Psychology of the learning process
—Interrelation between inner psychological world and physical activities—

Ikuko FUJITA

Preface

“End-gaining behavior” is a concept introduced and discussed by John Dewey¹ (1859-1952), Matthias Alexander² (1869-1955), and Aldous Huxley³ (1894-1963). In his book Ends and Means⁴, A. Huxley (1937) states as follows:

‘All of our actions have purposes. Yet, we tend to rush to accomplish the aim without carefully examining the best means we should take to realize the goal. The ideal individual is the one who is non-attached. Accordingly, all education, including physical education, must ultimately aim at producing non-attachments.’

Similarly, in this thesis the concept of the End-gaining behavior is defined as people’s accustomed action that seeks the goal effect, or result without careful examinations of means or methods. The End-gaining behavior is a type of action that people take when they have a purpose or set a goal and try hard to achieve it. Such goals can be of any kind, from obtaining the driver’s license or winning a sport competition, and putting too much effort to fulfill this purpose. The thesis claims that such End-gaining behavior can be somewhat harmful and problematic because some blindly continue to find a goal and, although it is fulfilled, they go on to find another. Thus, this process never ends and even creates a vicious circle.

Yet, the End-gaining behavior, which is widely performed from our individual daily activities to organized collective activities, is hardly recognized as “harmful”. Our lives are considerably controlled by the End-gaining activities from simple actions like opening a jar, eating food, and pick up the fallen object, to doctors’ critical medical actions. This End-gaining activity, however, can often be a reason of people’s unhappiness. Thus, the thesis aims to describe the functions of End-gaining behavior and to illustrate the

¹ One of the representative American philosopher of the early 20th century, who constructed theoretical underpinning of the educational progressivism from Pragmatism viewpoint. His major publications include Democracy and Education (1916), Human Nature and Conduct (1921), and How we think (1910)
² An Australian theater actor who developed the Alexander Technique, whose major publications include, Mans Supreme Inheritance (1918), Constructive Conscious Control of the Individual (1923), and The Use of the Self (1932)
destructive results that such behaviors often bring.

When people are driven by the End-gaining behavior, their actions are usually too quick or tensed. This is often a byproduct of their attempts to reach the goal or to fulfill the purpose as soon as possible. Once this goal is achieved, many people are more eager to set another goal rather than carefully examining the process of achieving the prior goal. Such goal or purpose can be diverse, from finishing school-homework, brushing their teeth, going shopping, obtaining a national vocational qualification, to passing a university-entrance examination. These goals may be set by their personal decisions or by social pressures such as parents’ or school expectations.

The major obstacle in the End-gaining behavior is that, in executing a purpose, appropriateness of its means or method is hardly examined in detail. The End-gaining behavior does not go through rational thinking and is similar to the reflexive movement where information is input and output automatically and habitually. Thus, those who take such behaviors hardly pay attention to whether the method employed is truly appropriate or not. Some may think that the issue of the End-gaining behaviors is a byproduct of the pro-longed tension, rather than establishing an objective itself and putting efforts to it. But the thesis argues that this is not the case. The thesis will reveal that the End-gaining behavior itself is the biggest issue.

1. The Essence of learning

The End-gaining behavior can be an obstacle in the process of learning. For example, we have been learning and acquiring a lot of knowledge and skills since we were children. Yet some of them are acquired perfectly whereas the others are completely lost and forgotten. What makes this difference? Some may say, “What they acquired is what they studied hard and what they didn’t acquire is what they didn’t study hard enough”. But this is not always the case. When we try hard to learn something, simultaneously, we pick up the deleterious habit of physical strain as a byproduct of target achievement. In order to recall these knowledge, therefore, we have to experience the similar stress or in the similar situation with physical strains. This is the reason why some knowledge cannot be carried around forever or become so important to form the life-time identity of the person.

Because of this, although one can memorize many things, it stays only for a short period of time and cannot be recalled easily after a certain period once school examinations terminate, for example. Therefore, because they know relatively more, those who graduated from a university cannot be evaluated too highly automatically compared to those who did not. Those who can truly acquire solid knowledge or skills of a subject might be surprisingly fewer than one may imagine. Then, what is the “true” learning? What kind of knowledge can be truly learned and acquired?

When asked about the definition of learning, most of people would answer learning as studying academic subjects. However, in this thesis it will be clarified that understanding
the process of learning is much more crucial than academic studying itself. We can memorize telephone numbers, solve the crossword puzzle, or play chess, for example. We can study the medical science, politics, or economics and even be an expert of the field. Although we can certainly learn many things, not all of such knowledge is eternally essential in our lives. On the contrary, learning and understanding about the process of learning is the most important. It is possible to say that, whether they are capable of acquiring the proper process of learning or not, can even determine the success of their life.

The thesis continues to describe the important features in understanding the process of learning. One can hardly learn or acquire anything when he/she is suffering for worries or physical disorders. Thus, one has to attempt to control such disorders, to increase the sensibility, and to be able to capture one thing from multiple viewpoints. Generally, the more options we have, the more sophisticated and humanistic decisions we can make. For example, robots that can play music instruments\(^5\) are introduced recently but they can only play preprogrammed music. Such music is not usually valued as humanistic. In contrast, some of the outstanding violinists of the 20\(^{th}\) century, Michel Rabin\(^6\), David Fiodorovich Oistrakh\(^7\), Itzhak Perlman\(^8\), play the same flexurae and enthusiastic violin-fans can appreciate and enjoy their subtle differences in their music. Thus, human can recognize and take pleasure in such sophisticated difference, though they may say it is not subtle but obvious. Similarly, be it writing or singing, any kinds of artistic expression can be presented in various ways. The human sensibility should be able to appreciate such sophisticated differences and choose among them. Therefore, it is possible to say that meaningful humanistic decisions can only be made by differentiating the subtle differences using their sensibilities.

Hence, one has to work with the sensibility. To increase and train the sensibility, he/she needs to decrease mental efforts. The greater the stimuli are, the less one can feel, as it is difficult to sense the light of a lamp when there is sunshine. The mental efforts or the greater stimuli, here, is the End-gaining behaviors itself. The End-gaining behavior is what makes human sensitivity less effective and prevents them from making the truly “free” decisions. At the same time, this means that the decision made cannot be considered as a humanistic choice.

For this reason, one has to be more careful about how to learn, when they intend to learn something. When playing the music, how they play is what makes the difference rather than what they play. In the same way, a great story writer is the one who knows

---

\(^5\) Toyota Motor Corporation developed humanoid robots with artificial lips that can play the trumpets using the robot hands.

\(^6\) An American violinist, who was born into a musical family and endowed with tremendous talent, regarded even as second coming of Heifetz, but mentally and physically suffered and died in an accident at the age of 35.

\(^7\) David Fiodorovich Oistrakh (1908-1974); a Jewish violinist from Ukraine

\(^8\) Itzhak Perlman (1945- ); an Israeli-American violinist, conductor, and instructor, who performed at the Obama inauguration with Yo-Yo Ma
how to construct a novel and to illustrate the story. Also, impressive paintings are not those which describe solely extraordinary objects but those that illustrate emotions and sensibility of the painters themselves. Similarly, in the academic world, scholars who advance significant theories are often with superior sensibility. Therefore, the superior sensibility is often the key division between artistic productions and non-artistic productions.

As it is discussed previously, to be able to make the truly “free” decisions, one has to identify and distinguish subtle differences. To capture the subtle differences, one has to work with the sensibility, rather than increasing the stimuli. In other words, once the stimuli are decreased, the sensibility can be strengthened. For this reason, striving, suffering, bearing the pain, and nervousness can hardly lead to the productive learning. This is one of the reasons why many children barely remember anything taught at the school. Although students study hard for school examinations, they tend to forget them once the examination finishes. This is one of the major characteristics of the End-gaining behavior. At school, children are often surrounded by and have to deal with various interpersonal problems such as bullying. Many of them, however, cannot overcome or have to spend enormous energy on the problem. Mentally, those children are forced to put under considerable tension all the time at school because of the excessive relationship-stress. In such a condition, human sensitivity has no way to function properly, thus, the productive learning cannot take place. This is the current situation that many children are placed in the Japanese school education and one of the reasons for their poor understandings of the school subjects. Currently many of the students are often forced to study surrounded by the excessive tension, efforts, humiliation, or competitions. Under such circumstances, the productive learning that maximizes potential abilities of the human cannot be realized, which the thesis aims to draw attentions to. Current educational condition suppresses the sensibility and ends up destructing their intrinsic capability to improve themselves.

Hence, true acquisition of the knowledge or skills requires to uplift the sensibility and to decrease destructive mental effort. Then, how is it possible? Most of people are accustomed to make efforts. For example, many people have desire to receive recognition or to attain an exalted status. Thus, they try to compete with others and push themselves harder. Especially at school, they are thrown into a severe competition and those who cannot or are not willing to demonstrate their effort sufficiently are regarded as “incompetent”. Under this educational environment, deleterious habits are developed because of the adverse environment and one cannot fully exercise their potential capability. In the end, they start to evaluate themselves as “incompetent” even after the school graduation.

Many parents and teachers often think, “If one does not work hard enough, he/she will not be able to learn.” When children grow up with adults who have such way of thinking, they tend to swallow this mentality and develop such values. As a result, many of them also build up a habit of putting too much effort blindly even when it is not necessary. Such efforts hardly contribute to the true learning and force them to get accustomed with
enduring and wasting too much energy unproductively, rather harmfully, and inconveniently. Moreover, this gives unfavorable influences to their future and in their entire lives.

Therefore, in the process of learning, the End-gaining behavior can often be an enormous obstacle. What is crucial in learning is whether we are able to “digest” the meaning of the topic in our own way or not. Here, we have to consider elements that prevent us from appropriate digestion of the learning; which are mental health conditions and leaning methods.

2. Perfect Resting
In the modern society, many people are often physically and/or mentally pressured and constrained. Physical and mental disorders are becoming more and more prominent because of the prolonged or excessive tension caused by the stress at the workplace, school or various circumstances. To reduce such stress or tensed feelings, many of them take vacations or enjoy relaxation activities. Some may rely on alcohol or nicotine, while others go shopping or traveling as a mean of stress-management. They can certainly control physical or mental stress by taking those actions temporarily. In such a way, however, they will not be able to fully exercise their vitality or creativity because the vitality and imagination have a tendency to stimulate the tension. Those, who live in the contemporary society surrounded by various stresses, try to take the pressure off temporarily by taking various relaxation methods. Such repetition of the tension and relaxation will gradually become their daily routine and part of their “normal” life. Thus, majority of people spend most of their time with tension and strains, then only sometimes they lessen the physical and mental stress by resting.

On the other hand, some do enjoy and take full advantage of their vitality and creativity, though they live in the same stressful contemporary society. They do not have to avoid or get rid of the stress temporarily. But they often take the completely opposite approach; they actively enjoy the stress. In order to take the full advantage of the vitality and creativity, one has to be able to relax in the “Perfect Resting”5. Although every person is able to reach the state of “Perfect Resting” by taking certain trainings, those who are constantly strained and tensed may be afraid to do so. This is because, at the state of the “Perfect Resting”, one has to face, realize, and accept his/her own inner emotions, which can be very painful, difficult, and problematic for some people. Thus, many people tend to acquire the “tensed” life-style influenced by the End-gaining behaviors and often avoid the state of the “Perfect Resting”, which forces them to recognize the true portrait of themselves.

3. Dilemma of the Observational-Record Based Diagnosis in Medical Institutions
The greatest misfortune in the current medical care is that it is largely driven by the End-gaining behavior itself, consequently, often encourages and permits people to take

5 Known as “Balanced State of Resting” that is described in the Alexander in Technique (Refer to: Barlow, W. [1973] Alexander Principle)
such behaviors. In the following section, the thesis will describe how the End-gaining behaviors actually influence the medical procedures.

When a patient enters the medical consultation office, the doctor’s job is to “label” the patient by a name of a disease. The human body consists of various physiological phenomena. It is a complex “whole” that is made up of various bodily processes performed by numerous “parts”. The doctors attempt to determine which “part” of the body is malfunctioning since the technology made it possible to chose some of the “parts” and examine or measure them individually, though all of these constituents are formed to contribute to the overall anatomy and interrelate and depend one another. The doctor will gather detailed information about the observable fact that a bodily function of the patient is not performing sufficiently and give a diagnosis. This process of gathering information about the patient’s disease, then creating and putting a label on, is simply a typing method that has been habitually employed in the medical procedures, which is often called the observational-record based diagnosis. Thus, it is possible to say that a disease is merely a “label”. There is not a disease but a sick person. What the doctors call a “disease” is a various forms of physiological malfunctions that are evident among patients in a variety of conditions. Furthermore, there can never be the same symptomatic states. Simply because they can identify some similarities in the disease presentations, the general concept of the disease is constructed.

Let us look into the inconvenience that the observational-record based diagnosis can cause. For example, a company employee aged 42 had a stomachache. So he went to a hospital and had a detailed examination. As a result, an ulcer was found in his stomach and he was diagnosed as having the gastric ulceration. He had an operation to take the ulcer out and received some medical treatments. As he had no more stomachache and his symptoms recovered, he left the hospital and returned to work. Such diagnosis and medical treatments carried out in general are somewhat inappropriate because the diagnosis of the “gastric ulceration” and the pathological phenomenon named as the “gastric ulceration” are not always identical. When a patient is labeled as having the gastric ulceration, it does not only mean that the ulcer was found in the stomach but also reflects his/her personal, and social relationships as a human being on the whole. Currently, however, the term, “gastric ulceration”, is referred to in multiple situations with some confusion, to mean the pathological condition of the ulcer itself and to signify the overall social and individual relationships that the patient confronts. The doctor who examined him valued too heavily on the ulcer found in his stomach and was satisfied by eliminating it, which was the pathologic explanation of the disease. The fact that this patient, in the end, fell down for the ulcer once again and had to be hospitalized after four months suggests certain misjudgments in the diagnosis or in the treatments performed by the above-mentioned doctor and/or hospital. Although the doctor had eliminated the gastric ulceration, informed about the dietary cure, prescribed the medicine, and explained in detail about the gastric ulceration, it was somehow insufficient. These medical evaluations and treatments are widely carried out not only in this particular hospital. The critical issue in this case, however, is that pathological damage of the
ulceration was too much emphasized and the viewpoint of the patient as a human or an aggregation of various organic compositions was completely neglected.

When examining and giving diagnosis to a patient, there are two distinct approaches; the observational-record based diagnosis and the holistic prescriptive diagnosis. The former aims to concentrate on and describe the defective functional activities inside of the body, while the latter includes and focuses more on the easing and prevention of future diseases. The observational-record based diagnosis tends to judge and determine the disease and often consider the disease-causing agents as genetic or constitutional. Here, the patient is often regarded as a solid body, rather than a human being with the emotions and freewill.

In contrast, the holistic prescriptive diagnosis is based on the understanding that the human beings are with the individual autonomy and that they are able to judge and decide what they need for their future by themselves. The holistic prescriptive diagnosis focuses on the predicting and foreseeing future conditions rather than describing the current health conditions of the patient. Thus, the holistic prescriptive diagnosis aims to gather as much information as possible regarding the circumstances that the patient faces. Such information may be physical, immunological, bacteriological, cell-related, organic, and concerning the mental functions, or private and social actions. In the holistic prescriptive diagnosis, every kind of the information needs to be examined collectively. Nevertheless, as one can easily understand, giving the holistic prescriptive diagnosis at medical institutions is impractical and almost impossible. In reality, the patients themselves have to judge prescriptively to decrease the possibilities of future diseases and to improve their health conditions. However, when they are too closely constrained by the mind-set of the End-gaining behavior, their sensitivity become too exhausted and can hardly notice a sign of functional difficulties in their own body by themselves.

4. The “whole” and the “parts” - To the holistic approaches

It is crucial to understand that we, the living organism called humans, are not simply an aggregation of many organic “parts”. When we discuss the uniformity of the human organism, we must consider not only relationships between each organ and the whole body, but also between the physical body itself and mental activities. As the neck and shoulder sometimes have to substitute the functions of the back, the human emotion can supplement and alternate the task of the intelligence, and vice versa. Spending the energy for such a purpose in order to replace other functions is somewhat uneconomic and inappropriate for humans. This causes internal troubles and weakens the sense of uniformity as the human organism. As John Dewey states; ‘The medicine, politics, science, industry, and education are so obsessed with extra-ordinal, peculiar, and disconnected ideas, that the world seems increasingly insane.’ Also in the chapter three, the thesis pointed out that the contemporary medical institutions are more concentrated on examining each body “parts” rather than considering them as an interrelated “whole”.

Medical disciplines are more and more specialized and segmentalized. This creates a situation where a medical specialist understands perfectly about an organ, such as the

— 65 —
eyes, ears, heart, or liver, but none understands the overall condition of the patient as a whole. As it is described in the chapter three, the modern Western medicine is more concerned about directly eliminating a particular symptom than identifying primal and more fundamental cause of the disease condition. Currently, enormous medicines are developed to prevent and control diseases. Although these medicines are somewhat effective, we cannot underestimate the adverse effects caused by them. Also, they are not always effective in curing the diseases completely. These facts may reflect our powerlessness, that we are yet unable to fully identify fundamental causes of illness caused in our own body.

In the first chapter, the thesis pointed out that the current education system concentrates on the specific test results or competitions at the expense of original purpose of education to extract their latent potential. At the school, students are often heavily pressured to memorize incoherent and inconsequential information forcibly and voluminously. Regularly they are strictly supervised and questioned or criticized if their achievements are not satisfactory. As many of their school subjects are taught disjointedly, their knowledge hardly forms an overall unity or can be understood with interrelation between the multiple subjects. In such a situation, the school education becomes too disconnected with students' personal lives or experiences, thus, it is often viewed as irrelevant and unimportant, something of a different world. There is little connection between what they learn at school and how they are themselves. Physical education or gymnastics, for example, is often considered as irrelevant to the other school subjects by students. Learning about basic body movements is one of the important elements in the physical education and is closely correlated to the other subjects. Yet, many students can hardly imagine and acknowledge such a fact.

Such disconnected knowledge at school ultimately gives a considerable influence on the entire society and can be one of the cause of the situation that J. Dewwy described. J. Dewwy continues to state:

“When the organs through which any structure, be it physiological, mental, or social, are out of balance, when they are uncoordinated, specific and limited attempts at a cure only exercise the disordered mechanism. In “improving” one organic structure they produce a compensatory maladjustment somewhere else’.

In fact, many people are becoming more aware of such imbalance of the knowledge that we acquire at school. This implies that they consciously or subconsciously understand necessity of recognizing the totality of human beings. This can be related to the fact that the Oriental philosophy and psychotherapy increasingly attract people's attentions. We now have to attempt to view the totality, unity, and interrelation of objects or phenomena and avoid disconnecting them and concentrating on each “part” that forms the “whole”, which we have been educated and learned to do.

In conclusion, the human body and mentality cannot be disconnected and considered separately. Based on this understanding, one can easily understand that any kinds of diseases or disorders cannot be categorized and treated individually. We must restart or
modify our understandings once again that the human organism always functions aggregatively, whether it’s spiritual or physical.

5. The Wisdom of the body

Walter Bradford Cannon (1871-1945)⁰ emphasized the perfection of the human body and argued that it is created by the God as a superlative organism, which he called “the wisdom of the body”. According to Cannon, the human body is originally created to maintain the perfect balance by itself and, even when it is temporarily distracted by mental stress or physical disorders, it can automatically recover its natural state of perfect equilibrium. This theory of “the wisdom of the body”, however, is now regarded as inaccurate. Currently, there are many people who depend more on the medicaments to keep normal blood pressure or sugar level, to prevent the depression, and to control anxieties. These facts describe that the bodily wisdom is not working properly or actually invalid.

In his research, The Naked Ape¹¹, Desmond Morris¹², 1928- explored the functional difficulties that the upright standing posture causes to the human body. In the 19th century, many anatomists claimed that the erect posture is blessed and was created following the figure of the God. They believed that the standing posture itself is an evidence of human superiority to the other animals. They also imagined that by the first quarter of the 20th century, the spinal column would be able to line completely straight. In the second quarter of the 20th century, however, a new medical field of orthopedics appeared and a variety of functional problems caused by the erect posture were pointed out. Also, with the rise of orthopedics, people began to consider the bodily deformation as a result of maladaptation to the environment. The orthopedists claimed that, especially after the Industrial Revolution, many people were forced to take unnatural postures and due to the extremely unfair working conditions, they were suffering from diverse orthopedic difficulties. Later in the latter half of 20th century, a new discipline of the human engineering appeared and focused on the ways of adapting or fitting machines to the human body and vice versa. Then they started to redesign chairs, car seats, beds, and every other furniture and mechanism to make them more usable for humans. For instance, car pedals, gearshifts, and meter displays were reconstructed, modified, and made easier to use. Such modifications were aimed at reducing exhaustions or stresses brought by inappropriate postures or unnecessary body movements. Nonetheless, it is argued that such attempts of the human engineering were not so effective as expected because most of the people were not aware of how to use their body properly and effectively, thus, redesigning the chairs or other equipments did not make such a difference. What needed

¹⁰ An American physiologist and a doctor of Medical Science who founded the central-origin theory of emotion, the concept of homeostasis, and the peripheral-origin theory of hunger. His major publications include: The Mechanical Factors of Digestion (1911)

¹¹ In his book, The Naked Ape, D. Morris presents bold arguments, applying ethology and bionomics and contributed enormously to the popularization of the ethological thinking.

¹² An British zoologist known for his influential writings on animal behaviors and human ethology, whose major publications include: The Naked Ape (1967), Bodywatching (1985), Manwatching (1977), and The Human Animal (1994)
to be re-considered was the usage of the human body itself, rather than the tool designs.

As it is described, the human body is less than perfect and far from what W. B. Cannon imagined. We have to re-acknowledge this fact. Once some parts of our body become damaged, the other parts function to substitute it and often become overloaded and eventually injured. Also, our subconscious tends to choose the shortest way to fulfill the purpose, which is regularly accompanied by mental or physical tensions. These are the physical actions that we tend to take subconsciously and almost automatically, unless we carefully examine and exercise our own sensibilities. In conclusion, it is crucial to understand that the wisdom of the body cannot be trustworthy.

6. Disappearance of the division between purpose and means

The writer of the *Zen in der Kunst des Bogenschiessens* (1956), Eugen Herrigel (1884-1955) was a German university professor who studied the Zen and the Japanese archery in Japan. When learning the Japanese archery, his archery master taught that important elements in the archery were the way how to hold the archery, to pull the string, to release the arrow, as well as the posture, breathing, and the inner condition. His old master explained to train all of these skills before practicing to hit the mark. The master told him, "Stop thinking of the mark." Herrigel responded, "I cannot stop it." Then the master explained;

"You can learn what shall happen next from a bamboo leaf. A bamboo leaf hangs down under the weight of snow. Although the leaves are not touched or swayed, suddenly the snow falls down. The arrow also has to be released like this snow falling down from a bamboo leaf."

The ultimate goal for Herrigel was to reach the "presence of mind" of Zen Buddhism, which Daisetsu Suzuki claimed. According to Suzuki, "in this state, people start to think as if they are not thinking. They start to think like the rain falling from the sky, like the wave breaking to the shore, like the stars shining in the night sky. They are like the sprouting leaves in the spring wind. They themselves are the rain, sea, stars, and leaves. When people reach this state, they are the Zen artists of the life. They no longer need the canvas, painting brush, or paints like other painters. Nor do they need the arrows, mark, or other instruments like other archers. They have their arms, legs, brain, and the other body parts. Their Zen lives appear from using all of these means of expressions. Each of

13 In his book, The Myth of Zen in the Art of Archery, E. Herrigel considered the art of archery as a way of discovering superhumanity within oneself through intensive concentration and self-analyzed the freeness of the mind in Zen
11 A German philosopher who described Buddhism and Zen mentality as the origin of Japanese culture. His major publications include; Zen in der Kunst des Bogenschiessens (1948), The Method of Zen (edited by Alan Watts, 1960), and others
15 The Zen term of the "presence of the mind", Heijoshin in Japanese, was first introduced in the Zen masters' dialogues in the time of Sung dynasty of China. Although Heijoshin is often used to mean the calm and normal mind without excessive pressure, this is different from the Zen term of it.
16 A Japanese Buddhist scholar who wrote books about Zen in English and contributed to the spread of Japanese Zen culture to the world, whose major publications include; Zen Buddhism and Psychoanalysis (1960), Heart of the East (1998) and others.
their body parts are the brush itself and the whole universe becomes the canvas for them to demonstrate their lives."

Suzuki also describes the “presence of the mind” of Zen Buddhism as “sleeping when tired and eating when hungry.” This expresses the natural state of the mind or way of life to sleep and eat when one wants to do so. In another words, it can be understood that it is unnatural to think, “I have to sleep or eat” when one feels sleepy or hungry. There is another term in the Zen which symbolizes the genuineness or naturalness of the human. “Gannoubichoku”\(^\text{17}\), meaning that the human face has two eyes side to side and a nose at the center, expresses and emphasizes the original figure of the human. Thus, when the mind or spirit is not at the natural state, they cannot be free. In the unnatural conditions, they are constrained, which the thesis states as the excessive tension.

As we can see in the Herrigel’s attempts to release the arrow while being too concentrated on to the mark, many people tend to take the End-gaining behaviors when purposes of actions are clear. Herrigel also fell into the End-gaining behavior and generated unnecessary tension, which prevented him from taking the “free” actions. This also obstructed the exercise of the free mind and spirit that his master intended to point out. Majority of people tend to seek the result without carefully considering the by-product or by-effect of the End-gaining behaviors. As a result, they often end up suffering with unnecessary and excessive stress. The Zen mentality draws attention to this stress and discomfort caused when one thinks of obligations, “I have to do it”, and emphasizes on the liberation of the mind and body, moving as it wishes to. The lethargy and hunger are referred to as examples to describe this viewpoint but it is more practical if it is applied to the working or academic circumstances.

In the professional baseball, some players often say in the interview after the game, “I feel like I did an excellent work today”. This expression of “doing the work” implies the satisfaction and invigorating feeling of the player but at the same time, gives an impression of doing the work as one wants arbitrarily and freely. In fact, one can hardly work arbitrarily. On the contrary, the work almost always accompanies certain obligations or constrains, thus, often creates the excessive tension and limits the freeness of the mind. In 2004, a Japanese swimmer, Kosuke Kitajima\(^\text{18}\), won the gold medal in the Athens Olympics. After swimming the race, he told “I feel good, so good!” to the interviewer. This comment reflects not only his joy of winning the race and the gold medal, but also his enjoyment in swimming itself, that he gets pleasure from swimming. We can understand that he was at the state of perfect concord and harmony of the mind and the body.

In the Zen philosophy, such state of absorption is valued as the liberation of the mind and body, in which both mental and bodily activities are hardly burdened with extra

\(^{17}\) “Gannoubichoku” is a term emphasized by a Japanese Zen Buddhist, Dogen Zenji, which calls attention to accept everything as it is, not to embellish or cover up oneself but to live honestly.

\(^{18}\) A male Japanese swimmer who won the Olympics gold medals at Athens 2004 in the 100-meter breaststroke and at Beijing 2008 both in the 100 and 200-meter breaststroke.
tensions. Such liberation is often compared with the completely constrained condition, where neither of mind or body can exercise freely. In conclusion, the thesis intends to draw more attention to the fact that physical and mental liberation, where both thoughts and body are freed from excessive control of outer factors, can hardly be realized by itself. Moreover, the human mind can be easily trapped by needless stress when it is left alone. Admitting that the mind and body are intrinsically inseparable, the thesis separated and described them from the physical-body viewpoint for the purpose of the examination.

7. Psychoneuroimmunology

Psychoneuroimmunology\(^{19}\) consists of the Psychology, Neuropathology, and Immunology. Although the linkage between the body and the mind is a long-existing concept since the ancient times, no scientific research was seriously carried out until the beginning of 20\(^{th}\) century. The rise of Psychiatry in the early 20\(^{th}\) century started to deconstruct the boundary between the body and the mind. The term, psychosomatic disorders, also appeared to describe the physical abnormality caused by mental disorders.

Currently, the autonomic nervous system, the central nervous system, and the neuropeptide system are known as the networking systems to correlate the body and the mind. These systems help direct communications of the two. The brain fulfills an important role of converting thoughts, perspectives, and perceptions to the nerve impulse or biochemical information. Then the brain sends signals to the whole body through the nerve systems running throughout the body from the brain and by the biochemical substances circulating around the body.

The autonomic nervous system is made up by the sympathetic nerve and the parasympathetic nerve. The sympathetic nerve works to fasten the pulse or to increase the blood pressure. The parasympathetic nerve operates to calm down the bodily functions. When people are relaxing, the parasympathetic nerves work dominantly. The central nervous system runs all through the body from the brain. If the brain sends a message to move a muscle, the signal run through the central nervous system and move the muscle, communicated by the electric nerve impulse. The central nervous system is closely linked to the thymus, lung, and other lymph tissues and plays the key role in controlling the immune systems.

The neuropeptide system connects the body and the mind through a certain kind of chemical substances. Fifty to sixty naturally-formed chemical substances were discovered, represented by the beta-endorphin. These natural chemical substances were found to be actively functioning throughout the entire body and called “neuropeptide”. The researchers found that these naturally-formed chemical substances flow through the bloodstream, circulate the body, and cause physiological alterations by binding with the receptors located in the numerous parts of the body. They also found that hormonal and immune-system related cells are playing the most significant role in this process. Subsequent

\(^{19}\) An interdisciplinary study of psychoneurotic medicine which aims to examine the interaction among the brain, behavior, and immune system of the human body.
Psychology of the learning process

studies also revealed that the neuropeptide is produced in the brain cells, hormonal cells, and other cells including immune cells. Thus, this unveils that not only the brain can communicate the body by stimulating the immune system or hormonal system through the neuropeptide, but also the body itself can activate the brain cells by producing and communicating through the same chemical substances.

The researchers also found out that the chemical transmitters produced in the brain can increase or decrease, depending on the person's mental conditions. Mental activities such as thoughts, emotions, stress, powerlessness, the depression, or the anger can give significant influences on the production of the chemical transmitters. Similarly, emotions opposite to these, such as feeling of trust, joy, or peacefulness can affect the production of the neuropeptides. These facts suggest that the human can self-control the biochemical or physiological functions of the body and mind through attitudes, behaviors, or other various activities. It also suggests that, if the attitudes or behaviors of a person can give influence on another person mentally, the influential person can also affect or even control the physiology of the other.

In Conclusion

According to the Maslow\(^{20}\) and his hierarchy of needs\(^{21}\), the physiological needs are placed at the very bottom and the self-actualization needs at the top. This need of self-actualization is the realization of the spirituality. V. E. Frankl\(^{22}\), for instance, claims that "People live seeking for the meanings". In other words, humans feel somewhat empty in a meaningless situation. According to his theory, the first phase to reveal the meanings is the "experimental value" such as love. The second phase is called "creation value", like a sense of mission that soldiers show when they leave for the war to protect their own land or believing the war to be for the sake of the God. The third phase to follow is the "attitude value" to be able to decide what attitude to exhibit no matter what circumstances they are in. This third value can be exemplified by the standpoints of Sokrates\(^{23}\) or Galileo Galilei\(^{24}\). Therefore, the ideal or goal that indicates "what to do in the

\(^{20}\) An American psychologist who is considered to be the founder of humanistic psychology. His psychological studies were focused mainly on the mental health and in between the mental analysis for the psychopathology and the behaviorist psychology. His research reached as the field of education, business economics, and the nursing science. He claimed in his book, Motivation and Personality (1954), that the real theme of the psychology is to scientifically examine how and to what extent it is possible to maximize the human potential while maintaining the mental health. His major publications include; Motivation and Personality (1954), Eupsychian Management (1965), Toward a Psychology of Being (1968), and others.

\(^{21}\) A theory which hypothesize the human nature as always seeking for self-realization and classifies human needs in five levels, also known as Maslow's hierarchy of needs.

\(^{22}\) An Austrian psychiatrist and a psychologyst, one of those who take the existentialism standpoint, following Freud or Adler. Those who take similar stands with Frankl are in the Vienna City Hospital Neurology also known as the Third Vienna School. His major publications include: Pathologie Des Zeitgeistes (1955), Das Menschenbild Der Seel Enheilkunde (1959).

\(^{23}\) A classical Greek philosopher.

\(^{24}\) An Italian physicist, mathematician, astronomer, and philosopher, who is considered to be one of the most important writers of the Scientific Revolution along with Copernicus, Keper, and Newton. His major publications include: Sidereal Messenger (1610), Letters on Sunspots (1613), Dialogue Concerning the Two Chief World Systems (1632), Discourses and Mathematical Demonstration Relating to Two New Sciences (1638) and others.
life” is very important for a person and, without this, many people feel empty and pointless. Nevertheless, this is not easy. Even the longest life will only last a little more than one hundred years, just a moment if viewed by the cosmic perspective. Whatever is done in such a short period of time, if one logically questions, cannot have a significant meaning. Thus, it becomes more and more difficult to find and to resonate a meaning in life. One can only possess or come within the reach of the “will to the meanings”\(^2\) that V. E. Frankl claims, by believing in the value of life that the life is worthwhile to actively involved in and by optimistically trust in oneself that he or she is capable of understanding and coping with the incidents that occur in his or her life. If people try to attain such an attitude, they cannot explain or understand the meanings of the human existence, only by the conceptions of the finite world. They cannot ignore the spiritual spheres.

Although the word “spirituality” is understood and defined in various forms, here it will be defined as a high-level cognitive ability, with which one can feel and understand the trans-logic sensation that goes beyond the reason and rationality of the current reality of society. Also the person who possesses such ability and can understand the meaning of love and mercy will be defined as expressing the higher spirituality. When people reach this level of higher spirituality, they are believed to be in the “clear” or favorable condition both psychologically and cognitively.

The human conscious can be roughly divided into the ego, the sense of self, and the spirit, the eternal self, and those with higher spirituality and self-actualization behave not by the ego but by measuring with the scale of the spirit. Once the spirituality is developed, one can always stay calm and be more responsive to the outer stimuli or information. He or she can be more self-affirmative, less dependent on opinions of the others and never be worried about what others might think to decide what actions to take. To increase the level of spirituality, it is often more important to explore the inner world than discovering the outer world. One has to try to listen to the distant voice that comes deep within inner-self through mental practices like meditation. These can lead to the state of trans-consciousness and would guide to the answer of the questions about who and what we really are.

In the ordinal social consensus, inter-personal and social relations are regarded as ego-and-ego relationships and various laws and social systems are based on such understandings. However, if the number of people with higher spirituality is increased, there would be more experiences that associate and link the spirit of a person with that of the other, thus, creating the synchronicity between human relationships.

Although the spirituality exists beyond the mind and physical body, it still lies within the two. If the spirituality is kept high, one can maintain the peaceful mind that no outer factors can interfere and most of the mental problems will be cleared out. Moreover, this will not only stay within in the level of self-satisfaction but would contribute to increase the virtue and goodness in the entire society.

\(^2\) Frankl argued that the human nature cannot resist seeking for the meaning of life and described the true value of it.
References
Alexander, F. M. [1910] Man’s Supreme Inheritance. Dutton
Alexander, F. M. [1923] Constructive Conscious Control of the Individual. Methuen
Alexander, F. M. [1932] The Use of the Self, Dutton
Cannon, W.B. [1939] Wisdom of the body. 原著: 人体の教訓
Frankl, V. E. [1959] Das Menschenbild der Seelenheilkunde. Hippokrates-Verlag
小林（訳）[1961] 精神医学の人間像
Frankl, V. E. [1972] Der Wille zum Sinn. Verlag Hans Huber
Huxley, A. [1937] Ends and Means. Chatto & Windus 菊池亜(訳) [1959]『目的と手段』南雲堂
Huxley, A. [1941] 'End-gaining and Means Whereby.' The Saturday Review of Literature
Kato, M.(ed) [1972] 『現代人の病理：文化の臨床社会心理学』誠信書房
日本デューイ学会編 [1969] 『デューイ研究』玉川大学出版部
Pertu, E.(ed) [2008] Praxisbuch Gynaekologische Onkologie. Springer
Selye, H. 杉崎三郎（監訳）[1974] 『現代生活とストレス』法政大学出版局
Sherman, R.(ed) [1994] Enlarging the Therapeutic Circle. Bruner/Mazel
Psychology of the learning process

『学習プロセスの心理学一心と身体の相互関係の考察一』

藤田 依久子

【要旨】

本稿では、目的遂行行動をハクスレー等にならって、手段や方法を考えることなしに目的や結果を求めようとする人々の習慣的な行動のことを指すこととする。

目的遂行行動は、日常生活の些細な行動から、人々が組織的に集団で行う行動に至るまで、自らが行っている手段や方法が、極めて有害な副産物を生み出しているということを意識することなく、多くの人々によって広く行われている。例えば、瓶のキャップを開ける、食べ物を飲み込む、物を拾う等の日常的行動から、医師による医療行為といった人間の生死に関わる重大な行動に至るまで目的遂行行動がこの世界を支配している。人々の行動を広く支配方的な目的遂行行動が、人々を不幸にしているという現実があり、これに対して、注意を喚起することを目的として本稿は執筆されたものである。

目標達成の為、多くの人々が取っているこの目的遂行行動の問題点は、その目的を遂行するための手段や方法の善し悪しが問われないことにある。目的遂行行動とは、理性的な脳の働きを避けて通る一種の反射的な行動であり、目的遂行を行う者は、その為に取られる手段が適切な方法であるのか、ということに対して意識が払われることがない。

多くの親や先生たちは、「努力しなければ、何かを学び何とかができるようになることはない」と考えている。周りの人たちはこうした考え方を持った人が多いと、そのような価値観が子供の幼少期に形成されてしまう。その結果、我々は必要ない時でも努力をするという習慣を身に付けてしまうのである。これは、学習を向上させることのない努力であり、この種の努力をすることによって、人間は我慢をし、エネルギーを浪費するという悪習慣を身に付けることになる。この為に受けられる苦痛、不都合、苦労は、その他人間の将来に対し、後々でも悪影響を与えることとなる。

教育の世界では、生徒の潜在能力を伸ばすという本来の意味での学習を犠牲にして、試験や試合の結果等の細々とした結果を強調し過ぎている。現在、生徒たちは、パラパラで、とりとめないような情報を強制的に大量にインプットされている。学校の中では、生徒たちは、厳しく紛れられて、成果を上げられないと厳しくとめられる。そうした中で、生徒たちは、それぞれの科目を何の関連性もないトピックとして教えられている為、知識が生徒たちの中で統一性を持ったものとして形成されていくことがない。

J.デューイは、次のように指摘した。

「組織というものにおいては、生理的なものであろうと、精神的、社会的なものであろうと、構造上のバランスが崩れ、調整作用が悪い時、治す為の特定な限度的努力が不調な部分に対してのみ行われる。一つの構成的部門を『改善』することによって、人は別のところで補償的な不調を引き起こすのである。」