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Experimental Investigation on the Local Character of People in North-Eastern Japan

by

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(I) Introduction

Existence and Nature of Local Character

Among the peoples of the same folk or nation, there are somewhat different characters according to their native places. The district where one was born and was brought up in one's childhood and boyhood, gives to one's individuality an unnoticed characteristic colour. We call it the local or native character of a people. The local character is scarcely perceived in their native places and among the same native people. But when they appear in big cities as Tōkyo or Ōsaka, or in the place where people from various native places assemble, for example, in Hokkaidō, one's local character is vividly perceived. The local character of the people of north-eastern district is one of the most conspicuous characters of Japanese people. Under north-eastern district or Ōu district we mean northern half of Honshū: that extends from Shirakawa and Niigata to Aomori. It is situated from lat. 37° to 41°5' N. and covers 66,952 Km². Its population is about 6,600,000.

In nature, the northern district of Honshu has a somewhat distinctive character than that of the other district. Not only the winter is cold and long, but the landscape is comparatively wide and wild. Cultivated fields are only 13.2% and many fields are not able to be cultivated in winter. Transport Facilities are not yet so much advanced as in the other districts. Roades are not good. Industry is represented by agriculture. Fishery and the mining industry follow it, but modern mechanical industries are, on the contrary, poor.

As well known in Japan, speech of northern Japanese is called "Zū-zū Speech", that is, they have not only many dialects, but many wrong and unclear pronunciations. Their dresses and dwellings are in general simple and humble.

The people of Northern Japan are said to be tenacious, patient and not so easily emotionally excited as the Japanese in general. Their



Fig. 1

activity is not so quick that they say the northern people are heavy-headed, phlegmatic or "slow motion". From 1942 till now we have continued a systematic experimental investigation on the local character of northern people. This research is planned on the three stand-points.

a) As subject of experiment we should choose children of farm-village, because in farm-village, which is not close by big city, we can find the local character most purely and richly.

b) We should study children than adults, because they have shorter time of influence by environment and accordingly we can study much more innate tendency than in adults.

c) We should study children of the other districts also, because the local character of northern people will be clear, when we study not only northern people but those of the other districts, that is, by way of comparative research.

According to these three working principles, we started to study the native character of northern people by the comparative investigation of the children of farm-village from northern as well as some southern districts.

(II) Subjects and Experimental Procedure

Our subjects are children of the following farm-villages in North-eastern Japan.

- (1) Umezawa village, Kita-Tsugaru county, Aomori prefecture.
- (2) Iizume village, Senhoku county, Akita prefecture.
- (3) Mirumae village, Shiwa county, Iwate prefecture.
- (4) Shiwahime village, Kurihara county, Miyagi prefecture.
- (5) Tozawa village, Mogami county, Yamagata prefecture.

- (6) Watamae village, Higashi-Tagawa county, Yamagata prefecture.
- (7) Nagatoro village, Kita-Murayama county, Yamagata prefecture.
- (8) Kōya village, Kita-Aizu county, Fukushima prefecture.

Those villages are pure farm-village and not close to big city. Then we selected, in order to compare them, a few farm-villages which have just the same conditions, in southern districts.

- (1) Noda village, Izumi county, Kagoshima prefecture.
- (2) Tano village, Miyazaki county, Miyazaki prefecture.
- (3) Tampi village, Yatsukami county, Tottori prefecture.

This research was begun 1941, but year after year the circumstance of the transportation and food became more difficult, so that we could not research so many places of South-Western district.

Our subjects are sixth year grade boys of primary school (from 11 to 12 years old), first and second year grade boys of higher primary school (Kōto-Syō-Gakko) (from 12 to 14 years old). The total number of subjects are 1524 : children of northern districts are 1076 : that of southern districts 448.

We have to thank directors of these primary schools cordially. We are also obliged to "Japan Society for the Promotion of Scientific Research" for their economical assistance; especially Mr. Ryōichi Furuta, president of the 83. little Committee of the Society.

Now we applied the following experimental method and tests. These methods are so arranged that principal dimensions or strata of personality will be touched.

(a) Speed of psychophysical movement, both of full speed and favourite, habitual speed.

(b) Course of the change of mental attitudes during the repeated observation of Müller-Lyer's figure.

(c) Through abstraction experiment, width and accuracy and dimension to colour or form in momental perception.

(d) Imagination and interpretation of black, meaningless spot in Rorschach test.

(e) Intelligence test.

(f) Tests of bodily functions such as grasping power, running speed of two hundreds meters, exercises on a horizontal bar, standing broad jump.

We will describe each methods fully and then each results.

(III) Tests of psychophysical Movement

Holding a tapping counter with left hand, we let it tap with fingers of right hand during 20 seconds. Under the instruction of "tap the counter as fast as you can", subjects moves at first the counter with full speed. And we see the number of movements.

Then, under the instruction "Tap the counter neither too fast nor too slow, but such tempo as you like it", we measure the favourite and habitual speed of movement.

Table 1 a

Place	Age.	Effort Speed			Favourite Speed			n.
		Median	Arith.M.	M.D.	Median	Arith.M.	M.D.	
Umezawa Vil., Aomori	11-12	110.0	105.0	14.2 (13.5%)	75.0	72.0	12.1 (16.8%)	33
	12-13	110.0	110.0	11.6 (10.5%)	84.0	81.0	11.5 (14.1%)	37
	13-14	118.0	117.0	7.8 (6.6%)	79.5	78.0	12.4 (15.8%)	32
Mirumae Vil., Iwate	11-12	108.5	108.7	8.0 (7.3%)	93.0	91.1	10.3 (11.3%)	46
	12-13	109.0	111.3	8.6 (7.7%)	92.0	90.9	9.0 (9.9%)	55
	13-14	113.0	114.4	8.3 (7.2%)	84.0	82.0	11.1 (13.5%)	44
Iizume Vil., Akita	11-12	112.0	110.7	11.9 (16.8%)	78.0	75.9	9.7 (12.7%)	47
	12-13	115.0	109.0	8.2 (7.5%)	75.0	76.0	8.6 (11.3%)	36
	13-14	118.5	115.3	8.1 (7.0%)	87.0	82.0	12.5 (15.2%)	24
Tozawa Vil., Yamagata	11-12	109.0	106.0	9.6 (8.8%)	55.0	57.0	11.3 (20.5%)	33
	12-13	111.0	111.1	10.8 (9.7%)	69.0	67.1	12.8 (18.5%)	40
	13-14	120.0	119.0	9.5 (7.9%)	79.0	76.0	10.0 (12.6%)	45
Shiwahime Vil., Miyagi	11-12	105.0	103.9	8.7 (8.3%)	67.5	64.1	12.6 (19.6%)	58
	12-13	111.0	111.1	8.7 (7.8%)	67.5	68.0	12.4 (18.2%)	48
	13-14	115.0	116.0	6.1 (5.2%)	83.5	83.3	8.7 (10.4%)	50
Nagatoro Vil., Yamagata	11-12	105.0	102.0	11.7 (11.4%)	0.66	64.6	9.7 (14.9%)	51
	12-13	108.0	109.1	9.3 (8.6%)	0.96	68.7	12.6 (18.2%)	59
	13-14	109.0	110.2	11.5 (10.4%)	0.18	81.0	10.1 (12.3%)	52
Watamae Vil., Yamagata	11-12	106.0	106.0	10.0 (9.4%)	83.0	76.0	11.0 (13.2%)	44
	12-13	108.0	108.0	7.5 (6.9%)	78.0	77.0	9.7 (12.6%)	34
	13-14	112.0	115.0	6.4 (5.7%)	82.0	82.0	8.1 (9.8%)	45
Kōya Vil., Fukushima	11-12	118.0	117.2	7.9 (6.7%)	91.0	88.1	10.5 (11.9%)	49
	12-13	121.5	119.5	8.5 (7.0%)	85.0	84.5	9.6 (11.3%)	48
	13-14	126.0	126.6	7.7 (6.0%)	76.0	75.6	14.8 (18.1%)	63
arith. Mean	11-12	109.2	108.1	10.2 (9.5%)	76.0	73.6	10.9 (15.1%)	
	12-13	111.7	111.2	9.1 (8.2%)	65.9	77.5	10.7 (14.2%)	
	13-14	116.4	116.7	8.1 (6.8%)	81.5	99.7	10.9 (13.4%)	

Table 1 b

Place	Age.	Effort Speed			Favourite Speed			n.
		Median	Arith.M.	M.D.	Median	Arith.M.	M.D.	
Tampi Vil., Tottori	11-12	102.0	103.4	7.8 (7.5%)	85.0	83.5	8.3 (9.8%)	36
	12-13	110.0	110.9	8.4 (7.5%)	80.5	77.4	11.8 (15.2%)	40
	13-14	112.0	111.8	7.7 (6.8%)	85.0	81.1	10.1 (12.4%)	35
Noda Vil., Kagoshima	11-12	113.0	110.0	11.4 (10.3%)	75.0	74.9	10.9 (14.5%)	53
	12-13	113.0	114.1	10.1 (9.3%)	87.0	85.7	8.9 (10.3%)	60
	13-14	118.0	117.9	8.2 (6.9%)	90.5	87.1	13.1 (15.0%)	43
Tano Vil., Miyazaki	11-12	104.0	104.9	11.3 (10.8%)	79.5	78.9	10.9 (14.0%)	50
	12-13	115.0	115.3	9.1 (7.9%)	88.0	90.0	12.7 (14.4%)	53
	13-14	113.0	113.7	10.9 (9.6%)	99.0	95.0	13.1 (13.2%)	50
arith. Mean	11-12	106.3	106.1	10.1 (9.5%)	79.8	79.1	9.7 (12.7%)	
	12-13	112.6	113.4	9.4 (8.2%)	85.1	84.3	11.1 (13.3%)	
	13-14	114.3	114.4	8.9 (7.7%)	91.1	87.7	12.2 (13.5%)	

The results of the experiment are shown in Table 1 a and 1 b.

As you see on the table, there is very small difference between South-Western and North-Eastern children concerning the best possible speed of movement, or rather the latter is even somewhat superior to the former. However, concerning the personally favourite speed of movement, North-Eastern children are slower than South-Western children. If we express degree of effort by the ratio of difference between favourite speed and effort speed to the favourite speed, then the degree of effort of North-Eastern children are markedly great.

The mean variation of effort speed becomes little in accordance with the progress of age in both districts, that is to say, individual difference decrease. The mean variation of personal speed, on the contrary, increases according to the progress of age, that is, the individual difference of personal speed becomes greater. Each child grows up individualistic. But this is in the case of S-W district children. Those of N-E district is not so. Their mean variation of personal speed does not increase but decreases. This difference is interesting and important.

(IV) The degree of change of mental attitude during the repeated monotonous and minute works

We draw a Müller-Lyer figure on 2 sheets of paper and put the paper of comparative stimulus under the other paper of standard stimulus (see the Fig. 2).

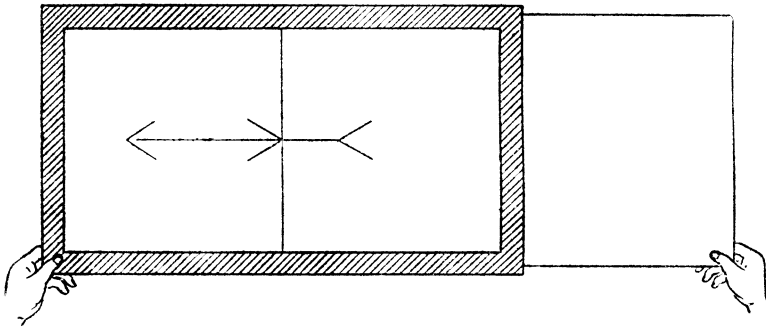


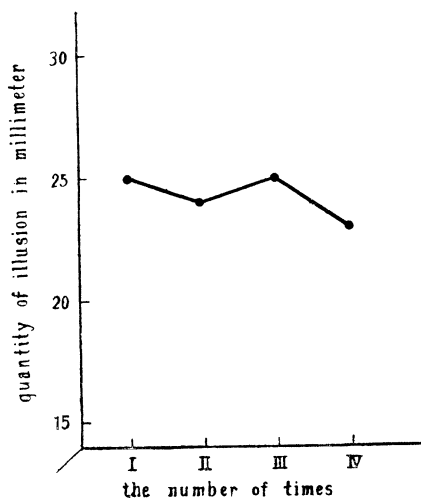
Fig. 2

If the subject pulls out the paper with his finger, then the length of comparative stimulus grows just so much larger.

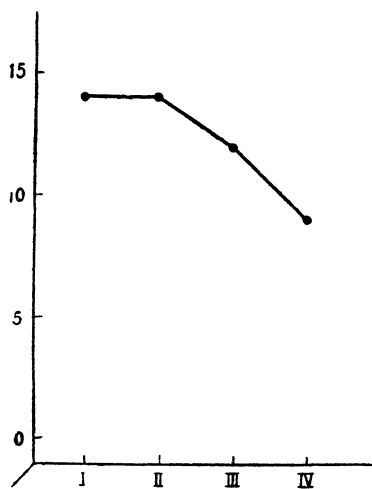
Standard stimulus is 7,4 cm and lies in the left. Comparative stimulus is in the right. At first, we give to the subject the figure paper in such state as the comparative stimulus is only about 1,5 cm.

We let the subject pull out the paper of comparative stimulus slowly till it appears at the same length as standard stimulus. We give time of about 13 seconds to do it. We let the subject have the cardboard of figure in the hand, fully stretching the arm, so that the distance of subject's eyes to the stimulus is about 40 cm in average.

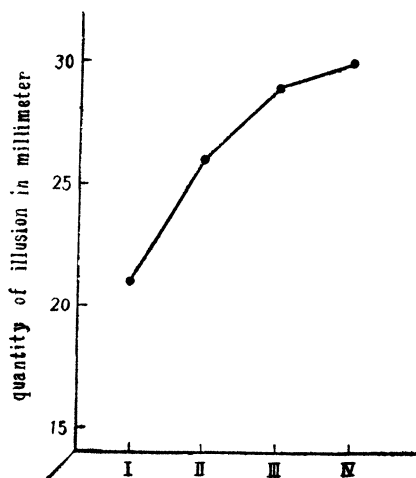
When the subject identified the length of the comparative stimulus with the standard stimulus, we let him measure the length of comparative figure with a rule and write it in record paper. Of course we have forbidden to measure the standard stimulus. Then the subject puts in the paper of comparative stimulus under that of standard stimulus as it



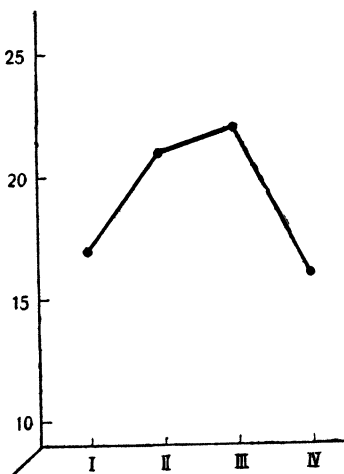
an example of constant type.
Subj.: T. Nakazawa.



an example of decreasing type.
Subj.: M. Itō.



an example of increasing type.
Subj.: T. Kamada.



an example of oscillatory type.
Subj.: T. Itō.

Fig. 3

was at first, that is, in the length of only about 1,5 cm. Then we let him repeat the work once more. In this way the subject repeats the work four times in all. We made 12 frames of illusion figure, so that we could experiment 12 children simultaneously. Experimenter inspected the measured numeral value, which children recorded, one by one and compared with the length of line, to see whether children correctly measured the length with scale or not. And when it is found to be measured not exactly or wrongly, then we have corrected it.

Let us see now the process of decrease or increase of quantity of illusion during the successive observation of Müller-Lyer figure. We can classify four types in the process.

At first, we find such children, whose quantity of illusion decreases gradually with the progress of repetition. We shall name them the decreasing type. Second group is such children, whose quantity of illusion

Table 2 a
N-E District.

Place	Age.	Increasing and Oscillating Type		Constant Type	Decreasing Type
Umezawa Vil., Aomori	11-12	10 (24%)	6 (17%)	5 (14%)	13 (38%)
	12-13	4 (10%)	7 (18%)	9 (24%)	17 (45%)
	13-14	13 (40%)	9 (28%)	3 (9%)	7 (21%)
Iizume Vil., Akita	11-12	16 (34%)	9 (19%)	3 (6%)	19 (40%)
	12-13	8 (22%)	9 (25%)	5 (13%)	14 (38%)
	13-14	11 (45%)	3 (12%)	3 (12%)	7 (29%)
Mirumae Vil., Iwate	11-12	10 (20%)	13 (27%)	4 (8%)	21 (43%)
	12-13	16 (29%)	9 (16%)	8 (14%)	21 (38%)
	13-14	8 (20%)	7 (17%)	4 (10%)	21 (52%)
Kôya Vil., Fukushima	11-12	17 (34,6%)		19 (38,7%)	13 (26,6%)
	12-13	12 (24,4%)		17 (34,6%)	20 (40,8%)
	13-14	22 (35,4%)		13 (20,9%)	27 (43,5%)
Shiwahime Vil., Miyagi	11-12	19 (38%)		7 (14%)	17 (34%)
	12-13	13 (27%)		4 (8%)	17 (35%)
	13-14	21 (33%)		5 (8%)	26 (41%)
Tozawa Vil., Yamagata	11-12	13 (39%)	2 (6%)	5 (15%)	13 (39%)
	12-13	10 (25%)	4 (10%)	5 (12%)	21 (52%)
	13-14	11 (24%)	3 (6%)	3 (6%)	27 (60%)
Watamae Vil., Yamagata	11-12	9 (20%)		7 (15%)	19 (43%)
	12-13	9 (24%)		7 (18%)	14 (37%)
	13-14	14 (31%)		5 (11%)	17 (37%)
Nagatoro Vil., Yamagata	11-12	20 (39%)		4 (7%)	16 (31%)
	12-13	10 (16%)		13 (22%)	21 (35%)
	13-14	13 (25%)		7 (13%)	22 (42%)
Total Sum	11-12	114 (317,6%)		54 (117,7%)	121 (294,5%)
	12-13	111 (246,4%)		68 (145,6%)	145 (328%)
	13-14	135 (288,5%)		43 (81,9%)	154 (325,5%)
arith. M.	11-12	18,0 (39,7%)		6,8 (14,7%)	17,6 (36,8%)
	12-13	13,9 (30,8%)		8,5 (18,2%)	18,1 (41,0%)
	13-14	16,9 (46,1%)		5,4 (10,2%)	19,2 (40,6%)

Table 2 b
S-W District.

Place	Age	Increasing and Oscillating Type		Constant Type	Decreasing Type
Tampi Vil., Tottori	11-12	10 (27%)	4 (10%)	2 (5%)	20 (55%)
	12-13	3 (7%)	6 (15%)	7 (17%)	24 (60%)
	13-14	3 (8%)	4 (11%)	5 (14%)	23 (65%)
Noda Vil., Kagoshima	11-12	14 (26%)	8 (15%)	6 (11%)	25 (47%)
	12-13	14 (23%)	7 (11%)	12 (20%)	27 (45%)
	13-14	13 (29%)	10 (22%)	4 (9%)	17 (39%)
Tano Vil., Miyazaki	11-12	13 (26%)	7 (14%)	3 (6%)	27 (54%)
	12-13	15 (28%)	6 (11%)	2 (3%)	30 (56%)
	13-14	8 (16%)	10 (20%)	4 (8%)	28 (56%)
Total Sum	11-12	56 (118%)		11 (22%)	72 (156%)
	12-13	61 (95%)		21 (40%)	81 (161%)
	13-14	48 (106%)		13 (31%)	68 (160%)
arith. M.	11-12	18,6 (39,3%)		3,6 (7,3%)	24,0 (52,0)
	12-13	20,3 (31,6%)		7,0 (1,3%)	27,0 (53,6)
	13-14	16,0 (35,3%)		4,3 (1,0%)	22,6 (53,3)

does not decrease, but almost shows no variation. If they vary its quantity only under 2 mm, we shall name them the unchanging, invariable or constant type. There is another group, whose illusion neither decreases nor is invariable, but the direction of variation is not constant or not uniformly; it is, for example, such group of children as the illusion quantity increases over 2 mm in the second observation, decreases over 2 mm in the third observation, and in the fourth observation it increases again. We name this group oscillation type. Besides, there are a few children, whose quantity of illusion increases more and more. Now, if we classify children in these four groups and calculate the percentage of each group to all children, then we get the following Table 2.

As you see on the table, in South-Western districts about fifty percents of the children belong to the first type, that is decreasing type. Either non-variation type or oscillation type is very few. In the North-Eastern district, on the contrary, oscillation type or non-variation type is so many, as it is almost equal to the decreasing type. On this distribution we are able to see that the North-Eastern children have few oscillation of mental attitude during the repetition of monotonous work. The mental attitude of most children is perseverative or constant. Or, there is a few of children, whose observation does not become analytical or objective as the South-Western children, but as a whole, they compare two lines still impressionally, so that the illusion quantity increases or decreases according to each observation, in consequence there is some children whose illusion quantity oscillates.

Is there any relation between the types of process of illusion quantity and intelligence? For example, let us take Shiwahime Village children, Miyagi Prefecture and compare the intelligence score of each group.

Table 3

	Age.	Number of Subs.	Intelligence Test Score (Median)
Constant Type	11—12	15	75,0
	12—13	9	75,0
	13—14	13	107,0
		Total 37	arith. M. 85,6
Decreasing Type	11—12	12	74,0
	12—13	19	90,5
	13—14	15	82,0
		Total 46	arith. M. 82,1
Oscillating and Increasing Type	11—12	5	55,1
	12—13	20	76,0
	13—14	22	87,5
		Total 47	arith. M. 72,8

As you see on the table, there is no remarkable difference of intelligence among three types of course of illusion quantity. Above all, between constant type and decreasing type, we can find only a negligible difference. But in oscillating type, we see a little lower intelligence than other types.

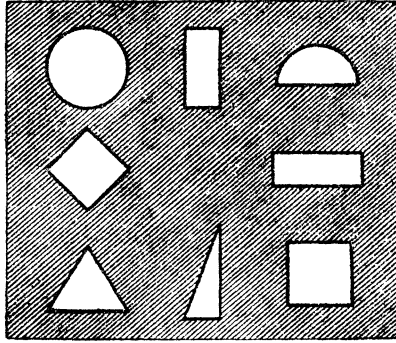
How is the correlation between the the types of course of illusion quantity and personal tempo of finger? Let us compare the personal or favourite tempo of moving tapping machine with each type of course of illusion.

Table 4

	Age.	Number of Subj.	Personal Tempo (Median)
Constant Type	11—12	15	70,5
	12—13	9	63,0
	13—14	13	85,0
		Total 37	arith. M. 72,8
Decreasing Type	11—12	12	62,5
	12—13	19	71,0
	13—14	15	87,5
		Total 46	arith. M. 73,6
Increasing and Oscillating Type	11—12	5	72,0
	12—13	20	68,5
	13—14	22	83,0
		Total 47	arith. M. 74,5

Increasing and oscillating type has the quickest, and constant type the latest personal tempo. But we can not say, that there is a great difference of tempo among the three types.

(V) **Width, Accuracy and Direction to Colour and Form in Momental Perception**



(An example of stimulus card)

Fig. 4

Momental perception is in such a way tested. At first we diagnosed the colour blindness according to Ishihara's Table. Colour blind children are omitted. We took each five children simultaneously as subjects. On a somewhat hightened table stands a tachistoscope, $56,5 \times 42,0$ cm, which has a window $15,0 \times 10,5$ cm in the middle. As the tachistoscope is a little higher than the height of eyes of the subjects, the stimulus card, when it is exposed from the window, is perceived easily by each five subjects. Toward the tachistoscope sit two subjects side by side, in three rows according to their body length. Distance of subjects' eyes to the stimulus window is at the first row 0,35 m, at the third row 0,65 m.

There are 6 or 8 different geometical figures, different in form and colour stuck on the stimulus card. Of couse, the relative position of figures and colour are different in each cards. Duration of exposure is $1/75$ seconds. We gave to each subject a sheet of paper on which are written several squares. We give the subjects the following instruction, showing one of the stimulus cards as an example, "I will show you a card in a moment. On the card, there are several different figures with different colours. Perceive them exactly. Perceive, where are the different figures and colours. Write down the figures with the different colours which you could perceived in the square of paper. All the forms and colours are different one other, there is no same figures or colours in a card." We have explained the name of forms and colours on the card to subjects. Two series of experiment were carried out, the first series being "natural abstraction" or "natural perceiving", the second series "task abstraction". In task abstraction there are 2 classes again. One is colour task abstraction which is perceived under the instruction; "Perceive the colour of each figures exactly. Perceive in which position the each colours are". The second task abstraction is form task abstraction, in which such instruction were given; "Perceive forms of each figure

exactly. Perceive in which place lies each form of figure". We took seven stimulus cards in all; one with four figures, the other with six figures, the remaining five cards with eight figures.

There are 44 forms and 47 colours in all, in natural abstraction. In task abstraction, there are 3 forms, but upon colour we carried out no task abstraction. Therefore if subject could perceive perfectly, he can get 94 points.

The Result of Experiment

Let us see at first the results of total number of perceived forms and colours in natural abstraction. The following number is average of all village boys of 11 to 12 years old in each prefecture.

Table 5

North-Eastern District		South-Western District	
Places	Perceived Forms & Colours in all	Places	Perceived Forms & Colours in all
Umezawa Vil., Aomori	19,2	Noda Vil.,	31,0
Mirumae Vil., Iwate	19,6	Kagoshima	
Iizume Vil., Akita	18,6	Tano Vil.,	25,5
Tozawa Vil., Yamagata	18,9	Miyazaki	
Shiwahime Vil., Miyagi	14,8	Tampi Vil.,	21,6
Kōya Vil., Fukushima	21,4	Tottori	
arith. M.	18,7		26,0
Median	19,0		25,5

Children of North-Eastern district perceived fewer than South-Western children.

If we compare the correct perception among the perceived forms and colours, then we get the following Table.

Table 6

N-E District		S-W District	
Places	Correct Forms & Colours in all	Name of Prefecture	Correct Forms & Colours in all
Umezawa Vil., Aomori	6,8	Noda Vil.,	7,2
Miyumae Vil., Iwate	4,2	Kagoshima	
Iizume Vil., Akita	5,7	Tano Vil.,	6,6
Tozawa Vil., Yamagata	4,5	Miyazaki	
Shiwahime Vil., Miyagi	4,4	Tampi Vil.,	6,3
Kōya Vil., Fukushima	6,3	Tottori	
arith. M.	6,1		6,7
Mediam	5,3		6,6

In the degree of correctness of perception, there is few difference

among N-E and S-W children.

Then let us count the number of wrong perception, so we can get the following Table.

Table 7

N-E District		S-W District	
Places	No. of Wrong Forms & Colours reported	Places	No. of Wrong Forms & Colours reported
Umezawa Vil., Aomori	13,4	Noda Vil.,	23,9
Mirumae Vil., Iwate	15,4	Kagoshima	
Iizume Vil., Akita	12,8	Tano Vil.,	18,9
Tozawa Vil., Yamagata	13,8	Miyazaki	
Shiwahime Vil., Miyagi	10,4	Tampi Vil.,	15,3
Kōya Vil., Fukushima	14,1	Tottori	
arith. M.	13,3		16,0
Mediam	13,6		18,9

There are much more errors of perception among S-W children than N-E children.

In short, the width of the momentary visual perception of N-E children is much inferior to S-W children. But as to the correctness of perception we can not find great difference among them. In consequence, among the report of the perceived forms and colours, there is relatively few errors in N-E children than S-W children. How is the circumstance in the task abstraction, then? The following Table is the result of task abstraction. The number value is the total of the forms and colours reported and correct perception among them.

Table 8

N-E District			S-W District		
Places	Total Reports of Forms & Colours	Correct Reports among them	Places	Total Reports of Forms & Colours	Correct Reports among them
Umezawa Vil., Aomori	3,5	0,9	Noda Vil.,	4,7	1,1
Mirumae Vil., Iwate	2,7	0,8	Kagoshima		
Iizume Vil., Akita	3,7	1,0	Tano Vil.,	4,0	1,0
Tozawa Vil., Yamagata	3,6	1,0	Miyazaki		
Shiwahime Vil., Miyagi	2,7	1,1	Tampi Vil.,	3,5	2,0
Kōya Vil., Fukushima	3,8	1,0	Tottori		
arth. M.	3,3	1,0		4,1	1,1
Mediam	3,5	1,0		4,0	1,1

In task abstraction also the width of perception of N-E children is a little inferior to the S-W children.

The correct perception in task abstraction of N-E children is also inferior to the S-W children, although there is only very little difference.

If we find such subjects who have no single correct perception of form or colour, we get the following Table.

Table 9

N-E			S-W		
Place	No. of Subj. who gave no Correct Reports	% of such Person	Place	No. of Subj. who gave no Correct Reports	% of such Person
Umezawa Vil., Aomori	1	2,6	Noda Vil., Kagoshima	1	1,8
Mirumae Vil., Iwate	9	18,7	Tano Vil., Miyazaki	2	4,1
Iizme Vil., Akita	2	4,2	Tampi Vil., Tottori	2	5,5
Tozawa Vil., Yamagata	3	9,0			
Shiwahime Vil., Miyagi	9	15,0			
Kôya Vil., Fukushima	0	0			
arith. M.	4	9,9		1,6	3,5
Medjam	2,5	6,5		2,0	4,1

Such subjects, who gave no single correct perception, are found more among the N-E than among S-W children.

Distribution of form-perceiving Subject and Colour-perceiving Subject

In natural abstraction, we can find a person whose correct perception is more in form than in colour and a person more in colour than in form. We may name the former a form-perceiving subject, the latter a colour-perceiving subject. Such a subject whose perceived number of forms and colours are exactly the same, we name a balanced-perceiving subject. Is there more form-perceiving person or colour-perceiving person in any district? That relation will demonstrate one of the character of the people of district.

We have found that the ratio of distribution of form-perceiving subject to colour-perceiving subject is unquestionably different between N-E and S-W children of Japan.

In N-E district, there are more colour-perceiving subjects than the form-perceiving subjects. In the S-W district, on the contrary, there are more form-perceiving subjects than colour-perceiving subjects. In the N-E district, Iwate and Yamagata children are especially colour-perceiving.

What is meant by the fact that N-E children are disposed more to colours than forms? We think that colour perception is not analytical, not objective perception in comparison with form perception; colour perception is accordingly in such sort of seeing that the subject sees on the whole or all over, but not discriminating in parts or detail or in contour and ground. In short, we can perhaps say that colour-perceiving subject

Table 10

		Form-Perceiving Subjects		Colour-Perceiving Subjects		Balanced-Perceiving Subjects	
		No. of Subj.	%	No. of Subj.	%	No. of Subj.	%
N-E District	Umezawa Vil., Aomori	16	47,1	8	22,2	10	29,4
	Mirumae Vil., Iwate	10	20,8	32	66,7	6	12,5
	Iizume Vil., Akita	22	46,8	19	40,4	6	12,8
	Tozawa Vil., Yamagata	11	33,3	12	36,4	10	30,3
	Shiwahime Vil., Miyagi	26	43,3	24	40,0	10	16,7
	Kōya Vil., Fukushima	22	41,5	18	34,0	13	24,5
S-W District	arith. M.		38,4		40,0		16,9
	Median		42,4		41,2		20,6
	Noda Vil., Kagoshima	27	50,9	18	34,0	8	15,1
	Tano Vil., Miyazaki	22	45,8	15	31,3	11	22,9
	Tampi Vil., Tottori	18	50,0	14	38,9	4	11,1
	arith. M.		51,6		34,7		16,3
Median		50,0		34,0		15,1	

is more whole-seeing, or seeing with feeling or seeing naively.

Scholl, R. and Lutz, A. has found that almost all of the colour-perceiving subject belongs to zykllothym type of character,¹ form-perceiving subject to schyzothym type, but our children of N-E district are more colour-perceiving. However, it is evident that they tend to belong not to so-called zykllothym type of Kretschmer, but rather schyzothym of temperament.

What is the relation between abstractive perception and intelligence? We have tested intelligence according to the form of "Kokumin Chinō Kensa" elaborated by Watanabe, Kuribayashi and Honda. If we classify Shiwahime and Noda village children as an example in 5 groups in proportion to their intelligence-test score as in the Table 11 and 12, we can find then the median of total number of perceived forms and colours of each group's subject.

Table 11
Subj. of N-E District: Shiwahime Vil., Miyagi.
55 Subj. (11.—12. years old)

	Intelligence-Test Score	Forms and Colours Perceived	
		Total Numbers	Correct Perception
I	140—100	13	4
II	97—75	23	7
III	74—64	13	6
IV	63—48	13	3
V	46—12	10	4

Table 12
 Subj. of S-W District: Noda Vil., Kagoshima.
 55 Sub. (11.—12. years old)

	Intelligence-Test Score	Forms and Colours Perceived	
		Total Numbers	Correct Perception
I	133—107	41	12
II	107— 93	31	8
III	93— 78	38	8
IV	75— 59	28	6
V	56— 19	18	4

There seems to be somewhat positive correlation between abstract perceiving of forms and colours and intelligence. It is more clearly seen in Kagoshima children (S-W), but in Miyagi children (N-E) it is not so clear and regular.

However, we can not see any positive correlation between task perception of form or colour and intelligence, as you see in the following Table.

Table 13
 Subj. of N-E District: Shiwahime Vil., Miyagi.

Intelligence-Test Mark	Task Perception to Form			
	Correctly Perceived Form. Median of 11 Sb.	arith. M.	Perceived Colour besides Form	
			Median of 11 Sb.	arith. M.
I	1	0,8	0	0,5
II	1	0,6	0	0,5
III	0	0,8	0	0,4
IV	1	0,8	0	0,3
V	0	0,3	0	0,3

Table 14
 Subj. of S-W District: Noda Vil., Kagoshima.

Intelligence-Test Mark	Task Perception to Form			
	Correctly Perceived Form. Median of 11 Sb.	arith. M.	Perceived Colour besides Form	
			Median of 11 Sb.	arith. M.
I	1	0,6	0	0,5
II	1	0,7	0	0,5
III	1	0,9	0	0,4
VI	1	0,9	0	0,3
V	0	0,4	0	0

As we have tested only three times on the task perception either on form or on colour, there were many subjects who could not perceive

correctly.

As you see on the Table, we can not acknowledge any positive correlation between task abstraction of form or colour and intelligence, either in N-E children or in S-W children.

Accordingly we can not say so simply that there is positive correlation among them. In the manner and degree of deviation from such positive correlation, we are able to find the characteristics of different district.

(VI) Imagination and Interpretation of Black, Meaningless Spots in Rorschach Figure

We used 5 black figures of ink-blots. It is a photograph in size of 23,5×17,5 cm. Two of them are those of Rorschach, three of them are made by Ohwaki². We gave the figures one by one, turning a photograph down, on their desk. Children could perceive one figure during 3,5 minutes.

We made 12 sets of figures so that we could experiment 12 children in group. We gave such instruction: "To what does the figure bear some resemblance?" "What do you think it looks like?", "Write down the name of objects on the given paper, which came into your mind and write down not only one object, but so many objects as you can identify them.

Table 15
Result of the Rorschach Ink-Blot Test.

Places	No. of Sb.	No. of Objects Interpreted arith. M.	Median
Umezawa Vil., Aomori	103	15,0	14,5
Mirumae Vil., Iwate	144	9,5	9,0
Iizume Vil., Akita	104	11,2	11,0
Tozawa Vil., Yamagata	118	12,0	12,0
Watamae Vil., Yamagata	126	8,7	8,1
Nagatoro Vil., Yamagata	155	8,3	7,8
Shiwahime Vil., Miyagi	157	9,0	8,3
Kōya Vil., Fukushima	159	12,0	11,0
Total Sum	1059	a. M. 10,7	10,7
Noda Vil., Kagoshima	157	14,2	14,3
Tano Vil., Miyazaki	153	12,3	12,4
Tampi Vil., Tottori	111	11,5	11,0
Total Sum	421	a. M. 12,6	12,6

S-W children can imagine much more various things than N-E children. Only children of Aomori prefecture of N-E district alone could imagine so many things as S-W children.

We find subjects who could give no interpretation on some figure. If we pick out such subjects who gave no interpretation at least to one figure, we get the Table 16.

Table 16

District	Places	No. of Sb. who can give no Interpretation to at least one Figure	Percentage
N-E	Umezawa Vil., Aomori	19	18,8
	Mirumae Vil., Iwate	43	29,8
	Iizume Vil., Akita	26	21,9
	Tozawa Vil., Yamagata	28	22,3
	Watamae Vil., Yamagata	33	26,1
	Nagatoro Vil., Yamagata	62	40,0
	Shiwahime Vil., Miyagi	59	37,5
	Kōya Vil, Fukushima	35	22,0
	Total Sum	305	arith. M. 27,2 Median 24,2
S-W	Noda Vil., Kagoshima	14	9,9
	Tano Vil., Miyazaki	31	20,3
	Tampi Vil., Tottori	26	23,9
	Total Sum	71	arith. M. 18,0 Median 20,3

Subjects who can give no interpretation to at least one figure are found more in N-E district than S-W district. Especially among Nagatoro Village (Yamagata) children and Shiwahime Village (Miyagi) children, there were found so many such subjects.

Is there now any correlation between Rorschach test score and colour-form abstraction? If we take, as an example, subjects of Shiwahime village, N-E district ($n=156$) and count out correlation coefficient r according to the product moment formula, then we get

$$r = \frac{\sum xy}{N \delta x \delta y} = 0,0063$$

$$P. E. = 0,0538$$

Therefore we can acknowledge almost the non-existence of correlation between them.

(VII) Intelligence test

We have tested, as stated before, children of N-E and S-W districts by way of the "Kokumin Chinō Kensa" compiled by Watanabe, Kuribayashi and Honda. The test scores of them are as follows.

According to the test score, intelligence of N-E children is on the average inferior to that of S-W children about one year or even one and half year. This fact is easy to understand, if we think of their slowness of personal speed of psych-physical movement.

Besides, their degree of backwardness of intelligence becomes the larger, the older they grow.

Table 17 a
Subjects of N-E District.

Place	Age	No. of Subj.	Score(Median)	M. D.
Umezawa Vil., Aomori	11-12	30	62,0	23,0 (37.0%)
	12-13	36	60,0	17,0 (28.3%)
	13-14	27	92,0	19,0 (20.6%)
Mirumae Vil., Iwate	11-12	42	64,5	18,0 (27.9%)
	12-13	55	78,0	20,0 (25.5%)
	13-14	40	84,5	16,5 (19.5%)
Iizume Vil., Akita	11-12	44	89,5	14,0 (15.6%)
	12-13	36	82,0	11,5 (14.0%)
	13-14	24	93,0	18,5 (19.8%)
Tozawa Vil., Yamagata	11-12	33	74,0	24,0 (32.4%)
	12-13	40	80,0	18,5 (23.1%)
	13-14	43	85,0	27,0 (31.7%)
Watamae Vil., Yamagata	11-12	45	62,0	19,5 (31.4%)
	12-13	35	82,0	22,1 (26.9%)
	13-14	41	95,0	20,9 (22.0%)
Nagatoro Vil., Yamagata	11-12	54	65,0	22,3 (34.3%)
	12-13	57	82,0	22,8 (27.8%)
	13-14	57	85,0	21,4 (25.1%)
Kōya Vil., Fukushima	11-12	53	77,0	22,0 (28.5%)
	12-13	49	86,0	17,0 (19.7%)
	13-14	61	88,0	20,0 (22.7%)
Shiwahime Vil., Miyagi	11-12	55	67,0	21,0 (31.3%)
	12-13	41	79,0	17,0 (21.5%)
	13-14	51	89,0	19,0 (21.3%)
	11-12	356	70,1	20,4 (29.8%)
	12-13	Total 349	Mean 78,6	Mean 18,2 (23.3%)
	13-14	344	88,9	20,2 (23.8%)

Table 17 b
Subjects of S-W District.

Place	Age	No. of Subj.	Score(Median)	M. D.
Tampi Vil., Tottori	11-12	36	69,0	24,5 (35.5%)
	12-13	41	83,0	21,0 (25.3%)
	13-14	37	103,0	19,0 (18.4%)
Tano Vil., Miyazaki	11-12	49	83,0	25,0 (30.1%)
	12-13	52	96,0	18,5 (19.2%)
	13-14	51	107,0	20,0 (19.0%)
Noda Vil., Kagoshima	11-12	53	88,0	19,0 (21.5%)
	12-13	60	98,0	19,5 (19.8%)
	13-14	44	101,5	13,5 (13.3%)
	11-12	Total 138	80,0	Mean 22,8 (29.0%)
	12-13	153	Mean 92,3	Mean 19,6 (21.4%)
	13-14	132	103,8	17,5 (16.9%)

(VIII) Summary and Conclusion

After all, personal tempo of psycho-physical movement of village children in North-Eastern district of Japan is slower than that of South-Western subjects. But on the effort tempo, we can not find such difference on the whole.

During the repetition of monotonous and minute work, their attitude in many of them scarcely varies: that is to say, they are persevering and patient. They get hardly tired of work, but do not tend to think out a new device.

Their width of momental perception is comparatively small, but their percentage of correctness of perception is superior. Their direction of abstraction tends to colour than to form of figure.

Concerning the quantity of imagined objects about Rorschach figures, that of N-E subjects is small and there are found more incomprehensible figures for them than for S-W subjects.

On the intelligence test score, they are inferior about one year or more to the other district subjects. The difference between two districts becomes more and more wider, the more the subjects grow up.

From these results of our experimental research, we can acknowledge some of their fundamental psychological characteristics. We see that they have some characteristics which are somewhat different from the traits of Japanese in general. We may say, that they have not different but rather contrasted traits to most Japanese. It is a question, whether or not this antagonistic character is derived from their natural and social environment. There is some one who asserts that one can find a considerable number of people who are of mixed-blood with Aino, in North-Eastern district. But it seems to us that the case is limited to a few places and to a negligible small population in the district. The North-Eastern Japanese are not, on the whole, of mixed-blood with Aino. The uniqueness of N-E people among Japanese in general is derived, in our opinion, mostly from natural and social environment of their life. Otto Klineberg has found also, that intelligence of races and folks in Europe has been much more determined from their living environment³.

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