

Workshop on Evolution, Culture, and Reasoning

Inamori Center, Kyoto University (京都大学稲盛財団記念館)

Medium Meeting Room (3rd floor, 中会議室)

January 7th, 2012

10:00a.m. - 5:00p.m.



Direction from Kyoto JR Station

- **Cab:** The journey takes about 30 minutes. Please show the following message to the driver: 目的地: 荒神橋東詰(こうじんばしひがしづめ)の稲盛財団記念館 住所: 京都市左京区吉田下阿達町 46
- **Kyoto City Bus:** The journey takes about 30 minutes and cost 220 yen. Take bus #205, #4, or #17, and get off at "Kojin-guchi." Five minutes' walk from the bus stop to the center.
- **Kyoto Bus:** The journey takes about 30 minutes and cost 220 yen. Take bus #17, get off at "Kojin-bashi," and cross the road to east.

Direction from Jingu Marutamachi Station (Keihan Railway)

Five minutes' walk northward on Kawabata street.

Program

10:30-11:00

Taro MURAKAMI, Kyushu University

“How About This?” Contextual Inference About the Ambiguous Referent in Children

11:00-11:30

Katsuhiko ISHIKAWA, Kyushu University

Interpretations of Others’ Interactions of Request By 5- and 6-Year-Old Children: Effects of Syntactic and Pragmatic Cues

11:30-12:00

Sachiko KIYOKAWA, Chubu University

Cross cultural differences in implicit learning

12:00-13:30

Lunch Break

13:30-14:00

Hiroko NAKAMURA, Otsuma Women's University

Postal Address as an Assay of Cultural Cognition

14:00-14:30

Kosuke TAKEMURA, Kyoto University

Cooperation, intergroup competition, and winner-takes-all society

14:30-15:00

Yousuke OHTSUBO, Kobe University

A Test of Costly Apology Model in Seven Cultures

15:00-15:30

Coffee Break

15:30- 17:00

Open to General Audience

Laurence Fiddick, Lakehead University

A Modular Account of Open and Closed Societies

10:30-11:00

**“How About This?” Contextual Inference
About the Ambiguous Referent in Children**

Taro MURAKAMI
Kyushu University

The syntactic meaning of an utterance is sometimes ambiguous (Sperber & Wilson, 1986) and the referent might not be identified through a simple decoding process (Sperber & Wilson, 2002). For an example, without some inferences based on the contextual information, it should be difficult to identify the object of a demonstrative pronoun, especially when multiple candidates for the referent appeared in preceding communicative sequence. Thus, a reference assignment is important as one of basic competences for communication. Though adults achieve this process almost subconsciously, it remains as an open question when and how children acquire such a pragmatic ability. As an empirical approach to this question, we focused on the utterance of “How about this? (“Kore-wa?” in Japanese)”. In order to identify the referent for “this (Kore)” in this particular expression, the recipient has to refer to preceding communicative context. We systematically examined how children assign the referent (in name / color dichotomy) of the adult’s utterance under ambiguous contexts. Three- and 5-year-old Japanese children were individually tested in a task including 4 trials; a trial consisted of 5 events in which the participant was shown 5 color illustrations in the predetermined sequence. In each trial, after being shown the illustration, the participant was asked as follow; “What’s the name of this?” / “What’s the color of this?” (Explicit Question 1), “How about this?” (Implicit Question 1), “What’s the color of this?” / “What’s the name of this?” (EQ 2), “How about this?” (IQ 2), and “How about this?” (IQ 3), for 1st, 2nd, 3rd, 4th, and 5th. event, respectively. The explicit dimension of the question (name / color) was changed between 1st. and 3rd. events. Adult participants in our preliminary experiments

answered to the IQ with the dimension that reflected the adjacent EQ. However, not small number of children answered in different ways from the adults. Specifically, in both 3- and 5-year old groups, participants were classified into 2 (High / Low “accuracy”) groups, each of which showed different tendencies (see figure 1): the results showed significant interaction between age (3 / 5 yrs) and group (H / L). Further analysis suggested that, while the different performances in EQ 2 between H and L groups could be explained by different abilities of the cognitive shift, the performance in IQ 2 by 3-H group did not fit this explanation. The findings suggested that other factors than the ability of cognitive shift, such as reference assignment, should be considered in approaching the developmental changes in strategies of the contextual inference.

11:00-11:30

Interpretations of Others' Interactions of Request By 5- and 6-Year-Old Children: Effects of Syntactic and Pragmatic Cues

Katsuhiko ISHIKAWA
Kyushu University

When X requests something after receiving Y's communicative act, we tend to process the request as a reflection of Y's desire, not X's own. Though adults robustly show this tendency, 6-year-old children follow it only in parts, depending on the particular ways of expression (Ishikawa & Hashiya, in prep). The present study examined to what extent the children's ability of pragmatic inference could be expanded to different expressions of request, including indirect request. Though previous studies have documented that 4-year-olds as first persons properly understand not only direct expressions of request but also indirect ones (Gravey, 1975), it is still unclear whether children properly understand the indirect request not directed toward themselves, as third persons. In Study1, 19 Japanese 6-year-olds and 16 Japanese 5-year-olds were individually tested. The participant was shown two types of video-recorded sequences (Direct Demand and Indirect Demand conditions). In a video stimulus, two actors (Initiator and Stater) interacted with each other. In Direct Demand condition, first Initiator directly requested to Stater on Japanese "XX tabetai (want to eat XX)". Following this, Stater nodded twice and said in Japanese "XX hoshii (want XX)" facing to the front. The subject of Stater's utterance is grammatically unclear in this expression. In Indirect Demand condition, Initiator indirectly requested to Stater on Japanese "XX oishiso (XX seems to taste good)". Following this, Stater nodded twice and said on Japanese "XX hoshii (want XX)" facing to the front. After the video presentation, the experimenter asked, "Who wanted XX"? Children responded to the question with pointing to the one of two models on PC monitor. We compared the child's evaluation of the social impact of sender's

request on the response of recipient among two conditions. Binominal tests revealed that in all conditions, 6-year-olds' selection of Initiator as "desire holder" remained in the range of chance level. On the other hand, for 5-year-olds, though the selection of Initiator remained in the range of chance level in DD condition, a tendency of selecting Stater (not Initiator) was observed in ID condition ($p=0.0768$). Though 6-year-olds selected Initiator as the desire holder even in ID condition, 5-year-olds did not: the interpretation of Initiator's indirect speech act might differ between the age groups. In Study2, a new set of video stimuli were prepared. Though the same Initiator and Stater (adult Japanese females) interacted in the same sequence as Study 1, only Stater's utterance "XX hoshi-i" was replaced to "XX hoshii-nndatte". The final particle of "datte" can be function as "hearsay". Even without any explicit subject, this expression corresponds to the English expression of "I hear that she wants XX" and clearly shows that the desire holder is not Stater but Initiator. Eighteen Japanese 6-year-olds were newly recruited. Five-year-olds were same sample as in Study1. The procedure and target question were same as Study1. Binominal tests revealed that both in DD and ID conditions, 6-year-old's selection of Stater as "desire holder" exceeded above chance level. On the other hand, for 5-year-olds, though the selection of Stater exceeded above chance level in DD condition, it remained in the range of chance level in ID condition. To summarize, while overall tendency suggests that the final particle "datte" clearly facilitated the selection of Initiator both in 5- and 6-year olds, 5-year-olds' selection of Initiator did not reach the level of significance in ID condition. These results suggest that the pragmatic ability to interpret indirect expressions as a speech act of demand might mature between ages of 5 and 6.

11:30-12:00

Cross cultural differences in implicit learning

Sachiko KIYOKAWA
Chubu University

Previous studies (e.g. Nisbett, 2003) have indicated strong cross cultural differences in conscious perception, memory and reasoning, such that Eastern people have a preference for a more global perspective and Western people for a more analytical perspective. We investigate whether these biases also apply to unconscious cognition, specifically to implicit learning. In Experiment 1, Japanese and UK participants were asked to memorize so-called “GLOCAL strings” which constitute one sequence of letters at a global level and a different sequence at a local level. The results showed the cultural differences in implicit learning, indicating that Japanese participants unconsciously learned the grammar at the global and not the local level but the English equally at both levels. In Experiment 2, Japanese and UK participants were asked to attend to one of the two aspects of the GLOCAL strings, global or local. Now the cultural groups performed similarly, indicating the bias largely reflects preference rather than ability. In sum, we show for the first time that cultural biases strongly affect the type of unconscious knowledge people acquire.

13:30-14:00

Postal Address as an Assay of Cultural Cognition

Hiroko NAKAMURA

Otsuma Women's University

The present study investigated whether the cultural difference affects both explicit and implicit semantic processing, by using priming paradigm with postal addresses as stimuli. There are two kinds of postal addressing styles: In most countries, including U.S. and Malaysia, addresses are written in order from most specific to general geographical unit (e.g., city-to-state), while some Eastern countries, including Japan, use the opposite ordering (e.g., state-to-city). If Easterners' cognition is holistic and context-dependent (e.g., Nisbett, 2003), the general unit can be contextual information in order to identify its specific unit. Therefore, both Japanese and Malaysians may be better at identifying the city name when the state name is preceding as contextual information. Contrary, if cultural differences are consequence of accumulation of domain-specific knowledge within a culture (e.g., Medin & Atran, 2004), Malaysians response patten may similar to that of Americans, because they used to state-to-city postal addressing style. In the experiments, both explicit (SOA700, Experiment 1) and implicit (SOA200, Experiment 2) priming tasks were conducted. Participants were required to judge whether the target city or state name was a real one or a fake one. We manipulated the prime (congruent, incongruent, or neutral) and the target (city or state) items. In the congruent-city condition, just before a target city name was presented, a state name, where the target city is located, was presented as a prime, and this relation was reversed in the state condition. The incongruent condition presented the state name where the city is not located in, and neutral prime condition presented "###" strings as a prime. The results indicated direction between prime and target (state-to-city or city-to-state) had no effects on amount of priming, and this results ware difficult to explain by domain-specific knowledge hypothesis. The

cultural difference was significant only in the explicit priming task: amount of priming was larger in Malaysian participants compared to both American and Japanese participants in SOA700, while there were no cultural differences in SOA200. These results imply Malaysian participants consciously use a prime as a context cue to anticipate a target item, and this cultural difference was disappeared in implicit semantic processing.

14:00-14:30

Cooperation, intergroup competition, and winner-takes-all society

Kosuke TAKEMURA
Kyoto University

Although it has been widely believed that North Americans are less collectivistic than East Asians, accumulating evidence in cultural psychology has demonstrated that this widely accepted notion is not necessarily true. However, little is known about when North Americans become particularly collectivistic, and why. By focusing on cooperation toward ingroup as an expression of collectivism, the current research tested the hypothesis that North Americans are more cooperative toward their ingroup than East Asians when their ingroup competes with another group (outgroup). Given that a social situation resembling “winner-takes-all market”, where benefits from winning and damage for losing are generally big, is prevalent in North American societies, it is expected that North Americans tend to assume greater benefits that winners would earn than people from other societies do. This assumption about greater benefits from winning may elicit higher ingroup cooperation by North Americans than East Asians when there is intergroup competition. To test this hypothesis, a cross-cultural experiment was conducted between Canada ($n = 135$) and Japan ($n = 211$), using a vignette method where participants were asked to imagine a public goods game situation. Participants read a scenario describing a situation in which they were assigned into one of two 20-person groups in a laboratory. They then were instructed to decide how much to give to the ingroup from their personal assets, which would be doubled and divided equally among the members. One third of participants received a scenario in which there was no intergroup competition (no intergroup competition condition), while the other participants read scenarios depicting situations where their ingroup competed with another group for an additional bonus that the group with greater cooperation level would earn. In

one of the intergroup competition conditions, however, the scenarios did not mention the amount of the bonus (intergroup competition/ambiguous reward condition), while in the intergroup competition/certain reward condition, the scenarios clearly mentioned the amount of benefits from winning. The results of the experiment supported the hypothesis. The ratios of participants who showed high level of cooperation (those showing cooperation level at 80% or higher) were not different between countries in the no intergroup competition condition. On the other hand, in the intergroup competition/ambiguous reward condition, the ratio of participants with high level of cooperation was higher in Canada than in Japan. Consistent with the hypothesis, however, this cultural difference disappeared in the intergroup competition/certain reward condition. These results suggest that Canadians tend to cooperate toward their ingroup more than Japanese because of the assumption they have by default about the benefits from winning in intergroup competitions.

14:30-15:00

A Test of Costly Apology Model in Seven Cultures

Yousuke OHTSUBO*
Kobe University

Ohtsubo, Esuka Watanabe, JiYoon Kim, John T. Kulas, Hamdi Muluk, Gabriela Nazar, Feixue Wang, & Jingyu Zhang

Apology-making is an effective means for human reconciliation. However, if any apology is accepted at its face value, it can be abused by free-riders, who always free-ride a friend's benevolence but are forgiven by saying "I'm sorry." Ohtsubo and Watanabe (2009) maintain that to avoid being repeatedly exploited by such a free-rider, we are sensitive to cost involved in the way that a wrongdoer makes an apology. For example, when noticing that one has inadvertently broken a promise with a friend, he/she might cancel an important business meeting to apologize to the friend as soon as possible. In this example, canceling the meeting is a cost, which reliably signals the apologizer's valuation of the relationship with the friend. If the transgressor does not value the relationship, he/she may not be willing to incur the cost. Ohtsubo and Watanabe tested and confirmed the hypothesis that people perceive costly apologies more sincere than no-cost apologies in vignette and behavioral experiments. However, all of their studies were conducted in Japan. Since Japan has been known to use apologies more frequently than some other countries (e.g., U.S.), their sensitivity to the apology cost might be attributable to Japanese participants' familiarity with reconciliation practices via apology. In the present study, we conducted a conceptual replication of their vignette study in seven countries (Chile, China, Indonesia, Japan, South Korea, the Netherlands, and the United States). In all seven cultures, costly apologies were perceived more sincere than no cost apologies. We further confirmed that this pattern remains intact regardless of participants' religious beliefs: self-claimed Buddhists, Christians, and Muslims perceived costly apologies more sincere. Implications of these results will be discussed.

* This paper is co-authored by Yousuke

15:30 – 17:00 (Open to General Audience)
A Modular Account of Open and Closed Societies

Laurence Fiddick
Lakehead University
Orillia, Ontario

There is a long tradition in the social sciences of classifying societies into two broad categories. On the one hand, there are open class societies in which status is achieved; whereas, on the other, there are closed class societies, in which status is ascribed (Ostrander, 1982). Concomitant with this distinction between open and closed class societies, there is a wide range of correlated features such as differences in views of human nature, interest in the natural and social sciences, interest in biography and realistic portraiture, and sound historiography (Brown, 1988). Given that it is beliefs about social mobility, as opposed to real rates of social mobility, that appears to be most important in determining whether a society will be open or closed (Brown, 1988; cf. Lipset & Bendix, 1959), psychology would appear to play an important role in the way society is organized. Therefore, this paper aims to explore the psychological underpinnings of beliefs about social mobility, specifically changes in status, with reference to modern developments in the cognitive sciences.