Form 3-3-2

Japan-US Brain Research Cooperative Program
The Report of Information Exchange Seminar in 2009 fiscal year

[field: other]

1. The Seminar Title: Development of social brain

2. The Term: From Y.2010 M.1 D.23 To Y.2010 M.1 D.24

3. The Location: The University of Tokyo, Tokyo

4. The Representative's Name, Title and Affiliation:

Japanese Coordinator: Shoji Itakura, Associate Professor, Kyoto University

US Coordinator: Andrew Meltzoff, Professor, Washington University

5. The Participants:

Japan: The Invited participants 7 people The others 106 people

Name, Title and Affiliation of the Invited participants

Atsushi Iriki, Team Leader, RIKEN

Masami Yamagichi, Professor, Chuo University

Hideki Ohira, Professor, Nagoya University

Kazuo Hiraki, Associate Professor, The University of Tokyo

Gentaro Taga, Professor, The University of Tokyo

Minoru Asada, Professor, Osaka University

Shoji Itakura, Associate Professor, Kyoto University

US: The Invited participants 7 people The others 1 people

Name, Title and Affiliation of the Invited participants

David Liu, Assistant Professor, University of California, San Diego

Andrew Meltzoff, Professor, University of Washington

Peter Marshall, Associate Professor, Temple University

Jenifer Pfeifer, Associate Professor, University of Oregon

Kevin Pelphrey, Associate Professor, Yale University

Peter Mundy, Professor, University of California, Davis

Sarah Paterson, Associate Professor, Children's Hospital of Philadelphia

6. The Abstract and the Significance of this seminar:

The goal of this joint US-Japan workshop on the "Development of the Social Brain" is to assemble leading developmental neuroscientists from the US and Japan for the purpose of exchanging scientific information, building a model and theory of social brain development, and fostering research collaborations between American and Japanese scientists that advance theory and practice. In brief, we seek to bring together American and Japanese developmental brain scientists to exchange scientific information and ideas and foster research collaborations. The workshop will provide an important opportunity to advance the neuroscience of social growth and development, which, in turn, will impact domains stretching from innovative theories of child development to unraveling the mysteries of social-communicative disorders such as autism. The workshop participants have been carefully selected to be leaders in the field and to cover the complex interactions of social, cognitive, affective, neurobiological, maturational, and molecular processes that contribute to brain development. We seek to provide a unique forum for these leading American and Japanese researchers to exchange and integrate findings as well as to develop theories and models to generate future interdisciplinary US-Japan research collaborations.

7. The result of this seminar and its implication for future perspective:

In this seminar, our goal was to integrate the new knowledge from the various research domains concern to the development of social brain, such as developmental psychology, developmental neuroscience, information science, neuroscience, and developmental cognitive robotics. We confirmed that even from the various research domains we could have fruitful discussion in a same topic. From such a fruitful discussion, we obtained new idea or possibility of mechanism in social brain development. For example, we may discover the mechanism of neonatal imitation, discovered by Dr. Andy Meltzoff (invited speaker from US side). This is a very famous phenomenon in very early development in infants, but its mechanism has not been clarified yet. Dr. Asada (invited speaker from Japan side), whose measure is cognitive developmental robotics, proposed the possibility how neonates recognize their own face structure they cannot see directly. In a womb, a fetus may touch his/her own face by hands, and he/she may be able to perceive the structure of face through the sense of tactile. Dr. Asada demonstrated this by computer simulation, and postulates that this sense might be a base of imitation of facial gesture. This is very interesting hypothesis. Dr. Meltzoff is interested in this simulation, and promised to reconsider of the new theory of neonatal imitation.

We are able to expect concrete collaboration between US researchers and Japan researchers in the development of social brain study. Actually, we will have a plan to

publish of this seminar's results in the *Trends in Cognitive Science* as our first collaboration.

8. The Others (Other Comments):

   It was not so serious problem, but it was little bit confusing because the time of acceptance notification of our proposal was different from the US side grant. That was reason why it was difficult to coordination of the schedule.