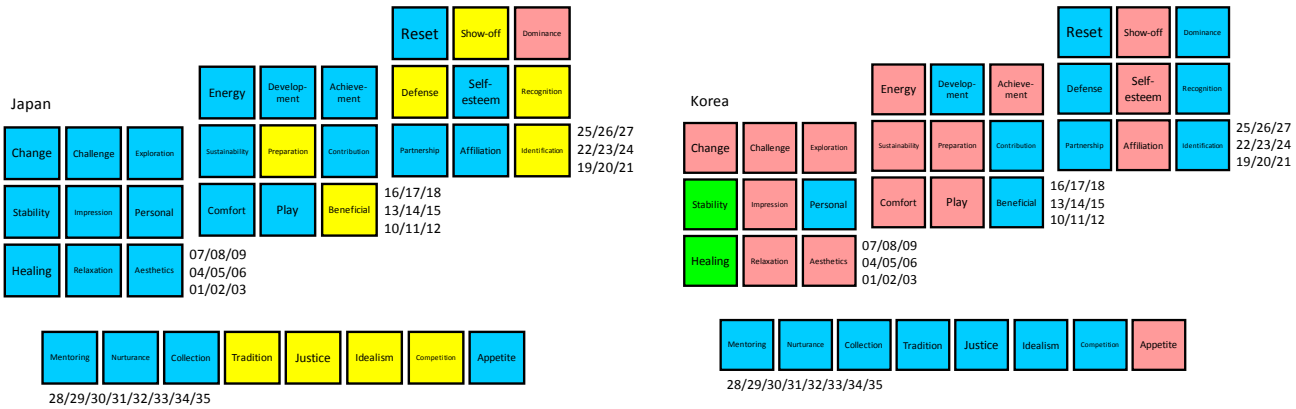

Fig. 4 Preliminary results of the human well-being (HWB) analysis in four countries.

Method

We measured the five components of the MA's HWB using 20 items. Each item was answered on a 1 to 5 scale ranging from "Very Dissatisfied" to "Very Satisfied". The Well-being CUBE (Fig. 2) was assessed using 35 items scored on a scale ranging from 1 to 5 ("Very Dissatisfied" to "Very Satisfied" and "No Expectation" to "High Expectation").

The first survey of 1000 people in Japan was conducted in 2012 to assess their relationships with the sea and to further develop a methodology. In 2013, the same questionnaire was used to survey 500 people in Korea and the United States. In 2014, we carried out a survey of 200 people in Indonesia.

The results from Structural Equation Modeling (SEM) analysis showed that each country has the same structure of the MA's HWB, but the primary paths to "freedom of choice and action" differ from country to country (Fig. 3). In the SEM, the structural model includes the relationships among the latent constructs. In Figure 3, one-headed arrows represent regression relationships, while the two-headed arrow represents correlational relations.

Preliminary results and next steps

The results from the Well-being CUBE analysis are summarized in Figure 4. *Red* shows high-expectation and satisfaction need, *blue* is low-expectation and satisfaction need, *yellow* is high-expectation and low-satisfaction need, and *green* is low-expectation and high-satisfaction need. Clear differences are evident among the four sampled countries.

Some initial findings include the fact that all countries surveyed have similar general concepts of HWB with regard to marine ecosystems. However, the specific understanding of how the marine ecosystem affects HWB differs among the countries and, therefore, what makes for a desirable relationship between people and the sea is different among countries. In order to grasp the big picture of HWB in the North Pacific, we are planning to collect data in the rest of the PICES member countries (Canada, China, and Russia) and in Guatemala within the lifespan of the MarWeB project.

References

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Juri Hori (jhori@rikkyo.ac.jp) is a psychologist at Department of Psychology of the Rikkyo University, Japan. Her major scientific interests are the effects of the sea on society and human well-being, including an international comparison of the well-being structure, and consensus building among the countries in the region. In PICES, Juri is a member of the Section on Human Dimensions of Marine Systems and the PICES project on "Marine ecosystem health and human well-being".