This cross-sectional study examined Japanese children's action-related beliefs about school performance and compared them with comparable data available from studies of German, Russian, and American cultures. A total of 817 Japanese children aged 8 to 13 years completed the Control, Agency, and Means-Ends Interview (CAMI), which assesses general control expectancy, four self-related agency beliefs (effort, ability, luck, and teachers), and five causality-related means-ends beliefs (effort, ability, luck, teachers, and unknowns). The CAMI had shown strong cross-cultural validity, but it had not yet been validated with Japanese children. Academic performance was represented by the teachers' assigned math and Japanese language grades. The findings indicated that the original factor structure of the CAMI mostly fit the Japanese children; thus, there were many intercultural similarities in the CAMI constructs that were likely related to commonalities in teaching formats and beliefs about academic performance associated with formal schooling. However, there were differences in self-related agency beliefs that appear to stem from cultural influences specific to Japanese society. Specifically, Japanese children placed a higher relative emphasis on effort than ability than did children in other cultures. The belief in effort as a mean for academic success was quite strongly endorsed by the Japanese children, and this endorsement was stronger with older Japanese children than with younger. The correlation between agency effort and academic achievement in Japanese children was weaker in comparison to the relationship found in other Western cultures. The role of luck and the relationship between effort and ability evinced unique patterns in Japan. (Contains 20 references.) (KDFB)
A Cross-Sectional profile of Japanese Children's (ages 8-13) Action-Control Beliefs

Mayumi Karasawa, Takahiro Miyashita, Mari Mashima, & Hiroshi Azuma (Shirayuri College, Tokyo, Japan)

Abstracts
In this paper we examined Japanese children's (grades 2-6, n = 817) action-related conceptions about school performance and compared them with comparable data available in other socio-cultural contexts (German, Russian, and American cultures). We used the Control, Agency, and Means-ends Interview (CAMI) to assess the Japanese children's self-related agency beliefs, their general control expectancy, and their causality-related means-ends beliefs. The CAMI, which is based on an action-theory view of performance beliefs, had shown strong cross-cultural validity, but it had not yet been validated with Japanese children. Consistent with our expectations, we found many inter-cultural similarities in the CAMI constructs which are likely related to commonalities in teaching formats and conceptions about academic performance associated with formal schooling. At the same time, however, we found differences in the self-related agency beliefs that appear to stem from cultural influences that are specific to Japanese society. Most notably, we found that the role of luck and the relations between effort and ability evinced unique patterns in Japan.

Introduction:
We studied the development of school performance-related agency, control, and means-ends beliefs and their link with academic performance in Japanese children, using the "Control, Agency, and Means-ends Inventory" (CAMI). Is Japanese understanding of these concepts similar to Western understandings? First, these concepts have initially been validated in Germany and other Western cultural contexts. It is important, therefore, to determine whether these concepts are equally applicable to the Japanese cultural context. Although the very fact that those of us from different cultures can communicate with each other by using these concepts indicates that our understandings of these concepts are reasonably similar, it may be desirable to carry out a more stringent test. Once concepts used to describe academic performance are shown to be reasonably similar across different cultures, it will become possible to describe cultural differences in terms of these concepts. What cultural differences can be predicted? It is generally acknowledged that Japanese society in general is oriented toward interpersonal relations as compared to many Western, more individualistic societies. One important implication of this may be a relatively strong emphasis placed on effort rather than on ability in Japan. Given the individualist belief of a person as constituted primarily by attributes internal to the self, to believe that one has high abilities may prove to be a very important concern for many individuals. But given a more interpersonally oriented belief, it may be more important that one tries to improve and meet expectations and standards of individuals, which may in turn lead to a strong general emphasis on one's exerting effort on a task at hand.
Methods:
We gave the CAMI to a total of 817 Japanese boys and girls attending two schools in Tokyo (see Table 1 for sample size by grade; 52% girls and 48% boys on average; ages 7.4-12.3 years). The schools were from primarily working-class and middle socio-economic status districts in the greater Tokyo suburbs. We administered the CAMI in the classrooms in the teachers' absence, reading each item aloud as the children silently followed along, answering on a 4-point scale. The CAMI measures 10 dimensions across three belief types: control expectancy, four agency beliefs (effort, ability, luck, & teachers), and five means-ends beliefs (effort, ability, luck, teachers, & unknowns). Academic performance of the children was represented by the teacher's assigned math and Japanese language grades. Analytic procedures. As with previous cross-cultural work with the CAMI, we used multiple-group mean and covariance structures (MACS) analyses because these methods can (a) test the hypothesized factor structure of the items, (b) correct for measurement error (disattenuation) to allow, for example, estimates of true correlation among the constructs, and (c) explicitly test for equivalence of comparison (metric invariance; Little, 1995).

Results and Discussion
As expected, multiple-group analyses of mean and covariance structure revealed that the original factor structure of the CAMI mostly fit the Japanese. Thus there was a considerable degree of measurement equivalence with the other four socio-cultural contexts most of the ten CAMI constructs.

These similarities may be derived from the fact that we studied children's understandings about achievement in formal school settings, which as a system share considerable commonalties across cultures. Among others, there were many similarities in the developmental trends of the mean levels of the CAMI sub domains and in the correlation between academic performance and the causality-related means-ends beliefs. At least two possible factors might contribute to the similarities of the Japanese children's action-related beliefs: (a) commonalties in classroom teaching formats and (b) commonalties in conceptions about the factors that determine school performance. An important outcome of this study, therefore, was the overall similarity in Japanese children's school performance-related beliefs. This demonstrates that the concepts used in the CAMI inventory was comprehended and used quite similarly in Japan as in the European-American cultures. This similarity enables us to test specific predictions for cultural differences except the concept of "Luck".

*Luck:* As described in Little, Oettingen, & Baltes (1995), the negative-event items for the agency belief dimensions are reverse coded to reflect greater access to, or possession of, these dimensions -- the negation of a negative event is the same as the affirmation of a positive event. However, in the present sample of Japanese children after reverse coding (as per the coding manual), the items did not manifest a positive correlational manifold ($r = -.31$), suggesting that the children have interpreted these items differently from what was intended. In other samples (e.g., Little et al., 1995), items correlate positively after reverse coding. In all the western countries where the CAMI was conducted, those who scored high in the agency luck basically
said that they will both succeed and not fail because they are lucky. As described above, we had several items used to measure agency luck. Some measured the extent to which one succeeds because of luck and the others measured the extent to which fails because of luck. In the Western countries, there was a high negative correlation between those items measuring the extent to which one succeeds because of luck and those items measuring the extent to which one fails because of luck. But in Japan, this was not the case, those who scored high in the agency luck basically said that they will both succeed and fail because of luck. That is to say, there was a high positive correlation those items measuring the extent to which one succeeds because of luck and those items measuring the extent to which one fails because of luck.

*Effort*: We first predicted that there would be a stronger emphasis on effort than on ability in Japanese culture. We made this prediction because given a more interpersonal oriented value prevalent in Japan, it may be more important to believe that one has a capability to improve and meet expectations and standards of other individuals, which may in turn lead to a strong emphasis on one's capacity to exert effort on a task at hand.

**Agency beliefs**: In all the cultures examined here, children believed that they had effort at their disposal to a greater extent than they had ability. But this relatively stronger emphasis on effort was especially pronounced in Japan. Japanese in general tend to say that they are capable of expending a lot of effort although they have much less ability at their disposal.

**Mean-ends beliefs**: The most striking cultural difference again happened in Japan, where the role of effort as a general means for academic success is quite strongly endorsed. Further, this belief in effort as a means for success becomes stronger as the child gets older. No such trend is obvious for the means-ends belief for ability.

**The low correlation between the agency effort and academic performance**: We also predicted that there would be a much attenuated relationship between agency effort and actual academic performance. We made this prediction because there is a strong emphasis on effort itself in Japanese cultural contexts. In the Western studies quite strong correlations have been reported between agency effort and academic performance such that those who believe that they have effort at his own side are also likely show high academic performance. This may in part reflect the fact that individuals tend to infer, from their own academic performance, the corresponding degree of their effort. In Japanese society, however, there is a strong emphasis on effort itself rather than on consequences of the effort such as academic performance. It is often considered more important to exert effort than to succeed. Of course, once you put more effort, the chance is that you will succeed. But the outcome tends to be de-emphasized. This may imply that Japanese may be less likely to infer their own level of effort from their own academic performance. It may then be predicted that there will be a lesser degree of correlation between academic performance and agency effort in Japan than in other Western cultures (Fig 2). This in fact was the case. This correlation varied between .7 and .4 among Western countries, but in Japan it was only .3.

**Conclusions**: In summary, we found striking differences that reflected socio-cultural
influences. Most notably, the role of luck and the relations between effort and ability were quite distinct in this sample. Clearly, future research into the nature of the luck concept in Japanese society is needed before any strong conclusions regarding the luck items can be drawn. In addition, the ways in which socio-culturally-based values, such as those shaping effort and ability conceptions, are transmitted to the children are important processes for future research to untangle. Such an exploration into the ontogeny of the distinctiveness between effort and ability as well as into how these action-related beliefs relate to various performance measures may be an important key to unlocking the secret of the Japanese children's achievement successes. In other words, given the fundamental commonality between effort and ability conceptions between Japanese children and children reared and educated in other socio-cultural contexts, a number of relevant questions emerge: How are these concepts shaped and expressed in such a distinctive manner? Do they reflect the important individual differences variable that predicts the high achievement patterns of Japanese children? Given the results of this study, such questions would provide important insights into the possible mechanisms that moderate the relationship between children's beliefs about their own performance and their actual performance.
References


Figure 1

Mean Level of Belief

- Effort
- Ability
- Luck
- Teacher
- Control Expectancy

Agency Belief

Note: Disattenuated Means
Figure 2

Means-Ends Belief

Effort  Ability  Luck  Teachers  Unknowns

4.0  3.5  3.0  2.5  2.0  1.5  1.0

Mean Level of Belief

Note: Disattenuated Means

East Berlin  West Berlin  Moscow  Los Angeles  Tokyo

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Mayumi Karasawa, Takahiro Miyashita, Mari Mashima, and Hiroshi Azuma

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