Research Activity Report Supported by "Leading Graduate Program in Primatology and Wildlife Science"

(Please be sure to submit this report after the trip that supported by PWS.)

	2015. 08. 26
Affiliation/Position	Primate Research Institute / M1
Name	Makiko Take

1. Country/location of visit

PRI (Primate Research Institute), Kyoto University

2. Research project

Comparative Cognitive Science Course

3. Date (departing from/returning to Japan)

2015. 08. 24 – 2015. 08. 26 (3 days)

4. Main host researcher and affiliation

Prof. Masaki Tomonaga, PRI

5. Progress and results of your research/activity (You can attach extra pages if needed)

Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.

Comparative Cognitive Science is "a science to compare animal intelligence and that of human in order to clarify how human cognitive function, one of the most important characteristics of human, evolutionary developed" (Kazuo Fujita, 1998). In PRI, the researchers are using chimpanzees as the comparison. This is quite unique among all over the world and many foreign students come to learn on it in PRI. The aim of this course was to learn the basis of those comparative cognitive studies. We observed several experiments that are carried out everyday in PRI. Prof. Tomonaga, an associate professor at the Section of Language and Intelligence in PRI, is conducting similar experiment for horses too. So we visit the horse site at a nearby place in Kagami-gahara also and observed horses doing the cognitive task. Five students participated in this course. Everyday we visited the chimpanzee site in the morning and the horse site in the afternoon.

We saw 5 kinds of tasks for chimpanzees. Four of them were conducted by using touch panels, and they were given to chimpanzees with almost no intervals. I was surprised that they could switch the way of thinking for each task quickly. The most interesting experiment was an attempt to make chimpanzees learn the rule of rock-paper-scissors game. Its aim was to examine if chimpanzees can understand such a circulating relationship. It seemed quite difficult for chimpanzees. They could not solve the task easily so far. Then, why we humans can understand the circulating relationship easily? We had a discussion about it. Probably it is because we have multiple standards to determine win or lose, and we can use them flexibly according to the situation. Chimpanzees maybe do not need to have such multiple standards.

Horses were also using a touch panel to solve a cognitive task. The task given to horses was to examine their cognitive skill to count numbers. They were requested to choose a square in which there were more numbers of circles. This task seemed easy for horses. They chose correct answers for almost all questions.

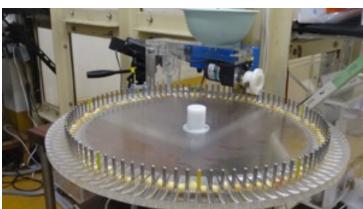
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Overall, in this course, I understood what kind of experiments are running in PRI. Also, I learned how and where to pay attention when we conduct such experiments using chimpanzees. From my observation, it seemed clear that they have emotion, mode, and personality. So I think when we give them some cognitive tasks, probably we have to take those factors into consideration. This point of the differences in personality would be also important when we collect behavioral data in the field.





A chimpanzee doing the rock-paper-scissors game

A feeder for chimpanzees (apples)





A horse doing a task

A horse doing the task (from behind)

A feeder for horses (carrots)

6. Others

I am grateful to Prof. Matsuzawa and other staffs in PWS for supporting this course. I also grateful to Prof. Tomonaga and Mr. Kumazaki for teaching us a lot of things, and the members of Section of Language and Intelligence for kind helps.

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