

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.)

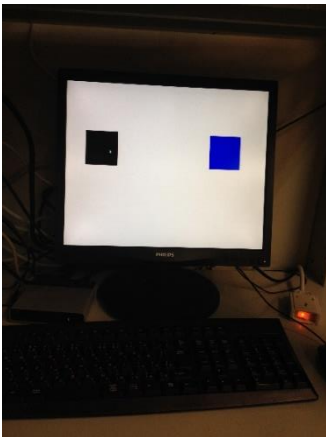
	2015. 08, 26
Affiliation/Position	Primate Research Institute / D1
Name	Morgane Allanic

1. Country/location of visit	Kyoto University Primate Research Institute and Kagamigahara Ranch, Inuyama (Japan)
2. Research project	Comparative Cognitive Science Course
3. Date (departing from/returning to Japan)	2015. 08. 24 – 2015. 08. 26 (03 days)
4. Main host researcher and affiliation	Prof. Masaki Tomonaga (Kyoto University Primate Research Institute)
5. Progress and results of your research/activity (You can attach extra pages if needed)	<p>As part of the PWS curriculum, I attended the Comparative Cognitive Science Course. The aim of this course was to learn about the basis of comparative cognitive science, to understand the procedures in cognitive experimentation and behavioral observations, focusing on both chimpanzees and horses. I, first, came to Japan as a summer intern in 2013 conducting cognitive experiments on captive chimpanzees at the Primate Research Institute (PRI) in the Language and Intelligence section, and I am currently conducting my doctoral research in the same section, so I was already familiar with the chimpanzee cognitive experiments which are runned at PRI.</p> <p>For three mornings, we went to the laboratory in order to observe the different experiments. We could experience the difficulty sometimes to get the chimpanzees coming to the booth. Chimpanzees are called to come in the experimental booth from their inside or outside enclosures through corridors. However, it was totally up to them to come to the booth. It depends on their daily motivation. Sometimes, they will come directly after being called and start immediately the tasks, sometimes they will come to the booth but not participate to the tasks, sometimes they will arrive after a very long time, like one hour, or do not come at all. Their motivation may vary depending on different factors such as social event in the group or oestrus cycle for example. We observed varied experiences such as color preference, rock-paper-scissors game and visual discrimination through touch panels. For example, in the visual discrimination task, three pairs of eyes were presented, among these three two were eyes-closed and one was eyes-opened. Chimpanzees have to discriminate and choose the correct answer which was in this case the ‘eyes-opened’ pair. Each time the answer is correct, chimpanzees are rewarded by a piece of apple coming from an universal feeder and a positively associated noise. Each time chimpanzees choose the wrong answer, there is a negatively associated noise and a delay for the next trial. Chimpanzees stay motivated by receiving food after correct trials and between experimental sessions. We also observed experiments where no touch panels were involved such as behavioral synchrony involving an electronic keyboard and display of several playback tempos or an experiment with the aim to see if chimpanzees develop behavioral patterns, like action grammar, when giving a specific object among others.</p> <p>During two afternoons, we went to Kagamigahara Ranch where Kumasaki-san welcomed us and presented his three ponies: Ponyo (10 years old), Nemo (Ponyo’s offspring – 2 years old), and Thomas (5 years old). We observed the three ponies doing a discrimination task on a touch-panel. It was interesting to see how the touch-panels have been adapted for horses with horses using their noses to touch the screen. The task consisted of presented two squares with a different number of circles inside. Ponies had to choose the square with the highest number of circles. I was surprised to see how their behaviors changed during experiments compared as when they were not doing experiments, especially Ponyo and Nemo. As soon as the experiment started they became more excited, nervous, and sometimes aggressive towards humans because of the presence of the food. However, this behavior did not persist after the experiment, it was only during. It is similar as what I observed in horse-riding clubs during feeding time where one human is feeding one by one horses, so it can take time, horses that have to wait and become nervous showing similar behaviors as Ponyo and Nemo during the experiments.</p>

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Cognitive experiments on captive animals show several advantages. It is good for research, in order to better understand a species or evolution and to make people aware about the cognitive abilities of one species. It is also good because it is a cognitive enrichment and stimulus, so important for animal welfare. Prof. Tomonaga told us that one study showed that for the chimpanzees here at PRI, if you consider the time spent doing cognitive experiments as a time spent for feeding, it is similar as the time that wild chimpanzees spend feeding. In the wild, chimpanzees have to use their cognitive abilities to find food at the right place and the right time. In the laboratory, when chimpanzees are doing cognitive experiments they have to use their cognitive abilities in order to get pieces of food.

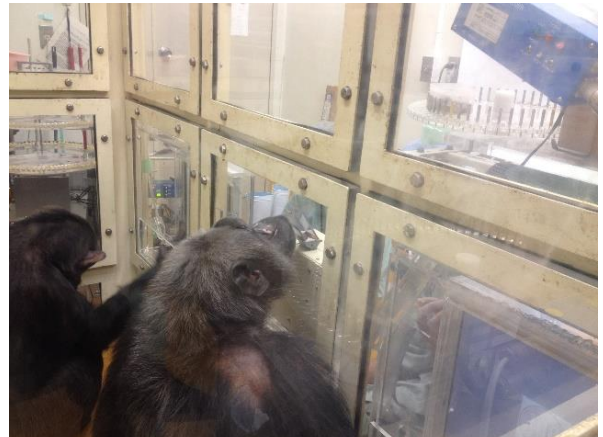
I found the course interesting, it gave me the opportunity to me updated about the cognitive experiments that are being done at PRI and it also gave me the opportunity for the first time to observe horses using touch-panels and doing similar task as chimpanzees, illustrating the importance of species-comparison to study the evolution of cognitive abilities.



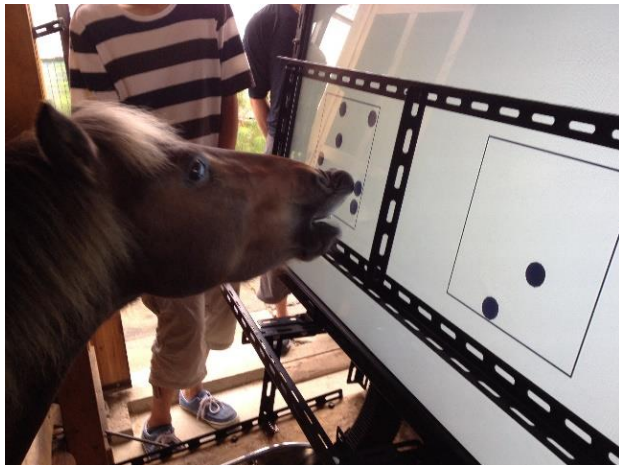
Color preference task



Cleo playing with objects before the experiment



Chloe insering a coin to activate the matching-to-sample task



Ponyo doing a discrimination task (nb of circles)



PWS students with ponies (credits: Pr. Tomonaga)

6. Others