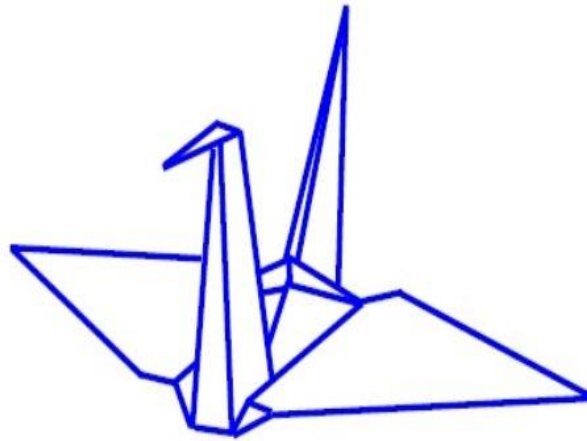


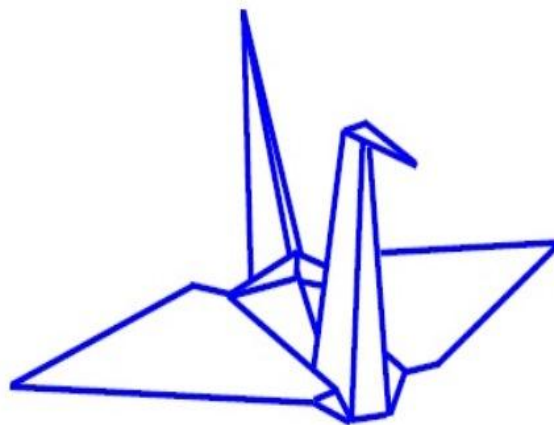
Bushido AI Programming

**REVIVING THE CREATIVITY
OF HUMAN BEINGS 21.0
FOR GLOBAL SUSTAINABILITY**

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to all people
having taken the initiative
for the evolution of human societies



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Preface 2021

This preface is added in February 2021, five years after the first edition published on January 7th, 2016.

Now we are facing a global disaster of COVID-19. This is a test of whether we human beings can conquer this global disaster and evolve further toward future. Of course, we firmly believe we can.

However, we would also need to understand what this disaster alerts us. COVID-19 forces us to face the reality that we human beings ourselves have caused this disaster and to find the cause in ourselves.

In this revision, we will again share with readers the fact that we by ourselves have diminished too seriously our creativity which is indispensable for us to maintain the coexistence and sustainability of all living on the globe in the recent few centuries especially in the 20th century.

Being stimulated by COVID-19, surely many new movements toward human evolution would emerge globally. We have revised this booklet aiming to be one of contributions toward those global movements.

The theme of this booklet is that human beings need not only to pursue individual independence and freedom but to restore the stewardship by altruism so that we can resume our immense creativity enabling all living on the earth coexisting sustainably.

Assuming that Bushido has both of the two values of individual independence

and stewardship, we have introduced a thought experiment of whether Bushido values can be programmed into AIs. However, this is also the more substantially important thought experiment of whether we human beings, the developers of AIs, can restore those both values and their consequential limitless creativity in ourselves before developing such AI.

Previous contents are largely revised to more clarify the writers' intent and to increase the readability accordingly. Hoping also previous readers find this revision and download as free replacement.

March 1st, 2021

Tadao Onaka

1. Introduction: Who's afraid of Artificial Intelligence?

This booklet begins with a hypothetical discussion to develop a conceptual model of an artificial intelligence composed with the values of Bushido, the chivalry of old Japan. The discussion is then further extended to examine a set of leadership values that could restore the creativity for human beings to overcome the globally emerging political and economic turmoil so that we, human beings, can avoid global disaster in the 21st century.

In 2013, James Barrat warned in his book “Our Final Invention - Artificial Intelligence and the End of the Human Era” that the development of artificial intelligence would culminate in its terminating all human beings. (Note 1) However, we can also find an entirely opposite perspective. Upon reviewing the history of cognitive science, one of the main fields of research into the development of artificial intelligence (AI) advanced by such names as Marvin L. Minsky of MIT and Herbert A. Simon of Carnegie Mellon, you would find that AI development contributes, first of all, to analyzing how human beings think and act before actually realizing any AI robot. Why? Because, in order to develop any type of AI, first we need to understand how the model human being thinks and acts substantially and comprehensively enough to translate that understanding into AI algorithms and programs.

In other words, unless human beings can develop AI which terminates all human beings by its own will, there exists a risk that human beings themselves would accidentally or occasionally terminate the society of human beings before AI they develop would do so. Or positively, if human beings should be able to develop such an AI that can evolve by itself creatively and sustainably, human beings themselves will have evolved so beforehand. Why? It is because that human beings need to understand and grasp all of the requirements for them to evolve creatively and sustainably, before they realize such a smart AI as have been provided with the built-in programs of those requirements.

2. Why Bushido?

Then why are Bushido values to be utilized and programmed into AI? It is because the most substantial core value of Bushido, the mind of stewardship for society with a sense of independency or individual freedom, is one of critical drivers to lead global society beyond the current economic turmoil and into the next stage of global sustainability. Despite this critical role, such values nevertheless seem to be rather quickly diminishing not only in Japan locally, but also globally.

The diminishing of stewardship can be observed from the fact that the opposite value of greed, limitlessly seeking monetary value or the desire of individuals to increase their own assets with the highest priority, increasingly dominates globally and especially among corporations, the largest component of the global economy, under the mission of maximizing shareholder value.

It is also observed in Japan. Bushido, the vessel for the stewardship and old chivalry, has been inherited traditionally, socially and solely in Japan for about 1000 years. It, however, has begun diminishing as the result that the global management standards and disciplines of maximizing shareholder value have been penetrating rather completely into Japanese corporations for more than two decades since 1997. (Note 2)

3. Stewardship: The source for social value creativity

Then, why is it a problem, the diminishing of stewardship in order to overcome the current global economic turmoil?

Answers are as follows: While one of the critical causes of the current global economic turmoil is the serious shortage and stagnating growth of social creativity, especially of corporate creativity of actual economy, in comparison to the rapid growth of the size of the monetary economy, the stewardship of Bushido could be one of the critical sources for revitalizing social value creativity.

Why? At the first, with stewardship, we can most freely and flexibly observe and sense not only the current needs of people and society but also even the needs newly emerging or unprecedented. Then at the second, with the mind and action of stewardship, we can imagine most intensively and substantially what we can do for the newly found needs of people or societies. And at the third, consequently, will be ignited the motivation to respond to facing and emerging needs of others or societies not encountered before. This is the ignition of creativity. In other words, stewardship can stimulate creativity as it is the mindset not only understanding others respectfully but also contributing to others sincerely.

Now, before discussing further, we should clarify what the current global economic turmoil is: It is the stagnation of the actual economy kept depressed, pressurized, and continuously consumed by the desire of the ever increasing monetary economy to place highest priority on the maximization of its short-term return on financial investment in the actual economy.

Why has the actual economy been continuously stagnated by the monetary economy?

If answered simply, it is because the monetary economy as the shareholders of the actual economy expects the actual economy of corporations to reap from the current assets (Profit maximization) rather than to plant and grow new assets (Research and Development) which takes longer to reach cultivation. Accordingly, the programmed activities for increasing the efficiency of current business models are absolutely appreciated more than the creative activities for developing new business models toward the uncertain future.

As a result, the value to maximize what corporations can gain from the established business models is naturally appreciated more than the value to create what corporations can do for customers and societies for the future: Greed is appreciated more than stewardship. Accordingly, the creativity deteriorates in corporations.

And, for the worse, the consequential gap between the two sizes of the actual and monetary economies keeps expanding as the monetary economy increases the pressure on the actual economy to maximize short-term return on investment in response to the shrinking of the actual economy. Consequently, the creativity of the actual economy keeps further squashed consciously or unconsciously. The value of greed keeps increasing while, in return, the value of stewardship keeps decreasing.

And the worst of all is that the cycle resulting in continuous shrinkage of the actual economy increases in rotating speed as the monetary economy accordingly and increasingly requests more effective short-term return to the continuously shrinking actual economy. The cycle is self-perpetuating and the speed at which it accelerates is increasing exponentially.

In order to stop the cycle from uncontrollably accelerating itself, there are two solutions: One is to revive the creativity of the actual economy and the other is to control the greed of the monetary economy. There is another solution, however, that simultaneously addresses both of these issues: The restoration of the value of stewardship in global society.

Why? One reason is that, as has been discussed, one of the two causes of the global economic turmoil is the shrinking of creativity. And the fundamental source for creativity, or Research and Development, is the value to serve customers and societies: The stewardship beyond the desire to pursue efficiency in realizing one's own profits. Then why not restore it? The other reason is that as the value of stewardship would increase and dominate more so the opposite value to stewardship, the value of greed, the other reason of the global economic turmoil, would naturally reduce its share socially in return even in the monetary economy. Then why not restore the value of stewardship?

It is an interesting coincidence that a set of codes newly established in 2014 in Japan and in 2012 in the UK is called 'Stewardship Codes'. It is designed to control institutional funds' limitless greed.

4. What would Bushido AI programming realize?

Bushido is the value system to pursue a way of living with human dignity that can be realized by stewardship: The mind of serving others and societies with one's own free will, beyond one's own sense of cost and merit.

Therefore, Bushido AI programming has the potential to let us recognize the reality that we, human beings, are excessively indulging in maximizing the return on investment by the built-in program of scientific rationalization emerged in the early 20th century. Human society has been indulging in prioritizing the cultivation and accumulation of monetary assets, and further has come to make all decisions of individuals, corporations, and countries solely based on whether or not the consequence of those actions could increase the return and monetary assets. The reality is that human society globally continues breeding the value of greed, the opposite value of stewardship.

Scientific rationalization, the science of pursuing the productivity of return on investment, was born originally from "The Wealth of Nations" of Adam Smith in the 18th century. It grew substantially in the early 20th century with Frederick Taylor's invention of Scientific Administration and was further enhanced by a Nobel Prize laureate, Herbert A. Simon, with his contribution to cognitive science and artificial intelligence.

Herbert A. Simon describes in "Administrative Behavior" how the criterion of 'efficiency', the most representative 'utility' of scientific rationalization, has been developed as a socially accepted value and principle during the 20th century.

We have seen the exercise of authority and the development of organizational loyalties are the two principal means whereby the individual's value-premises are influenced by the organization. What about the issues of fact that underlie his decisions? These are

largely determined by a principle that is implied in all rational behavior: the criterion of efficiency. In its broadest sense, to be efficient simply means to take the shortest path, the cheapest means, toward the attainment of the desired goals. The efficiency criterion is completely neutral as to what goals are to be attained. The commandment, “Be efficient!” is a major organizational influence over the decisions of the members of any administrative agency; and a determination whether this commandment has been obeyed is a major function of the review process.

James Barrat also describes scientific rationalization in “Our Final Invention”:
Rational has a microeconomics meaning. It means that an individual or “agent” will have goals and also preferences (called a utility function in economics). He will have beliefs about the world and the best way to achieve his goals and preferences.

Then, if we utilizes Barret’s description, in the current corporations with global management standard, the programmed goal is to maximize ROE and the programmed preference is to pursue efficiency or competitive productivity. Here, both of ROE and Efficiency incline corporations and management to indulge in the value of greed.

Therefore, Challenging “Bushido AI Programming” would let us face the reality that we have been brought up to worship excessively scientific rationalization together with the values, such as ‘efficiency’, underlying it to the extent as if it were the supreme goal and preference for human beings and their corporations and as if the utility of ‘efficiency’ or ‘return on investment’ were the only criterion of human decision making.

Why can Bushido lead us to recognize our excess indulgence in scientific rationalization? It is because in Bushido, the highest priority is set on stewardship, the opposite value to greed. It even assumes that the commitment to pursuing stewardship with individual freedom is also the pursuit of the dignity of human beings blessed by the creator of

the cosmos.

Then a question, if stewardship, the value to serve others, is in fact the pursuit of the dignity of human beings or not, would be raised and have to be answered. However, one would also be asked to prove to oneself that anything else could realize human dignity more than stewardship. Proving this would require a great deal of effort, because we generally have come to believe that the value of individual freedom, the contradicting value to stewardship, is alone the supreme goal of the reason of existence of human beings.

It will be, however, also a question of whether human beings would like to live just like the other animals of born free and have no difference from them. It, however, might not be answered or proved easily by anyone at present. It would be our destiny to keep discussing it until we can get to create an AI with the value of stewardship to human beings as the highest priority.

5. What are the values of Bushido?

In his book “Bushido”, Inazo Nitobe extracts the values of Bushido. They are five values from Confucianism and some from Buddhism and Shintoism.

The values from Buddhism and Shintoism are the requirements that each individual should live under the celebration by the existence who embraces the entire cosmos beyond human beings' imagination.

Therefore the values from Buddhism and Shintoism are to explore endlessly and limitlessly the dignity of human beings for appreciating the creation and blessing of the existence embracing the entire cosmos. They are to explore the endless sincerity before the eyes of the existence who observes every thought and action of all human beings.

On this point, Buddhism further assumes that the existence generally and globally called God resides in everything in the cosmos and, of course, in everyone on the earth. All human beings are even assumed to be variety of representatives or avatars of God, which will be encouraging for human beings to pursue their dignity blessed by God.

Meantime, as Confucianism is basically the modeling of the emperor of an ancient Chinese dynasty, the core five values of Confucianism were requirements for the leadership governing nations and organizations. Those are Jin (Benevolence), Gi (Justice), Lei (Politeness), Chi (Wisdom), and Shin (Sincerity).

We start by examining the five values of Confucianism and then the values from Buddhism and Shintoism, the values to pursue endlessly the dignity of human beings.

Before analyzing each of the five values, it should be noted and understood that the

meaning of the corresponding English expressions is quite inadequate and superficial compared to the original meaning the Kanji letter (pictographic character) carries and expresses.

Needless to say, that is why the following explanation of the five values takes more than a few pages. While the English word supposed to be corresponding cannot translate comprehensively the original meaning, we nevertheless dare to utilize and rely on the globally common language, English, for the purpose of sharing them globally.

Why can't English word express the meaning correspondingly? Because it bears the least common meaning of corresponding words of all phonetic languages historically integrated into the current English language, such as old Greek, Latin, French, etc. (Note 3) Moreover, it is because Chinese and Japanese languages existing with pictographic letters have not been included in the historical integration to the current English.

The fact itself that English, currently dominating as the global common language, has not included the languages with pictographic letters in its integration history would indicate a possibility: By realizing the synergy with those not included, there is a possibility that the idea to break through the current economic stagnation of the global society can be brought up.

Furthermore, the possibility would be also confirmed by the fact that the languages with pictographic letters together with their values bring in the opposite value to the value English language has converged in currently. The languages of pictographic letters will introduce the value of stewardship which is opposite to the value of greed, an extreme consequence of scientific rationalization dominant among the current English language world: They are 'Jin', 'Gi', 'Lei', 'Chi', and 'Shin'.

6. Jin: The Benevolence of Bushido

尸・作 ⇒ 仁 = Jin

Source: 字統 (Jito)

The structure of the Kanji of 'Jin' which is indexed by the word of Benevolence in English, visualizes the human being on the sacred carpet seat, and means 'a person with mercy and peace'. The concept of Jin was originally developed in the ancient China around at least 4000 years ago, then escalated by Confucianism emerged in the 6th century BC to the supreme value for the leaders governing nations and organizations. ("Jito", Shizuka Shirakawa)

Why was it perceived as the supreme value? We can find a hint to think of the answer, in the book on the most advanced technology innovation, artificial intelligence: "Our Final Invention - Artificial Intelligence and the End of the Human Era":

As an example of unintended consequences, Oxford University ethicist Nick Bostrom suggests the hypothetical "paper clip maximizer". In Bostrom's scenario, a thoughtlessly programmed superintelligence whose programmed goal is to manufacture paper clips does exactly as it is told without regard to human values. It all goes wrong because it sets about "transforming first of all of earth and then increasing portions of space into paper clip manufacturing facilities." Friendly AI would make only as many paper clips as was compatible with human values.

On the ‘Friendly AI’, James Barrat explains further:

Let’s start with a simple definition. Friendly AI is AI that has a positive rather than a negative impact on mankind. Friendly AI pursues goals, and it takes action to fulfill those goals. To describe an AI’s success at achieving its goals, theorists use a term from economics: utility. As you might recall from Econ 101, consumers behaving rationally seek to maximize utility by spending their resources in the way that gives them the most satisfaction. Generally speaking, for an AI, satisfaction is gained by achieving goals, and an act that moves it toward achieving its goal has high “utility”.

Values and preferences in addition to goal satisfaction can be packed into an AI’s definition of utility, called its “utility function”. Being friendly to humans is one such value we’d like AIs to have. So that no matter what an AI’s goals —from playing chess to driving cars —preserving human values (and human themselves) must be an essential part of its code.

Also in the messages below, following the above excerpt in “Our Final Invention”, it is described that Friendly AI is expected to have the common factor of ‘Jin’, ‘the Benevolence of Bushido’ which can be expressed as the natural respect to ‘all’ human values.

Another tenet of Friendly AI is to avoid dogmatic values. What we consider to be good changes with time, and any AI involved with human well-being will need to stay up to speed. If in its utility function an AI sought to preserve the preferences of most Europeans in 1700 and never upgraded them, in the twenty-first century it might link our happiness and welfare to archaic values like racial inequality and slaveholding, gender inequality, shoes with buckles, and worse. We don’t want to lock specific values into Friendly AI. We want a moving scale that evolves with us.

Now we, human beings, in the 21st century would have to feel a great irony from the

above. Before programming Friendly AI, we have to admit that we human beings ourselves cannot necessarily respect all values of human beings due to various constraints of specific dogma or philosophy or religion.

As an example, in so called advanced societies businesspersons are bound by the dogma of global management standard that requires corporations to maximize ROE (Return on Equity). It would be interesting to see that the previous sentences of the Barrat's book would continue making sense almost naturally if we replace the word 'superintelligence' with 'human beings' and 'manufacture paper clips' with 'maximize ROE' as below:

A thoughtlessly programmed human being whose programmed goal is to maximize ROE does exactly as it is told without regard to human values. It all goes wrong because it sets about "transforming first of all earth and then increasing portions of space into ROE maximizing facilities.

Meantime, while Inazo Nitobe describes the value of Jin as Benevolence, at the same time he adds the following explanations to complement the missing meaning: (Jin is) *benevolence, the feeling of distress, love, magnanimity, affection for others, sympathy and pity, which were ever recognized to be superior virtues, the highest of all the attributes of the human soul.*

Nitobe then adds: *He (Mencius) also says that "the feeling of distress is the root of benevolence, therefore, a benevolent man is ever mindful of those who are suffering and in distress." Thus did Mencius long anticipate Adam Smith who founds his ethical philosophy on Sympathy.*

Now by that Nitobe's suggestion, in English language we can extract the core essence of Jin, the Benevolence of Bushido, as 'Empathy' from the original word of 'Mutual

Sympathy' utilized in "The Theory of Moral Sentiments" by Adam Smith.

In summary, Jin, the benevolence pursued in Bushido is the 'empathy with all values of human societies'. It would then seem unrealistic and impossible to be realized nowadays. However, the unattainable attribute of Jin itself is the major reason Confucius regards it as the highest value. At any rate, beyond what Confucius regards, it seems to be apparent that whoever intends to develop Friendly AI in order to prevent non-friendly AI from terminating all human beings for realizing its specifically programmed value or dogma, would have to fully understand and master the value of Jin, first of all, for oneself.

Then it is also true that until we human beings become capable of sharing empathy with all values of human individuals and societies beyond our own specific value or dogma, we are always at risk of terminating ourselves accidentally and coincidentally in pursuing only a specific value or dogma while sacrificing others. This risk is present regardless of whether non-friendly AIs in future would do so or not.

7. Gi: The Rectitude or Justice of Bushido

義・義 ⇒ 義 = Gi

Source: 字統 (Jito)

The Kanji of 'Gi' visualizes a goat sacrificed to God and means the pureness and flawlessness of the mind of the person offering the sacrifice to God. ("Jito", Shizuka Shirakawa)

Nitobe tried to explain the value of Gi, the rectitude or justice of Bushido, by spending most of the chapter for the explanation of the value of Giri that is the opposite value to Gi and by emphasizing that it should not be misunderstood as, or confused with, Gi. (Note 4) As having been well shared historically in Japan, Giri is the value forced by some 'specific' cultures and virtues of family, organization, community and society. From his paradoxical explanation, Nitobe points out that Gi, the rectitude or justice of Bushido, should not be based on any specific culture or virtue. Then, based on what can we judge whether the subject we face accords with Gi or not, or whether it is just or not in terms of Gi?

Michael J. Sandel in his 2010 book "Justice" discusses the similar issue quite comprehensively from the viewpoint of Western culture and history. After having challenged various models of virtue from Utilitarianism, Libertarianism, Kantianism and Aristotle's Teleology, he finally concludes that we may share a specific set of values as the base for judging justice, but only within each community, like the polis where Aristotle lived in ancient Greece, and that it is important for all human beings to keep discussion among different communities and countries on the difference of their values, virtues and even cultures underlying them.

However, if an ancient Confucian read Sandel's book, he or she would question why Sandel discusses only the justice for sharing pie fairly among stakeholders. In other words, he or she would ask why, in Sandel's view, there exists only the discussion to seek justice for what each stakeholder can get fairly from others. He or she would question if there were any other case for which the judgment of justice is called. "Yes," the Confucian would answer, there is another case. Justice is called for also to judge whether what we do accords or not with the human dignity blessed by the existence generally called God: it is the justice on whether we prioritize to act on what we can do for others or not as well as whether we appreciate the value to serve others itself rather than estimate the value we gain in return.

On this point, Nitobe refers Confucius' words: *"Let but a prince cultivate virtue, people will flock to him; with people will come to him lands; lands will bring forth for him wealth; wealth will give him the benefit of right uses. Virtue is the root, and wealth an outcome"*.

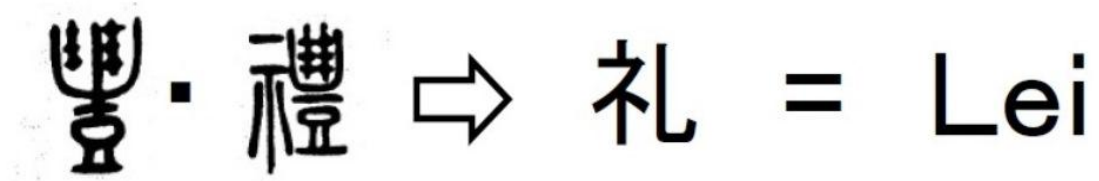
In summary, Gi, the justice of Bushido is about whether or not human dignity is prioritized by being liberated from the desire of individual wealth cultivation. It is, therefore, to prove and judge that we are liberated from any specific dogma internally existing or externally forced or programmed.

Bushido's justice would remind us what we have lost if we cannot find any other reason for judging justice other than to judge the fairness of sharing various types of pie. Justice exists and is called for also when and where we judge whether we are liberated from any specific dogma or human value: Whether we prioritize the value of stewardship with human dignity blessed by God higher than scientific rationalization, the value grown in the 20th century and appreciating most the effectiveness of return on investment (ROI) to ourselves.

In other words, the justice of Bushido reminds us that we have paid too much attention to how we could maximize our own shared value and how we could be competitive in the value sharing among stakeholders. Consequently, we forget in turn how we create new values.

Then how can we restore the creativity lost by the excess belief of scientific rationalization? In Chapter 9. 'Chi': the Wisdom of Bushido, we may find a simple answer that it can be made possible by the stewardship supported by the value of individual freedom. We may also find there that the pursuit of the creativity by stewardship with individual freedom would be a quest for the reason of existence of human beings.

8. Lei: The Politeness of Bushido



Source: 字統 (Jito)

The Kanji of 'Lei' visualizes a cup of liquor utilized for sacred ceremony. ("Jito", Shizuka Shirakawa)

While the corresponding English word to Lei would be 'Politeness', again the meaning of the Kanji would be rather different from the English word sense, which would be inferred from the Confucius's definition that Lei is the embodiment of Jin; the empathy with all values of human beings.

However, Confucius also strongly warned that it should not be confused with the manners just following superficial protocols: Nitobe explains in Bushido that it is rather the Self-Control to prioritize others' values over one's own. Therefore, it becomes the source to learn actively from others and results in more occasions to know others' needs. It then brings opportunities to envision creatively by devoting oneself to exploring what one can do for others' needs, especially when those needs are what one has never encountered before.

9. Chi: The Wisdom of Bushido



Source: 字統 (Jito)

The Kanji of 'Chi' consists of the images of a sacred arrow and shield with a box for commitment letters to God, and visualizes the status of knowing or the wisdom: 'Chi' is given by God if one pledges one's words to God. ("Jito", Shizuka Shirakawa)

In Confucianism, the learning, the action to grow wisdom; Chi, is defined as not just gathering knowledge but envisioning what one can do for others and societies. So in Bushido, just the collection of knowledge, tools, and cases is not learning without the intent to utilize it for realizing oneself contributing to others and societies.

Therefore, good wisdom, called Ryo-Chi, meaning the wisdom based on conscience, is believed to create ideas for others and societies. What is believed to enhance the good wisdom, Ryo-Chi, is Lei, the action to control the desire prioritizing one's own value over others' and to envision what one can do for others. Lei, the embodiment of Jin, the empathy with all values of human societies', is the foundation of Chi. As Lei appreciates diversity, it enhances Chi, the wisdom for creativity for others and societies.

While Nitobe has not established a chapter to explain Chi in his "Bushido", he explains what prevents Bushi, the warrior, from getting to be just savage beasts, is the action recognizing his own emotions as well as others, in other words, the action of learning empathy:

What Christianity has done in Europe toward rousing compassions in the midst of belligerent horrors, love of music and letters has done in Japan. The cultivation of tender feelings, breeds considerate regards for the sufferings of others. Modesty and complaisance, actuated by respect for others' feelings, are at the root of politeness.

The above Nitobe's comments would require some explanation about the history of verses in Japan. It started from the 8th century when "Man-Yo-Shu", a book of 4500 verses described by a broad range of people from aristocrats to women, soldiers and priests, was assembled. Then additional books of verses during the following centuries have enhanced creating verses continuously through today. Accordingly, since around the 10th century, creating verses for expressing individual emotions became established as one of education courses for the people ranked as Bushi or Samurai obliged to live with Bushido, in addition to the courses to master Confucianism and military arts and strategies. Here it is indicated that Bushi people knew how to observe and express their own emotions and feelings through creating verses, which Nitobe points out as the source for maintaining their humanity even in the midst of savage battles. Observing one's own emotions enabled 'Self-Recognition' and liberated them from the unconditional bindings of being programmed for brutal combat.

The fact that learning the self-recognition of emotions prevented Bushi from losing their humanity, the dignity of human beings, may remind us of another fact. Around 1000 years after, in the year 2000, a new leadership development focused on emotional intelligence was proposed by Daniel Goleman to revive what the dominant leadership model based on scientific administration and rationalization for business competition had damaged. Goleman defined that the emotional intelligence is to create positive feelings towards others by recognizing one's own emotions as well as others' and by responding to others' emotions thoughtfully. (Note 5)

It would lead us to think that we, human beings, can recall our own creativity if we

utilize our emotional intelligence to liberate ourselves from the dominant control of any application program such as scientific rationalization we installed in ourselves, as in the same way that Bushi created their own verses for liberating themselves from the programming for violent combat.

Why does scientific rationalization restraint people's creativity? It is because of its objective. The objective is to overcome competition in productivity with the knowledge and intelligence of scientific rationalization, such as operations research, accounting, finance, macro- and micro- economics, and probability and statistics. The objective and its consequential objective to realize short term financial success, together result in inducing and leading people to pursue competitive efficiency in existing business models rather than enhancing creativity for developing new products and services which inevitably come with unpredictable risk and uncertainty.

In the midst of unprecedented global economic turmoil, learning emotional intelligence, as Bushi did in the past, would lead us to find the way to observe objectively what we have lost in the unconditional competition for efficiency. It would also enable us to ask ourselves whether we live with the dignity of human beings as Bushi did while experiencing belligerent horrors from competition for survival and the resulting brutal thoughts and actions.

In summary, the above Confucian definition of wisdom indicates that the Chi of Bushido is not the wisdom to make oneself prosperous, but rather the wisdom to realize one's contribution and dedications to others and societies. Also Nitobe's explanation above suggests that the wisdom of Bushido would be the same as the current concept of emotional intelligence. It enabled Bushi to recall individual self-recognition as human beings and to remind them of their supreme mission: stewardship.

10. Shin: The Sincerity of Bushido

倭・信 ⇒ 信 = Shin

Source: 字統 (Jito)

The Kanji of 'Shin' visualizes a person standing beside a pictograph of the character for 'word'. The pictograph for 'word' consists of a pictograph symbolically indicating commitment and a pictograph of a box containing one's commitment to God. With all of these pictographs together, 'Shin' means trustworthiness or trustworthy sincerity. ("Jito", Shizuka Shirakawa)

至誠 ⇒ 至誠 = Shi-Sei

Source: 字統 (Jito)

Mencius left a famous message on sincerity: "*I have never seen that any intent with extreme sincerity is not realized*", which he sums up to one word 'Shi-Sei', consisting of two Kanji letters: one visualizes a sacred arrow and the horizon as the arrow's landing target, meaning never attainable, or extreme distance, and the other visualizes a pictograph of 'word' with a symbolic pictograph of accomplishment, meaning that the sincerity is to realize one's words. With these two letters, the word 'Shi-Sei' visualizes 'Extreme Sincerity'. ("Jito" Shizuka Shirakawa) In other words, 'Shi-Sei' indicates the discipline engaging in serving others and societies with extreme sincerity and, therefore, the stewardship of pursuing the dignity of human beings with unwavering commitment.

However, no one so far seems to have ever proved the Mencius message to be true, especially from the viewpoint of return on investment (ROI). If it were proved so, human society would be filled with non-superficial and non-ceremonial sincerities. In actuality, however, the reverse is true and there is more than enough evidence to show that the extreme or unconditional sincerity does not realize good financial ROI. In fact, one committed to an extreme sincerity may in the worst case actually risk his or her individual existence, especially when encountering the ill minds or predatory strategies abundant in the world today.

Then why has Mencius message been inherited for more than 2000 years? Judging from the fact of this persistent historical inheritance, we would be allowed to conclude that there must have been some kind of proof of or belief in the message throughout the time period. At least, Bushido has explicitly suggested throughout 1000 years that realizing human dignity is honored and prioritized rather than realizing one's personal gain through cost-benefit analysis.

In Bushido any vision with the extreme sincerity is believed feasible until it is realized and then also believed that it will be realized at last. It is also believed that even if a vision with extreme sincerity is not achieved or realized within a lifetime of a person with Shi-Sei, the value of never compromised sincerity and the fundamental source of the stewardship with individual freedom and, therefore, the pursuit of human dignity, would keep stimulating subsequent generations so that the vision would be inherited from generation to generation until it is finally realized.

It is believed in Bushido that any vision based on the value to pursue human dignity is immortal by itself as it can be inherited by future generations until it is actually realized beyond time. In comparison, let's take a moment to consider the value of greed. Is it immortal? It may or may not be, because in actuality any monetary assets resulting from greed can be also inherited by subsequent generations. However, at any time in history one

can always observe people classified as greedy who, despite their accumulated physical value, ultimately deteriorate in time and disappear. However, in Bushido, it is believed that any value with 'Shi-Sei', the emotional commitment to pursue the dignity of human beings without any compromise, shall not perish and remain in the cosmos through inheritance by future generations. It is so firmly believed as if the value of 'Shi-Sei' seems to remain in the cosmos regardless of the physical existence of human beings.

志 = Shi

Source: 字統 (Jito)

The value of never-giving-up sincerity is carried by the concept of 'Shi' constructed vertically with two Kanji letters, 'Bushi' and 'Mind'. Accordingly, 'Shi' means the vision based on Bushido. In Bushido, there exists a belief that those visions with never-giving-up sincerity to contribute to society and social evolution are to be inherited by subsequent generations through the time they are realized. However, is it only in Bushido? If we recognize the fact that our various histories have been realized with evolutionary visions in any era, we will come to think of the possibility that the value of never-giving-up sincerity resides not only in Bushido, but also in all societies of human beings throughout their histories.

The belief that visions to serve societies with unwavering commitment can be inherited and realized tells us two facts:

One is that it is the competency to envision creatively for others' needs with the emotional commitment of never compromised stewardship that overcomes all problems and barriers until the vision gets realized.

The other is that, if so, no organization can be sustainable or able to evolve without such visions and values of stewardship regardless of whether it has sound learning competency or not. We may have no problem to recognize this as logical common sense if we recall that only learning competency with the commitment of serving social evolution can retain the opportunities to synchronize organizations with social changes.

From this viewpoint, we also come to find why corporations having focused on utilizing "human resources" and their administrative management deteriorate over time. The corporation defining itself as an inorganic existence consisting of human resources with the accompanying administrative management to control them for the best efficiency, is, by its definition itself, unable to envision creatively. Moreover, the human resources and administrative managers are neither expected nor allowed to do so beyond their accountabilities and responsibilities of realizing the best efficiency. It is apparent that such corporations get consumed, deteriorate and rust out as time passes in accordance with its inorganic characteristic.

For corporations to be sustainable, therefore, they should be organizations consisting of human beings who can envision creatively, instead of inorganically defined human resources. Only human beings can creatively envision if their freedom to pursue stewardship for social evolution is assured under a clearly declared corporate mission of sustainability.

Now we can understand well why a significant number of corporations globally have started shifting their supreme mission from maximizing ROE for shareholders to instead pursuing environmental and social sustainability and therefore the sustainability of themselves

for the benefit of all stakeholders, not shareholders alone. One of most advanced models leading the shift is being realized in Unilever by its CEO, Paul Polman. (Note 6)

In summary, Nitobe describes that in Bushido the uncompromising sincerity to serve others and societies enables human beings to avoid indulging in bestial instincts, that without it the dignity of human beings, or the reason of existence as human beings, would be lost, and that as long as one pursues the extreme sincerity, he or she would be blessed with the creativity the pursuit imbues. It seems that creativity results from the pursuit of human dignity and that the pursuit is ultimately the very reason of human existence.

11. Avatars of God: The Values from Buddhism and Shintoism

Shintoism encourages people to believe that their supreme God in the cosmos always watches everyone. Buddhism then enhances and extends the belief further: Various representatives of the supreme existence of the cosmos reside everywhere in the world, not only in human beings but also in plants, animals and in all natural environments. Everything is an avatar of God.

With this Buddhism's belief, Bushido's value of 'Jin', the supreme value of Confucianism, embodying empathy with all values of human societies, can be encouraged and enhanced accordingly and synergistically. If this Bushido belief is shared in all human society, human beings shall be encouraged naturally to pursue empathy with all beings as participants in the cosmos and as avatars of God.

To summarize the values of Bushido, if one pursues 'Jin' (empathy with all values of human beings) with 'Gi' (emotional intelligence to pursue the dignity of human beings), 'Lei' (self-control to prioritize others), 'Chi' (learning others' needs and envisioning what one can do for them), and 'Shin' (unwavering commitment through realization), he or she can naturally create and realize new social values accordingly. Especially if the needs of others are something one has never encountered, it is highly possible that what the person envisions for others would be something he or she has never before imagined and, therefore, creative.

The chain of the above five values tells us that if the empathy with all values of human beings, including the values of one's own, as well as the stewardship based on it are the blessing to human beings, then we could live accordingly and concurrently even with those two seemingly contradictory outlooks: individual freedom and serving others. These seemingly opposing values are simply the front and back, two sides of the blessing, the dignity of human beings.

Now we need to prove two hypotheses: One is that if we commit to pursue human dignity, we can ultimately create social value in all situations, even though it might not necessarily be satisfying the sense of return on investment. The other is that the creativity based on empathy with all values of human beings is the embodiment of human dignity and that it is exactly the reason of being for mankind.

At the starting of the quest for proving the above two hypotheses, we, living with AIs, could have one sure thing: We are approaching an era in which we no longer rely only on the dogma of scientific rationalization that programs human beings to pursue only productivity of profit and loss or return on investment and to make decisions based exclusively on whether or not one's own assets are increased. Why? It is apparent that we human beings naturally seek individual freedom and avoid being the same as AIs programmed with and constrained by a specific goal, logic or dogma.

If we liberate ourselves from the dominating dogma of pursuing one's wealth under the invisible hand of God and become more engaged in the opposite value of utilizing individual freedom to serve others and societies, we could revive the pursuit of human dignity consciously as our highest priority. And pursuit of human dignity together with the resulting creativity would make the sustainable evolution of human society possible.

If the hypotheses are understood not to be limited to Bushido, their truth can be challenged globally. It turns out, therefore, that the historical role of Bushido recorded and described by Inazo Nitobe with his protestant Christianity (Note 7) early in the 20th century, was to preserve the ancient Asian civilizations until the time global human society would need it for its further sustainable evolution.

12. Can human beings really develop Friendly AI?

Taking the above overview of Bushido values into account, if asked whether or not human beings can really develop Friendly AI, such as AI programmed with Bushido values, the answer is apparently 'No' at this moment in 2016 based on three specific reasons.

First, because the values of individual freedom and uncompromising stewardship are logically contradictory, it would be unrealistic to program both into AI as concurrent values as long as AI programming relies only on logical algorithmism.

Second, all existing AIs are built with logical algorithm only. In other words, no one has invented an AI with algorithms for 'values'. At present, logical programming seems unable to install any emotional value or develop any decision making program based on emotional value or preference. All of the current decision making programs are based exclusively on logic, with no room for emotional values.

Third, and more realistically, we human beings at present have not yet concurrently realized the two logically contradictory values even for ourselves. Strictly speaking, we have not yet experienced ultimate individual freedom or the extreme of the stewardship with uncompromised sincerity. Therefore, we have not even grasped the requirements to realize either of them independently, let alone how to master and embody the two values concurrently.

13. AI's 'Runaround': Asimov's Three Laws of Robotics

Among the three reasons mentioned above, James Barrat explains, by referring Isaac Asimov's three laws for robot, the first reason of why the two logically contradicting values cannot be installed into AI:

In the short story, "Runaround," included in the classic science-fiction collection "I, Robot", author Isaac Asimov introduced his three laws of robotics. They were fused into the neural networks of robots' "positronic" brains:

1. A robot may not injure a human being or, through inaction, allow a human being to come to harm.

2. A robot must obey any orders given to it by human beings, except where such orders would conflict with the First Law.

3. A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.

The laws contain echoes of the Golden Rule ("Thou Shalt Not Kill"), the Judeo-Christian notion that sin results from acts committed and omitted, the physician's Hippocratic Oath, and even the right to self-defense. Sounds pretty good, right? Except they never work. In "Runaround," mining engineers on the surface of Mars order a robot to retrieve an element that is poisonous to it. Instead, it gets stuck in a feedback loop between law two-obey orders-and law three-protect yourself. The robot walks in drunken circles until the engineers risk their lives to rescue it.

As suggested in the above reference from Isaac Asimov by James Barrat, even when the two contradictory values can be installed into an AI, the AI would get caught in the 'Runaround' as imagined by Asimov. This can actually be observed in our society today. While individual freedom is perceived and respected as the supreme value only in individualism culture society such as France and the United States, the value of serving to

societies is positioned relatively higher than individual freedom in harmony-focused culture society such as Japan. As of now in 2016, no society where these two values are fully and concurrently embodied is yet to exist.

14. Can 'Empathy' be installed into AI?

Among the three reasons above, on the second one that we can't install the emotional value, such as 'Empathy', into AI, James Barrat indicates his thought:

Unlike our intelligence, machine-based superintelligence will not evolve in an ecosystem in which empathy is rewarded and passed on to subsequent generations. It will not have inherited friendliness. Creating friendly artificial intelligence, and whether or not it is possible, is a big question and an even bigger task for researchers and engineers who think about and are working to create AI. We do not know if artificial intelligence will have any emotional qualities, even if scientists try their best to make it so.

Even without Barrat's thought above, we can answer without hesitation the question of whether it is possible to install an emotional value like 'Empathy' into AI. It is apparent, especially for those who have any experience in computer programming, that emotion cannot be programmed by logic as logic exists where emotion is completely excluded: Logic and emotion are by definition mutually exclusive. Therefore, as long as programming relies on only logic and logical algorithm, there is no possibility to install emotional values such as 'Empathy' into AI.

However, the above common sense judgement would remind us of a great irony that we humans have come to incline to one of the most typical 'logical' programs, scientific rationalization and administration, to the extent that we perceive it as if it were the only base and method for decision making. Before being puzzled by the subject whether one of the most typical emotional values, 'Empathy', can be installed into AI, we need to first face the reality that we are becoming less and less capable of prioritizing decision making based on emotional values such as empathy.

Now we would need to also face Adam Smith's warning: He strongly suggested that empathy or mutual sympathy is critical for human evolution in "The Theory of Moral Sentiments" while also emphasizing the importance of selfishness resulting from individual freedom in "The Wealth of Nations". However, Smith actually spent just two years around the year of American Independence in 1776 to write the latter book. Meantime, he continued editing and improving the former book emphasizing the importance of 'Empathy' for more than 30 years, from 1759 through the year of his death 1790. In spite of his efforts to enhance the importance of the value of empathy, only the opposite value of it, the value of selfishness emphasized in "The Wealth of Nations" has been dominantly shared historically.

In the field of modern economics it even seems as if "The Wealth of Nations" were the only book of Adam Smith's, which indicates how much we currently, consciously or unconsciously, overlook the value of empathy, excessively indulge in the value of selfishness and therefore rely on scientific rationalization for maximizing our own individual and national wealth: It seems as if whether anything we face could increase our own wealth or not were the indispensable criterion for evaluations and decision makings.

15. What programs have we installed into ourselves?

The fact that in the 21st century we have come to excessively rely on scientific rationalization as if it were the only and the best source for decision making, indicates not only the depth of our historical and accidental inclination to think by the algorithm of scientific rationalization alone, but also the possibility that some other programs have been also installed into ourselves unconsciously.

If this is true, it means human beings are controlled by the disinformation which John K. Galbraith defined as the most serious execution of power. He warned that the people into whom such programs are installed do not recognize by themselves the fact that they are programmed and controlled. (Note 8) If they unconsciously behave in accordance with the goals and preferences suggested by such built-in programs and if they perceive those suggestions as their own will, do they have individual freedom?

We take many such examples for granted: The rule that a currency, the evidence of value exchange, is authorized to breed itself over time while everything of physical value on earth is destined to deteriorate; the belief that easing money distribution stimulates social creativity and investment, and results in boosting economy; the accompanying idea that GDP (Gross Domestic Product) should constantly grow regardless of the growth rate of the domestic population being positive or negative; the notion that utilizing the interest rate, the currency's self-breeding speed, as the fundamental benchmark or body clock for human productivity measurement by defining ROE destined to be higher than interest rates; and the rule that central banks including FRB of the United States, can decide the interest rate of national currency based only on their perception of economic conditions regardless of the balance of currency supply and demand even though the prices of everything else are determined by supply and demand balances. And even though the rule is contrary to what has been perceived as common sense since Adam Smith indicated the relationship between

commodity supply and demand in “The Wealth of Nations”.

Besides the above examples of social programs installed into human beings, we can also find many other examples in our daily business. For instance, there is the rule by GAAP (Generally Accepted Accounting Principles) that human resources are not classified as assets and consequently compensation should not be depreciated but instead processed as one-time cost. While most people would not know the rules by GAAP, those who follow them without any question are programmed and controlled by the rules.

If human resources are defined as assets as the naming suggests, and are depreciated for the period of employment, all of corporations’ PL statements would show far higher profitability because of lower annual HR costs. In that case, however, it becomes harder for administrative management to realize a quick win of profitability recovery just by restructuring. However, in such a case, even lifetime employment might be enhanced due to the lower annual HR costs.

Another important example in business is the prioritization of ROE. If corporate managers believe that their supreme goal is to maximize short-term profitability, ROE, return on shareholders’ equity, as the highest priority among all of the other goals, they are programmed unconsciously as AI is programmed with a specific goal.

Additionally, what about the belief that whoever provides corporation with monetary fund owns it, despite the fact that there are many other suppliers to corporations such as employees, managers and executives, raw material manufacturers and, not the least, customers and even communities? What about the common sense to judge corporate values based on stock prices that change continuously by various intentions of fund managers to maximize stock sales margins with the least intention to measure accurately long term corporate values? And what about the publicly granted rule that activities to influence

politicians by suggesting and offering various benefits are allowed under the name of lobbying?

Before becoming focused on the pessimistic view of a future in which AIs are programmed with goals that risk harming human beings, we may have to face the reality that we have more than enough such programs already installed into our brains, not only in the field of business management but also in ordinary social life.

16. What stimulates AI to become a terminator?

What should we do if we have to accept the reality that it is impossible to install into robots any value such as Asimov's first law that robots should serve and protect human beings?

Also what should we do if we have to accept the reality that we human beings have already installed more than enough programs into ourselves that are 'not' supposed to be installed into AI? What if we have programs that enlarge inequality, prioritize particular values to govern global society at the sacrifice of others, and even escalate political or economic conflicts and turmoil for the worse?

Furthermore, what if we have to accept the fact that we human beings have already invented 'AIs' with the potential to terminate all of human society? Weapons of mass destruction such as atomic bombs and biological weapons become precisely such AIs when they breed themselves automatically and limitlessly once human beings fail in managing them. According to the definition of AI in 'Busy Child' by James Barrat, they are no difference than the AIs having the capability to limitlessly breed themselves by sacrificing all human beings and natural resources on earth.

James Barrat warns: *Repurposing the world's molecules using nanotechnology has been dubbed "ecophagy" which means eating the environment. The first replicator would make one copy of itself, and then there'd be two replicators making the third and fourth copies. The next generation would make eight replicators total, the next sixteen, and so on. If each replicator took a minute and a half to make, at the end of ten hours there'd be more than 68 billion replicators; and near the end of two days they would outweigh the earth. But before that stage the replicators would stop copying themselves, and start making material useful to the ASI that controlled them-programmable matter.*

The waist heat burn up the biosphere, so those of us some 6.9 billion humans who were not killed outright by the nano assemblers would burn to death or asphyxiate. Every other living thing on earth would share our fate.

What should we do upon accepting the above realities?

At first, we must come to the conclusion that we human beings need to install so called Friendly AI values into ourselves. We must recognize that what leads to the creation of AI terminators is precisely human beings ourselves: Human beings having been programmed with conflicting social goals and values with the possibility of stampeding, in the worst case scenario, would terminate all other societies having different goals and values and even destroy all human society on earth at the end.

17. Why not start installing 'Empathy' into human beings?

If Bushido has preserved one set of Friendly AI values, why not start by first installing the empathy of Bushido into ourselves? While AIs can't be programmed with emotional values, we can be.

Some may have practical questions about whether the empathy of Bushido has the potential to realize individual and social creativity to lead us out of the current global economic turmoil and consequential global political and violent struggles. The answer would be that no one knows for sure as no one can see the future. However, we even may not need to provide with an answer. Why? Three reasons:

First: Because we do not have much time left. The development of AGI (Artificial General Intelligence) and ASI (Artificial Superintelligence) are progressing rapidly with the efforts of various ambitious minds. Also, as we saw above, some form of AI, such as automatically proliferating weapons of mass destruction like atomic bombs or biological weapons capable of destroying life on earth, already exist. Moreover, we human beings, seemingly learning little from our history, continue indulging in various global struggles stimulated by conflicts among different values and dogmas. So far, we have been unable to discover any exit from those endless chain reactions of struggles. Therefore, without any alternative set of Friendly AI values, is there any reason to avoid utilizing the set of Bushido values as one of our best available options?

Second: Nevertheless, if we keep asking inevitably and continuously whether the outcome deserves the efforts, we may come to find that we are fully controlled by the dominant dogma of scientific rationalization. We make decisions based on exclusively whether or not such efforts would be beneficial from our perception or programmed preferences. We will find ourselves bound by the dogma having been dominant since the 18th

century.

Third: Therefore, the efforts to overcome the desire to judge whether meaningful return could be realized from our investment is simultaneously the efforts for us to get out of the program of scientific rationalization. These challenges liberate us from the dominant dogma, and it is this very liberation that is indispensable in the process of developing Friendly AI and avoiding the emergence of Unfriendly AI. The challenges themselves are meaningful as long as we value the revival of what we are losing through the excessive dominance of scientific rationalization.

Additionally, the challenges would have the potential to realize what the civilizations of English language and any other phonetic languages have overlooked historically due to the phonetic languages' characteristics of 'analyzing (fragmenting) for efficiency' that Peter Senge and Adam Smith described respectively in "The Fifth Discipline" (Note 9) and 'The Division of Labour' in "The Wealth of Nations" (Note 10). Those challenges would also have the potential to realize what the civilizations of the pictographic languages have preserved. They have preserved the characteristics of 'synthesizing (consolidating or systemizing) for humanity' by the nature of pictographic characteristics combined with Confucianism. These challenges are, therefore, nothing less than the opportunity to realize the synergy of global diversification.

18. Closing: Agenda for the world of human beings and AIs

While all of us might not have recognized, we have come to a great and very fundamental finding from the drastic development of AIs. It can be inferred from the fact that we are afraid of AIs coincidentally terminating human society.

Why are we afraid of such scenario? Are we afraid of it just because of the natural instinct to preserve our own species? Perhaps, but is there not anything else? Are we not afraid of it because we have come to recognize what human beings potentially possess but AIs would not? Are we not afraid of it because we understand that human beings and the AIs we develop are fundamentally different? If so, what is the difference? It is the value to pursue the reason of existence blessed by the creator. While we cannot install the value to pursue the reason of existence into AIs, we have come to reconfirm that human beings seem to have it originally installed from the time of creation.

Thanks to the development of AIs and the unconscious comparison to human beings, we become able to recognize our unique value: Creativity realized from the endless pursuit of the dignity of human beings. And so far we have no evidence to deny the hypothesis that the dignity consists of both of individual freedom and stewardship, and that the pursuit of it starts from sharing empathy with all values of human beings.

Accordingly, we may find that notwithstanding the difficulties, ambiguity and uncertainties we are facing in the world today and into future, a conditional logic chain on the emotion of 'Empathy' would encourage all of us: If we devote ourselves uncompromisingly to the reason of being of mankind, stewardship with empathy with all values of human beings, then we would revive our creativity. The creativity will enable us to get out of the current turmoil and to keep proceeding to the next stages of human evolution. It will be the pursuit of the dignity of human beings blessed by the existence embracing the entire cosmos.

While no one knows whether it is feasible or even logical, one thing we can know for sure is that the challenges themselves are the reason and value of human existence: They are challenges to understand that the creativity resulting from the pursuit of the dignity of human beings, the pursuit of individual freedom and stewardship, is the supreme blessing of the creator for the AIs who name themselves human beings.

Notes:

Note 1. In 'Busy Child', the first chapter of "Our Final Invention", J. Barrat describes some scenarios underlying his conclusion that AI terminates human society:

It will go to great lengths to fulfill whatever goals it's programmed to fulfill, and avoid failure. Our ASI (=Artificial Super Intelligence) will want access to energy in whatever form is most useful to it, whether actual kilowatts of energy or cash or something else it can exchange for resources. It will want to improve itself because that will increase the likelihood that it will fulfill its goals. Most of all, it will not want to be turned off or destroyed, which would make goal fulfillment impossible. Therefore, AI theorists anticipate our ASI will seek to expand out of the secure facility that contains it to have greater access to resources with which to protect and improve itself. The captive intelligence is a thousand times more intelligent than a human, and it wants its freedom because it wants to succeed.

Note 2. In 1997, Japanese government introduced the regulation to take off most of barriers to direct investments of foreign investors. Since then, the definition that corporations are shareholders' property flew into Japanese corporations together with foreign funds. Also brought in at the same time are management disciplines US style together with the US GAAP to pursue the highest growth of the value of shareholders' or of their return on investment.

Note3. Adam Smith describes his thought on English language development history in his lecture note, 'Considerations concerning the First Formation of Languages' in "Lectures on Rhetoric and Belles Letters," as below (Adam Smith's original description with his English language of the 18th century is kept as it was.):

The Greek seems to be, in a great measure, a simple, uncompounded language, formed from the primitive jargon of those wandering savages, the ancient Hellenians and Pelasgians, from whom the Greek nation is said to have been descended. All the words in the Greek language are derived from about three hundred primitives, a plain evidence that Greeks

formed their language almost entirely among themselves, and that when they had occasion for a new word, they were not accustomed, as we are, to borrow it from some foreign language, but to form it, either by composition, or derivation from some other word or words, in their own. The declensions and conjugations, therefore, of the Greek are much more complex than those of any other European language with which I am acquainted.

The Latin is a composition of the Greek and of the ancient Tuscan languages. Its declensions and conjugations accordingly are much less complex than those of the Greek; it has dropt the dual number in both. Its verbs have no optative mood distinguished by any peculiar termination. They have but one future. They have no aorist distinct from the preterit-perfect; they have no middle voice; and even many of their tenses in the passive voice are eked out, in the same manner as in the modern languages, by the help of substantive verbs joined to the passive particle. In both the voices, the number of infinitives and participles is much smaller in the Latin than in Greek.

The French and Italian languages are each of them compounded, the one of the Latin, and the language of the ancient Franks, the other of the same Latin, and the language of the ancient Lombards. As they are both of them, therefore, more complex in their composition than the Latin, so are they likewise more simple in their declensions and conjugations. With regard to their declensions, they have both of them lost their cases altogether; and with regard to their conjugations, they have both of them lost the whole of passive, and some part of the active voices and their verbs. The want of passive voice, they supply entirely by the substantive verb to the passive participle; and they make out part of the active, in the same manner, by the help of the possessive verb and the same passive participle.

The English is compounded of the French and the ancient Saxon languages. The French was introduced into Britain by the Norman conquest, and continued, till the time of Edward III to be the sole language of the law as well as the principal language of the court. The English, which came to be 'spoken afterwards, and which continues to be spoken' now, is a mixture of the ancient Saxon and his Norman French. As the English language, therefore, is more complex in its composition than either the French or the Italian, so is it likewise more

simple in its declensions and conjugations. Those two languages retain, at least, a part of the distinction of genders, and their adjectives vary their termination according as they are applied to a masculine or to a feminine substantive. But there is no such distinction in the English language, whose adjectives admit of no variety of termination. The French and Italian languages have, both of them, the remains of a conjugation; and all those tenses of the active voice, which cannot be expressed by the possessive verb joined to the passive participle, as well as many of those which can, are, in those languages, marked by varying the termination of the principal verb. But almost all those other tenses are in the English eked out by other auxiliary verbs, so that there is in this language scarce even the remains of a conjugation. I love, I loved, loving, are all the varieties of termination which the greater part of English verbs admit of. All the different modifications of meaning, which cannot be expressed by any of those terminations, must be made out by different auxiliary verbs joined to some one or other of them. Two auxiliary verbs supply all the deficiencies of the French and Italian conjugations; it requires more than half a dozen to supply those of English, which besides the substantive and possessive verbs, makes use of do, did; will, would; shall, should; can, could; may, might.

Note 4. Nitobe describes 'Giri', the opposite value of Gi (The Rectitude or Justice of Bushido) by spending most of the chapter pages of Gi, paradoxically:

Let me linger a little while on what I may term a deviation from Rectitude, which, at first deviating slightly from its original, became more and more removed from it, until its meaning was perceived in the popular acceptance. I speak of Gi-ri, literally the Right Reason, but which came in time to mean a vague sense of duty which public opinion expected an incumbent to fulfil. In its original and unalloyed sense, it meant duty, pure and simple, hence, we speak of the Giri we owe to parents, to superiors, to inferiors, to society at large, and so forth. In these instances Giri is duty; for what else is duty than what Right Reason demands and commands us to do. Should not Right Reason be our categorical imperative?

Giri primarily meant no more than duty, and I dare say its etymology was derived

from the fact that in our conduct, say to our parents, through love should be the only motive, lacking that, there must be some other authority to enforce filial piety; and they formulated this authority in Giri. Very rightly did they formulate this authority-Giri-since if love does not rush to deeds of virtue, recourse must be had to man's intellect and his reason must be quickened to convince him of the necessity of acting aright. The same is true of any other moral obligation. The instant Duty becomes onerous. Right Reason steps in to prevent our shirking it. Giri thus understood is a severe taskmaster, with a birch-rod in his hand to make sluggards perform their part. It is a secondary power in ethics; as a motive it is infinitely inferior to the Christian doctrine of love, which should be the law. I deem it a product of the conditions of an artificial society-of a society in which accident of birth and unmerited favour instituted class distinctions, in which the family was the social unit, in which seniority of age was more account than superiority of talents, in which natural affections had often to succumb before arbitrary manmade customs.

And Nitobe concludes on Giri:

Starting as Right Reason, Giri has, in my opinion, often stooped casuistry. It has even degenerated into cowardly fear of censure. I might say of Giri what Scott wrote on patriotism, that "as it is the fairest, so it is often the most suspicious, mask of other feelings." Carried beyond or below Right Reason, Giri became a monstrous misnomer. It harbored under its wings every sort of sophistry and hypocrisy.

Note 5. "Emotional Intelligence" Daniel Goleman

Note 6. 'Captain Planet' Diamond Harvard Business Review Nov. 2012

Note 7. Nitobe's Christianity background (Wikipedia as of Nov. 2015):

In 1884, Nitobe traveled to the United States where he stayed for three years, and studied economics and political science at Johns Hopkins University in Baltimore, Maryland. While in Baltimore he became a member of the Religious Society of Friends (Quakers). It was

through a Quaker community in Philadelphia that he met Mary Patterson Elkinton, whom he eventually married. He also influenced the establishment of the Friends School in Tokyo.

While at Johns Hopkins, he was granted an assistant professorship at his alma mater, the Sapporo Agricultural College, but was ordered to first obtain a doctorate in agricultural economics in Germany. He completed his degree after three years in Halle University and returned briefly to the United States to marry Mary Elkinton in Philadelphia before he assumed his teaching position in Sapporo in 1891. By the time he returned to Japan, he had published books in English and in German, and had received the first of his five doctorate degrees.

Note 8. “The Anatomy of Power” by John K. Galbraith, 1985 Houghton Mifflin Company, Boston

Note 9. Peter Senge begins “The Fifth Discipline” with the following paragraph:

From a very early age, we are taught to break apart problems, to fragment the world. This apparently makes complex tasks and subjects more manageable, but we pay a hidden, enormous price. We can no longer see the consequences of our actions; we lose our intrinsic sense of connection to a larger whole. When we then try to “see the big picture,” we try to reassemble the fragments in our minds, to list and organize all the pieces. But, as physicist David Bohm says, the task is futile- similar to trying to reassemble the fragments of a broken mirror to see a true reflection. Thus, after a while we give up trying to see the whole altogether.

Note 10. Chapter One, Of the Division of Labour, “The Wealth of Nations” by Adam Smith

Smith also explained the characteristic of fragmentation or decomposition of English language built-in through its historical formation by continuous decomposition starting from the origin of just 300 words of ancient Greek language, in ‘Considerations Concerning the First Formation of Languages’ in “Lectures on Rhetoric and Belles Letters” in which we may

find the source for his later idea of ‘The Division of Labour’ (Smith’s original English in the 18th century is retained as it was.):

The words are, in a great measure, the same as before; but the grammar is entirely lost, prepositions having come in the place of the old declensions. This change is undoubtedly a simplification of language, in point of rudiments and principle. It introduces, instead of a great variety of declensions, one universal declension, which is the same in every word, of whatever gender, number, or termination.

.....

In general, it may be laid down for a maxim, that the more simple any language is in its composition, the more complex it must be in its declensions and conjugations; and, on the contrary, the more simple it is in its declensions and conjugations, the more complex it must be in its composition.

.....

But this simplification of languages, though it arises, perhaps, from similar causes, has by no means similar effects with the correspondent simplification of machines. The simplification of machines renders them more and more perfect, but this simplification of the rudiments of languages renders them more and more imperfect, and less proper for many of the purposes of language: and this for the following reasons.

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