# Promotion of the Humanities and Social Sciences

## Addressing Risk Society and Matured Intellectual Society

July 25, 2012

Subdivision on Science,
Council for Science and Technology

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# Preface

The Great East Japan Earthquake that occurred on March 11, 2011 not only brought about tremendous damage to Japanese society, but also forced the science and technology to be confronted with an unparalleled impact, as well as need for reflection. What methods are available for response in a human society that suffers the aftermath of the earthquake and the resulting disasters?

The humanities and social sciences, which have as the subject of their study human beings, cultures, and societies, should make efforts to promote intellectual society, and have great responsibility for these activities. How can the researchers of the humanities and social sciences, which should contribute to well-being and happiness, face human beings and societies and conceive what research activities should be, when people are suffering from the disaster that occurred as an act of nature and may be threatened again in the future? This question forces all researchers who are engaged in or are associated with the humanities and social sciences to make efforts to provide an answer.

We, researchers of the humanities and social sciences, are asked to earnestly reflect on our activities thus far and discuss what our future activities should be, in order to fulfill these obligations. We would like to assume our responsibilities by responding squarely to the mandate from society.

How should we reexamine our research and propose new types of research? What problems are implicit in a social system that faces increasing risks at present? We are asked to provide radical solutions to these problems. These questions will be intellectually tackled and solved using a large store of various results from research thus far. For example, important suggestions will be obtained from collection and close examination of historical materials on past disasters, human activities performed in response to these disasters, and investigation of cases representing empirical and intellectual wisdom underlying these activities.

Considering that the confrontation of problems included in society should be taken as an urgent task for the time being, the Committee on Promotion of the Humanities and Social Sciences extracted and summarized challenges from three viewpoints and examined them. We are now prepared to make earnest efforts towards the five prioritized measures to be proposed in this report. By doing so, we will energetically endeavor to seek the maturation of intellectual society and prepare ourselves against risk society. At present in 2012, we would like to declare this as a message from researchers engaged in the humanities and social sciences to the people of Japan.

July 2012

Committee on Promotion of the Humanities and Social Sciences,

Chair, Koichi Kabayama

## Composition of this report

The study of the humanities and social sciences[1] includes vast fields and areas. Research activities in Japan also bring about a significant amount of outcomes even in daily activities. This report takes into consideration of the directions that are newly requested as follows;

Firstly, we propose the following three viewpoints, which are considered to be the most important for promoting the humanities and social sciences in Japan based on the "Perspectives for future scientific and technological policies in lights of the Great East Japan Earthquake",[2] as 1. Viewpoints for promoting the humanities and social sciences:

(1) Interdisciplinary integration and totality

(2) Requests upon science and social contribution

(3) Globalization and international academic community

Secondly, we will discuss the following four challenges on the strategic promotion of the humanities and social sciences, while referring to the discussions thus far at the Subdivision on Science,[3] as 2. Institutional challenges:

(1) Systematization of Joint research

(2) Formation and functional enhancement of research centers and roles of universities

(3) Fostering the next generation researchers and perspectives for new intellects

(4) Outcome dissemination and matured research evaluation

Finally, we will propose the following five measures to be taken while keeping in mind the above viewpoints, as 3. Measures to be taken for the time being:

(1)Promotion of pioneering joint research

(2)Establishment of an infrastructure for large-scale research

(3)Fostering young researchers who can be active on global scenes

(4)Enhancement of outcome dissemination by digital methodologies

(5)Improvement of research evaluation

The report intends the humanities and social sciences are important factors for creating and inheriting cultures and propose ideals to be pursued, and view the future perspectives with the total image representing people, society, and nature. We, the committee want these activities to fulfill requests from the people and history of this country.

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1 Sciences that broadly target human beings, cultures, and societies are variously called, including the humanities, the humanities and social sciences, or human and social sciences. In this report, the term "the humanities and social sciences" is used.

2 The Council for Science and Technology summarized "Perspectives for future scientific and technological policies in lights of the Great East Japan Earthquake" (approved on May 31, 2011). This document includes "verification of matters concerning the Great East Japan Earthquake from scientific and technological viewpoints," "interdisciplinary research and inter-field cooperation for problem solutions," and other viewpoints. It also emphasizes that adequate consideration should be given to international cooperation for science and technology and to promotion of cooperation between natural scientists and the humanities and social scientists.

3 The Subdivision on Science summarized "Promotion of the humanities and social sciences (report) - way to the formation of a cultural infrastructure through 'dialog' and 'verification'" (approved on January 20, 2009) and "Promotion of scientific research (interim discussion report)" (approved on January 17, 2011).

The Special Committee, Subdivision on Science concerning basic problems of science summarized "Important efforts for science promotion (summary of opinions presented thus far)" (approved on July 15, 2011), which focuses on what research promotion based on 'strategic viewpoints' should be. This summary presents "Collection of wisdom from researchers for social contribution," "Sharing of research themes for which rebuilding and systematization of wisdom are required," etc., as tasks for the time being and asks related committees to conduct the necessary discussions.

# 1. Viewpoints for promoting the humanities and social sciences

## (1) Interdisciplinary integration and totality

Those who are involved in the humanities and social sciences have tended to adhere to elaboration and sophistication of their individual fields. As a result, the humanities and social sciences have been considerably segmented due to high priority placed on rapidly advancing specialization. This tendency has lacked viewpoints for integration of wisdom and for totality that should be achieved across different fields, with the result that total understanding of human beings, society, and nature has been neglected.

Overcoming this tendency is not an easy task. However, we should closely examine methods that are already being tried for close collaboration, in an attempt to seek directions that are believed to lead to higher possibilities. The humanities and social sciences should not only evolve their own viewpoints that have been developed by themselves, but also, should achieve strategic challenges while considering appropriate cooperation with various sciences to fulfill a wide variety of requests that are newly addressed to sciences as the result of the progress of related scientific and technological fields, such as life science and new engineering technologies. Efforts in this direction should consequently include viewpoints for overcoming problems with extreme segmentation. We believe that the maturity of intellectual society will be achieved as a result of these efforts.

### (Importance of inter-disciplinary mutual understanding and research continuation)

To proceed with research activities in order to achieve total understanding of human beings, society, and nature, it is important to encourage mutual understanding among different fields in Japan, considering that it is extremely difficult to communicate with researchers in different fields because research fields tend to be clannish while scientists who conduct steady research are tolerated.

The same concept and the same term are often defined to have different meanings in different fields. It is therefore extremely important for researchers in different fields to have an attitude of trying to mutually understand "recognition frameworks" or "terminology recognition." It is also important to mutually understand that methodologies and values vary from one field to another and to proceed with study activities while having adequate discussions in order to supplement each other. It is thus important to create another recognition framework while achieving cooperation among different fields, such as making the best effort to provide the identity and methodology of one field to researchers of other fields.

If researchers share the same purpose and interest, it is expected that researchers can discuss the positioning of a particular research in the total story, with other researchers, with the results that autonomous research will be activated and that researchers can use outcomes from joint research for their own fields.

Field-to-field cooperative research will grow autonomously as stimulated by researchers

themselves. It is therefore likely that such a research will fail to be positioned as a field of expertise in the entirety of existing fields and cannot be continued without difficulty until it is established as a certain research area. It is important to have the viewpoint of providing stable continued support with respect for what is autonomously grown by researchers' efforts for communication and pursuit. In addition, continuation of research requires efforts to create opportunities to undertake joint projects with researchers in other fields.

## (2) Requests upon science and social contribution

In the humanities and social sciences, great importance has been placed thus far on the motivation of researchers. This importance is still undeniable. However, the requests addressed to researchers are becoming more advanced and diversified because research is expected to exhibit its social functions now that we have experienced the great disaster and that the present society has advanced and become very complex.

How should we think in this situation? At the very least, we have to avoid isolation that could be taken as self-complacency on the part of researchers.

What is required is to directly accept strong requests from society, accurately identify the underlying reasons and grounds, and provide functions and accounts for independent judgment. For this purpose, researchers need not only to participate in various social activities, including those planning policies for critical examination, but also to ask society to participate in research activities, in an attempt to eagerly respond to requests from society. Above all, scientists should take action themselves to find the subjects of which will help society cope with social risks that are entering a critical stage.

Promotion of so-called topic-setting type research is successful and some of such research has produced significant outcomes. This suggests one direction in which proceeds in the future. In addition, the outcome of this type of research needs to be spread[4] in a quick and well-defined way to the society from which the requests originate. Technologies and systems for outcome dissemination are infinitely open, including the development of digital techniques.

### (Importance of target setting and joint research)

When research is expected as social function, target setting is important for research that aims at social contribution.

There are a variety of ideas on the role of research: One is that the principal mission of researchers is to accumulate elemental and empirical studies and, provide optional solutions from which national and/or local governments could select to make decisions when developing or implementing policies. Value judgment is, therefore, is considered as a role of politics. Another idea is that researchers should also engage themselves in value judgment associated with policy development and implementation. Considering that there are so many ideas on the role of research, people concerned are strongly requested to set targets while understanding real society from various viewpoints.[5]

If the purpose of research is to solve problems, it is necessary to further promote research

4 Outreach (activities): Activities through which science and technology (S&T) are conveyed to people in an easy-to-understand and friendly manner, and increasing awareness of the needs and uneasiness of the public by deepening dialogues, and outcomes are reflected in the S&T activities of the entity executing such activities (White Paper on Science and Technology 2011)

5 In the 2010s, two concepts were used in EU countries: One was represented by "inter-disciplinarity" or "multi-disciplinarity" which referred to fusion in the scientific field, whereas the other concept was represented by trans-disciplinarity (TD) which was used if collaboration involved society.

based on evidence. In this case, it is also necessary to consider that viewing evidence or research outcomes too one-sidedly is likely to lead to the risk of narrowing the purpose and content of social contributions that are the original purpose.

In addition, joint research with domain specialists at NPOs, NGOs, administrative agencies, juridical organizations, as well as journalists and other people who can serve as a bridge between research and domain subjects (hereinafter referred to as “working-level specialists”) will also help scientists try to achieve social contributions.

## (3) Globalization and international academic community

It is well known that the rapid globalization that started at the end of the 20th century forced research to change significantly. And the research subjects of the humanities and social sciences greatly changed. It might be questionable whether the humanities and social sciences in Japan appropriately responded to these changes and successfully disseminated their outcomes. At present in the 21st century, a wide variety of problems, such as those about advanced and complicated society, have been raised and require immediate formation of intentions. In particular, the humanities and social sciences, unlike natural sciences in general, have tended to adhere to the characteristics of the native language due to their research properties, and have often been unmotivated in responding to activities derived from foreign countries.

However, as the situation proceeds, research outcomes that are worthy of review and reference are accumulated and competition and collaboration under global standards are becoming common in the international academic community. Aside from a few exceptions, there can be no level of difference inside and outside the country, even in the fields of the humanities and social sciences.

In this situation, researchers of the humanities and social sciences need to answer these questions: How can we compete and collaborate with foreign countries? And, how can we accept outcomes from international collaboration? In addition, Japan is confronted with many challenges, such as the recent earthquake disaster, declining birthrate, and graying society. We need not only to respond passively to globalization trends, but also to consider it our responsibility to discuss Japan-derived research in the international academic community, take leadership in these research fields, and make contributions.

### (Importance of international exchange and outcome dissemination)

In this age of global innovation, in which both competition and collaboration are increasing, excellent foreign researchers who are interested in Japanese studies come to Japan. Similarly, Japanese researchers who are interested in events overseas should be involved in the competition with foreign researchers in research environments overseas, and disseminate their outcomes to the world. By building, maintaining, and improving the research environment, in which excellent researchers can gather from the world, the humanities and social sciences will make further advance in Japan. At the same time, universities need to improve their supporting system of international activities.

The targets of the humanities and social sciences are common to the inside and outside of the country. For example, various types of research being conducted in Japan, such as work on social systems in a declining birthrate and graying population, will be valuable for other countries as well. If international dissemination and international exchange are enhanced, Japanese researchers will have opportunities to discuss with foreign researchers who have the perceptions different from those of Japan-derived research. These international activities will lead not only to the discovery of values apparent as the result of

comparison, but also to the field-to-field collaborations and the exercise of international leadership.

# 2. Institutional challenges

## (1) Systematization of joint research

It is true that the humanities and social sciences have progressed through a long history as stimulated by personal motives. On the other hand, many years have already passed since the necessity of large-scale joint research involving many researchers and organizations was recognized in response to an increased level of research. Actually, such efforts produced some examples of joint research worthy of citation. However, these joint research methods were not widely shared and these examples were merely praised as unique exceptions. In recent years, there is strong demand for the qualitative and quantitative improvement of joint research for a number of reasons, including achieving effective and efficient research. Although communication between different fields is often triggered by fortuitous personal contacts, empirical research systemization is also indispensable. Pertinent institutions should study new systems for joint research in the humanities and social sciences using specialized methods. Physical support for this purpose is also required.

### (Direction for building the research promotion institution)

In Japan, joint research projects[6] so far have been based on "dialog with others," which characterizes research methods in the humanities and social sciences.

In the future, in order to ensure that the humanities and social sciences can further grow, it is necessary to carry out research promotion projects and institutions stably and sustainably, by building a joint research promotion framework based on the viewpoints aiming at integrity, responses to real society, and globalization, while making use of the characteristics of individual projects that have been separately carried out so far.

Specifically, in order to ensure that outcomes of research efforts can be implemented in society, it is expected to build a framework that makes it possible to expand projects across boundaries of individual support schemes, according to the possibility for future research progress.

As many cases of joint research based on inter-field cooperation require much time and work, it is important to proactively provide venues for continuous communication. In this context, it

6 The Ministry of Education, Culture, Sports, Science and Technology has undertaken research promotion projects concerning the humanities and social sciences from the following viewpoints:
○ Interdisciplinary or trans-disciplinary efforts to solve and address problems human beings face at present
○ Joint research with scholars in different fields
○ Research for "symbiosis" between Japan and the research target area
○ Research intended to resolve economic and social problems and challenges Japan will face in the near future
○ International joint research on Japan utilizing "Japan-related" resources existing overseas
Note that, as the result of the review of competitive funding in the Ministry of Education, Culture, Sports, Science and Technology, research promotion projects concerning the humanities and social sciences were integrated in 2012 into the "topic-setting program to advance cutting-edge humanities and social sciences research," which is managed by the Japan Society for the Promotion of Science (JSPS)

is necessary to secure front-line researchers, who can find points of field-to-field contacts and to create research communities that allow mutual communication between academic and social worlds. It is also important to strengthen cooperation with think tanks that integrate research into government policies. Universities should provide environment in which researchers who are highly motivated for joint research can directly meet researchers and working-level specialists in various fields inside and outside the university or institution. If these activities lead to an increased number of researchers who are willing to participate in joint research, it is expected that the entire world of the humanities and social sciences will change.

It seems that substantial inter-field collaboration or large-scale joint research plans are implemented more effectively by deepening challenges in individual research subjects Therefore, it is also necessary to enhance basic "bottom-up" research as a prerequisite for encouragement of joint research. At present, there are relatively few new applications for the Grant-in-Aid for Scientific Research from researchers in the humanities and social sciences. Further efforts for intelligent research should be encouraged.

## (2) Formation and functional enhancement of research centers and roles of universities

As discussed earlier, research activities in the humanities and social sciences heavily depend on the personal motivation of researchers, and how the outcome of research is evaluated represents the responsibility of researchers. Therefore, intensive investment in research resources tends to be limited in the field of the humanities and social sciences. Obviously, there are many respectable cases in the distinctive research results, although their scale is small. On the other hand, we cannot ignore the fact that there are themes that concern huge or extensive problems and therefore require the participation of a large number of researchers in a well-organized manner. In the field of the humanities and social sciences, some attempts have already been made to implement intensive research systems that include installing research centers. These attempts produced appreciable results although these results may not be comparable with those achieved in the field of natural sciences. It seems important to explore the new direction for cooperative and intensive research organizations while referring to information on past successful attempts. When doing so, it will be practical to establish research centers that can work efficiently, taking into consideration human networks and geographic conditions. Especially when attempting to select candidates for research centers, it is necessary to explore new possibilities so as to further activate excellent research while learning from experiences accumulated so far and assuming universities and similar organizations that have conventionally functioned as research centers.

### (Direction for enhancing research organizations)

In order to increase the attractiveness and international presence of the humanities and social sciences in Japan, it is necessary not only to enhance the capability of promoting the creation of new science fields across existing boundaries, but also to establish research centers with consideration on science fields with high research potential.

Since the establishment of the Joint Usage/ Research Center system in 2008, eighteen institutions in total (including both national and private universities) have been approved as the humanities and social science research centers. To further vitalize and develop research, it is considered helpful to establish more research centers, and for public and private universities and Inter-University Research Institutes, which already have a research center each to make efforts to supplement each other by utilizing all resources they have. These organizations are expected to be venues where various researchers can build teams to promote joint research and perform evaluation functions.

In order to enhance outcome dissemination in international academic community through cooperative and intensive research organizations, it is indispensable to activate the function[7]

7 At present, the National Institutes for the Humanities, the Inter-University Research Institute Corporation, bears various functions including the following: the function for building inter-center networks through organizational

of research centers as an information station and to achieve mutual linkage between research centers in order to establish database and other common infrastructures. Individual universities are expected to make efforts to enhance outcome dissemination to researchers and working-level specialists inside and outside the country while reinforcing cooperation with the National Institutes for the Humanities and related Joint Usage/Research Centers as well as activating education and activities in graduate schools.

linkage with multiple universities concerning area studies, the function for mediating international exchange by concluding agreements with organizations overseas and by assigning researchers to research organizations belonging to it, and the function for promoting international joint research and analysis on Japan-related materials through collaboration with universities, research institutes, museums, and other organizations inside and outside the country.

## (3) Fostering the next generation researchers and perspectives for new intellects

The humanities and social sciences have included appropriate systems for fostering the next generation. However, the operation of these systems has heavily relied on the wisdom of front-line people. It has now been pointed out that, as environmental conditions have changed, these conventional systems are confronted with difficulty in running smoothly. The problems that have been identified include an unbalanced personnel structure, "inward-looking" attitude, and mental conservatism that tends to accept present status as it is. In this situation full of objective difficulties, what improvement measures can be taken to foster the next generation? To eliminate obstacles resulting from conventional practices and cultivate new intellect, it seems required to bring next-generation development activities, which have generally been handled on a case-by-case basis, into a venue common to all the humanities and social sciences and to explore possibilities at the venue. In the course of this effort, it will be necessary not only to promote institutional reform and enhancement but also to make people concerned to change their viewpoints. Furthermore, our field of view should include the exploration of the direction for supporting and fostering next-generation researchers to overcome the recent so-called "inward-looking" tendency.

### (Direction for fostering human resources)

To foster human resources who can understand the significance of inter-disciplinarity and act based on this understanding, universities need to implement an education program to be across faculties/departments and to pursue the relationships between science and real society.

It is also necessary to appropriately appreciate people who eagerly talk with a wide range of people in society and are willing to seek interdisciplinary cooperation in addition to establishing methods to appropriately verify the academic and social values of interdisciplinary research, and to succeed to the research with evaluation.

It is important for universities to raise students' awareness of studying abroad through international exchange activities or special education/research, in order to foster human resources who understand various perspectives and values different from their own by studying abroad or through social experiences and seek new challenges.

It is also necessary to study, in each field of science, what evaluation items should be assigned higher priorities in the light of human resource development and share information on the differences in evaluation items among fields. For example, some fields obligate their postgraduate students to submit their doctoral thesis to a peer reviewed journal, whereas these are many fields that place a higher evaluation on research books than on papers. Considering this characteristic of the humanities and social sciences, it is important for some fields to set up multiple evaluation schemes, that young researchers should be encouraged

not only to submit their papers to a peer-reviewed journal, but also attempt at or focus on writing of a doctoral thesis having a content and length equivalent to those of a scientific book, and to receive a peer review when the outcome is published as a scientific book. As discussed so far, it is important to motivate young researchers based on the nature of their particular field of science.

In any field, research must be evaluated based on reviews by people from a wide range of academic fields. It is important to foster human resources based on an appropriate evaluation institution. For the evaluation, consideration must be given to ensure that assessors will not be limited to the direct supervisor of the researcher or to researchers from a small group.

## (4) Outcome dissemination and matured research evaluation

There is an increasing and pressing demand for expansion of outcome dissemination of research because of the transformation of national universities into corporate entities and people's increasing interest. Parallel with those, greater emphasis is placed on the necessity for researchers to take responsibility for responding to requests from support of the nation or society. In these circumstances, researchers are now required to disseminate the outcome of their research if they receive financial and personnel aid for their research activities.
Conventionally, while natural sciences, engineering, life sciences, and similar fields have mature evaluation schemes, the humanities and social sciences have not been eager to introduce large-scale objective evaluation systems, in the belief that evaluation should be intrinsic and should be qualitative rather than quantitative. Generally speaking, however, evaluation before and after receiving aid or support is unavoidable and the humanities and social science researchers should eagerly discuss and propose how research evaluation should be carried out.
Although technical difficulty is obviously higher than in other fields, it is the obligation of researchers to propose evaluation methods persuasive to the general public.

### (Direction for enhancing outcome dissemination and matured research evaluation)

In order to increase incentives for social contribution of research, it is necessary to embody the proposal that is presented to society as the outcome of each research so that the evaluations connected to the influence on the researcher who is engaged in the project. Evaluation should be conducted considering how the research connects to society.

For research that aims to solve a problem in cooperation among different fields, evaluation is usually conducted at the level of technology development or problem solution. However, in many cases of research in the humanities, the target of evaluation is the presented recognition framework because the achievement of a specific technical level cannot be accessed. It is necessary not only to encourage researchers in the humanities and social sciences to eagerly participate in scientific or technological projects, but also to consider the differences among fields in outcome evaluation methods and evaluation viewpoints, and to be aware of viewpoints from people living in real society.

In addition, it is necessary to further enhance international dissemination capability, for example, by transmitting overseas data about research on Japanese literatures, history, performing arts and economy and social theories specific to Japan, and by translating papers and other research outcomes to English and other foreign languages. It is also necessary to improve the current situation that holding open seminars with researchers overseas and writing English papers are not appreciated so well.
Research in the humanities has an aspect that researchers suggest a recognition framework in their own words and succeed while analyzing from various viewpoints using interactive or

scientific/factual methods. Appropriate respect should be given not only to research that produces outcomes in a short period of time, but also to attempts at research that requires a long time to produce outcomes.

# 3. Promotion measures to be taken

The previous chapters of this report described the viewpoints that are important especially at present to promote the humanities and social sciences as well as the challenges that should be achieved to promote research strategically.
These themes should be studied speedily and innovations based on the studies should be propounded and implemented as early as possible. This chapter emphasizes specific promotion measures which seem to be feasible at present.

## (1) Promotion of pioneering joint research

### (Promotion of topic-setting program to advance cutting-edge humanities and social sciences research)

Joint research that involves the humanities or social sciences are roughly divided into three types in terms of the purpose: <1> "area cultivation" type research that aims at breakthrough of research method innovations through interdisciplinary integration, <2> "responding-to-real-society" type research that seeks solutions to various problems in real human society, and <3> "Global-initiatives" type research that researchers take part in and lead international research community. When building a framework that supports these types of research, the following requirements need to be considered:

<1> Research aiming at interdisciplinary integration for the purpose of "area cultivation"

It is necessary to encourage a group of researchers from different science fields to pursue challenges that can bring unexpected breakthrough to new research fields and to continuously improve methodologies.

<2> Research that makes social contribution by responding to real society

It is necessary to build an effective framework for social contribution while obtaining help from working-level specialists who can bridge between research outcomes and working-level tasks, in an attempt to assure seamless transitions from research promotion to outcome dissemination. It is also necessary to study about the introduction of social viewpoints.

It also seems important to try examination and evaluation conducted by a group that includes working-level specialists who have expertise in the related fields or experience in real society, although the roles and duties assigned to these working-level specialists may vary depending on the content of research. When a joint research project involves working-level specialists, research cycle assumed by researchers does not always agree with demand cycle assumed by the working-level specialists. Therefore, project management is indispensable to keep a good balance between the research level and the working level from the viewpoint of coproduction of knowledge. We also need to bear in mind that incentives for joint research vary from one research field to another.

<3> Research that seeks global initiatives

It is necessary to promote international joint research in various fields of the humanities and social sciences, to build an international network for communication with researchers overseas, and to globally disseminate research outcomes.

These cases of joint research share the common characteristic that there is a strong requirement for understanding the research target according to various perceptions ranging from those of the humanities, social and natural sciences to those of real society. It is therefore required to focus on coproduction of knowledge when carrying out projects while seeking interdisciplinary integration. As for project management, taking account of the characteristics of the humanities and social sciences[8], projects that would produce excellent outcomes in the light of coproduction of knowledge, should be continued from a long-term perspective, rather than ending up as short-term projects. The Japan Society for Promotion of Science (JSPS) needs to build a support framework that makes it possible to extend the research period based on evaluation results, considering the experience in joint research projects of the humanities and social sciences.

In addition, topic-setting process to increase the feasibility of policies based on the basic policies and discussions of the advisory board such as the Council for Science and Technology is required. In this context, it is also important to keep track of research trends overseas in various fields of the humanities and social sciences, for example, by utilizing the investigation function of the Japan Society for the Promotion of Science (JSPS).

Regarding application process, it is also encouraged to notice topics and requirements in advance, to accept broader topics in each research area, and to build a review system that promotes joint research.

It is also necessary to introduce a financial support that enables young researchers to carry out interdisciplinary projects, even though they may be of small scale, in an attempt to expand the base of coproduction of knowledge.

## (Examples of topic-setting)

The report[9] of the Subdivision on Science in January 2009 suggested some examples of research topics derived from global issues in the near future (poverty, energy, and population issues, balance between environment preservation and economic growth, and coexistence

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8 For example, research in the humanities that creates and presents a recognition framework showing what is the problem, rather than presenting a solution to the problem are often recommended and reputed. It is therefore necessary to manage the project to ensure not only that individual project members can provide their own outcomes according to the role assignment plan set up during the planning stage of the joint research project, but also that workshops are held repeatedly for project members to reconfirm the importance of a recognition framework in the process of coproduction of knowledge and to share understandings. For researchers in the fields of politics or sociology, it is also important to join international networks and keep communication with researchers overseas so that they can participate in venues that raise argument points about "what are universal subjects at present" and proceed with their research in the light of these argument points.

9 Promotion of the humanities and social sciences (report) - Way to Forming the Civilization Basis Through "Dialog" and "Corroboration" - (January 20, 2009; Subdivision on Science, the Council for Science and Technology)

of civilizations with different values) as well as Japan's issues in the near future (declining birthrate and graying population, improvement of life quality, environmental issues in East Asia, clarification and breakthrough of restrictions on Japanese economy growth, issues related to ethics and consensus formation for application of science and technology outcomes to society). These are still important research topics at present.

In addition to the above, there are other research topics that should be promoted by interdisciplinary integration and cooperation with society, as listed below. Note that the list contains examples at present and needs to be reviewed continuously in the future.

□Social system which enables appropriate responses in emergency

In emergency such as earthquake disasters or new infectious diseases, problems that cannot be handled by existing social systems may arise and paralyze city's functions and transportation systems and disrupt social order. Therefore, social risk management and value judgment are demanded in case of possible emergencies. To fulfill this demand, it should be studied ideal new social systems that should exist in order to cope with the present "risk society."[10]

□ Creation and spreading of new science, technologies, or institutions derived from social background, cultural soil, etc.

In the future, it is expected that various sciences, technologies, and institutes that have social values will be created and propounded. New technologies or new institutions demanded by human society should be studied in the light of engineering and economics as well ethnography, religious studies and psychology etc.[11]

□ Design of science and technology institution that seeks harmonious development of Asia

In the future of Asia, collaborative development is required in addition to innovation competitions. It should be studied how to design the science and technology institution in order to address cross-border problems in the condition that the technological development level varies among countries. When conducting this study, it is necessary to

10 Examples include the following:
○ Study by jurists, medical experts, etc. on what social systems should exist in emergency -- for example, what legal rules should be established in advance to ensure that external medical experts who enter the affected area to perform medical aid activities immediately after a disaster can share a huge amount of personal medical data held by local medical institutes, etc.
○ Study on what systems, including legal rules, should exist to enable re-construction of supply chains in an emergency such as an earthquake disaster
○ Study on decision-making management from viewpoints of behavioral economics, history, politics, sociology, psychology, etc. on the assumption that autonomous distributed decisions are made at each site in an emergency

11 Examples include the following:
○ Understanding of instinctive avoidance of life manipulation with artifacts, ideological background underlying religions or indigenous beliefs, and other personal or social elements. This understanding is indispensable when introducing or spreading new technologies, such as gene-recombination technology, operations by medical robots, and depression treatment using fMRI.
○ Viewpoints of making good use of art engineering (design engineering) while considering human senses/feels and designs and pursuing easy use in the course of product development will also help resulting products to convey natural science outcomes to society (thus increasing people's understanding).

seek development methods considering the current cultural differences among fields at present from the viewpoints of history, economics, politics, jurisprudence, and other studies.[12]

## (Expansion across project and institution frameworks)

Many topic-setting research projects are promoted on a large scale mainly in natural science fields. To raise the level of basic joint research until the outcomes can be implemented in society, it is necessary to include the participation of researchers of the humanities and social science in the requirements for the natural science projects. If "Topic-setting program to advance cutting-edge humanities and social sciences research" which is small-scale basic joint research centering on the humanities and social sciences, not only contributes to the progress of the humanities and social sciences, but also to natural sciences, it is also essential to develop the program across project/institution boundaries. One of the suggestive examples is to develop the program to joint research close to the implementation stage, such as Strategic Creative Research Promotion Projects (sociotechnical research and development), which make use of knowledge of various fields to solve specific social problems.

In addition, if a project of joint research of the humanities, social and natural science is expected to make progress for area cultivation, it is desirable that group researchers willing to study in cooperation among different fields should be supported and appropriately evaluated according to the provisions regarding Grant-in-Aid for Scientific Research on Innovative Areas, so that further development can be achieved.

12 Examples include the following:
○To address cross-border pollution and other problems, obtain knowledge useful to establish international rules that are expected to solve pollution problems, while taking into consideration the differences in valuation norm and social institution, etc. among countries.

## (2) Establishment of an infrastructure for large-scale research

### (Improvement, enhancement, and cooperation of research centers)

In order to promote creative research in the fields of the humanities and social sciences, it is necessary to establish networks of researchers and inter-university networks based on agreement between public and private universities and to build research centers that will act as the core of the networks. For this purpose, it is necessary to support universities in building research centers if the universities have distinctive facilities and materials, considering the research activities of the existing Joint Usage/Research Centers and the efforts for building/maintaining such centers. It is also important to support in enhancing inter-university network bases where distinctive research is conducted even though the scale of research may be small because the efforts of research facility enhancement for such universities as private universities may not have always been sufficient.

### (Promotion of large-scale projects)

Large academic research projects are mainly led by Inter-University Research Institutes, Joint Usage/Research Centers, etc. They play an important role in collecting leading-edge technologies and knowledge to outface unexplored research topics, bringing drastic advances in each research field, and leading world's academic research.

The "Roadmap for the promotion of large scientific research projects"[13] lists up large-scale research projects like building research centers using existing the humanities and social science bases. Building a database of Japanese historical literature that form the backbone of Japanese culture and making an integrated social science database solution network that will promote leading-edge research for sustainable society creation are examples of such large-scale projects.

These large-scale research projects contribute not only to the building of the basis of the humanities and social sciences, but also to the dissemination of Japanese cultures to the world and the promotion of interdisciplinary research encompassing various fields of social sciences. We need to promote these large-scale projects strategically and systematically according to a plan in a long-term perspective while obtaining nation-wide consent from society and people, on the assumption that the projects are agreed to by researcher communities and proved to be appropriate in terms of the entities responsible for the projects, the organizations for joint use and the plans for the projects, etc.

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13 The Working Group on Large Scientific Research Projects, Research Environment Basis Commission, Subdivision on Science, Council for Science and Technology (hereafter abbreviated as the Working Group) established a roadmap (approved on October 27, 2010; revised to the "Roadmap 2012" on May 28, 2012) that summarized evaluation results, main merits, challenges, considerations, and other specifics of each research project, based on the Master Plan 2010" (*) drawn out by the Science Council of Japan to evaluates projects from pure scientific viewpoints, for the purpose of clarifying the priorities to be assigned for the purpose of large-scale project promotion.

(*) The Science Council of Japan collected information on the concepts of large research projects planned in researchers' communities in each field and evaluated the projects from pure scientific viewpoints. The Council drew out the "Master Plan 2010" (on March 17, 2010) that summarized the purposes and meanings of 43 projects in seven fields that were judged as truly necessary for the development of Japanese academic research, sciences, and technologies. (The "Master Plan 2010" was revised on September 28, 2011, to the "Master Plan 2011" that covers 46 projects in seven fields.)

## (3) Fostering young researchers who can be active on global scenes

To foster and secure talented human resources with international perspectives who will lead Japan's sciences in the future, it is very important to provide young researchers with opportunities to eagerly study in an international research environment with competition with researchers from various countries.
An effective measure to achieve this purpose is a combination of two types of support activities for sending researchers overseas. One is to support young, highly-talented researchers so that they can study in specific universities or other institutions overseas for a long period of time, based on their own research plans. The other is to support universities and other institutes so that they can send their young researchers to overseas according to their own organizational international research strategy, so that the researchers can be given opportunities to tackle various challenges.

To let human resources pursue research career in the humanities and social sciences with high hopes, it is necessary to take measures so that young researchers can have various prospects in their career paths, both inside and outside the country. Universities and other institutes need to make organizational efforts to allow young researchers to establish various career paths, for example, by offering lectures, seminars, long-term internship programs and other career development opportunities, so that young researchers can think freely and widen their views to open up new research horizons, and can be active in various fields.

In order to foster next-generation researchers who can be active on the global scene, it is important to enrich faculty's education globally, improve the environment for promoting students' study overseas, and promote international educational cooperation with universities overseas while ensuring that the quality is guaranteed internationally so that even undergraduate students can study overseas with a certain purpose.
In order to develop highly-skilled human resources who can understand the nature of things from a comprehensive viewpoint, take initiative in overcoming crisis and challenges, and demonstrate leadership for sustainable development and growth of human society, it is also necessary to make efforts to train talented students to become leaders who can be active on global scenes of private sector, universities and government agencies, by establishing and implementing quality-guaranteed degree programs across boundaries of specific fields.

## (4) Enhancement of outcome dissemination by digital methodologies

### (Improvement of the Grant-in-Aid for Scientific Research project for international information dissemination capability enhancement)

Journals that are periodically issued by academic institutions have played an important role in the dissemination and spreading of research outcomes. However, now that society has become more computerized, it is becoming more important to enhance international information dissemination capability.

For this purpose, it is necessary to review the "academic journals" category of the Grant-in-Aid for Scientific Research (Grant in Aid for Publication of Scientific Research Results) system that supports academic institutions in issuing their journals because the support has been limited so far and to improve the pertinent institution, including the systems that evaluate efforts for international information dissemination and support open-access journal publication. In this case, it is required to evaluate appropriately not only the academic value of the journal, but also its feasibility of projects planned by the academic institutions in the light of enhancing international information dissemination capability.

### (Outcome dissemination of research using institutional repositories)

At universities and other research institutions, institutional repositories[14] are being built as archives to electronically collect and disseminate outcomes produced through various intellectual activities. Institutional repositories hold university bulletin papers and many other documents of the humanities and social science and tend to be used not only by researchers, but also by ordinary people widely. Therefore, increasing opportunities for quickly and widely disseminating research outcomes through institutional repositories will help promote communication with society and activate exchange among researchers.

In order to open up new possibilities of institutional repositories useful for academic communication, universities should make organizational efforts to improve institutional repositories, encourage researchers to understand the significance of institutional repositories, and promote the usage of institutional repositories, for example, by adding education-related information and other various education and research resources to the institutional repositories.

On the other hand, research book publication support is still important because research books, which are written by researchers to describe the process from problem finding to

14 Institutional repositories play significant roles in many aspects. Researchers can contribute to academic information distribution innovation by registering their own papers and other works with institutional repositories. Universities can use their institutional repositories to quickly publish and disseminate the outcomes of their education and research activities, fulfill accountability to society on their education and research activities, and store intellectual products for long periods. The content of institutional repositories is diversified -- it includes various types of intellectual products, such as papers, books, research reports, and educational material. However, university bulletin papers currently represent more than 50% of all content because their copyrights can be handled easily. At present, institutional repositories are built and run mainly by university libraries. The National Institute of Informatics (NII) also eagerly supports these efforts, for example, by providing a shared repository system.

resolution in their own words, provide methods by which people can evaluate the academic level of research.

## (5) Improvement of research evaluation

The "Guideline for Evaluation of Research and Development in MEXT (Ministry of Education, Culture, Sports, Science and Technology)" (February 17, 2009)[15] lists considerations for evaluation of academic research. Regarding the evaluation of the humanities and social science research, it states that "the humanities and social sciences are categories of science that focus on various phenomena that occur in human spirits, cultures, human beings, and societies and interpret these phenomena and gives meanings to findings. It is crucial to be aware of that individual value largely influences on any evaluation."

The "evaluation of education and research statuses of national universities and Inter-University Research Institutes" conducted by the National Institution for Academic Degrees and University Evaluation (NIAD-UE) defines a wide variety of creative activities as "research activities," including papers, books, conference presentation, translation and introduction of overseas academic books, literary works, dictionary compilation and creation of related databases, creation of investigation reports contributing to policy formation. According to this definition, the evaluation grabs research activities.

Primary evaluation of academic research is a peer review. For peer reviews, it is necessary to make efforts to secure fairness and transparency, encourage researchers to further advance research by, for example, evaluating the attitude towards creation, and respect aggressive and developmental approaches.
In addition, it is necessary to increase the number of evaluation viewpoints considering the characteristics of the humanities and social sciences while deepening discussions of what type of review would be ideal. For example, it is required to evaluate those outcomes as research activities, such as outcome disseminations and outreach activities through writing books that help people enrich their cultural literacy, open lectures, media, etc., and creation of indexes and lists of Chinese classic, Japan studies, and other literature. It is also necessary to recognize the following international activities as research activities for evaluation: translation of rare Japanese classic literature and excellent literary studies to foreign languages, co-authored international papers, and research activities overseas. It is also important to have a perspective for evaluating the contribution to international research activities, such as international institutionalization of scientific societies.

Before the contribution of research to problem resolution can be further promoted, interdisciplinary research aiming at new area cultivation must be appropriately evaluated. When evaluating such a research, it is important to evaluate not only the academic level of the research, but also the contribution to the research community (which, for example, might be offered by a valuable database built in the course of joint research) efforts for cooperation

15 Guideline that summarizes the basic concepts for evaluation of research and development activities that pertain to the duties of the Ministry of Education, Culture, Sports, Science and Technology

with working-level research participants for the outcome dissemination of research. The evaluation emphasized here is also recognized as evaluation of outcome dissemination of research activities. Therefore, it is important for working-level specialists to evaluate who actually share and use the research outcomes is important. The study on how to select appropriate assessors must be continued.

Although suggestion and viewpoints mentioned above may not be sufficient to evaluate the possibility of future development of the humanities and social sciences, they represent a part of the characteristics of these sciences. Therefore, they should be deeply considered when the "Guideline for Evaluation of Research and Development in MEXT" is revised. It is also expected to be appropriately reflected on the viewpoints of research project examination and evaluation, and on the criteria for university researcher recruitment.

# Promotion of the Humanities and Social Sciences Addressing Risk Society and Matured Intellectual Society

o How the humanities and social sciences contribute to those problems concerning well-being and happiness.
o Nine sessions were held from May 2011 to June 2012 in an attempt to answer the question.

From three viewpoints, the Report has identified four institutional challenges to urgently address the current society and proposed five prioritized measures to be taken..

## 1. Three viewpoints for promoting the humanities and social sciences

Rapidly advancing specialization and lacked viewpoints of integration and totality across academic disciplines.

### (1) Interdisciplinary integration and totality

Scientists should proceed with study through adequate discussions so that they could mutually understand their different methodologies and values between different disciplines and that they could complement each other.

To address highly advanced and complex society and disasters, social functions of science is expected.

### (2) Requests upon science and social contribution

Positive scientific responses to social needs by scientists' participation in social activities and stakeholders' involvement in research activities.

Adherence to native-language characteristics leading to indifference in foreigners and foreign-derived activities.

### (3) Globalization and international academic community

A duty of Japanese scientists is to bring original sciences to international community and take leadership there, rather than passively responding to globalization trends.

## 2. Four institutional challenges

### (1) Systematization of joint research

o To run research promotion programs and institutions in a stable and sustainable manner.
o To build a framework that makes it possible to expand projects across individual promotional programs in order to ensure that research outcomes lead to the fruition in society.

### (2) Formation and functional enhancement of research centers and roles of universities

o The research centers should have their functions activated and cooperate with each other to allow a larger number of researchers to participate in those centers in a well-organized manner.

### (3) Fostering the next generation researchers and perspectives for new intellects

o To implement education programs seeking for new relationship between real-society and academia.
o To foster young researchers based on appropriate evaluation systems.

### (4) Outcome dissemination and matured research evaluation

o To consider different viewpoints on research outcomes and evaluation between disciplines, taking account of viewpoints of stakeholders in real-society.
o To appreciate challenging research activities requiring a long time to get outcomes.

# 3. Five promotion measures to be taken

## (1) Promotion of pioneering joint research

[Promotion of topic-setting program to advance cutting-edge humanities and social sciences research]

o Establishment of a framework that supports joint research for the following three purposes:
- Research aiming at interdisciplinary integration for the purpose of "area cultivation"
- Research for social contributions by responding to real-society
- Research for global initiatives

o Establishment of a support framework that makes it possible to extend research period based on evaluation results

o Following overseas trends in the humanities and social sciences

o New programs specially supporting young researchers

o Priority topic-setting for joint research to be promoted

[Examples of topic-setting]
- New social systems to enable appropriate responses in an emergency
- Creation and application of new sciences, technologies, or institutions based on the social and cultural background, etc.
- Design of a science and technology institution seeking for co-operative development in Asia

[Expansion across project and institution frameworks]

o Further expansion owing to such outcomes of the "Promotion of topic-setting program to advance cutting-edge humanities and social science research" (JSPS) project that also contribute to natural science in a way that influences joint research closer to the fruition stage.

o Further development based on appropriate evaluation of research activities supported by Grant-in-Aid for Scientific Research on Innovative Areas, etc.

## (2)Establishment of an infrastructure for large-scale research

[Improvement, enhancement, and cooperation of research centers]

o Support for research centers according to their efforts to promote Joint Usage/Research Centers.

[Promotion of large-scale projects]

o Promote large-scale projects strategically according to a plan in a long-term perspective while obtaining nation-wide consent from society and people, on the assumption that the projects are agreed upon by researcher communities and proved to be appropriate in terms of the entities responsible for the projects, the organizations for joint use, the plans for the projects, etc.

Example: A new Japanese historical literature database

## (3) Fostering young researchers who can be active on global scenes

o Sending highly talented young researchers to overseas

o Efforts for allowing young researchers to establish various career paths

o Improvement of teachers' global education potentiality, improvement of the environment for promoting students' study overseas, and educational cooperation with universities overseas

o Fostering research leaders who can be active on global scenes

## (4) Enhancement of outcome dissemination by digital methodologies

[Improvement of the Grant-in-Aid for Scientific Research project for international information dissemination capability enhancement]

o Improvement of the Grant-in-Aid for Scientific Research (Grant-in-Aid for publication of scientific Research Results) system to evaluate those efforts to enhance the capability of international information dissemination , and to support open-access magazine publication, etc.

[Outcome Dissemination of education/research using institutional repositories]

o Improvement of institutional repositories at universities and promotion of the awareness of their significance by researchers belonging to these universities

## (5) Improvement of research evaluation

o Improve evaluation items considering the characteristics of the humanities and social sciences while deepening discussions of what reviews should be.

Examples: - Various outcome dissemination and outreach activities
- Creation of indexes and lists of Chinese classic and Japanese literature
- Translation of excellent studies on rare Japanese classic literature to foreign languages, co-authored international papers, research activities overseas, etc.

# Committee on Promotion of the Humanities and Social Sciences, The 6th session of Subdivision on Science, Council for Science and Technology (2011−2013)

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