

# Higher Education towards Sustainable Society

## — Focus in Whiteheadian Rhythmic Method —

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For aiming at Sustainable Society, it is asked that what education should be. I maintain Whiteheadian Rhythmic Method, consisting of "the stage of romance, the stage of precision and the stage of generalization," as the method of higher education towards Sustainable Society. The purpose of this presentation is to clarify the intention of the Method that has been incorporated in the educational method of Aomori Public College.

Aomori Public College, established in 1993, incorporated the cycle of the Rhythmic Education as an education method at the Department of the Regional Frontier, newly established in 2006. The reason is that teachers had not entirely imparted knowledge to students imaginatively. "Imagination enables men to construct an intellectual vision of a new world, and it preserves the zest of life by the suggestion of satisfying purposes." Knowledge without accompanying imagination is not knowledge embodying behavior.

We emphasize "the first stage of romance" to foster the energy of imagination and weld together imagination and experience. And we expect that students get wise to the sense of responsibility and satisfying purposes through "the stage of romance." This is the aim of education for Sustainability by Rhythmic Process of Education.

### 1. Preface

The aim of this paper is to clarify how we should perform education in order to build the society aiming at sustainable development. For this aim, at start, I point out what sustainable society is, and why "sustainability" becomes the question in the present age. And I will clarify the problem of constructing a sustainable society.

Next, for the solution of the problem, I deal with Education Theory of Alfred. N. Whitehead and introduce the education method of Aomori Public College bringing in his "rhythmic education." And lastly, I show effects of "rhythmic education" in our College and point out problems of education for the

sustainability of society.

### 2. Sustainable Society: its Implication

In our Society, for an individual person each of nature, person, organization, community, and state is an environment and conversely an individual person is an environment for each other. Sustainable Society is the society where all beings are mutually related, and each being is living while being lived. As all beings are living while being lived, the secret of sustainable society is the durability of relationships of mutual dependence and the harmony of relationships of all beings.

In "Our Common Future" by World Commission of Environment and Development, United Nations, "Sustainability" is first used,

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1987; sustainable development implies "meeting the needs of the present without compromising the ability of future generations to meet their own needs." And the report proposed that we should recognize this in view of the global character of major environmental problems, the common interest of all countries to pursue policies aimed at sustainable and environmentally sound development.

As symbolized by the problems with global warming and energy issues, global environment suggests natural environment and we began to be aware of the finite nature of earth. Of course, I believe that the finiteness of environment includes not only natural environment but also social environment and human environment by which an individual person is lived.

In Japan, "sustainable society" is understood as having little impact on the environment and sustainable development of society can be built, and the "development" implies economic development (Article 4, The Basic Environment Law). It is primarily determined that the indicator of sustainable development is the economy. In Japan, the priority is the economy, and also to give consideration to the environment.

The basic idea of these understandings is that the relationship between subject (an individual person) and object (nature) is a one-sided relationship, namely, subject influences object. The idea is not aware that subject and object interplay with each other and all beings are living while being lived. Moreover, modern society is a society where people forget that an individual person is lived by the environment, speaking in extremes; an individual person is living while destroying the environment.

That is why sustainability of society is questioned.

### 3. A Problem to Obstruct Sustainability

#### 1) Question of the Knowledge

As for asking about "sustainability," I want to question "what knowledge should be." Sustainable Society is the society where each being is living while being lived, as I have stated, what sustainability is depends on whether we recognize relationships of mutual dependence and the harmony of relationships of all beings or not.

Concerning human beings living while being lived, Chester I. Barnard, affected by Whitehead, pictures it wonderfully. He treats a human being from two sides.

First of all, as a human "being lived," he means an individual" a single, unique, independent, isolated, whole thing, embodying innumerable forces and materials past and present which are physical, biological, and social factors<sup>1)</sup>." Though individual as wholeness is "independent and isolated," physical, biological, and social factors constituting an individual connotes that he is lived by organic concerns with his environment, namely, nature, species and society.

But, Barnard simultaneously points out another second side of a human being. In spite of being lived by these environments, an individual person exceeds it, uses selectivity and creates new self through activities. This implies "be living" especially, There is a dual meaning in "activities" which he pays attention to, that is to say, It forms the new subject and provokes other subjects as an object.

Barnard's outlook on human beings is clearly different from the usual outlook. According to usual understanding, an individual person is assumed a subject, anything other than the person is assumed an object, and the relationship between subject

and object is a one-sided relationship. According to Barnard, this outlook is only the second side of the outlook on human beings except on "activities" and the characteristic of modern science that is premised on the mechanical view of the world.

Whitehead thoroughly criticizes these outlooks of modern sciences. He points out matter or material based on such assumptions as "simple location" and calls it the "Fallacy of Misplaced Concreteness<sup>2)</sup>." Then how do we not violate the "Fallacy of Misplaced Concreteness?"

Lawrence J. Henderson, a prominent physiologist, who contributed immense efforts to invite Whitehead to Harvard University, established the procedure in a science, "Method of Hippocrates," that is, "first, intimate, habitual, intuitive familiarity with things; secondly, systematic knowledge of things; and thirdly, an effective way of thinking about things." The most important element of these he emphasized is the first element, namely, "intuitive familiarity with things<sup>3)</sup>."

His emphasis of "intuitive familiarity with things" is to attach importance to the application of theory not based upon the theory, but the real world, and avoid the "Fallacy of Misplaced Concreteness."

Barnard also says, when he wrote *The Functions of the Executive*, "still more do I regret the failure to convey the sense of organization, the dramatic and aesthetic feeling that surpasses the possibilities of exposition, which derives chiefly from the intimate habitual interested experience<sup>4)</sup>."

The serious consideration common to Henderson and Barnard is that for acquisition of the intellect from the real world, each person lets the body indulge in reality and grasps the relevance of things by emotion before analysis. And Whitehead

emphasizes this, too.

## 2) Relations of the Interplay of Subject with Object

The subject-object relation is the fundamental structural pattern of experience, but the problem is the relation. Whitehead takes the organic view of the world and treats experience as the subjective form of the interplay of subject with object<sup>5)</sup>.

The subject has a "concern" for the object. The "concern" at once places the object as a component in the experience of the subject, provoked by this object, with "an affective tone" of subject drawn from it and directed towards it, and through an activity as an occasion of experience a new self is born. Coincidentally, the subject perishes into the status of an object for other experience<sup>6)</sup>. This is the interplay of subject with object and it may be said that the subject and the object are inter-subjectivity with penetrating communion.

As experience is the subjective form of the interplay of subject with object, all knowledge grounded on experience is derived from, and verified by, direct intuitive observation of the subject<sup>7)</sup>. Direct intuitive observation is performed by all perception that is by the mediation of bodily sense-organs provoked by the object. Perceptual function "essentially exhibits percepta as *here, now, immediate, and discrete*." But, according to Whitehead, the percepta exhibited has been interpreted and the interpretation is not due to *sensa*. "The evidence on which these interpretations are based is entirely drawn from the vast background and foreground of non-sensuous perception (for example, our knowledge of our own immediate past<sup>8)</sup>)."

I understand that both Henderson's

"intuitive familiarity with things" and Barnard's "dramatic and aesthetic feeling" give attention to the perception including "an affective tone" or original "non-sensuous perception" Whitehead pointed out, and attach great importance to it for scientific research.

Therefore, I believe that questioning "what knowledge should be" in conjunction with "sustainability," is asking how the original perception, the interplay of subject with object, preceding consciousness underlie experience is the serious consideration. On the basis of his assertion of "what knowledge should be," Whitehead proposes "the rhythm of education."

#### **4. "Rhythmic Education" as the Method of Education**

Concerning education, Whitehead advocates that rhythmic education is correspondent to the process of the development of human mind. It consists of three stages, that is, "the stage of romance, the stage of precision, and the stage of generalization"<sup>9</sup>."

The stage of romance is the stage of first apprehension. Romantic emotion in the stage "is essentially the bare facts to the first realization of the import of their unexplored relationships"<sup>10</sup>." The stage of precision, based on self-discipline, "is the stage of growing into the apprehension of principles by the acquisition of a precise knowledge of details"<sup>11</sup>." And the stage of generalization "is a return to romanticism with added advantage of classified ideas and relevant technique"<sup>12</sup>."

The process of education is to repeat this cycle continuously. But he emphasizes the first stage of romance. Because first, romance is its awakening to the interest of objects and to the appreciation of their connections, "there can be no mental development without interest

and interest is the *sine qua non* for attention and apprehension"<sup>13</sup>." Whitehead calls romance as "the ferment"<sup>14</sup>" and it the soil for making knowledge one's own. Without romance, a stage of precision is barren and there is no door on the stage of generalization.

The second stage of the cycle, namely the stage of precision is prior to exactness of formulation and acquisition of facts systematically disciplined. But mere instruction of knowledge," education with inert ideas is not only useless: it is, above all things, harmful"<sup>15</sup>." Whatever one's aim in life, education should be useful. Therefore, Whitehead insists that "education is the acquisition of the art of the utilization of knowledge"<sup>16</sup>."

With the intention of the acquisition of art, the essence of the last stage of generalization "is the emergence from the comparative passivity of being trained into the active freedom of application"<sup>17</sup>". And this implies the revolution of romanticism.

For successful education there must always be certain freshness in knowledge. The freshness must either be new in itself or it must be invested with some novelty of application to the actual world"<sup>18</sup>". Knowledge does not keep any better than fish. As fish demands seawater, oxygen and nourishment, the knowledge needs nourishment in order to keep its freshness. Whitehead calls it "wisdom." "It (wisdom) concerns the handling of knowledge, its selection for the determination of relevant issues, its employment to add value to our immediate experience." The only avenue towards knowledge is by discipline in the acquirement of ordered fact, but the only avenue towards wisdom is by freedom in the presence of knowledge"<sup>19</sup>).

The development of human mind is realized through the interplay of object and subject, namely the cycle of the "rhythmic education";

freedom in "the stage of romance," discipline in "the stage of precision" and freedom in "the stage of generalization."

And I infused this "rhythmic education" into the educational method of Aomori Public College.

### 5. Method of Education in Aomori Public College: "Adventure Plan of Wisdom"

According to Whitehead, "the stage of romance" is 12 years at the beginning of life, and the education of the university is "the stage of generalization." Why did Aomori Public College bring "the stage of romance" in?

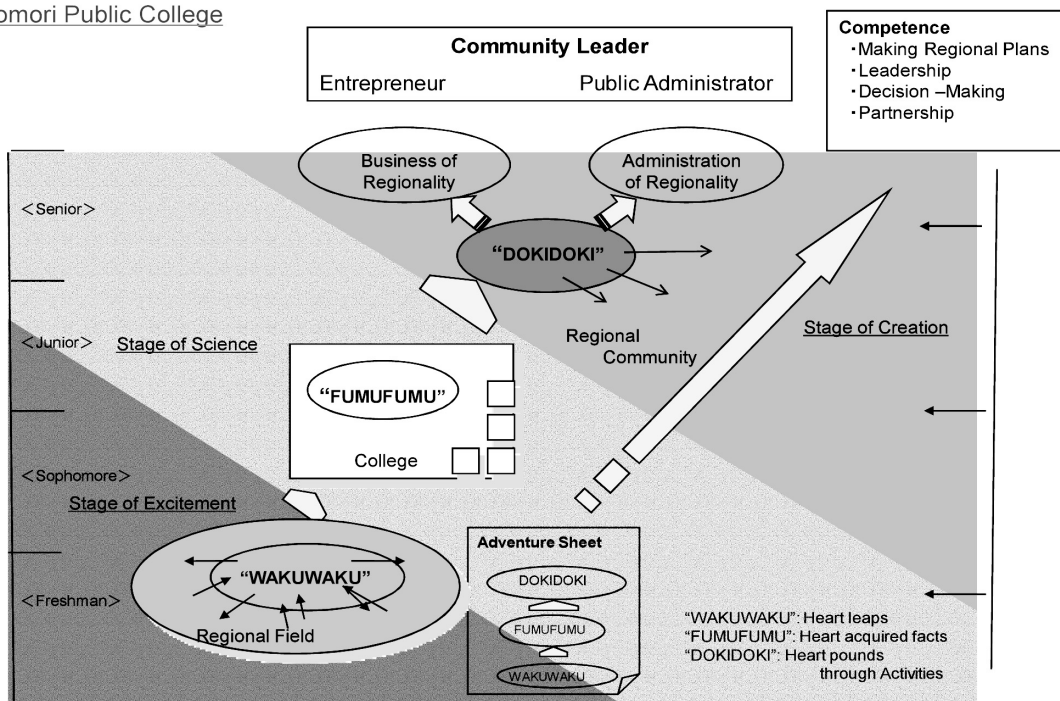
Whitehead points out that an inversion has entered upon the stage in those days and the senior at college has lost the things that correspond to words<sup>20</sup>. In Japan, today's students did not loose, but grew up in virtual reality

rather than putting bodies in the real world. Furthermore in the Japanese higher education system, teachers teach much knowledge fragmentarily, and let students cram and learn by heart. It represents the "evil path<sup>21</sup>." As a result, knowledge is not knowledge related to practical action, but knowledge for knowledge, and so, it cannot be said that education is useful in life.

Aomori Public College, where I work, was established in Aomori city located in northern Japan in 1993. And in 2006, Department of the Regional Frontier, newly established, introduced the cycle of the "rhythmic education" as an education method.

The ground in occasions of experience of Department of the Regional Frontier is mainly regional environment, and the aim of education is "to bring up a leader within the region with a place of creative exhibition, building

Aomori Public College



"Adventure Plan of Wisdom" in Dept. of the Regional Frontier

the relationships of mutual trust with people, and pioneering the new society with progressive spirit." Achieving this aim of education, we introduced "Adventure Plan" based on the cycle of the "rhythmic education" correspondent to the process of the development of student mind.

- ① **Stage of Excitement:** Delight is the opening of learning. The "Stage of Excitement" is that a student touches not a textbook, but the unknown world spreading out before his eyes, awakes emotions with which his heart leap through bodily experience. It is the stage of discovery through delight of the student. This stage is the process to look hard at the world of the circumference and ferment "curiosity" and "why."
- ② **Stage of Science:** For a question born in the "Stage of Excitement," the "Stage of Science" is that a student acquires precise knowledge in form answering "regionality," and understand the theory based on principles and concepts. Because the student learns, he poses a new question, and it causes new knowledge and he learns from it. This stage is the process to wear relevance of scattered knowledge in the world of his experience.
- ③ **Stage of Creation:** The "stage of creation" is that a student wears a wisdom to utilize knowledge and concepts which he learned about "regionality," and he resolutely challenges a concrete problem. This stage is the process not to be hammered a desk theory into his passive standpoint, but to utilize precise knowledge for his own problem positively, and develop subjectively<sup>22)</sup>.

It is the "Stage of Excitement" of the first

stage of the learning that we make much of most. It begins with the seminar called "inquiry of the self," soon after entrance into the college. The seminar has two methods, that is; firstly, to give out the goal only, for example, "you make a certain tour plan in a certain regional area, secondly, to instruct only to action, for example, "you attend on the manager," and nothing can point out a condition besides it. The new students jump in the state that they don't understand what is what and move under their judgment, and reliance is the only themselves.

After students were active, they write down what they felt, noticed, doubted in "adventure sheet," and hand it to the teacher every week. And the teacher writes comments and suggestions for it and returns it to students. Excitement to the object slowly occurs to students by the repetition of this process, and they are inspired to know it more.

After half a year, in the next seminar called "Inquiry of Oneself Knowledge," an individual student interprets own physical experience in the seminar "Inquiry of the Self." He arranges fact he acquired, understands the meaning, and finds out new doubts and problems from there. It mediates between the "Stage of Science." At the second year, the seminar called "Inquiry of Science" beginning; the students pass through the "Stage of Science," and will go to the "Stage of Creation."

## 6. At the End : Effects of the "Stage of Excitement"

The students who entered in 2006 are third year students now, and the "Stage of Creation" is going to contain the "Adventure Plan of Wisdom" from the "Stage of Science." All of the education is not over, but I want to show some effects of the "Adventure Plan" based on "rhythmic education," especially the

"Stage of Excitement" corresponding to the "Stage of Romance."

Though the "Stage of Excitement" was only short for half a year, the effects unlike the other Departments appeared. In the other Departments, namely, Department of Business Administration and Department of Economics, students learned theories at the start, but students in Department of the Regional Frontier soaking themselves in the real world, got possible to express themselves through the loaded experiences by free thoughts and free actions. And they acquired intentions to the environments and clues to themselves. It may be said that the aim of the "Stage of Excitement" based on the cycle of "rhythmic education" succeeded in three meanings.

Primarily the student revolved the novel experience in his mind, made various questions, put it up, demanded answers to the questions, and looked hard at the things which did occur as a result of the first adventure, like Rachel L. Carson's phrase "The Sense of Wonder"<sup>23</sup>." It implies that "the ferment", Whitehead called, was born of, the student based on "the subjective form" thought over at ease, and understood of knowledge through a free way.

Second, the students could contact environment (nature, society, human) directly because of regional community. Putting bodies in the same environment, students based on each "emotional tone" were responsive to the provokers of environment for different activities. The difference is arisen from relations of the interplay subject with object. Each response is "the subjective form" provoked by object, and at the same time, it is the sprouting of the responsibility and the glorification of the freedom to be responsive.

Lastly, I point out the meaning of responsibility sprouted in students. Responsibility is divided into three parts. First is responsibility

of doing, second is responsibility for things and third is responsibility to persons. Doing implies one's activity and the problem I want to emphasize that is responsibility to whom.

The base of responsibility is responsibility to oneself, but in Japanese organizations, responsibility to the boss tends to take first priority. For the person who is a subordinate in the organization giving priority to economic values, the primary responsibility is to meet the order of the boss whose priority is economic values.

However, the students were active freely without the restriction from others. They were provoked by the various values of the regional community, and own morality sprouted. The students have begun to learn various values from regional various environments besides economic values. And they acted based on their own morality in order to meet the value that came from environment.

In other words, Japanese society still over-emphasizes economic values, but it may be said that it is the sprouting of the responsibility to open up sustainable society in Department of Regional Frontier of Aomori Public College. Touching the unknown world, students awake emotions through the interplay of subject with object. Their emotional tones arise from communions in regional community. I believe that these students create a sustainable road and it is a gift of the education that this Department attached great importance to the "Stage of Romance" above all.

Of course, there are some problems for our "the Adventure Plan of Wisdom." First problem is the construction of the basic theory of the regional community. On this occasion, we must construct the knowledge that reflected relations of the interplay of the subject with the object. Understanding each of natural environment, social environment and human

environment in regional community being lived by other environments, and each environment living subjectively, and avoiding "Fallacy of Misplaced Concreteness," we, Aomori Public College Group will construct knowledge which carve ourselves out sustainability, that is, "Environmental Management."

Second is that the students acquire knowledge imaginatively. Wisdom is trained by imagination. Whitehead says that "Imagination enables men to construct an intellectual vision of a new world, and it preserves the zest of life by the suggestion of satisfying purposes<sup>24)</sup>." Knowledge without accompanying imagination is not knowledge embodying action. To this end, it may be said that teachers are required to work hard imaginatively.

I believe that sustainable society is inherited ahead of a generation through "rhythmic education," and sustainable development requests the possibility from education.

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### Notes

This paper is based on my presentation at the 7<sup>th</sup> International Whitehead Conference, Christ University, Bangalore, India, Jan.7, 2009.

- 1) Barnard, Chester I., *The Functions of the Executive*, Cambridge, Harvard University Press, 1938. P. 21.
- 2) Whitehead, Alfred N., *Science and the Modern World*, New York, The Free Press, 1925, 1967. pp. 48-51.
- 3) Henderson, Lawrence J., "Address before Assoc. Harvard Clubs, Indianapolis, May 15, 1937," Henderson Collection, in Baker Library Archives, Harvard Business School. pp. 1-2.
- 4) Barnard, Chester I., *op. cit.*, p. xiv.
- 5) Whitehead, Alfred N., *Adventures of Ideas*, London, Cambridge University Press, 1933, 1935. p. 241.
- 6) *Ibid.*, pp. 226-227.
- 7) *Ibid.*, p. 228.
- 8) *Ibid.*, pp. 231-232.
- 9) Whitehead, Alfred N., *The Aims of Education and Other Essays*, London, Ernest Benn Limited, 1932, 1959. p. 28.
- 10) *Ibid.*, p. 28.
- 11) *Ibid.*, p. 58.
- 12) *Ibid.*, p. 30.
- 13) *Ibid.*, p. 48.
- 14) *Ibid.*, p. 29.
- 15) Inert ideas are ideas that are merely received into the mind without being utilized, or tested, or thrown into fresh combinations. *Ibid.*, pp. 1-2.
- 16) *Ibid.*, p. 6.
- 17) *Ibid.*, p. 59.
- 18) *Ibid.*, p. 147.
- 19) *Ibid.*, pp. 46-47.
- 20) Whitehead, Alfred N., *Essays in Science and Philosophy*, New York, Greenwood Press, 1947, 1968. p. 217.
- 21) Whitehead, Alfred N., *The Aims of Education and Other Essays*, *op. cit.*, p. 7.
- 22) "Basic Framework of the Course of Study at 'C' Department," unpublished, April 7, 2004.
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