

**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.)

2015.08.27

<b>Affiliation/Position</b>	Primate Research Institute/D1
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<b>1. Country/location of visit</b>
Japan/Inuyama, Primate Research Institute
<b>2. Research project</b>
Comparative Cognitive Science Course
<b>3. Date (departing from/returning to Japan)</b>
2015. 08. 24 – 2015. 08. 26 (3 days)
<b>4. Main host researcher and affiliation</b>
Prof. Masaki Tomonaga (Language and Intelligence Section, KU Primate Research Institute)
<b>5. Progress and results of your research/activity</b> (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.
<p>The goals of this course were to learn the basis of comparative cognitive science, and understand the procedures in cognitive experimentation and behavioral observation. For three days we joined experiments with chimpanzees at the Primate Research Institute, and ponies at Kagamigahara ranch.</p> <p>For chimpanzees, a session consisted of several different experiments ran by researchers and graduate students. One of the experiments that I particularly enjoyed was about the emergence of cognitive patterns in chimpanzees (fig. 1). What the researchers want to find out is what patterns emerge when chimpanzees have different categories for the same set of objects (colors and shapes in this case). Chimpanzees were given 3 types of objects (rope, cube, cup) in 3 colors (yellow, green, red), and were assigned different tasks. Some of them had to present objects according to the shape and others according to color. While the first task was performed almost effortlessly, presenting the objects by color seemed to be more challenging for the chimpanzees.</p> <p>For the ponies, we observed a discrimination task, where ponies were presented an apparatus consisting of a screen with two panels separated by a divider (fig. 2). In both panels, there was a window showing a group of black dots on a white background. The pony was required to touch with the snout the panel with the highest number of black dots in order to obtain a food reward. Ponies were highly successful when the gap between the quantities was large, but had more difficulties when the gap was small. The quantitative abilities of ponies are largely unknown and the touch panel experiment is a first step towards understanding their numerical reasoning.</p> <p>Overall I enjoyed taking part of this course and learn about animal cognition. It was interesting to hear from the researchers stories on how each individual has unique characteristics (like one of the chimpanzees would not participate in the experiment if the floor of the lab was wet) or how sometimes they want to cheat on the experiment. As for usual, I would have liked to have a schedule in advance; in my opinion, is always better when the student knows what to expect during a course.</p>

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Fig. 1. Experiment on emergence of cognitive patterns. Ai has to present items by color (middle), while Chleo has to present them by shape (right). Photo credit: Liesbeth Frias.



Fig. 2. Experiment on numerical discrimination in ponies. Photo credit: Liesbeth Frias.

## 6. Others

I would like to express my gratitude to PWS and Prof. Matsuzawa for supporting this course. Special thanks to Prof. Tomonaga and Prof. Hattori for their guidance and giving us the chance to visit their labs. To Kiyonori-san, and all the students and researchers at PRI's facilities for kindly letting us participate in the observations.

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