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Survey of urban residents' evaluation of their city environment Part 1: The urban charm

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This paper presents the findings of questionnaire and interview surveys conducted in Mitaka and Musashino Cities in the aim to investigate the methods employed by residents to evaluate their respective environments, particularly with respect to the charm associated with these cities. The charm associated with the urban environment was classified into two categories, "charm in daily life" and "charm in non-daily life". It became apparent that residents placed value on opportunities for relaxing and living in comfort. In non-daily life, residents placed value on improved living conditions and harmony between the natural environment and commercial facilities. An examination of the urban infrastructure using GIS (the Geographic Information System) was one of the methods employed to analyze the residents' responses. However, a more holistic assessment of the environmental evaluation by residents was obtained by combining GIS data with information on urban history, residents' personalities and their values, all of which contribute toward environmental evaluations and therefore need to be considered. Survey results such as these might serve as useful basic materials for facilitating and obtaining consensus among residents for community design initiatives.

Survey of urban residents' evaluation of their city environment Part 2: Anxiety associated with traffic accidents and urban crimes

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This paper presents the survey findings of an evaluation by urban residents of their town, with particular emphasis on the anxiety associated with traffic accidents and urban crimes. Residents attributed the reasons underlying their anxiety over crimes as being due to the density of trees, narrow streets, obstructed views, dark areas and gloomy atmosphere of the environment. Violent crimes were regarded as being prevalent, while housebreaking crimes were not. Anxiety over traffic accidents was attributed to factors such as reckless driving manners, narrow streets, lack of distinctly separated pavements and roadways, heavy traffic and obstructed view. The residents mentioned main roads and intersections as being the locations where they were most anxious, and where their fears concurred most with the occurrence of these events in reality.

Elderly people's awareness of traffic safety and barrier-free transportation

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Recently, many elderly people have died in traffic accidents. According to the statistical data of the National Police Agency, traffic fatalities have been on a declining trend for 10 years. However, traffic fatalities of people aged 65 and over were 2924 cases and still over 40% in 2005. This study investigates senior citizen's awareness of traffic safety and their travel behavior, in the aim to offer them a barrier-free daily life. The survey was done from September to November 2005. The respondents were elderly people living in Fukaya City and Kumagaya City, Saitama Prefecture, 149 men and 180 women, among which 92 men and 100 women aged 65 and over. The results are as follows: Women's awareness of danger becomes stronger in accordance with age. Elderly people unable to walk at ease on community roads need the installation of traffic signals for pedestrians, regulation signs and uneven pavement. Elderly people who feel their life is in danger at intersections also believe it is necessary to install traffic signals for pedestrians, regulation signs and uneven pavement. In addition, it became clear that they also consider necessary the installation of blinking red lights and convex traffic safety mirrors at road curves. We believe that these measures should be introduced.

How passengers' postures affect their feeling of danger in a moving bus

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The purpose of this study is to clarify what kinds of postures make bus passengers feel in more danger when their bus is in motion. 16 volunteers, 15 male and 1 female university students wearing safety helmets took various postures as passengers in 14 different positions in a moving bus, and their feeling of danger was measured by VAS-method in each case. At first, the bus braked suddenly to stop from about 50km/h speed, and then it braked again suddenly as soon as it started moving. The results show that standing postures make passengers feel in more danger than sitting postures. In addition, when holding on to vertical bars in the moving direction of the bus, passengers feel less safe than when using bars located in the opposite direction. Therefore, in order to avoid accidents, passengers should be careful 1) not to have a lot of baggage, 2) to have a seat and hold to the handrail, 3) not to leave their seat until the bus stops completely. If they cannot have a seat and must travel standing, passengers should at least hold to vertical bars or handrails opposite to the moving direction of the bus.

The role of organizational learning in fostering reciprocity

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It has become necessary to redesign organization in order to be more effective and innovative and to provide an organizational environment for all stakeholders to foster four major techniques which allow them to manipulate objects, to communicate, to conduct themselves with respect to others, and to pursue self-transformation (Foucault, M. 1980's), namely, to transform work organization into a reciprocal and innovative workplace to share organizational strategies and social responsibility.

Previously, we have conducted studies on communication and caring as leverage of organizational transformation. This paper deals with empirical studies on organizational learning as another leverage of organizational transformation, and on the appreciation system of the organizational context. Organizational learning types such as “how” type, “what” type, “why” type are formed by strategic business units (SBU). A higher level of reciprocity was observed in Cluster 1, where members took action in a recursive process of organizational learning characterized by a higher level of “why” and “what” types of organizational learning, while Cluster 2 was characterized by a higher level of “how” type of learning, and Cluster 3 was characterized by a lower level in all three types of “how”, “what”, and “why”. The appreciation level of the organizational context played a crucial role in fostering a reciprocal climate of organization, which made organization be more intelligent and innovative.

Measurement of angles of trunk inclination and rotation by use of 3D gyro sensor

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To evaluate the flexibility of the low back, the maximum angles of trunk inclination and rotation were measured with three-axis gyro sensors (MDP-A3U9S, NEC-TOKIN) able to detect Euler angles, yaw, pitch and roll. Subjects were 232 female workers (20-59 yrs) engaging in social welfare facilities. Each of the two sensors was attached with a belt to the lumbar spine (L1) and the pelvis (S1) of the subject. The subjects were asked to be in an uprightly standing position at the start, and then to change the trunk position to the limit in the following order: (1) forward bending, (2) backward bending, (3) left lateral bending, (4) right lateral bending, (5) counterclockwise rotation (twist) and (6) clockwise rotation. The Euler angles were recorded into a personal computer every 100msec throughout the position changes. Before the position-change test above, the subjects' actual pain in the low back was investigated by a questionnaire. Except for the trunk rotation, every maximum movable angle of the lumbar spine on the basis of the pelvis significantly decreased with age, regardless of the low back pain. The age groups (further divided into 10-year difference groups) with low back pain showed on the whole smaller averages of the maximum movable angle, as compared with the same age groups without low back pain. There were significant differences of the averages of the maximum movable angle between subjects with and without low back pain for the forward bending in the 40 years-old group and the rotation in the 20 years-old group. The present study results suggest that measurements of angles of multi-direction inclination and rotation should be made in order to examine the relationship between trunk flexibility and low back pain.

Research on care worker's sense of workload in some nursing homes from the perspective of the difference between nursing service forms

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According to the statistics regarding elder care insurance users in Japan, at least 3,400,000 people are using care services. On the other hand, the number of nursing workers was estimated at about

620,000 people in 2004, and is continuously increasing together with the increase in elderly population. This research questionnaire and personal interview of the workers aimed to measure out how the nursing workers' sense of workload and work consciousness change in several different service forms (a group home, a home help service, and adult daycare). Moreover, the research examined how much the stress factors of the nursing work influenced each individual elderly person.

The training effect of sport activities on peripheral circulation in trained persons with spinal cord injuries

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The purpose of this study was to determine the training effect on arm and leg blood flow responses at rest and during reactive hyperemia in trained persons with spinal cord injury (SCI). The subjects were five wheelchair marathon runners (WCMA), five wheelchair basketball players (WCBB) and eight able-bodied (AB) individuals. The forearm and calf blood flow – resting blood flow (RBF) and peak reactive hyperemic blood flow (RHBF) – were measured by means of strain-gauge occlusion plethysmography in a supine position. RHBF, which estimates the vasodilator capacity, was obtained from the responses following the release of 5 min arterial occlusion. As results, RBF of the forearm did not show any significant differences among subjects. RHBF of the forearm was much larger in WCMA than that in WCBB and AB. In the calf, RBF and RHBF of WCMA were lower than those of WCBB and AB. There were no significant differences in delta BF among them. In conclusion, sports-specific training effects were demonstrated in WCMA and WCBB. Regular endurance training in WCMA enhances the vasodilator capacity in the arm, and it may inhibit the vascular systems in lower limbs.

Physical features of dance major female students

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The skinfold thickness of dance major female students was measured, one group per year, for three consecutive years. Body fat mass was estimated by the electric impedance method. The skinfold thickness at triceps brachii, subscapula and abdomen were significantly greater than in basketball, rhythmic gymnastics, and track athletes. Dance majors were shorter and lighter than basketball and track athletes. Body fat mass differed among the three groups of dance majors, although stature and body weight did not show differences.

Nowadays children's sleep and meal routines: A report of questionnaire survey in Aomori, Tokyo and Okinawa

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In order to clarify the actual situation of children's sleep and meal routines, a questionnaire sur-

vey was conducted in Aomori, Tokyo and Okinawa. The following results were obtained:

- (1) The time of going to bed was significantly different among the areas ($p < 0.01$). The children in Okinawa showed a tendency to go to bed later than children in other areas.
- (2) The children's wake-up time was significantly different among the areas ($p < 0.01$). The children in Aomori showed a tendency to get up early.
- (3) The children's sleeping time was different among the areas. The children in Tokyo showed a tendency to sleep longer, while the sleeping time of the children in Okinawa was considerably short.
- (4) The ratio of the children who ate their supper fully but had insufficient breakfast amounted to about 40 percent in every age group.
- (5) The children who got up earlier than 7:00 a.m. showed a tendency to eat both breakfast and supper fully.
- (6) The children whose sleeping time was longer than the mean sleeping time of the age group showed a tendency to have sufficient breakfast as well as supper. It appears that sufficient meals and sufficient sleep are related in children.

Bus passengers' attention not to fall and the locus of control

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To prevent falling (or tumbling) on a moving bus, it is necessary to increase the passengers' caution not to fall. The purpose of the present study was to examine the relationship between the attention regarding falling on the bus and the locus of control among Japanese bus passengers. In this study, 242 Japanese bus passengers completed questionnaires measuring their attention regarding falling on a bus and the locus of control. The scale adopted was a health locus of control scale which was adjusted to fit the situation of falling on a bus. The results showed that internal attribution was related to the attention not to fall. Furthermore, elderly people showed higher attention not to fall and higher internal attribution than young people. The present study suggested that it is important not only to expose the dangers of falling accidents but also to indicate ways in which passengers can prevent the accidents. Furthermore, elderly people may need to use the safety devices on the bus.

Psychological factors impeding safe driving in bus drivers

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The purpose of this study was to clarify the stress response impeding safe driving among bus drivers. Furthermore, this study showed a relationship between stress response and job stressors or receiving recognition from others. In this study, a questionnaire investigation was carried out in 2006. Valid responses were obtained from 39 bus drivers. As a result, it was found that safe driving was significantly and negatively correlated with the experience of passenger accidents on the bus. This result shows that the bus drivers' safe driving actually influenced the passengers' avoidance of bus accidents. Moreover, some stress responses were significantly and negatively correlated with the bus

drivers' safe driving. Therefore, bus drivers' service under a good mental condition is indispensable for the prevention of bus accidents. Furthermore, some stress responses were significantly and positively correlated with some job stressors, and significantly and negatively correlated with receiving recognition from others. In conclusion, the adjustment to a work environment which encourages bus driving under a good mental condition provides effective prevention of passenger accidents on a bus.

Implications of group interactions based on the experience of several years in international participatory improvement study tours of the Mekong Delta area

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This study reviews the experience gained in organizing international participatory improvement study tours of the Mekong Delta area since 2000, and discusses the implications of group interaction among participants with culturally different backgrounds, based on the review. Each year, practitioners, researchers and students from several countries including Japan, Korea, Thailand and Vietnam collect improvement examples from factories and farm households, and run a workshop of 1-2 days for factory workers and farmers. The effectiveness of the study tours has been acquired through (a) positive thinking relying on local good practices, (b) focusing on low-cost ideas and (c) serial group work steps aimed at immediate changes. These experiences confirm the importance of using participatory action tools comprising local good examples, action checklists and illustrated manuals. Difficulties often arise from the short period of each tour, cross-cultural conflicts and different views about participatory methods. In overcoming these difficulties, the empathizing process through small collaborative experiences and sharing of positive thinking seems to play a catalytic role. The combined use of the good practice approach and action-oriented group work tools also seems relevant. The interaction among the participants based on positive thinking is found to be particularly important.

A training machine to reduce reaction time to light stimulus

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In Japan, the proportion of the population of 65 years old and over will soon exceed 20%. Unfortunately, changes in general physical activities with increasing age in elderly people are unavoidable. According to studies on changes in reaction time with age, reaction time is shortest at about 20 years of age for men and women, gradually declining thereafter and slowing by approximately 30% at 65 years of age. A test model of a training machine to reduce reaction time in elderly people is presented in this study. The machine consists of a control box and an operating panel. A display on the surface of the control box indicates performance results after training, and an internally installed sequencer controls the movements of the operating panel. The operating panel consists of a mode/level switch and 6 segments (1 lamp and 2 switches per segment). The lamp inside each segment emits colored light randomly selected from red, green or yellow. A pair of switches to turn off the lit lamp is installed on the left and right sides inside each segment. The subject wears the operating pads on both hands, and presses the start button. When the machine starts, a random lamp emits 1 of the 3 colored lights. The subject presses the left switch inside the light-emitting segment for the red light using the left pad, the right switch for the green light using the right pad, and both the left

and right switches simultaneously for the yellow light using both pads, according to the color of the emitted light. The subject performs the above operation as fast as possible once a lamp light appears. As another random lamp will emit another random color immediately after the previous lamp turns off, the subject repeats the operation described above.