

2006 CEFOM/21 HOKKAIDO UNIVERSITY INTERNATIONAL SYMPOSIUM



Cultural and Adaptive Bases of Human Sociality

人間の社会性の文化的・適応的基盤

■ Program and Abstracts

International House of Japan

September 9-10, 2006

9:00a.m.- 6:00p.m.



CEFOM/21, Center for the Study of Cultural and Ecological Foundations of the Mind, a 21st Century Center of Excellence, is one of twenty centers in humanities funded by the Japanese government in 2002 to advance research and educational activities.

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PROGRAM

Day 1: Saturday, September 9th, 2006

9:00 – 9:30	Registration
9:30 – 9:40	Introductory remark: Toshio Yamagishi
9:40 – 11:00	Paper presentation 1 (Chair: Yoshimichi Sato) Motoki Watabe “Cultural difference of resource distribution and opportunity costs” Toko Kiyonari “Punishing non-cooperators doesn’t yield a solution to the problem of cooperation but rewarding cooperators does” Kazumi Shimizu “Group affiliation and ‘altruistic’ punishment: Who provides ‘altruistic’ punishment and in which situation?” Masanori Takezawa “Revisiting ‘the evolution of reciprocity in sizable groups’”
11:00 – 11:10	Break
11:10 – 11:40	Special lecture: Tatsuya Kameda (Chair: Mark H. B. Radford) “Democracy under uncertainty: Adaptive robustness of group decision-making beyond the voter’s paradox”
11:40 – 1:10	Lunch break
1:10 – 2:50	Paper presentation 2 (Chair: Nobuyuki Takahashi) Rie Mashima “Is the enemy’s friend an enemy?: An experimental study to examine strategies in indirect reciprocity settings” Mayuko Nakamaru “The coevolution of altruism and punishment: Role of the selfish punisher” Shinji Yamagata “Cross-cultural differences in heritability of personality traits: Using behavioral genetics to study culture” Keiko Ishii “Culture and perceptual inference: Inferring the identity of an object from its parts or its blurred image” Kosuke Takemura “Two types of collectivism: Intragroup relationship orientation in Japan and intergroup comparison orientation in the United States”
2:50 – 3:50	Poster presentation 1
3:50 – 4:00	Break
4:00 – 6:00	Plenary lecture: Leda Cosmides (Chair: Kai Hiraishi) “Cognitive adaptations for social exchange” Discussant: Toshikazu Hasegawa
6:40 – 9:00	Reception

Day 2: Sunday, September 10th, 2006

9:00 – 9:30	Registration
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9:30 – 10:30	Lecture: Toshio Yamagishi (Chair: Nobuyuki Takahashi) “Culture and institutions”
10:30 – 10:40	Break
10:40 – 11:40	Lecture: Joseph Henrich (Chair: Tatsuya Kameda) “Cultural learning, sociality and the coevolution of human institutions”
11:40 – 12:40	Poster presentation 2
12:40 – 2:10	Lunch break
2:10 – 3:10	Lecture: Shinobu Kitayama (Chair: Masaki Yuki) “Voluntary settlement and the spirit of independence: Evidence from Japan’s ‘Northern frontier’”
3:10 – 3:40	Coffee Break
3:40 – 4:40	Lecture: Mary C. Brinton (Chair: Toshio Yamagishi) “Analyzing choices and preferences during rapid institutional change: Young people in the Japanese labor market”
4:40 – 4:50	Break
4:50 – 5:10	Comments: Yoshihisa Kashima
5:10 – 6:00	Wrap-up session

ABSTRACTS

Saturday Plenary Lecture, 4 p.m.

Cognitive adaptations for social exchange

Leda Cosmides (University of California, Santa Barbara)

Social exchange – cooperation for mutual benefit – is rare in the animal kingdom. Yet it is as characteristic of human beings as language and tool use. There are good reasons to think that the human cognitive architecture contains cognitive machinery that is specialized for reasoning about social exchange. I will present evidence – cognitive, cross-cultural, and neuropsychological – that our brains contain cognitive adaptations for reasoning about social exchange, which include a subroutine designed for detecting cheaters. Because social exchange allows trade, this evolved competence provides a cognitive foundation for human economic activity and other forms of cooperation. The results presented challenge the view that the mind is a blank slate, and cast new light on debates about human rationality.

Saturday Lecture, 11:10 a.m.

Democracy under uncertainty: Adaptive robustness of group decision-making beyond the voter's paradox

Tatsuya Kameda (Hokkaido University)

Every human society relies on groups, ranging in size from families to electorates, to make important decisions. The primary reason we rely so heavily on group decisions is that groups have more problem-solving resources than any individual member. On the other hand, there are many threats to effective deliberation. Perhaps most worrisome, group enterprises frequently require costly investment of resources by individuals and may involve personal risk. Participation in a group activity is, thus, often described as a “sacrifice” of personal utility for a “higher” group goal. This paper explores how group decision-making works when people try to choose the mutually most beneficial alternative in a stochastic, noisy environment. Our question centered on the adaptive robustness of majoritarian group decisions under uncertainty given the inherent free-rider problem. To answer this question, we conducted a series of evolutionary computer simulations and a behavioral experiment with interactive human groups. Results from the simulation and the laboratory experiment both demonstrated that group decision-making could serve as a highly adaptive device; majoritarian group decision-making works well under uncertainty, without demanding sacrifice of personal utility for higher group goals.

Sunday Lecture, 9:30 a.m.

Culture and institutions

Toshio Yamagishi (Hokkaido University)

Cultural psychologists argue that preferences shared by a majority of people in a culture come to constitute social norms for that culture, *and* that social norms in a culture are internalized as preferences (Kim & Markus, 1999). I argue that this process of mutual

constitution is not simply a matter of the aggregation of individual preference into social norms and internalization of social norms by individuals; it is mediated by social institutions. There are two important parts of this argument. First, a social institution, of which social norms are a part, is not simply an aggregation of individual preferences. Rather, a social institution is a self-sustaining system of preferences and beliefs. What distinguishes a social institution from a simple aggregation of preferences is the existence of *equilibrium* state. Second, a social institution produces social adaptation tasks unique to that institution. Individuals who are endowed with a particular psychological “tool” to solve the “institution-specific” adaptation tasks can outperform others who are not endowed with such a tool. As a result, such psychological tools often come to be shared by individuals who face a particular social institution. I present results of several experiments that support hypotheses derived from this approach.

Sunday Lecture, 10:40 a.m.

Cultural learning, sociality and the coevolution of human institutions

Joseph Henrich (University of British Columbia)

Sunday Lecture, 2:10 p.m.

Voluntary settlement and the spirit of independence: Evidence from Japan’s “Northern frontier”

Shinobu Kitayama (University of Michigan)

The voluntary settlement hypothesis holds that economically motivated voluntary settlement in the frontier fosters cognitive, affective, and behavioral orientations toward independence. While illuminating the origin of American individualism, this hypothesis has received direct empirical support from a region in Japan (Hokkaido) that has undergone a recent history of voluntary settlement.

Sunday Lecture, 3:20 p.m.

Analyzing choices and preferences during rapid institutional change: Young people in the Japanese labor market

Mary C. Brinton (Harvard University)

Rapid institutional change introduces new uncertainties in the environment. In these circumstances, it becomes more difficult to analyze individuals’ preferences. This is because individuals face new difficulties understanding the structure of opportunities and constraints they face, given that these are being altered substantially. The transition to a new institutional equilibrium introduces a new level of uncertainty regarding not only which choices are rational (leading to a desired end), but also which choices will be normatively acceptable and even individually desirable. The difficulty of interpreting whether individuals are exercising their “true” preferences or are instead responding as best they can to muddled signals in the environment has important consequences for institutional design and policy formation. This paper explores these ideas in the context of changing employment relations in Japan and the difficulties they pose for the younger generation and for government policy.

Saturday Paper Session 1, 9:40 a.m.

Cultural difference of resource distribution and opportunity costs

Motoki Watabe (Kyoto University); Richard Gonzalez (University of Michigan); Rie Toriyama (Kyoto University); Keiko Ishii (Hokkaido University); Yuko Morimoto (Kyoto University); Hiroki Oozono (Kyoto University); Mitsuhiro Nakamura (Kyoto University)

We performed a cross-cultural experiment and a computer simulation to account for how culturally-unique strategy of resource distribution emerges. First, we conducted an ultimatum game experiment in US and Japan with the following two conditions; “anonymous condition” where the distributor never knew her partner’s disposition, and “goodness condition” where the distributor knew that the partner is good and honest. Consistent with the past studies, average distribution for self, under the anonymous condition, is about 60% in Japan and about 50% in US. Under the goodness condition, however, it goes down to about 50% in Japan and up to about 60% in US. To account for the emergence of these distributive patterns, we performed a computer simulation to explore what factors determine these distributive patterns in the two cultures. The simulation is an agent-based with genetic algorithms where agents with various distributive strategies play ultimatum games under a natural selection system and well-performing strategies are likely to have their copies whereas poor-performing strategies just disappear. The results suggest that the probability to find new partner (conceptually same as “opportunity costs”) plays a major role for emergence of the culturally-unique distributive patterns.

Punishing non-cooperators doesn’t yield a solution to the problem of cooperation but rewarding cooperators does

Toko Kiyonari (McMaster University); Pat Barclay (Cornell University); Margo Wilson (McMaster University); Martin Daly (McMaster University)

Cooperation within non-kin groups presents an evolutionary puzzle. Punishment can sustain cooperation, but the provision of such “altruistic punishment” suffers from a second-order free-riding problem since non-punishers can free-ride on the costly punishment provided by others. A possible solution to this problem is “second-order punishment” of non-punishers; more generally, the threat or promise of higher-order sanctions might be what maintains the lower-order sanctions that enforce cooperation in collective action problems. We found that voluntary second-order punishment was very rare, but second-order rewarding was common enough to cover the costs of first-order rewarding. Furthermore, people typically didn’t reward those who “altruistically” punished non-cooperators, but punished those who failed to reward cooperators. This suggests that people are more inclined to reward those who deliver altruistic benefits than those who deliver altruistic punishment, and thus that rewards may have played a more important role than punishment in the emergence of human non-kin cooperation.

Group affiliation and “altruistic” punishment: Who provides “altruistic” punishment

and in which situation?

Kazumi Shimizu (Waseda University)

Over the past few years a considerable number of experimental studies have been made on the human behavior in the social dilemma situation. They suggest that the punishment behaviour leads to higher rate of contribution or to toward full cooperation. But the provision of punishment makes the second-order free-riding problem: group member free-ride on the costly punishment given by others. In spite of this problem, considering the group conflicts or competitions, the multilevel selection may allow the proliferation of an otherwise unviable trait: “altruistic” punishment (Bowles 2004, Gintis 2000). And if the “altruistic” behaviour proliferates in this evolutionary process, it must have an evolutionary psychological base. To examine this we conducted a gift-exchange game experiment with punishment opportunity both in the no-group situation and in the group situation. Prior to the experiment, subjects are classified by their recent scores of their “sentiments” indices: general trust scale, trust care scale (developed by Yamagishi & Yamagishi, 1994), self-fairness scale, emotional sympathy scale and perspective taking scale.

The results of the experiment (N=47) support following hypothesis:

- 1) Participants punish free riders more severely in the group situation than in the no-group situation.
- 2) Punishment against “free-rider” is driven by an emotion: fairness. “Fair” participants punish free rider independently of their group affiliation.

Revisiting “the evolution of reciprocity in sizable groups”

Masanori Takezawa (Tilburg University); Michael E. Price (Brunel University)

Reciprocity has been widely accepted as the most likely explanation for the evolution of cooperation. Contrary to this widespread belief, Boyd & Richerson (1988) revealed that reciprocity cannot be an explanation of cooperation in repeated n-person prisoner’s dilemma game. In this talk, we will show that their argument is premature and just one modification, replacing trigger strategy with linear response strategy, significantly changes the results. Our mathematical model and numerical analysis revealed that, when individuals continuously adjust their level of cooperation in response to the average contributions made by the other group members, the size of basin of attraction for reciprocal cooperators gets much larger and let reciprocal cooperation be more likely to evolve even when group size is pretty large (e.g., $n > 100$) and groups are randomly formed.

Saturday Paper Session 2, 1:10 p.m.

Is the enemy’s friend an enemy?: An experimental study to examine strategies in indirect reciprocity settings

Rie Mashima (Hokkaido University); Nobuyuki Takahashi (Hokkaido University)

Recent theoretical studies suggest that the key to the emergence of indirect reciprocity is discriminate altruism based on not only 1st-order information (others’ previous behaviors) but also 2nd-order information (reputation regarding targets of others’

previous behaviors). We conducted a laboratory experiment to examine people's actual strategies in indirect reciprocity settings. Participants played a repeated giving game in eight-person groups. In each round, participants were endowed 50 yen and asked to decide whether to give it to one of the other participants or keep it for themselves. When they made their decisions, they could see 1) 1st-order information: whether each target gave or did not give in the last round and 2) 2nd-order information: whether the person had given to a giver or a non-giver in the last round. (In actuality all the information was manipulated by the computer program in order to systematically examine people's behavioral patterns.) Results showed that participants used not only 1st-order information (gave more to previous givers than to previous non-givers) but also 2nd-order information (gave more to the persons who had given to givers than to the persons who had given to non-givers). These results are consistent with Takahashi and Mashima (2003)'s conclusion, suggesting that the key to the emergence of indirect reciprocity is to exclude not only free-riders but also indiscriminate givers who help free-riders.

The coevolution of altruism and punishment: Role of the selfish punisher

Mayuko Nakamaru (Tokyo Institute of Technology); Yoh Iwasa (Kyushu University)

Punishment is an important mechanism promoting the evolution of altruism among nonrelatives. We investigate the coevolution of altruism and punitive behavior, considering four strategies: a cooperator who punishes defectors (AP), a pure cooperator (AN), a defector who punishes defectors (selfish punisher or SP), and a pure defector (SN). We especially focus on the effects of SP on the coevolution of altruism and punishment, studying both the score-dependent viability model (whereby the game's score affects survivorship only) and the score-dependent fertility model (whereby the score affects fertility only). In the viability model of a completely mixed population, SP helps cooperators to evolve, but SP does not in the fertility model. In both models of a lattice-structured population, SP promotes the spread of AP, but AN discourages it. These results indicate that punishment is a form of spite behavior and that different models give different magnitude of advantage to spite behavior.

Cross-cultural differences in heritability of personality traits: Using behavioral genetics to study culture

Shinji Yamagata (University of Tokyo); Ando, J. (Keio University); Ostendorf, F. (University of Bielefeld); Angleitner, A. (University of Bielefeld); Riemann, R. (University of Jena); Spinath, F. M. (Saarland University); Livesley, W. J. (University of British Columbia); Jang, K. L. (University of British Columbia)

This study examined whether strength of genetic and environmental influences on personality differ across three diverse nations: Canada, Germany, and Japan. From a sample of 1,209 monozygotic and 701 dizygotic twin pairs, genetic and environmental variances of 30 facet scales of the Revised NEO Personality Inventory were examined. Japanese sample showed lowest heritability for 23 out of 30 facet scales and highest heritability for only one facet scale. There were no systematic patterns for the order of

Canadian and German sample. Examination of raw genetic and environmental variances rather than its proportion revealed that low heritability for Japanese sample could be attributed to lower genetic variances: Japanese sample showed smallest genetic variance for 23 facet scales, and highest heritability for only 3 facet scales. Also, for 21 facet scales, Canadian sample showed largest genetic variance. There were no systematic differences regarding environmental variances. These results suggest either a) gene pools of Japanese people are less polymorphic, or b) Japanese collectivistic culture does not allow people to express their genetic predispositions. Implications of behavioral genetic methods to cultural psychology are discussed.

Culture and perceptual inference: Inferring the identity of an object from its parts or its blurred image

Keiko Ishii (Hokkaido University); Takafumi Tsukasaki (Hokkaido University); Shinobu Kitayama (University of Michigan)

On the basis of recent work on culture and cognition, we reasoned that because people engaging in Western cultures tend to attend analytically to separate elements of a perceptual field, they should be quite capable of making perceptual inferences from such elements. In contrast, because those engaging in Asian cultures tend to attend holistically to the whole field, they should be quite capable of making perceptual inferences from gestalt information. In 2 studies 61 Asian and 76 European American participants were presented with either parts of familiar objects (e.g., clock, lobster) or their blurred images and asked to identify the original objects. As predicted, accuracy of perceptual inference depended both on the cue type and the cultural backgrounds of the participants. When part information was presented as a cue, performance in perceptual inference was consistently better for European Americans than for Asians. Interestingly, when gestalt information was used as a cue, performance was no better for Asians than for European Americans. We suggest that to observe the predicted cultural difference in the gestalt cue condition it might be necessary to use stimuli that do not have inherent gestalt. Implications for culture's influences in perception are discussed.

Two types of collectivism: Intragroup relationship orientation in Japan and intergroup comparison orientation in the United States

Kosuke Takemura (Hokkaido University); Masaki Yuki (Hokkaido University); William W. Maddux (INSEAD); Yohsuke Ohtsubo (Nara University)

Two studies tested and confirmed the hypothesis that, while both being highly group-oriented, Japanese and Americans put importance on different aspects of groups: intragroup relationships and intergroup comparison. A recent review of empirical evidence disconfirmed the widely-held view that North Americans are less collectivistic than East Asians (Oyserman, Coon & Kemmelmeier, 2002). However, Yuki and colleagues (e.g. Brewer & Yuki, in press; Yuki, 2003) have proposed that the bases/motivations for group behaviors predominantly differ between cultures: North Americans put greater importance on acquiring and maintaining higher ingroup status relative to outgroups, whereas East Asians emphasize maintaining good relationships among ingroup members. Results of present studies supported the hypothesis. In a

questionnaire survey (Study 1), Americans reported stronger subjective importance on intergroup status differences than on intragroup relationships, whereas Japanese reported the opposite pattern. Study 2, a recall task experiment, showed that Americans recalled intergroup status difference information more accurately than intragroup relationship information that they had seen previously, whereas there was no difference in the recall rate for the two kinds of information for Japanese. A new interpretation of the findings from the perspective of individual adaptation toward different types of social environments (Yamagishi, Jin, & Kiyonari, 1999) will be presented.

Saturday Poster Session, 2:50 p.m.

Effects of gaze direction on the processing of threat-related facial expression in children with autism and without autism

Hironori Akechi (University of Tokyo)

Gaze direction and facial expression are vital cues in understanding other's mental states, and recent studies revealed the interaction between facial expression and gaze direction in various paradigms. Adams, R. B., Jr., and Kleck, R. E. (2003) provided the evidence that direct gaze facilitates the processing of anger expression and avert gaze facilitates the processing of fear expression. Adams, R. B., Jr., et al. (2003) found that activation in right amygdala differentially varies in response to anger and fear as a function of gaze direction. Autism is well known as a disorder of social communication, and show abnormal activation of amygdala in social processing. This study investigated whether children with typically development are affected by gaze direction on decoding anger and fear faces, and hypothesized children with autism show no or less gaze effect.

Evolutionary construction of social norm

Noriko Fujii-Tanoura (National Defense Academy in Japan); Akira Namatame (National Defense Academy in Japan)

Many sphere of social interactions are governed by norms such as reciprocity and equity norm. Although social norms can potentially serve useful constructs to understand human behavior, there is little theory of social norm development. Norms are self-enforcing patterns of behavior: it is in everyone's interest to conform given the expectation that others are going to conform. If the situation is repeated, norm is a kind of Nash equilibrium of the underlying social games. It is a strategy choice rule that assigns a rule to each individual that is an optimal in the sense no one has an incentive to deviate from it. This paper provides a game theoretic model about how social norm emerges and is maintained in a society of interacting agents. Using a game-theoretic method combined with the evolutionary model for evolving rules, we investigate the conditions under which the norm will emerge and dominate in various social interaction setting. The essential idea is to show how norms can emerge spontaneously at the collective level from the pair-wise interactions of evolving agents.

Universals and differences: What can we expect by bridging evolutionary psychology and behavioral genetics?

Kai Hiraishi (University of Tokyo)

Even though both the evolutionary psychology and the behavioral genetics aimed to explain psychology from biological point of views, there has not been much interaction between the two fields. This is partly because while evolutionary psychology is more concerned with "human universals" whereas behavioral genetics is more concerned with individual differences in human behavior. I will present some ideas to bridge the two fields. Specifically, I will present some data from the Keio Twin Project, and discuss how can we interpret the knowledge from the behavior genetics from an evolutionary psychological point of view.

Inequity enhancing rejection of unfair offers in ultimatum games

Yutaka Horita (Hokkaido University); Toshio Yamagishi (Hokkaido University)

A standard ultimatum game (SUG) was compared to two variants of the game. In SUG, the proposer decided how much of an endowment of 1,000 yen to propose to a responder in increment of 100 yen. When the responder rejects the offer, both players end up nothing. In contrast, when the responder in the unilateral ultimatum game (UUG) rejects an offer, he/she earns nothing but the proposer's earnings are not affected at all; he/she keeps the money he/she assigned to him/herself. In the dictatorial ultimatum game (DUG), the proposer is not informed of the fact that the recipient has an option to reject his/her offer. As in UUG, the responder who rejects an offer earns nothing while the proposer's earnings are not affected by the responder's rejection. In addition, the fact that the responder rejected the offer is not even informed to the proposer. In UUG and DUG, the rejection choice by the responder increases, rather than reduces, inequality between the two. Social punishment can be a motivation for rejection by the responder, and fair allocation by the proposer, in UUG, but not in DUG. The rejection rates in UUG and DUG were about half of that in SUG, and the difference in the rejection rate in UUG and DUG was insignificant. On average, proposers in SUG offered 44% of the endowment to the responder, whereas those in UUG and DUG offered 33% and 30%, respectively. These results suggest that a sizable proportion of rejection in the ultimatum game is produced by maintenance of self-image as a person not yielding to unfair treatments, a form of emotionally sustained commitment device (Frank, 1988).

Deficit in theory of mind is a risk for relapse of major depression

Yumiko Inoue (Inogashira Hospital); K. Yamada (Women's Medical University); S. Kanba (Kyushu University)

Background: Recently, we reported that patients with depression have theory of mind (ToM) deficit during remission from acute episodes. ToM deficit means difficulty in social adjustment, and thus may indicate a poorer prognosis.

Methods: We evaluated ToM ability of 50 patients during remission from major depressive episodes. The patients were followed for one year and their outcome observed.

Results: After one year, patients who had ToM deficit in a second order false question relapsed significantly more frequently as compared with patients who did not

have a deficit (Fisher's exact test $p < 0.0001$; relative risk (RR) = 8.105; CI 2.020, 32.524). Significant differences were shown in scores of the Global Assessment of Functioning Scale ($p < 0.0001$) between the two groups.

Conclusions: Patients with ToM deficit in second order false belief during remission may be a high risk group for recurrence and lower social function one year after recovering from a major depressive episode.

Generalized reciprocity norm as an adaptive strategy among lower-working class citizens

Keigo Inukai (Hokkaido University); Tatsuya Kameda (Hokkaido University)

Managing various life uncertainties was a major adaptive challenge in the EEA and continues to be a problem in modern societies. Kameda, Takezawa, & Hastie (2005) argued that people develop different strategies to deal with this problem contingent on their access to material resources. Compared to middle-upper class individuals, lower-working class people often cannot accumulate supernumerary personal assets. Kameda et al. (2005) argued that these people may have developed various social institutions as an alternative solution to uncertainty, including norms of generalized reciprocity. To address this question, we conducted surveys with students in 7 Japanese universities. A hierarchical linear regression analysis revealed that, when controlling for the university factor, individual SES indices (parents' occupation, education, and income) were significant predictors for the students' endorsement of a generalized reciprocity norm. As expected, students from lower-working class families endorsed the norm more vigorously than those from middle-upper class families, and expressed stronger emotional responses to norm violations.

Conformity or anti-Conformity?: Producer-scrourer behavior in group performance **Nobue Ishibashi (Hokkaido University); Tatsuya Kameda (Hokkaido University); Reid Hastie (University of Chicago)**

When animals engage in collective performance such as social foraging, the group is often divided into cooperative "producers" who actively forage and free-riding "scroungers" who exploit the producers' costly efforts (Vickery et al., 1991). Previous research testing the producer-scrourer model with human laboratory groups has confirmed this phenomenon in a variety of task settings, showing that the producer-scrourer ratio in a group approached a mixed equilibrium over time (Kameda & Nakanishi, 2002, 2003; Kameda & Tamura, in press). This study explores the phenomenon by examining individuals' micro-decisions in response to social-frequency information. In the experiment, we manipulated social-frequency information about the number of other producers in the group. If the producer-scrourer model is correct, subjects should decide to produce when there are too few producers in their group, but they should switch to scrounging when there are too many producers -- frequency-dependent anti-conformity. The results provided partial support to this hypothesis.

In-group trust and in-group favoritism in a dictator game

Nobuhiro Mifune (Hokkaido University); Toshio Yamagishi (Hokkaido University)

We present results of two experiments with dictator games. In Study 1, participants were assigned the role of a recipient in a dictator game, and further, provided with a choice between two dictators - one from their own (minimal) group, and the other from another group. In the mutual knowledge condition in which both the recipient and the dictator knew the membership of the two players, overwhelming majority of the participants (78%) chose the dictator from their own group. In the unilateral knowledge condition in which only the recipient knew the group membership of the two players (and the dictator did not know which group the recipient was in), there was practically no preference for the in-group dictator (51%). In Study 2, participants were assigned the role of a dictator, and divided a fixed amount of money between him/herself and a recipient (either an in-group member or an out-group member). In the mutual knowledge condition, dictators gave more money to an in-group recipient (66% gave at least half of the endowment to the recipient) than to an out-group recipient (only 40%). However, this in-group favoring resource allocation disappeared in the unilateral knowledge condition in which the recipient did not know whether or not the dictator was in the same group. These results indicate that in-group trust and in-group favoring behavior in these experiments are based on the expectations from their own group members, rather than on the in-group love or in-group stereotype that members of their own group are morally superior to members of another group.

Bargaining by children with autistic spectrum disorder

Kumiko Mori (Kwansei Gakuin University); Ryoji Yukihiro (Kyoto Gakuen University)

We investigated the development of bargaining behavior in children with and without autistic spectrum disorders. Children between the ages of 7 and 12 played two trials of trust game and were classified into four types (rational, reciprocal, over-reciprocal, and paradoxical) based on their choices in the games. The results in the typically developed control group indicated that younger participants tended to behave rationally while older participants behaved reciprocally. On the other hand, the percentage of rational participants also decreased in the autistic group by age: they tended to behave over-reciprocally rather than reciprocally. In addition, all age groups within the control group were observed for reciprocal behavior, but such behavior was found only in autistic children at least 10 years in age.

Effects of trust on sanctioning behavior and evaluating self-fairness: Warning and Vengeance

Yuko Morimoto (Kyoto University); Motoki Watabe (Kyoto University); Takashi Kusumi (Kyoto University)

In two experiments, we investigated how differently people sanction (punish) a free rider in social dilemmas. Experiment 1 was conducted to examine what kind of psychological properties enhance or inhibit sanctioning behavior in a 5-person social

dilemma. We focused on the effects of individual's trust (trustful vs. distrustful) and self-fairness (fair vs. unfair). The results showed that trustful and unfair people, as well as distrustful and fair people, would punish a free rider more than the other kinds of people. To account for the results, in experiment 2, we carried out a vignette-type study, in which participants rated how likely they were to engage in a variety of sanctioning behaviors that typically happen in the real world. A factor analysis indicated that people usually assign two different types of meanings to sanctions. One is a personal, emotional, and illegal sanction named "Vengeance," the other is an institutionalized, reasonable, and legal sanction named "Warning." This finding implies that, in experiment 1, participants assigned different meanings to their sanctions according to their levels of trust and self-fairness.

Impaired attentional disengagement from anger faces in social anxiety

Jun Moriya (University of Tokyo); Yoshihiko Tanno (University of Tokyo)

This study investigated whether social anxiety was associated with a dysfunction of attentional disengagement from angry faces. We used the gap task and the overlap task, in which participants were asked to direct attention to central angry or neutral faces and detect peripheral target stimuli. In gap task, the face stimuli disappeared 140~200 ms before the target stimuli appeared and this task didn't include attentional disengagement. In contrast, in overlap task, the face stimuli remained present when the target appeared and this task measured attentional disengagement. In both tasks, the face stimuli appeared 100, 200, 300, 500, 700, or 1000 ms before the target appeared. Results revealed that high social-anxious individuals took longer time to detect target stimuli when angry faces appeared in overlap task after the faces appeared for 300 ms, but in gap task, it was no longer time to detect the targets in appearing angry faces. Low social-anxious individuals didn't take long time in both tasks. We concluded that social-anxious individuals had deficiencies in attentional disengagement from angry faces 300 ms after the faces appeared to realize the angry faces.

Deception and cooperativeness: Evidence for counter strategy of free riders

Hiroki Oozono (Kyoto University)

In social and economic exchange, the free rider problem often occurs. In order to solve this problem and achieve mutual cooperation, cooperators should be able to distinguish free riders from other cooperators and to avoid free riders. Given this assumption, it should be a case that free riders take a counter strategy; they should improve their ability not to be detected themselves as free riders (Hypothesis 1). Thus, they should be more skilful liars than cooperators. If so then, the cooperators should develop their ability to detect the deception by free riders more precisely (Hypothesis 2). I conducted two experiments to test these hypotheses. The results supported Hypothesis 1, but not Hypothesis 2. I discuss several reasons why the results did not support the second hypothesis to proceed further research.

Trust and social mobility: An empirical study of the effect of job change on trust

Yoshimichi Sato (Tohoku University)

This paper examines the empirical validity of a theory on the emergence of trust proposed by Macy and Sato (2002). They argue that only moderate social mobility in a society gives its members opportunities to encounter strangers and to learn to trust them in a stable setting. Converting their theory into a hypothesis at the individual level—the level of trust of an individual is an inverted U-shaped function of the number of companies he/she has worked for (NUMCO)—, we test the hypothesis with the JGSS-2002 dataset. When NUMCO is used as the only independent variable in a logit regression model with trust as the dependent variable, the hypothesis is empirically verified. However, when income is added to the model, the coefficients of NUMCO become statistically insignificant, although they show a pattern expected from Macy and Sato's theory. We argue that this stems from the relationship between income and NUMCO, which suggests a new modification to their theory.

Genetic and environmental factors contributing to individual differences in socialization

Chizuru Shikishima (Keio University); Shinji Yamagata (University of Tokyo); Kai Hiraishi (University of Tokyo); Juko Ando (Keio University); Yutaka Ono (Keio University)

Behavioral genetics provides a statistical methodology to measure relative genetic and environmental effects influencing our complex behavior. Almost every behavioral genetic study across cultures so far has demonstrated that virtually all individual psychological differences are heritable and not affected by family environment shared among family members, but by nonshared environment unique to individuals. However, our twin data disclosed that many aspects of family influence on socialization were not explained by main effects, but by interaction models between genetics and environment. For instance, the level of parental care, the family structure, and the cohesion of the family do not mediate one's sociality as shared environmental factors but can moderate the manifestation of genetics and family environmental effects in children's acquisition of socialization. These dynamics between genes and environment imply that although universal effects which systematically influence all families and all family members do not exist, some features of families do affect the development of one's socialization. This will be of increasing relevance in the so-called postgenomic era, when all genes and all DNA variations will eventually be known, as the next contribution for behavioral genetics is to clarify the mechanism of genetic sensitivity to environments, i.e., gene-environment interactions.

Direct and indirect effect of punishment in the social dilemma

Mizuho Shinada (Hokkaido University); Toshio Yamagishi (Hokkaido University)

Human cooperation in a large group of genetically unrelated people is an evolutionary puzzle. Despite its costly nature, cooperative behaviour is commonly found in all human societies, a fact that has interested researchers from a wide range of disciplines including biologists, economists, and psychologists to name a few (1). Many

behavioural experiments have demonstrated that cooperation within a group can be sustained when free riders are punished (2). We argue that punishment has both a direct and an indirect effect in promoting cooperation. The direct effect of punishment alters the consequences of cooperation and defection in such a way as to make a rational person prefer cooperation. The indirect effect of punishment promotes cooperation among conditional cooperators by providing the condition necessary for their cooperation — i.e., expectation that other members will also cooperate. Here we show the data from a couple of 1-shot social dilemma games that these two effects of punishment increase cooperation in a complementary manner. Further, we show for the first time that these effects promote cooperation either when the punishment is voluntarily provided by game players themselves or when it is exogenously provided.

Which is more important for the emergence of indirect reciprocity: Regarding giving to free-riders as “bad”, or regarding not-giving to free-riders as “good”?

Nobuyuki Takahashi (Hokkaido University); Rie Mashima (Hokkaido University)

Indirect reciprocity is one mechanism that allows for unilateral resource giving among n-persons. Using analytical methods and computer simulations, previous studies have examined a number of strategies that make indirect reciprocity possible. In particular, previous investigations have shown that the distinction between justified and unjustified not-giving is critical. In other words, strategies that regard not-giving to “bad” individuals as “good” while not-giving to “good” individuals as “bad” make indirect reciprocity possible. However, this study shows that whether or not a given strategy is an ESS depends on the type of perceptual errors that are assumed. When errors are objective (i.e., perceptual errors are shared among all individuals in a society), as previous studies have shown, regarding not-giving to “bad” as “good” is critical. When perceptual errors are subjective (i.e., perceptual errors may not be shared among all individuals), however, the distinction between justified and unjustified giving is critical. In other words, in order to maintain indirect reciprocity, strategies must regard those who give to “bad” as “bad” while regarding those who give to “good” as “good.” Since we believe that there is no guarantee that perceptual errors are shared among all individuals in a society, we argue that the latter moral principle may play a more important role in human interactions.

An attempt to measure temperaments of Gray’s reinforcement sensitivity theory experimentally

Yusuke Takahashi (University of Tokyo); Shinji Yamagata (University of Tokyo); Kazuo Shigemasa (University of Tokyo);

The Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS) are widely studied temperaments of Gray’s reinforcement sensitivity theory. The BAS is thought to be a reward or approach system that responds to positive incentives by activating behaviors. The BIS inhibits behavior in the presence of cues signaling that aversive consequences will follow should a response be made. The purpose of this study is to explore the capability of measuring the temperaments, utilizing the point scoring reaction time task (PSRT task; Avila, 2001, experiment 1). We adapted this task for 30

university students and examined how self-reported BAS/BIS related to performance on the PSRT task. As hypothesized, (1) those who self-reported high BAS responded faster to reward cues than those who self-reported low BAS, when presented punishment cues, (2) those who self-reported high BIS responded more slowly to ex-punishment cues than those who self-reported low BIS. Result suggested that high BAS was associated with faster response to reward cues, but high BIS was not associated with slower response to ex-punishment cues. Although further investigation will be needed in the latter result, the PSRT task showed the possibility as experimental assessment for temperaments.

Fear may be transferable across individuals: A psycho-physiological experiment

Ryo Tamura (Hokkaido University); Tatsuya Kameda (Hokkaido University); Ritsuko Inamori (Hokkaido University)

Acquiring fear via observing another's fearful expression (fear contagion) can be a useful psychological device to detect an impending danger quickly. Previous brain-imaging research has revealed that the amygdala is activated when participants view another's fearful facial expression. This implies that fear may be transferable across individuals. To address this phenomenon more directly, we conducted a psycho-physiological experiment. We first video-recorded facial expressions of a target person (the sender) while she was watching a horror movie, simultaneously recording her psycho-physiological responses, including blood value pulse (BVP) and skin conductance response (SCR). We then showed the video clip (without sound) to a set of participants (the receivers) and measured their facial electromyogram (facial EMG), BVP, and SCR. The participants reported that they felt strong fear while watching the video clip. There was also some evidence that the physiological responses were synchronized between the sender and the receivers.

Factors influencing reciprocity in chimpanzees

Shinya Yamamoto (Kyoto University); Masayuki Tanaka (Kyoto University)

We investigated what factors regulate reciprocity in chimpanzees by developing a new task, “altruistic token task”. In this task, when one chimpanzee inserted a coin into a vending machine, a food reward was delivered to the other chimpanzee in the next booth. Three conditions were conducted: 1) “one coin alternately” condition with three mother-infant pairs and two adult-adult pairs, where two chimpanzees were alternately given a coin for a trial; 2) “two to twenty coins alternately” condition, where we increased the number of coins supplied for a trial; and 3) “500 coins simultaneously” condition, where each chimpanzee was given 500 coins simultaneously. In “one coin alternately” condition, coin insertion persisted in the two adult-adult pairs but not in the three mother-infant pairs. In “two to twenty coins alternately” condition, the frequency of refusal of coin-insertion increased with the number of coins supplied for a trial. In “500 coins simultaneously” condition, two adult chimpanzees took turns inserting coins; however, there was an imbalance in the number of coins inserted by each chimpanzee, and coin-insertion didn't persist. These results indicate that the social relationship

between subjects, the amount of investment, and fairness are factors that influence reciprocity in chimpanzees.

Sunday Poster Session, 11:40 a.m.

Cultural differences in attention: Comparing context sensitivity between Japanese and Western subjects

Mikako Akase (Hokkaido University); Takahiko Masuda (University of Alberta); Mark H.B. Radford (Hokkaido University)

A large number of studies on perception and cognition suggest that ‘East Asian’ people have context-oriented psychological processes; that is they are more likely to pay attention to periphery information whereas ‘Western’ people have content-oriented psychological processes – that is they are more likely to pay attention to salient objects and less likely to attend to surrounding information. Current research finds Japanese participants were more likely than Western participants to be influenced by peripheral information. We presented participants with six types of stimuli (single-face-circle, single-mark-circle, single-plain-circle, multiple-face-circles, multiple-mark-circles, and multiple-plain-circles). Participants were required to solely focus on the centre circle for every stimulus. Compared to Westerners, Japanese people could not ignore surrounding circles, and their gaze drifted away from the centre circle on which they had been asked to focus. Western participants, on the other hand, could focus on the centre circle. These results suggest that there can be cultural variations in cognitive processes.

Mutual enhancement in the United States and Japan

David J. Dalsky (Hokkaido University)

I examined the hypothesis that people with a relational-interdependent self-construal enhance their self-worth by praising and receiving praise from close others. I called this process mutual enhancement and validated a scale for its measurement with 4 samples in the United States ($Ns = 262$ and 154) and Japan ($Ns = 181$ and 160). Correlational studies confirmed the scale’s construct validity, criterion validity, and internal reliability. As hypothesized, mutual enhancement was positively correlated with: relational-interdependent self-construal, relationship closeness, family support, and sympathy. Mutual enhancement was not related to the cultural-interdependent self and collectivism. As predicted, American women scored higher than American men on mutual enhancement, whereas no gender difference in Japan was found. I discuss the relevance of mutual enhancement to the debate on pancultural self-enhancement.

The perspectives of “good life” in Japanese retirees

Haruko Hayashi (Tokyo Woman's Christian University); Mayumi Karasawa (Tokyo Woman's Christian University); Keiko Kashiwagi (Bunkyo Gakuin University)

The purpose of this study was to investigate the meaning of good life for retirees ($N=102$), who are college educated and worked in Japanese companies, and their

spouses (N=76). By questionnaire, respondents were asked to answer the following questions; “What is the meaning of good life for you?” “What is the cause which makes your life good?” “After retirement, what has changed your concepts on good life?”

In open-ended answers, it was found that physical health, a feeling of happiness and social relationships were very important to most respondents. As the cause of good life, male respondents focused more on role-oriented elements such as satisfaction with their works, stability of the economic background at home. In contrast, female respondents focused more on relation-oriented elements such as a feeling of gratitude and patience for others. After retirement, male respondents felt free from the obligations to their works or children, and they were led to their spouses and families. About twenty percent of the respondents faced critical events such as death of their spouses and severe illness, which changed their concepts of good life.

The effect of art therapy for aged patient with severe Alzheimer’s disease: A study through the practice by aged health facilities

Mari Imai (Ritsumeikan University); Mitsuo Miyazawa (Kinki University)

Japan is now aging society because 14% of its population are senior citizens. Aging population is a worldwide demographic transition phenomenon but in Japan the population seems to senesce at the alarming rate if compared with other developed countries. The Ministry of Health Labor and Welfare reported that 160,000 senior citizens are suffering from dementia and the number is estimated to exceed 300,000 by the year 2025.

Despite the gloomy prediction nothing much was done either to identify the cause of dementia among senior citizens or to search for a remedy or cue for this problem. We started our experiment by utilizing art as therapy for group of dementia senior citizens who frequent one of the Health care Facilities in Japan.

Since the first experiment in 1999, we have been observing and recording a positive result of reduction in problem behaviors among demented senior citizens’ consistency with art game program. This result suggests that the art therapy could change the behavior property and that the change might differ according to the personality of the patient.

We are proposing the art as the series of pilot experiments. In the preparing the research report we have asked the consent of the patients and his family and changed some details to keep the privacy and as a respect to human right.

The structure of happiness among Japanese

Chiemi Kan (Tokyo Woman's Christian University); Mayumi Karasawa (Tokyo Woman's Christian University)

Recently, many studies showed that how people achieve a meaningful life including an appropriate sense of the self and good quality social ties varies with the sociocultural context (Diener, Suh, Lucas, & Smith, 1999; Kitayama & Markus, 2000). Kitayama, et al has examined that general cognitive judgment of well-being (life satisfaction judgment; Kang et al., 2003; Kwan et al., 1997), or general hedonic well-being, such as reported happiness (e.g., Kitayama et al., 2000) and Eudaimonic well-being, which

involves assessments of purpose and meaning in life, personal growth, and self-acceptance (Ryff & Keyes, 1995) and demonstrated that socio-cultural perspectives of well-being were enhanced by a cultural perspective between North American and Japanese. (Kitayama, et al.) Although these research on culture and well-being have shown remarkable evidence, it might be interesting to see the meaning of well-being or happiness in Japanese perspectives. This study explored that there is socioculturally distinct pathways to well-being in Japan. As well as eudaimonic and hedonic well-being, we added the happiness of being scale, such as acceptance of their existence, living naturally and graceful to be existed among Japanese undergraduate and graduate students. As predicted, happiness of being are related stronger than other two scales. Socio-cultural meaning of culture and well-being constructs will be discussed.

Culture and well-being

Mayumi Karasawa (Tokyo Woman's Christian University)

The purpose of this study was to investigate age differences in multiple aspects of psychological well-being in a sample from Japan (N = 482) and the U.S. (N = 3,032) and examine how independence and interdependence relate to well-being and aging among American and Japanese adults in midlife. Prior U.S. findings have documented gains in hedonic well-being (more positive affect, less negative affect), but age decrements have been noted in aspects of eudaimonic well-being, particularly purpose in life and personal growth. Cultural differences in individualism and collectivism may, however, bear on these patterns, that is, interdependent cultures provide more benign contexts for growing old. Findings from this investigation provide partial support for this view – although U.S. respondents had higher scores on numerous hedonic and eudaimonic aspects of well-being than Japanese respondents, age patterns revealed age increments in personal growth in Japan juxtaposed with age decrement in the U.S. Purpose in life showed downward age trajectories in both cultures, but the Japanese fared comparatively better in this domain as well. Hedonic well-being, in contrast showed similarly positive trajectories in both culture. The findings were also qualified by gender effects, sometimes favoring women, while other times favoring men. Cultural differences through life span will be discussed.

Content and implications of Japanese' meta-stereotype of Koreans

JiYoon Kim (University of Tokyo); Tomoko Oe (University of Tokyo); Kazuo Shigemasu (University of Tokyo)

Two studies were conducted confirming that the beliefs held by Japanese about how they are viewed by Koreans (i.e., meta-stereotype) have important implications on intergroup relations. Study 1 showed that Japanese have a consensual negative meta-stereotype of Koreans. The following study presented the nature of Japanese' meta-stereotype of Koreans. It was testified that the impressions Japanese form of Koreans (i.e., other-stereotype) were not associated with anxiety toward interactions with Koreans, while meta-stereotype negativity, on the other hand, was positively correlated with intergroup anxiety. Concerning contact with Koreans, in contrast to the other-stereotype, levels of meta-stereotype were not related with contact experience,

which implies that reforming meta-stereotypes is not easy. It was verified that meta-stereotypes could be more important for intergroup relationships than other-stereotypes; however, meta-stereotype change proved to be difficult.

Cultural and interpersonal aspects of regret

Asuka Komiya (Kyoto University); Motoki Watabe (Kyoto University); Takashi Kusumi (Kyoto University)

In this study, we investigated how Japanese strongly feel regret in their life by questionnaire method. One-hundred and twenty-three university students were asked to describe how they felt the strongest regret in their life. The listed regrets were coded along with the following three dimensions; whether they did or failed to do (action vs. inaction), for whom the bad result was (self vs. others), and under what situation they regretted (personal vs. interpersonal). We found that Japanese regretted both their action and their inaction under the interpersonal situations, while they regretted more their inaction than their action under the personal situations. These results are consistent with the findings of cultural psychology in that East Asians are likely to define themselves in terms of their social relationships. Thus, these results suggest that feeling of regret depends on culturally specific factors more than researchers have thought.

A regional cultural difference on telling “exaggerating” blunders

Sora Niwa (Kyushu University)

Niwa and Kato (2005) hypothesized and demonstrated that compared to *Kanto* (Tokyo area), *Kansai* (Osaka area) people are more likely to tell their blunders. The purpose of the current study is to generalize this result with a larger sample (*Kanto*: 120 males and 66 females, *Kansai*: 55males and 69 females). We asked the participants to rate 16 vignettes in "How willing are you to tell others about the blunder you committed?" with a 7-point scale (An example of vignettes is “I looked for the pen-case in my bag, but I found a remote instead”). However, no significant difference between cultures was detected. We further performed the factor analyses and found that the blunder-vignettes can be categorized into 2: exaggerating and reporting blunders. A repeated 2 (region) X 2 (gender) X 2 (blunders) ANOVA showed an expected cultural difference when the blunders are exaggerating than mere reporting. This result suggests that *Kansai* people are more active to participate in the interactions and construct relationship with others.

Dominant effect of affection in stereotype activation

Tomoko Oe (University of Tokyo); Jiyeon Kim (University of Tokyo); Kazuo Shigemasa (University of Tokyo)

In two studies, we tested the hypothesis that affection is more dominant in stereotype activation than cognition. Participants completed three or more Implicit Association Tests (IAT) measuring automatic age stereotyping. The pleasant-unpleasant IAT and the like-dislike IAT were used to measure affective component. The strong-weak IAT, the sturdy-gentle IAT, and the dangerous-safe IAT were used to measure both affective and

cognitive components. In cognitive dimension, "strong," "sturdy," and "dangerous" are stereotypes toward the young, and their opposites are toward the elderly. In affective dimension, "strong" is more positive than "weak", whereas "sturdy" and "dangerous" are relatively more negative than their opposites. Results confirmed the automatic stereotyping favoring the young. In study 1, participants responded faster in the young-positive ("gentle") task than in the young-negative ("sturdy") one, as well as in the pleasant-unpleasant IAT and in the strong-weak IAT. In study 2, participants also responded faster in the young-positive ("gentle" and "safe") task than in the young-negative ("sturdy" and "dangerous") one, as well as in the pleasant-unpleasant IAT and in the like-dislike IAT. In addition, participants' sturdy-gentle self image did not correlate with the sturdy-gentle IAT score. These results provided support for the dominant effect of affection in stereotype activation.

Acceptance of a high cost sanction system: Why decision by discussion is preferred
Susumu Ohnuma (Hokkaido University)

This study examined why people prefer discussion when introducing a high cost sanction system. We developed an 'Environmental Game' which simulated 'The Tragedy of Commons'. Four participants were randomly and anonymously assigned to play in a game. Data from 28 participants were analyzed. The results showed preference for the introduction of a high cost sanction system when it was decided by voting after discussion, but was less when decided by voting without discussion or when decided an independent third person. However, despite a preference for discussion, players did not expect that they could necessarily achieve consensus. It is noteworthy that decision by discussion is preferred to other decision methods, despite the lack of expectation of consensus. Such a result can be explained in terms of procedural fairness rather than as a second order dilemma.

Depressive mood and discounting delayed monetary gains and losses
Hidemi Oono (Hokkaido University); Taiki Takahashi (University of Tokyo); Mark H. B. Radford (Hokkaido University)

The concept of delayed discounting has been proposed as a way of understanding impulsivity. Recently, it has been reported that the brain's serotonin function has an important role in both delayed discounting and depression. In the present study, we examined the relationship between depressive tendency and the rate of delayed discounting. A total of 129 healthy university students (68 males and 61 females) participated in the present study. Results showed a significant positive correlation between depressive tendency and the rate of delayed discounting only in females. These results suggest that depressed females may have a myopic decision style in intertemporal choice for both gains and losses.

Similarity attraction, relationship mobility, and actually selecting similar others: How social structural differences between Japan and the United States affect interpersonal similarity

Joanna Schug (Hokkaido University); Masaki Yuki (Hokkaido University)

Several studies have found Americans to rate both self-friend and within-group similarity higher than Japanese. This study attempts to explain these differences in terms of the differing social structure within each country. According to Yamagishi (1998), America is an "open society," where individuals have many opportunities to meet and choose interaction partners. In contrast, Japan is a "closed society" in which individuals are bound in commitment-based relationships. In an open society, individuals who prefer similar others have many opportunities to select partners who are similar to themselves. However, even if individuals were to prefer similar others in a closed society, opportunities to meet and select interaction partners are fewer in number. Thus, we predicted that Americans would report higher levels of self-friend similarity than Japanese and that this difference would be explained by Relationship Mobility, or the beliefs regarding the amount of chances individuals have to meet and choose interaction partners in a particular society. To test this hypothesis, a study of 116 American and 75 Japanese students was conducted. As predicted, Americans rated levels of self-friend similarity (when compared to an acquaintance as a baseline) higher than Japanese, and this difference was successfully mediated by differences in Relationship Mobility.

Beyond the differences: Ubiquitous jigsaw method for collaborative learning
Kazuhiko Shibuya (RIKEN [The Institute of Physical and Chemical Research])

The goal of this presentation is to articulate educational activities using ubiquitous jigsaw method. I would like to discuss how to learn in the situation of collaborate learning effectively beyond the differences of people (e.g. Socio-Economical, Cultural, Educational disabilities). Collaborative learning in itself consists of various needs to encourage motivation and understandings of each student more than ordinary learning style. We can recognize that collaborative learning should provide more interactive, experiential, spatiotemporal and distributed services for anyone who want to learn with others at any time. Thereby I concentrate on exploring possibilities of collaborative learning which enables to do reciprocal exchanging experience and knowledge with various people.

A study of normative conflict resolution strategies in Japanese culture
Hiroshi Shimizu (Osaka University)

In this study, we attempted revealing what kind of "thinking style for conflict management" people have as a norm, based on the Interdependence Theory (Kelley & Thibaut, 1978). Within that theory, various dyadic interactions could be expressed by dividing 2x2 outcome matrix into three components; Self Control(SC), Partner Control(PC), Joint Control(JC). Kelley & Thibaut (1978) analyzed that "exchange conflict" (e.g. Prisoner's Dilemma Game: PDG) derived from a dissonance between one's SC and the other's PC, whereas "coordinate conflict" (e.g. Hero game: HG) derived from a dissonance between both persons' SC and JC. From those arguments, this study investigated how the structure of conflict of both PDG and HG would be transformed, by using a scene assuming method. 190 Japanese college students

participated in the study. Analysis revealed that PDG was transformed harmonically, but HG was not. In addition, PDG was more harmonically transformed by participants who had higher scores on agreeableness. About HG, when the character's role was clear enough, conflict was solved comparatively. Results of this study indicated that people would share a "thinking style for conflict management" as norm for resolving conflict, especially when they had experienced an exchange conflict (PDG).

The effect of dictator's intentions in the third-party punishment

Haruto Takagishi (Hokkaido University); Nobuyuki Takahashi (Hokkaido University)

Perception of unfair intentions plays an important role in the punishment of proposers who make an unfair offer by the responder in the ultimatum game (Falk, Fahr & Fischbacher, 2003; Ohnuma & Yamagishi, 2005). Using a similar experimental paradigm of truncated choices, we examined whether perception of unfair intentions of the dictator play a similarly important role in the punishment of dictators who make unfair distributions of resources by a third-party. We conducted a strategy method experiment to examine whether a dictator's unfair intention increases third-party punishment. A truncated dictator game with the option of third-party punishment was employed. A first-party was given two options to allocate 1600 yen (\$14) between himself and a second-party. In the unfair-intention condition, Option X was an 80/20 split between the first and second-party, and option Y was 50/50. In the no-intention condition, X and Y were both 80/20. A third-party was given 500 yen and decided the amount used to punish the first-party by subtracting from the first-party's profit. Results showed that when a first-party chose X the mean punishment level was higher in the unfair-intention condition than in the no-intention condition. On the other hand, the proportion of punishers in the no-intention was much larger (65%, 37 of 57 participants) in the third-party punishment than in the previous studies of second-party punishment (15 to 18%). Inequity-aversion of resources regardless of intentions is suggested to play a much greater role in the third-party punishment than in the second-party punishment, in which reciprocity plays a prominent role.

Trust and punishment in three societies: A "joint-cultural" experiment in Japan, China, and Taiwan

Chisato Takahashi (Hokkaido University); Toshio Yamagishi (Hokkaido University)

In a "joint-cultural" experiment, in which participants from different cultures or societies participate via Internet, we compared Japanese, Chinese and Taiwanese on their willingness to trust and to return trust to another participant either from their own country or from another country. Further, participants were provided with information about other participants' behavior in the trust game. The trust game was constructed in the following way. The major findings in this study are as follows. 1) The proportion of the trustees who gave a fair share to the recipient was higher when they were trusted than when they were trusted less. 2) Regardless of the nationality of the participants, they trusted trustees from their own country more than those from another country. 3)

When trusted by a truster, both Chinese and Taiwanese participants provided a share of the common endowment more fairly toward the in-group truster than to the out-group truster, whereas this in-group favoring behavior in fairness toward the truster was not observed among Japanese participants. 4) Both Chinese and Taiwanese punished (without personal cost to themselves) out-group free-riders (those who took all the common share) more often than in-group free-riders, whereas Japanese participants punished in-group free-riders more often than out-group free-riders.

How culture shapes emotion? Emotion inference and expression in the United States and Japan

Yukiko Uchida (Koshien University)

In Japanese cultural contexts, emotions are not primarily private, internal or subjective events as they are typically understood to be in North American contexts. As a consequence, in Japan, emotional experiences are likely to occur, to be expressed, and to be inferred when appropriate and relevant others are salient. In Study 1, we analyzed the conversations on the TV program of Olympic athletes. When an interviewer asked about interpersonal relationships of athlete, then the amount of athlete's emotion expression was increased in Japan. In contrast, that kind of question inhibited athlete's emotion expression in the United States. Study 2 confirmed corresponding type of cultural difference in emotional inference. When we showed the information of an athlete who mentioned his or her interpersonal relationships, Japanese inferred more emotion of that athlete than Americans. Implications of function of emotion will be discussed.