

RESULTS OF THE KYOTO UNIVERSITY  
SCIENTIFIC EXPEDITION  
TO THE KARAKORAM AND HINDUKUSH, 1955, Vol. V

PERSONALITY AND HEALTH  
IN HUNZA VALLEY

Edited by  
KINJI IMANISHI

THE COMMITTEE OF THE KYOTO UNIVERSITY SCIENTIFIC  
EXPEDITION TO THE KARAKORAM AND HINDUKUSH

KYOTO UNIVERSITY, JAPAN

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\* Staff member of the Kyoto University at the time of the Expedition.



## EDITORIAL NOTE

The results of the Kyoto University Scientific Expedition to the Karakoram and Hindukush, 1955 have been arranged for the publications in seven separate volumes dealing with the botanical, zoological, anthropological and geological aspects of the Expedition. According to the scheme, the volumes, II, IV and VI, have already been issued in 1960, 1961 and 1963, respectively. The present volume contains the reports of the survey of the Hunza Valley.

Editing of the series of the reports has been assisted by the Fauna and Flora Research Society, Kyoto University with the financial aid from the Asahi Press, Osaka.

Kyoto, Japan  
March 31, 1963

K. H.





## PREFACE

During our survey of the Hunza Area in 1955, what was upper-most in our mind was whether or not it was true that the Hunza Area inhabitants were as healthy as had reported by Robert McCarrison in 1921. In this volume Dr. N. Harada reports on the results of his medical survey. In reality, the Hunza Area does not appear to be a Land of God's Grace, and it is not different from any other land in the world. Harada found many people in the area suffering from tuberculosis, conjunctivitis, rheumatism, goiter, skin disease, etc. He noted the high rate of infant mortality which was the result of undernourishment. In a word, Hunza is another place where it comes to the need for modern medical remedies. We continue to hope that there may be an utopia somewhere in this world, but if we ignore the reality of Hunza and the health of the people in that area, it would merely push us further from such an utopia.

We present Mr. Y. Huzioka's report of interpreting the result of Rorschach test after Harada's.

It was in 1950 when we first adopted the Rorschach technique for the purpose of finding out the modal personality of Japanese. Since then we have already administered tests to over 500 people who were selected from several villages mostly situated in the Kansai District of Japan.

There are several published reports about Japanese personality as defined by the Rorschach technique. Results of our research show little difference in modal personality as far as people of rural areas in Japan are concerned.

When I participated in an expedition to Mt. Manaslu organized by the Japanese Alpine Club in 1952, I administered the Rorschach test to some of our porters during the travel. These porters recruited from the upper stream of the Karigandaki River were culturally akin to the Tibetans. Their protocols are qualitatively very different from those of the Japanese. The main differences found in their protocols are as follows. 1. There are many *D,d*, and *dd*, and few *W* responses. 2. There are many indefinite form responses in terms of content such as rock, peak, field, etc. 3. Most of the contents are natural objects including plants and animals.

Their number of responses is not small in comparison to that of Japanese. Their interval up to the first response (reaction time) is also normal judged by our Japanese standard. It is possible to say that they have responded intelligently enough, neither being dull in their mentality nor having any resistance to the test. What, then, does the difference which appeared in the content of their protocols mean?

It has usually been considered that because the plates used for the Rorschach technique have originally a set of ink-blot which have no meaning in and of themselves the technique is valuable as a method of studying personality due to this very nature, for it eliminates any influences of culture as a cause of stimulation to obtain response. However, responses obtained by this method do not by any means come from outside the experiences of the subject. Therefore, subject's response may hardly be called culture free unless his accumulated experiences are all culture-free. Our subjects' responses

include such concepts as '*gompa*' or '*chorten*', which are related to Lamaism and would never be found in responses of the Japanese. This shows that no response can be free from the culture in which subject lives.

Culture is ultimately a man-made medium by which he may have smooth relationships with his environment, and in this sense, it is possible to say that culture is an artificial, secondary environment for man. This secondary environment becomes more important as civilization develops. In contrast, the more primitive our life is, the less the secondary environment affects it, and the more opportunities for direct contact with the primary or natural environment are there. Assuming our subjects are isolated in Himalayan Mountains, surrounded by the wild nature, it is no wonder that the primary environment should be a matter of more importance than the secondary or artificial environment in the experience. It does not necessarily mean that they are more interested in the primary environment than the secondary but it means that when they are asked how ink-blots look like they are likely to make response related to the primary environment in which they live. In other words, it means that subjects are likely to use what is easy to take from their accumulated experiences, whether the content of the responses is the primary or the secondary environment, or whether it is nature or culture. Therefore, similar responses will be obtainable from people who live in similar environment. Here is the basis for the making of modal personality.

In 1955, I participated in the Scientific Expedition of Kyoto University sent to the Karakoram-Hindukush Region, and traveled from Gilgit to Hunza, and then to Skardu traversing three of great glaciers of Karakoram, namely, Hispar, Biaho, and Baltoro. We employed Nagir porters who spoke Burishushki, and I administered the Rorschach test to them at camps along the way. In contrast to the Nepalese of the Tibetan culture who were porters in a former expedition, these porters are racially Indo-Aryan stock, and are Moslems in faith. Socially they were under the rule of a feudal lord. However, their basic economy which is primarily agricultural and pastoral, does not differ much from the Nepalese. Their domesticated animals are also same to those of the Nepalese, such as goat, sheep, horse, cattle, yak and dzo.

As will follow in the description by Mr. Yosinaru Huzioka, the content of their responses was very similar to that of the Nepalese despite the socio-cultural differences of these two peoples. Their total number of responses is more than that of the Japanese or the Nepalese, but there are few *W* and an extremely large number of *d*, *dd* responses. There are also many nature responses and form indefinite responses. All of their responses showed same tendencies as those of the Nepalese Tibetan. According to these facts, it would be possible to say that despite social and cultural differences both Nepalese and Nagir people have similar personalities in terms of the importance of the primary environment in their life compared with the secondary one. In fact the contents of nature responses may be an indication of the type of environment in which the subject resides.

Accordingly we can assume that peoples who tend reindeer in the tundra of Siberia, or who hunt in the rain forest of Congo, will not respond to the test with concepts such as "summit" or "glacier" because their natural environments are very different. On the contrary, they would probably use things which have never appeared



in the responses of Nepalese or Nagirese. However, we can assume that among the total responses of such people, there will be a large number of nature responses. The proportion would probably be as high as that of Nepalese or Nagirese.

Anthropologists call the development of human life from the primitive mode of life to the civilized mode of life the evolution of culture. If we consider culture as the secondary environment as we have defined above, this evolution means a development from the mode of life strongly oriented to the primary environment to the mode of life strongly oriented to the secondary environment.

Through this process of development, the responses to the Rorschach test should change in the frequency of nature responses decreasing according to the stage of development.

However, is it possible to call the change of content of response as the process of the evolution of personality? Those who emphasize the close relationship between culture and personality might consider that if there is cultural evolution, there must also be the evolution of personality. It is an idea that I have been considering. If one hopes to achieve a so-called evolution of personality which corresponds to the evolution of environment, it is necessary to examine more than the nature response.

As Mr. Huzioka has pointed out in the following text, in the responses obtained from the test of Nagirese there is relatively small number of responses of good quality, despite the fact that the number of responses itself is relatively large. In other words, they are making stereotyped responses in quite an easy going way, and there is little sign of effort involved. Many responses of *D*, *d*, and *dd*, and few *W* responses are one of the indication of this tendency.

Another point which we cannot ignore is that they definitely have a large number of responses which directly reflected their perception. It is a natural psychological process for anyone to grasp an ink-blot with his perception when he sees it. So that it is not unusual even for civilized people to have responses which are drawn directly from his perception. However, in case of civilized people it is more common not to respond directly by his perception but to go through a more or less psychological process of first judging the object perceived by his perception, then enlivening it, and try to make a response giving some meaning to it. For this the subject may need to put more energy in concentration, and response resulting from such an effort is likely to be labelled as a good one in quality. There are few such responses found in the case of Nagirese or Nepalese. The small number of *M* responses in their protocols might be related to this fact.

Would it be possible to assume that this difference is an effect of a difference of personalities between people who live in primitive mode of life and those who live in civilized mode of life? Would it be possible to think that there is a key to approach to the theme of the evolution of personality?

However, suppose that people live in a civilized mode of life, but their society is very stable and stagnant. They could live only adapting themselves to their given environment spending their time along a predetermined routine, without any necessity to create anything original. Then, their response to the Rorschach test should, whatever the contents, be related directly to their perception, and be an easy going and stereotyped

one, like those of Nagirese or Nepalese. The people of the Medieval Europe might have been in such a situation. If our contemporary civilization have reached a stable, stagnant situation, we would also respond stereotypically to the same test.

On the contrary even under the more primitive conditions, people would respond to the test by giving meanings for blots, if they are in a situation of a shift from primitive to civilized, or if they are requiring a reform of mode of life by some reason. Because, in such a situation, the subjects' psychological energy should be very high. If this is true, it is possible to say that this phenomena has been repeated throughout human history, and it is difficult to say that this is a measure of the evolution of personality.

It will be possible to discuss this aspect more clearly when we can collect and compare representative protocols of various people who live in different stages of development throughout the world, but even after we are able to do such studies, there may still remain the problem whether the Rorschach technique is the appropriate method or the best method to measure the evolution of personality.

At the present stage we merely attempt to classify the protocols of Rorschach test collected from different parts of the world as isolated, representative materials of the modal personality. What we might do is to rearrange the protocols by a unified method, transform them into comparable data, and then represent their interrelationships on a chart. If this work were advanced, we would be able to know how much we can expect from the results of the test and at what point we must limit our expectation for the test by accumulation of similarly treated materials.

I believe that in this respect the "group ordination" idea which is presented by Mr. Huzioka in the text seems to be a very important proposal in order to promote our present discussion, and that his methodology should be evaluated in terms of its scientific usefulness. At the same time his blind interpretation for the Nagirese personality seems to be very accurate from the eyes of the person who had administered the test in the field.

However, we have not yet reached a mature enough stage in the work along this line. If we have serious mistakes, we would not hesitate to revise them. In the text we have included our obtained protocols as many as possible as space allowed. The basis of science is always in the facts and the original materials, but so many interpretations and theories have made without presenting the original sources. It seems that this trend sometimes disturbed the development of the studies by means of the Rorschach techniques. We will be very happy, if this sort of presentation of materials had helped the establishment of a rail to lead the further advance of Rorschach technique and make it a usefull scientific method for the future of anthropology.

Oct. 17, 1961

Kinji IMANISHI

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## Is the 'Healthy Hunza' true?

Naohiko HARADA\*, M. D. and Atsuko MIYOSHI\*

### GENERAL DESCRIPTION

"Hunza is a paradise. People over there are enjoying a long life. There is no heart disease nor any other malignant disease," reported Sir. Rovert McCarrison, who carried out the medical survey of Hunza area for the first time. Lately Rodale, and Bircher also reported about the area as 'Healthy Hunzas'. Due to these reports, Hunza has come to attract general attention of people as well as scholars.

If diseases never exist, and germfree men who can be called "Kontroll-menschen" do exist, we can not help feeling we have responsibility to investigate the cause of the fact and to make it known to the world. Accordingly it is the authors' pleasant duty to report about the medical survey that we carried out, Hunza area during May to October in 1955.

### Geographical features

Hunza area is a district of Kashmir in West Pakistan, covering the valley of the Hunza river. This area is a peripheral part of dry Central Asia and moisture is extremely scarce there. Moreover, we visited there just during the dry season, that the temperature varied according to the altitude of the place; in general, radiant heat is strong in the day and it falls to a low temperature at night.

The inhabitants are said to be the descendants of the Greeks who had settled there at the time of the expedition of Alexander the Great. Their language is a special, independent one, called Burishushki. Racially most of them belong to Aryan and a few to Mongolian stock. A king called the Mir holds absolute power over them. The area from Chalt to Baltit is ruled by the Mir of Hunza. Chalt, Nagir and Hispar are ruled by the Mir of Nagir; and Askole is an independent state.

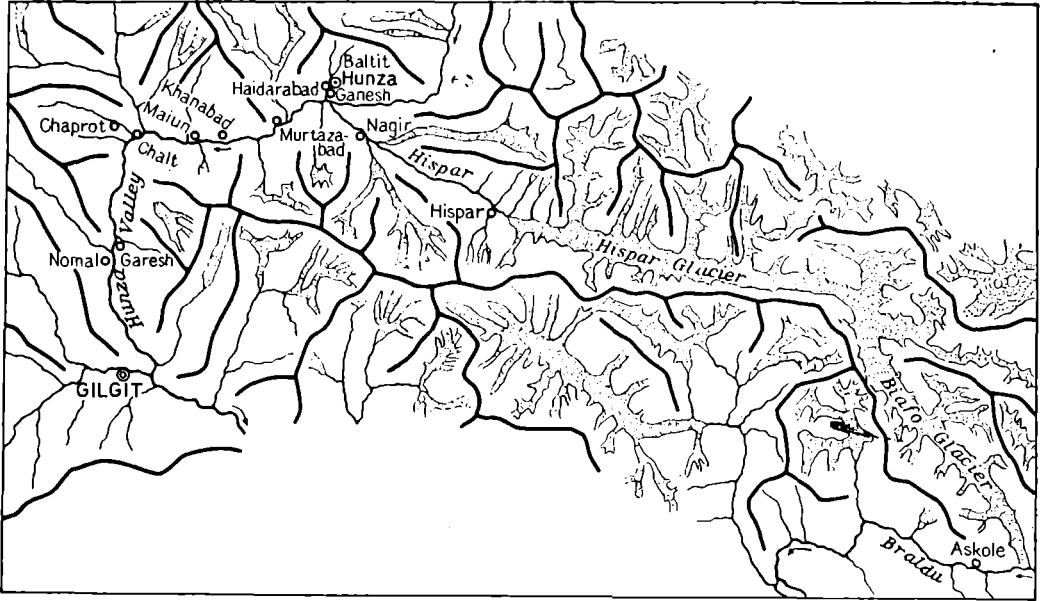
### Subjects and Method

The party composed of scientists passed through the whole area at the rate of 20-25 km. a day, and the medical survey was performed by the author alone. The chief aim of the investigation was to chart the distribution of disease over the entire area, so that it was necessary to examine all patients in every village in the area. Accordingly, we

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\* Osaka City University, Medical School.





A sketch map of the Hunza valley.

had to rely upon the following two means, that is, to give drugs to the subjects without charge and to ask the village chief or the police to give orders. At Gilgit where the party began its exploration trip, we tried to give particularly warm treatment to the patients which proved to be quite effective. The rumor of a doctor coming spread faster than the speed of our trip. In this way people would visit our tent quite actively and willingly, and it was invaluablely convenient for the purpose of our investigation.

Examination was performed physically after information about the history of each illness had been sufficiently acquired through the interpreter. Laboratory work could not be done at all, and, therefore, diagnosis was pursued solely by virtue of the author's 15 years of clinical experience. It is, however, a regretful fact that female patients were limited, by religious reasons, to those who were seriously ill or culturally enlightened.

### **Their way of life**

A survey of the life was carried out intensively upon Hispar village which was considered the most typical among all the villages we visited.

#### 1. Village.

The Hunza river flows through the deep and wide bottom of the valley, 2-3 km. in width which is surrounded by a wall of mountains about 2000-3000m. in height. Each branch that flows into the river forms a 'fan' at the side wall of the main course. This 'fan' creates a flat area on which there is a village with a traversed cannal. Due to erosion high precipices of 200-300m. have been formed so that people can not make use of water from the main stream instead they have to obtain water for drinking or for cultivation from the branch streams. The branch rivers originate from a glacier never dry up through out the year and it permits people to form village, but when there

is no branch river, there are no villages no matter how large the main river is.

## 2. Population.

In general, the fans are almost of equal size and accordingly the populations of them approximate each other. Most of the people are Aryans who are generally tall (Table 11, 12). Though there is no evidence that furnishes information about the change and development of the population, it is possible to suppose that the population over each fan scarcely changed, at least, during for the last 1,000 years or so. Considering the geographically independent character of the fan and the feudal and fixed way of life of the 365 persons we talked to, about 90 % (331) had never left their villages at all. Until the army had been established about 10 years before, their number was almost 100%. From this fact, it can be supposed that the population in the area which has been fixed in size and separated from the outside for such a long time has reached a point of saturation. Table 2 shows the cultivated area and present population of each village. The authors are convinced that they must have been the same about 500 years ago.

The size of a family is usually 4 to 6, and it is a conspicuous that there are comparatively few children (see Table 3). A family is composed of old parents, a householder, his wife and their children; usually the householder's brothers and their wives and children live in the same house. The overwhelming majority have two wives. Table 4 shows the number of family members classified according to their position in family.

Table 1. Temperature and humidity.

Height	Under the direct sunshine		In night	
	Temperature	Humidity	Temperature	Humidity
1000 m.	38°C	51%	13°C	48%
2000	35	55	8	35
3000	21	47	2	42

Table 2. Size of villages.

Village	Cultivated area	Houses	Population
Hispar	800×400 m <sup>2</sup>	100	500
Baltit	3000×600	500	2000
Nagir	2000×600	300	1000
Garesh	1000×500	80	500
Haidarabad	2000×200	100	600
Maiun	500×200	10	100
Chalt	1000×300	200	1000

Table 3. Number of children in a household.

Number of children	~3	4	5~7	8~
Household (100%)	42	35	15	8

Table 4. Family and relatives of 100 households.

Family head	Wives of family head	Parents of family head	Sons and daughters of family head	Sons and daughters in-law	Brothers and sisters of family head	Grand-child of family head	Other relatives
100	180	80	455	7	23	0	14

As shown in the above Table it is characteristic that children and people at the prime of manhood are comparatively few. As for the village a certain number of households is maintained. Some rate of youths emigrate out of the village. However, what is more important is the scarcity of children which naturally restricts the increase of households. Then in what way are they restricting the increase of children? They do not practice "positive thinning out" as was seen in old Japan. It is prohibited by religion to kill a living creature.

We examined the birth rate. The percentage of wives who gave birth 2 to 4 times reaches 10%, 5 to 8 times, 80 % and more than 8 times, 10 %. That is, those who bore 5 to 8 children occupy the great majority. Of course, a great many of children will die during their infancy, but what causes their death? Unfortunately there was not time enough for making a statistical study, but according to clinical observation, cases of surgical infection occupied the overwhelming majority. And their cause is skin disease with undernourishment as its basic cause (about 70 % of patients who are one to four years old). It can be said that they permit the high death rate, despite the possibility of preventing death. We were informed that 30 % died before 10 years of age and another 10 % before 40 years of age. The death rate has no relationship

Table 5. Marriage and first pregnancy.

Age at marriage	After marriage (in month)			
	0~4	5~9	10~	
14~15	41	2	2	45
16~20	42	1	2	45
21~25	7	2	1	10
	90	5	5	100%

with their status in the society. If antibiotics could be imported, the number of youths would show a conspicuous increase in about 10 years, which would be a modern Renaissance in the Hunza area. The younger they are at their marriage, the higher the birth rate is but they lack knowledge in caring for babies. The suckling period extends up to 36 months. In short, it is characteristic that unconscious selection (or weeding out) has been done in order to maintain a certain population size. If education develops and the means of traffic becomes easy, the death rate will must certainly drop.

### 3. Occupation.

According to the investigation at Hispar, agriculture and stockbreeding are absolutely predominant. The few who have emigrated out of the village usually become

Table 6. Percentage of household which have following number of cattle. (Hispar)

Number of cattles	~50	~100	~150	~200	200~
Percentage of household	6	8	14	62	10

Table 7. Occupation.

Occupation	Tradesman	Farmer Stock-farmer	Fisherman	Servant	Businessman	Miscellaneous
Percentage	1	95	1	0.5	1.5	1

soldiers, servants, or drivers, but in the Hispar these occupations do not them to get along. Every house has field and an orchard. The area of the field of each household is similar to each other. There is no wealthy farmer, but none is too small to live on. The field, however, does not belong to the farmer but to the Mir, as if farmers rented the fields from the Mir for nothing. Therefore, there is no fear of causing a strife over ownership of a field. The farmers really practice co-operative cultivation. They can get through sowing, watering and harvesting with just a small amount of labor, so that we almost believed that all of them were taking the whole field in a village as their own.

There naturally is no problem of wages in such a community where most of the inhabitants are engaged in the same occupation and traffic is quite inconvenient. As for wages, for example, our party handed the wages to the Mir in a lump sum and it seemed to be correct that the Mir repaid a part of wages to the village rather than to the porters. The question, 'How much do they work in a year?' does not sound very reasonable in such a developing society as this. They need only to work as much as is necessary. Otherwise, they live in idleness. As a matter of fact, we have often seen many adults who just watched us, and did nothing for as many days as they like. It could not be ascertained whether they had the custom of saving. Is there any chance of saving money in such a life where the chance of getting money is scarce? It is difficult to think of any utility in saving. To sum up the general impression of the village in a word, the way of life of the people is rather simple.

#### 4. Living house.

Every village is situated on a fan created by a branch stream, and the number of households in a village is almost the same throughout the whole area. As the size of a fan is almost the same, and accordingly the food produced from each fan is also limited to a certain amount, so the population which the fan permits is limited to a certain number, unless they import food from outside.

There are two-storied houses and their forms and sizes are almost the same with walls of stone and mud, a ridge of poplar, and a flat roof. As there is little rain, the roof made of poplar branches and coated with mud is enough for living.

The first floor is for live-stock and the second floor is for living space divided into a closed room and an open veranda. The latter is used in summer as it is cool there. The closed room is used in winter; it is completely closed except for a 1 m. square entrance and a chimney hole of 30 cm. square. Hence no sunlight can enter. In winter

all of the family gather in this room which may be warmed by a fire; but there is nothing to prevent smoke damage or infection by disease. As mentioned above, the size of the houses is almost uniform, and if the family is large, the room is literally jammed with people.

The fuel is dried feces of animals, therefore, the lavatory is large and every year a new corner of the lavatory is used in turn. The family depends upon the fat of sheep for lighting.

For religious reasons, they do not have the habit of taking a warm bath, but they merely pour cold water upon themselves once in about ten days.

The Mir holds the ownership of these houses. He can destroy them freely, *if it is necessary*. People do not pay any rent for the house. Perhaps it may a substitute for a rent to serve the Mir in his compulsory labor.

The Mir is, so to speak, a privileged person and possesses an old castle and a western styled new mansion, with a large garden.

### 5. Clothing.

They scarcely have spare clothes. They have three main articles of clothing, a shirt, trousers, and a hat. In addition, they have a 'choga' that serves both as bed clothes and as an over coat. Children use only the raw skins of sheep. They wear *sandals* of sheepskin as shoes. This is their entire wardrobe for both summer and

Table 8. Type of foot-gear.

Clog	Shoes of sheep skin	Shoes	Bare foot	
60	27	3	10	100%

winter. It is amazing to see them walking on ice with their bare feet or sleeping wrapped only in a 'choga' outside in a snow-storm. The 'choga' and hat is home-made of wool and, therefore one often sees them during leisure spinning yarn out of wool and chatting with each other.

### 6. Diet.

They live on 'chuputi' which is made of wheat flour and is baked into the shape and size of a hot cake. Sometimes they fry 'chuputi' with sheep fat. For food oil, they use sheep fat and butter. Sheep milk and yogurt are taken daily. They eat mutton only once or twice in a month. Salt is imported as rock-salt from Tibet. Sugar is treated as a valuable. Plums and apples are the chief fruits and they are dried for winter use. They cultivate vegetables, although they are scarce.

In conclusion, it can be said that they enjoy a far better balanced diet than when

Table 9. Source of nourishment.

Protein	Chicken, Sheep, Goat, Yogurt.
Fat	Sheep milk, Sheep fat, Sheep butter.
Carbohydrate	Corn, Rice, Wheat.
Miscellaneous	Apple, Apricot, Grape, Cucumber.



McCarrison visited there; e.g. they now consume as much as 2620 Cal. (Table 9). Their habit of consuming raw food has been abandoned and their diet has improved enough so that they import, though rarely, some food from the outside. They take meals 2 or 3 times a day; they eat with their hands, sitting in a circle in front of the fire-place. There is nothing for mid-afternoon snacks, as it were, but children are given abundant quantities of dried fruits or dried mutton.

They do not have a special room that can be called a kitchen, so that the fire-place made of stone at a corner of the room may be called the kitchen. Cooking utensils are nothing but an iron pan (or pot), and a few empty cans of tinned goods. The pan serves as a dish as well, and these empty cans are valuable tableware. They appear to be fond of baking 'chuputi' on a piece of stone rather than in a pan. They have not any large receptacles for storing water, but they use sheep skin bags for all liquids (butter, yogurt, milk, water, etc.).

As for wine, it is prohibited in some districts (Nagir, Hispar) for religious reasons, but in the others (Hunza state), it is not. Strong wine is made by fermenting fruit. They are allowed to smoke but it is difficult to obtain tobacco. These luxuries are quite small in quantity.

#### 7. Education

The inhabitants speak Burishushki which has no alphabet of its own. A special school is established by the British government, but those who have been educated there include only 0.1 % of the inhabitants. About 20 % of inhabitants speak English and about 30 % of them, Urdu, through self-study. As for an alphabet, they have borrowed Urdu. The special school founded by England has about 100 students who are 15-20 years old. They are the best ones chosen from the whole area.

There are two doctors in the Hunza area (one for 50,000 inhabitants) although every village has its own dispensary. As a matter of fact they can be said to have no share in the benefits of modern medical science. When they have pain, they rely upon the traditional primitive treatment such as using some kinds of grass, or rock. They knew, however, the value of modern medical science.

#### 8. Religion

Mohammedanism is the only religion that exists there; Hunza area belongs Ismaili and Nagir to Shiah. In the former, drinking is permitted and females have no need to conceal faces. In the latter, however, it is very severely prohibited. Both areas are polygamous and male has priority. They never fail to pay homage to the west 5 times a day: and every detail of their daily life is under the control of religion.

### MEDICAL SURVEY

As shown in Table of height and sitting-height (Table 11, in age-level and Table 12, in each village), they had fine bodies and we could not help marvelling at their physical strength which allowed them to carry a load of as much as 30 kg. on their shoulder while walking on rock and ice with their bare feet. Each individual, however, proved to have some health defect.

A particularly detailed examination was performed upon 277 patients as shown

in Table 10, and Table 13 is a classification of these patients. Malignant diseases and heart disease were found, though few, and almost all the inhabitants were suffering from goiter, rheumatism, or conjunctivitis. Furthermore, it was clear that the more fearful disease tuberculosis had been spreading among them.

But appendicitis and psychoneurosis, which are very common in developed countries were scarce.

Table 10. Age and sex of patients.

Age	Male	Female	Total
0~4	14	11	25
5~9	22	6	28
10~14	11	14	25
15~19	23	2	25
20~24	29	2	31
25~29	14	2	16
30~34	31	6	37
35~39	11	4	15
40~44	20	3	23
45~49	8	2	10
50~54	10	2	12
55~59	2	1	3
60~	26	1	27
Total	221	56	277

Table 11. Mean height and sitting-height by age and sex (in cm.).

Age	Male		Female		Mean	
	H.	S.H.	H.	S.H.	H.	S.H.
0~4	89	50	91	48	90	49
5~9	144	59	105	56	125	57
10~14	132	64	133	69	133	67
15~19			143	76	143	76
20~24	165	80	147	75	156	77
25~29	160	78			160	78
30~34	163	81	146	71	155	76
35~39	169	84	147	77	159	80
40~44	160	76	146	74	153	75
45~49	160	90	146	72	153	81
50~54	160	84	157	58	159	71
55~59	165	83	144	67	155	75
63~	165	74			165	74

H. : Height. S.H. : Sitting-height,

Table 12. Mean height and sitting-height by villages (in cm.).

Age		0~4	5~9	10~14	15~19	20~24	25~49	50~	
Villages		H. S.H.	H. S.H.	H. S.H.	H. S.H.	H. S.H.	H. S.H.	H. S.H.	
Chaprot	m.			140	70	170	79	180	70
	f.								
Chalt	m.		112	57	126	64	171	82	
	f.		95	48					
Hunza	m.						167	90	
	f.			136	70	137	72	133	60
Nagir	m.			182	58	164	78	175	79
	f.							180	90
Askole	m.					155	78	159	81
	f.							159	82
Chayah	m.						170	85	
	f.								
Khanabad	m.		119	66		170	58	166	84
	f.							140	75
Maiun	m.		99	50			162	90	154
	f.							154	85
Murtazabad	m.	90	52						
	f.	89	48	110	60		147	75	151
Ganesh	m.	85	50						155
	f.		99	52	125	68	147	75	
Baltit	m.					173	77	160	78
	f.				150	80		151	77

m : male, f : female, H : Height, S.H. : Sitting height.

The representative cases will be described in the following.

Case 1. H. B. 35, male, Hunza. No. 43

While he was in the southern part of the country as a soldier, he had a chancre. Since then he had been suffering from urethral pain in micturition, pus, and burning sensation. He was diagnosed as gonorrhoea, but he had not had any treatment for it. His wife had become sterile after giving birth to one child who had lost its sight (B. I. 2, male, No. 46). It was a quite typical case of intra-family infection of gonorrhoea.

Case 2. M. A. 9, male, Chalt. No. 157

He had suffered with gradually developed oedema, and weak for about 7 months. About 3 lit. of ascites was drained and he was administered neo-digitalis. He

Table 13. Classification of diseases of patients.

Age	Sex	0	5	10	15	20	25	30	35	40	45	50	55	60	Total
		4	9	14	19	24	29	34	39	44	49	54	59	64	
Respiratory disease	m	3	6	2	7	6	1	7	1	2	2	1	1	4	43
	f	4	2										1		7
Eye disease	m	2	2	1	5	7	1	2	1	3	1		1	3	29
	f	2	1	2	1		1	2	2	2		1			14
Bone and joint disease	m	1	2		2	2		3	3	1		1		6	21
	f		1	1		1					2				5
Digestive disease	m	2	1	1	2	5	1	4	2	1		2			21
	f	1	1	1			1								4
Goiter	m		1	1	1		1	4		2	2			1	13
	f			5						1					6
Skin disease	m	2	2	1			1	2		1				1	10
	f	3	1												4
Parasite	m	1		1	1			2	1	1				1	8
	f	1						1							2
Nutritional disorder	m		2			1	1	1	1	1	1	2			10
	f														
Tumor	m				1	1		1		1	1	4	1		10
	f														
Wound	m		1	1	2	2	1	1	2						10
	f														
Hernia	m	3				1	1			1				3	9
	f														
Malaria	m				3	1		2							6
	f		1												1
Otolaryngological disease	m	2			1			1							4
	f									1					1
Urological disease	m		1			1		1		1				1	5
	f														
Venereal disease	m				1		1	2	1						5
	f														
Psychoneurotic disease	m	1				2		1				1			5
	f														
Hydrocele testis	m	2	1	1											4
	f														
Surgical infectious disease	m														
	f				1										1
Miscellaneous	m		1	1	1	1	3							2	9
	f			2				1	1						4
Total	m	19	20	10	27	30	12	34	12	15	7	11	3	22	222
	f	11	7	11	2	1	2	4	3	4	2	1	1		49

was diagnosed as nephrosis. Though at first it seemed hard for him to recover, he had been perfectly cured in about 3 months. Natural healing by virtue of physical strength must have worked.

Case 3. K. A. 50, male, Nomal. No. 137

For about 5 months, he had suffered from lack of appetite. He had vomiting, slight stomachaches, with blackened feces. There was a tumor at the epigastrium and it moved with respiration and expiration. He had much ascite. He had metastasis of tumor at axillar region and supraclavicular region. It was a case of a malignant disease.

Case 4. A. A. 30, male, Chaprot. No. 140

He had suffered from light dyspnea, with projection of pain around the area from the right chest to right shoulder. He was always coughing, since 5 months before. Wet rustle was heard on the both tops of lungs. There was dullness at the under part of the right lung, and the existence of fluid was proved by puncture. This was a case of pulmonary tuberculosis.

Case 5. D. A. 12, male, Chaprot. No. 141

He had suffered from coughing and dyspnea. This was a case of family infection of pulmonary tuberculosis.

Case 6. G. M. 60, male, Chalt. No. 150

He had suffered with fever and hypogastric pain. Spleen and liver were hypertrophied. Fever was irregular. This diagnosis was malaria. Splenomegalia by malaria is nowadays seen only among old people but not among young people.

Case 7. M. H. 5, male, Maiun. No. 168

He had suffered with dermatitis pustulosum on both of his legs. This had caused sepsis in many cases, which is one of biggest causes of babies' death and can be cured by antibiotics.

Case 8. M. H. 48, male, Maiun. No. 169

He had suffered with left simple goiter and right cystic goiter. Those who suffer with goiter, usually suffer with conjunctivitis at the same time.

Case 9. K. K. 3, male, Fusinabad. No. 180

He had suffered with scrotal hydrocele. Many people were suffering with this disease in this district.

Case 10. U. M. 1, male, Hindi. No. 191

He had eczema over the whole body, especially on the back. This had worsened because of such uncleanliness and mal-treatment. Flies were left on the affected part.

Case 11. B. H. 2, male, Murtazabat. No. 217

He had cough, became thinner since about 6 months before. Wet rustle heard on the whole chest. He always had fever. He suffered with infant pulmonary tuberculosis.

Case 12. M. G. 56, male, Hunza. No. 220

He had been suffering with coughing especially at night for a long time. Wet rustle was heard on the chest. Diagnosis: bronchial asthma. Ephedrin was remarkably effective for this.

Case 13. G. N. 14, female, Baltit. No. 238



She had painless tumors on the right side of neck. It was lymphadenitis colli tuberculose, which was periadenitis and the nodes had adhered to each other. She had suffered from cough for about a year but had no fever.

Case 14. H. B. 17, female, Baltit. No. 242

Her under parts of both legs were swollen for three years before. She limped intermittently, and wounded easily.

Diagnosis: endoarteritis obliterans. She was injected with 0.5 g. of pilocarpin. Arterial injection was impossible. The doctor had to tear off her cloths to examine her abdomen. It was especially prohibited for religious reasons to disclose the genital region to others. But the religious restriction was mitigated as we were allowed to perform the health investigation around the region.

Case 15. N. G. 35, female, Baltit. No. 243

She had epigastrical pain which projected to the right shoulder, and had a fever but no cough for about three months before. She had no appetite especially for fatty food.

Diagnosis: cholecystitis.

Defense musculaire was positive and the enlarged liver was palpated.

Case 16. Z. C. 10, female, Baltit. No. 244

She had pain on the back and legs. She complained of terrible pains at the back sides of her knees and the pain projected to her legs.

Diagnosis: rheumatism.

Observation was necessary. Aspirin was given and was effective.

Case 17. Z. D. 12, female, Baltit. No. 245

She was wounded by hot water in the right hand when she was an infant, and due to neglect of proper treatment, she got cicatrical constructure. In this district, all wound was left to the natural healing. She recovered the mobility of fingers by the incision of the skin.

Case 18. N. G. 18, male, Shimshah. No. 246

He had pain in his right knee for six months before. Pus which was not homogeneous, was discharged from the right hip. Fistulas were undermined. Cold abcess was noticed.

Diagnosis: spondylitis tuberculosa.

Case 19. A. H. 12, female, Ganesh. No. 259

She could not talk nor walk; she was feeble-minded.

Diagnosis: perhaps, hypofunction of hypophysis.

Case 20. A. D. 68, male, Baltit. No. 255

Since a month before, he had had a swollen scrotum, which had become be oedema. The scrotum was as large as  $100 \times 10$  cm. It must have been caused by filaria.

Diagnosis: elephantiasis. There may have been parasites in blood stream at the same time.

Case 21. N. R. 30, female, Baltit. No. 262

Since about a year before, she had been suffering from stomach pains but fever was normal and she had a good appetite. There was abdominal tenderness and a parasite of about 30 cm. in length was found during evacuation.

Diagnosis: ascariasis.

Case 22. S. P. 23, female, Baltit. No. 272

She suffered from headaches, was conscious of accentuated heart beat, and complained of pain in her knees. The heart tone at the apex was not clear.

Blood pressure: 145-85. There was nothing but symptoms of circulatory disorder.

Treatment: vitacampher injection and tablets of neo-digitalis.

Case 23. G. S. 40, male, Baltit. No. 273

Since about a year before, the abdomen had begun to swell; appetite was not lost but it was impossible to eat much food. There was a marked stomach dilatation and obstacle of passage that had been caused by tumor. Now she was very lean and exhausted.

Diagnosis: malignant pyloric stenosis. It was necessary to perform an operation.

Case 24. M. D. 7, female, No. 284

She had coughing and fever. There was no finding at lungs.

Diagnosis; rachitis and tonsillitis.

Treatment: Domian 4 tabs.  $\times$  2. Venadorin 2 tabs.  $\times$  2.

Case 25. F. S. 30, female, Askole. No. 321

She was lean and complained of pain in her left leg, and loss of weight. Tumor was noticed at *Os ischii*.

Dianosis: osteoma.

Note: bone tumor was found in that area.

Case 26. U. H. 30, female, Askole. No. 330

Urine could not be passed out, but came out in dripping. He complained of kidney pain.

Diagnosis: probably, nephrolithiasis.

Note: The cause may be that the water there for drinking contained sand.

Case 27. A. R. 23, male, Nagir. No. 331

Since 19 days before, he had a painful ulcer at the upper lip. Probably it may have been due to sun-burn. For 19 days he was brought to a doctor, the present author, but he said nothing about it.

Case 28. N. T. 55, male, Nagir. No. 332

He had been suffering from tongue pains for four years. He had many teeth-caries but was not lean. Lymphnodes was not swollen. There was tenderness and he could not take any food except a fluid diet.

Diagnosis: glossitis.

Treatment: It was perfectly healed by sulfa-drug.

## DISCUSSION

The rumor that there were no patients in the Hunza area had aroused our medical interest. We visited the area with sufficient preparations and observed and studied almost all the villages personally. The results unfortunately broke down the dream of finding there an Utopia with no disease. We found that the common rural people suffered from the spread of tuberculosis and were left without any effective protection against the disease.

We had to teach them how to cure diseases, instead of learning how to be free from diseases.

The miserable state of people's health greatly moved us. It is that we who recognized the present state of their health for the first time and who know the means of preventing their diseases should have remained there to fight against the disease for the sake of those lovely people?

Simple techniques would increase the population threefold and just a little consideration of their health policy would keep the youth free from tuberculosis.

We could not help but promise to return there again to the people of Hunza who were so friendly to us and who eagerly requested us to remain there, although when is uncertain.

### CONCLUSION

1. It is wrong to say, at least at the present, that Hunza area is healthy.
2. The people of Hunza area are suffering from various diseases and are left without protection.
3. The predominant diseases are goiter, conjunctivitis, rheumatism, and asthma.
4. Heart disease, malignant diseases and appendicitis which have previously been reported as not existing there were found, as a matter of fact.
5. It is necessary to establish immediately a health center in the area to take care of their health.

## **Adrenalin effectiveness at high altitudes**

Naohiko HARADA\*, M. D.

It is a well known fact that in high altitudes hypoglycaemia will be caused by insufficient oxydation of carbohydrate in the body of every mountaineer. The condition is a hazardous one for any high altitude worker. Even for acclimatized people there is a limit of adjustment. If we can expect the elevation of the absolute limit of adjustment by administration of some drugs, we shall be able to offer a very effective weapon to mountaineering, flying and so forth. If hypoglycaemia is the main cause for high altitude deterioration, such as weakness, loss of weight, lack of appetite, increasing lethargy, insomnia and dullness of senses, a drug which will raise the sugar in blood may be useful for works in high altitudes.

We have known the hyperglycaemic action of adrenalin. Can we not expect an increase of blood-sugar as well in high altitude by its administration?

The author performed a series of experiments with this in mind in hopes that the experiment may be some help in revealing a basis for acclimatization.

### **SUBJECTS AND METHOD**

The subjects in this experiment were 3 Japanese including the author, and 1 Pakistani. They were all educated and good collaborators. One of the Japanese, S.N., went to the Himalayas 2 years ago, so he might be an acclimatized subject. Our trip was as follows:

1. On the 15th of June, 1955. We left Hispar village in Karakoram, Pakistan, height 2,500 m. for Hispar glacier. Walking speed was 20 km. per day.
2. On the 25th of June. We reached the top of the Hispar pass, height 5,500m. then went down the Biafo glacier to Askole village, height 3,000m.
3. On the 1st of July. We left the village and headed toward the Baltro glacier.
4. On the 12th of July. We arrived at Concordia, height 5,200m. then went back down the glacier to Askole.
5. On the 4th of August. We arrived at Hispar village through the Hispar pass on the same route.

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As the experiments were performed at Askole, Concordia and Hispar pass after a month's wandering in moderate height, every subjects might have been considerably acclimatized by the time the experiments were over.

The pharmaco-dynamic responses to hydrochloride adrenalin and hydrochloride pilocarpin in both high and low altitudes were observed clinically in these experiments. The test required 1 day for 2 kinds of drugs.

As it became very cold after sunset in high altitudes the subjects who perspire because of the injection were in danger of becoming ill. Accordingly, care was taken to perform the experiments in the early afternoon. In high altitudes there are usually many symptoms of the deterioration of mental functioning. Therefore, we prepared a card that would indicate the procedures of the experiments in details in order to avoid any errors in our experiments due to this deterioration. As might be easily supposed, in high altitudes, the subjects, who were naturally terribly exhausted from want of oxygen, had to maintain a firm will in order to co-operate in the experiment.

## RESULTS

### A. Observations on high altitude deterioration.

Each day the subjects experienced of low oxygen tension and showed clear symptom, owing to the chronic exposure to a lack of oxygen. The symptom will be described, in the order of the dates.

On the 15th of June: We climbed the Hispar glacier. Ice axe had to be used when we made a route on the ice fall. The camping site was at 3,586m. The symptoms were marked in all subjects. A subject, N.H., complained of a slight migraine when he climbed rashly and he became sleepy and thirsty. He suffered oxygen hunger. He had to walk slowly. While resting, he had a marked dullness of senses. The preparing of stove which is easy work in normal life was a troublesome one in the condition. There was deep breathing every 3rd inspiration. At night, he drunk 30 cc. of whisky and was heavily intoxicated. Another subject, S.N., had a headache and was administered a tablet of ephedrin (0.05 gr.). The headache was diminished. He complained of a bleeding pile which is heavier than in low altitudes. The natives, however, had no mountain disease, being well to sing the Koran in chorus.

On the 18th of June: The course of march was on an ablesion-valley. As the path was flat, we were not very tired. The camp was pitched at 4,100m. It was very cold. Water in the kettle was frozen. A subject, N.H., had severe dyspnea during the night. Because snow covered the tent and ventilation was restricted he was listless and always sleepy. While taking a rest, he had no symptoms, but as he began to move, he suffered heart palpitations and oxygen hunger. The degree of the symptoms, however, could be conquered by determination.

On the 19th of June: It snowed and we stayed in the tent. We did nothing all day except sleep. A subject, N.H., climbed up on a 10m. high rock, which was located in front of his tent, and took a photograph. It was slight work, but he had to exert strong will to do it. Activity of doing was completely lost! All natives were free from the disease.



Table 1. Adrenalin Effectiveness

		Low Altitude (2,600 m.)									High Altitude (5,200 m.)								
		Bef.	5'	10'	15'	20'	25'	30'	45'	60'	Bef.	5'	10'	15'	20'	25'	30'	45'	60'
Subject : S.N., Age : 38, Japanese.	Blood Pressure Max.	118	120	120	120	120	124	124	118	116	128	126	122	120	120	124	124	126	128
	Blood Pressure Min.	74	70	70	70	68	58	58	64	70	80	80	68	60	60	58	64	76	78
	Rate of Pulsation	80	82	80	80	78	78	76	78	80	70	70	74	80	76	70	70	70	70
	Tremor	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Heart Beating	—	—	+	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Cyanosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Width of the Pupillae (mm.)	3	3	3	3	3	3	3	3	3	3	3	2.5	2.5	2.5	3	3	3	3
	Spontaneous Pain	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Ischemia	—	—	+	+	+	+	+	+	—	—	—	—	—	—	—	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Date : July 2, 1955 ; Dosis : 0.1%, 0.7 cc. ; 15°C									Date : July 15, 1955 ; Dosis : 0.1%, 0.7 cc. ; 8°C								
Subject : N.H., Age : 36 Japanese.	Blood Pressure Max.	112	118	118	118	126	126	126	120	114	118	126	124	124	120	120	118	118	118
	Blood Pressure Min.	50	62	68	68	64	62	62	58	54	66	58	56	58	60	60	62	64	64
	Rate of Pulsation	76	76	82	80	82	82	82	80	76	88	90	96	94	86	88	88	88	88
	Tremor	—	—	+	+	+	+	—	—	—	—	+	—	—	—	—	—	—	—
	Heart Beating	—	+	+	+	—	—	—	—	—	—	—	+	—	—	—	—	—	—
	Cyanosis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Width of the Pupillae (mm.)	3	3	2	3	3	3	3	3	3	3	2	2	2	2	3	3	3	3
	Spontaneous Pain	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Ischemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Date : July 2, 1955 ; Dosis : 0.1%, 0.9 cc. ; 15°C									Date : July 30, 1955 ; Dosis : 0.1%, 0.9 cc. ; 5°C								

Adrenalin effectiveness

Table 2. Adrenalin Effectiveness.

		Low Altitude (2,600 m.)									High Altitude (5,200 m.)								
		Bef.	5'	10'	15'	20'	25'	30'	45'	60'	Bef.	5'	10'	15'	20'	25'	30'	45'	60'
Subject : K.F., Age : 36 Japanese.	Blood Pressure Max.	102	132	128	124	124	126	116	108	104	118	126	128	128	128	126	126	120	120
	Blood Pressure Min.	72	58	58	58	60	60	58	64	68	76	76	66	68	68	70	70	76	76
	Rate of Pulsation	88	81	86	88	88	90	90	88	88	68	70	74	70	76	72	70	70	68
	Tremor	—	—	+	+	—	—	—	—	—	—	+	—	—	—	—	—	—	—
	Heart Beating	—	+	+	+	—	—	—	—	—	—	—	+	—	—	—	—	—	—
	Cyanosis	—	+	+	+	—	—	—	—	—	—	+	+	+	—	—	—	—	—
	Width of the Pupillae (mm.)	4	4	3	2	3	3	4	4	4	3	3	3	3	3	3	3	3	3
	Spontaneous Pain	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Ischemia	—	+	+	+	+	+	+	—	—	—	—	+	—	—	—	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Date : July 2, 1955 ; Dosis : 0.1%, 0.9 cc. ; 15°C									Date : July 15, 1955 ; Dosis : 0.1%, 0.9 cc. ; 8°C								
Subject : G.S.B. Age : 27 Pakistani.	Blood Pressure Max.	116	122	128	132	136	136	130	124	120	122	120	124	128	128	128	122	122	120
	Blood Pressure Min.	72	88	80	78	72	70	70	70	70	80	82	78	78	78	78	78	80	80
	Rate of Pulsation	72	82	92	88	84	84	82	74	72	112	106	110	108	108	110	108	110	110
	Tremor	—	+	+	+	+	+	+	+	—	—	+	+	—	—	—	—	—	—
	Heart Beating	—	+	+	+	+	+	+	+	—	—	—	—	—	—	—	—	—	—
	Cyanosis	—	+	+	+	+	+	+	+	—	—	—	—	—	—	—	—	—	—
	Width of the Pupillae (mm.)	3	3	2	1.5	2	2.5	2.5	2.5	3	3	3	3	3	3	3	3	3	3
	Spontaneous Pain	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Ischemia	—	—	+	+	+	—	—	—	—	—	—	—	—	—	—	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		Date : July 2, 1955 ; Dosis : 0.1%, 0.9 cc. ; 15°C									Date : July 30, 1955 ; Dosis : 0.1%, 0.9 cc. ; 5°C								

Table 3. Pilocarpin Effectiveness.

		Low Altitude (2,600 m.)									High Altitude (5,200 m.)								
		Bef.	5'	10'	15'	20'	25'	30'	45'	60'	Bef.	5'	10'	15'	20'	25'	30'	45'	60'
Subject : S.N., Age : 38 Japanese.	Blood Pressure Max.	114	118	116	122	124	122	126	120	116	126	128	130	138	132	130	130	128	126
	Min.	76	64	72	72	78	78	84	78	76	76	68	68	64	68	72	74	74	74
	Rate of Pulsation	80	82	78	80	78	74	78	78	78	72	72	76	78	80	72	72	72	72
	Heart Beating	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Salivation (cc.)	—	—	20	20	10	3	—	—	—	—	—	10	18	15	10	3	1	1
	Dyspnea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Peristalsis	—	—	—	—	—	—	—	—	—	—	—	—	—	+	+	—	—	—
	Sweating	—	—	+	+	+	+	—	—	—	—	+	+	+	+	+	+	—	—
	Hyperthermia	—	—	+	+	+	+	—	—	—	—	+	+	+	+	+	+	—	—
	Nausea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Strangury	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sense of Defecation	—	—	—	—	—	—	—	—	—	—	—	—	—	+	+	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Headache	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
		Date : July 2, 1955 ; Dosis : 1%, 0.7 cc. ; 15°C									Date : July 13, 1955 ; Dosis : 1%, 0.7 cc. ; 8°C								
Subject : N.H., Age : 36 Japanese.	Blood Pressure Max.	118	118	116	116	116	116	118	118	118	118	120	124	126	120	118	118	118	116
	Min.	66	66	52	50	50	50	52	58	64	64	56	58	58	58	64	64	64	64
	Rate of Pulsation	74	76	82	80	84	82	76	74	74	80	84	88	88	88	82	80	80	82
	Heart Beating	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Salivation (cc.)	—	2	7	10	11	5	5	1	1	—	5	10	20	10	15	2	1	1
	Dyspnea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Peristalsis	—	—	—	—	—	+	—	—	—	—	—	—	—	+	—	—	—	—
	Sweating	—	+	+	+	+	+	+	—	—	—	—	+	+	+	+	+	—	—
	Hyperthermia	—	+	+	+	+	+	+	—	—	—	+	+	+	+	+	+	—	—
	Nausea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Strangury	—	—	—	—	—	—	—	—	—	—	—	—	—	+	+	+	—	—
	Sense of Defecation	—	—	—	—	—	—	—	—	—	—	—	—	—	+	+	+	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Headache	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
		Date : July 3, 1955 ; Dosis : 1%, 0.7 cc. ; 15°C									Date : July 13, 1955 ; Dosis : 1%, 0.7 cc. ; 8°C								

Adrenalin effectiveness

Table 4. Pilocarpin Effectiveness.

		Low Altitude (2,600 m.)									High Altitude (5,200 m.)								
		Bef.	5'	10'	15'	20'	25'	30'	45'	60'	Bef.	5'	10'	15'	20'	25'	30'	45'	60'
Subject : K.F., Age : 36 Japanese.	Blood Pressure Max.	98	104	102	100	102	104	98	98	96	114	114	120	120	120	122	122	116	112
	Min.	78	76	56	60	56	64	64	72	74	78	60	64	70	70	78	80	80	80
	Rate of Pulsation	72	80	82	88	90	92	80	76	74	64	84	86	82	78	78	72	66	66
	Heart Beating	—	—	—	+	+	—	—	—	—	—	—	—	—	—	—	—	—	—
	Salivation (cc.)	—	—	—	0.5	2	3	—	—	—	—	3	4	3	2	1	—	—	—
	Dyspnea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Peristalsis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sweating	—	—	—	—	+	+	—	—	—	—	+	+	+	+	+	+	—	—
	Hyperthermia	—	—	—	—	+	+	+	—	—	—	+	+	+	+	+	—	—	—
	Nausea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Strangury	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sense of Defecation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Headache	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
		Date : July 3, 1955 ; Dosis : 1%, 0.7 cc. ; 15°C									Date : July 30, 1955 ; Dosis : 1%, 0.7 cc. ; 5°C								
Subject : G.S.B., Age : 27 Pakistani.	Blood Pressure Max.	124	122	122	124	124	124	124	122	122	120	120	114	118	120	120	122	120	120
	Min.	86	70	74	76	78	78	76	82	84	80	78	80	82	80	80	82	80	80
	Rate of Pulsation	80	82	84	94	92	88	90	86	82	108	98	100	98	98	92	98	104	104
	Heart Beating	—	—	—	+	+	+	+	—	—	—	—	—	—	—	—	—	—	—
	Salivation (cc.)	—	—	2	10	7	7	9	2	2	—	—	—	2	1	1	1	—	—
	Dyspnea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Peristalsis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sweating	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Hyperthermia	—	—	—	+	+	+	—	—	—	—	—	—	—	—	—	—	—	—
	Nausea	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Strangury	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sense of Defecation	—	—	—	+	+	+	+	—	—	—	—	—	—	—	—	—	—	—
	Glycosuria & Glycaemia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Headache	—	—	+	+	+	+	—	—	—	—	—	—	—	—	—	—	—	—	
		Date : July 2, 1955 ; Dosis : 1%, 0.7 cc. ; 15°C									Date : July 31, 1955 ; Dosis : 1%, 0.7 cc. ; 5°C								

On the 20th of June: The whole day's rest on the previous day made up feel the effects of dyspnea even more when we began walk. Intelligence was not affected but dullness of senses was marked. Even the important part of leading a party often seemed hazardous. His pulse rate was 86, and respiratory rate 36 while walking. While walking, many good ideas occurred to him but he was unable to make a note of them. Even the slight extrawork which consisted of taking a note book out of his pocket and writing on it was too much for him. When he took a rest after walking about 100m., those ideas were already completely lost from his memory. He did not have a headache that day and had no oxygen hunger. He could enjoy skiing without dyspnea. But there was a dullness of the senses. Camp was placed on a point 4,300m. Several natives complained of headaches.

On the 22nd of June: All subjects were acclimatized completely and they could walk easily. We had severe sun burn. Camp site was at 4,800m.

On the 25th of June: We arrived at the top of the Hispar pass, 5,500m. All subjects were free from the disease but most of the natives suffered from the disease with vomiting and headaches.

Comment: Subjects suffered from mountain disease when they reached the level of 4,000m but became acclimatized when they reached 4,500m. But natives showed the symptoms of the disease at 4,500 m. and had no acclimatization under 5,300 m.

#### B. Experimental results

Response of 4 subjects for adrenalin and pilocarpin is shown in Table 1, 2, 3 and 4. All cases exhibited a decrease of adrenalin effectiveness in high altitudes.

## DISCUSSION

It is desire of mountaineers, to avoid exhaustion in high altitude. It is a well known fact that this type of exhaustion is mainly caused by hypoglycaemia. It appears that the 3 factors which are likely to exert the predominant effect in altering glucose tolerance at high altitudes are, a) the effect of low oxygen tension upon the activity of the various enzymes and the equilibria of these enzymatic systems, b) increased activity of the sympathico-adrenal system and c) increased adrenal cortical activity. The first step in solving the problem should be found in an attempt to evaluate the relative importance of these factors upon glucose tolerance.

Keys(1948) found that adrenal cortical extract caused a marked increase in the ability of dogs to form glycogen from glucose, and in high altitude adrenal cortical activity was increased. We attempted to examine adrenalin effectiveness in an actual situation. We paid attention to the gluconeogenesis of adrenalin. Is it not also possible that the drug forms glucose in high altitude? The results were against our expectation. The drug lost its effect in high altitude.

The fact, however, that the drug could cure a headache in moderate height may show that it is still effective during the low activity of the antagonistic function, adrenal cortical hormone. If we had administered the drug powerfully in high altitude as well, the disease may have been overcome because the adrenal cortical hormone might have been conquered. Unfortunately, we could not carry out this experiment of administering

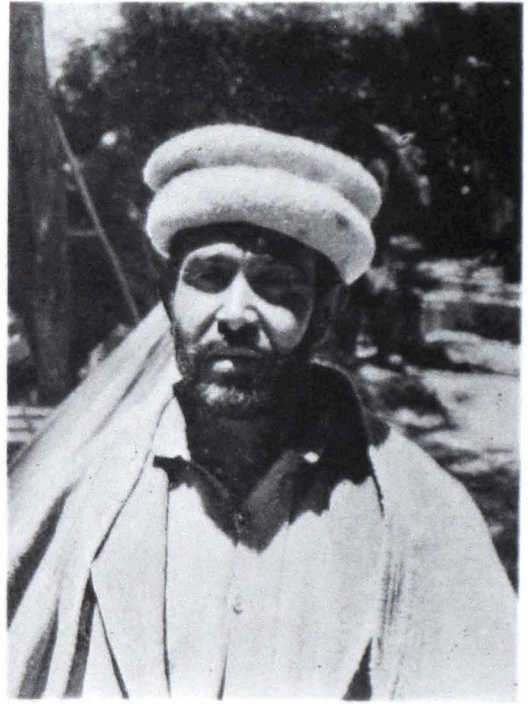
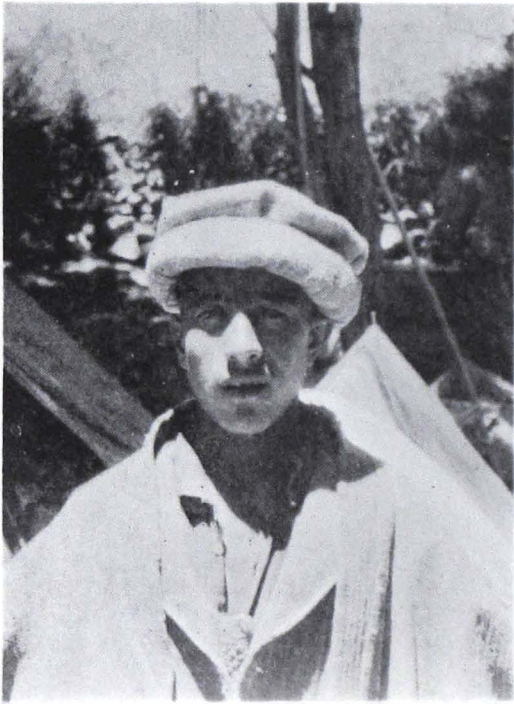
a large amount of the drug. We are expecting to pursue this problem possible in the near future.

### CONCLUSION

1. In high altitudes, the effect of adrenalin decreased.
2. Is it not possible to consider that administration of a large amount of adrenalin may be effective treatment against high altitude deterioration?

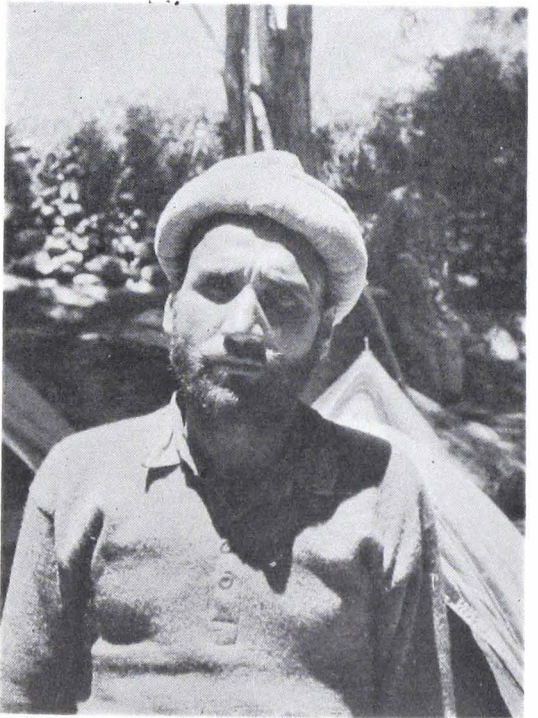
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Portraits of Nagir people.





Portraits of Nagir people.



# **Modal personality of people in Nagir through the Rorschach technique**

Yosinaru HUZIOKA\*

## **Chapter I Modal personality**

### INTRODUCTION

#### **Subjects**

All of the protocols of the Rorschach technique in this article were obtained by Dr. Kinji Imanishi, Professor of Anthropology at the Kyoto University. Dr. Imanishi was the leader of Karakoram Division of KUSE (Kyoto University Scientific Expedition; Leader: Dr. Hitoshi Kihara) in 1955. While leading his party from Nagir to Concordia, through the Hispar pass and the Baltoro glacier, and then back again to the Hunza District, he collected the protocols of the Rorschach test from native porters and couriers whom his party hired in Nagir. The tests were administered after his party left the Nagir District on June 14, and before they arrived in Concordia on July 12, 1955. Thirty three cases were obtained. Among them 24 cases were couriers and three cases were porters from Nagir: five cases were couriers from Hunza, and 1 case was an interpreter. All of these protocols have been duplicated and appear at the end of this article. All subjects were male.

Dr. Imanishi hoped to obtain a modal personality of porters and couriers from only the Nagir District so that this article only deals with the people from Nagir and does not include the five cases of couriers from Hunza and the one case of the interpreter. The protocols of these latter people will be discussed briefly at the end of this chapter.

It would not be appropriate to group porters and couriers together if there were significant differences between their personalities, but the reader will agree that no qualitatively significant differences appear from an examination of the duplicated protocols. In this respect, the five cases of the Hunza couriers do show qualitative differences of personality when they are compared with the Nagir couriers. The difference is clearly shown in the protocols by the number of responses and so forth.

According to Dr. Imanishi, the distinction between porters and couriers was decided by the Mir, and the party followed his decision. Consequently, both porters and couriers are considered ordinary native residents of the Nagir District. The former could obtain higher wages and better treatment from the party than the latter, but it is not clear whether the distinction between porters and couriers is based on certain differences in their prestige, status or by some other aspects of their life in Nagir. Nor is it known how the

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Mir made his decision. Hence, the report deals with them as samples from the same parent population, and hereafter will analyze them without making any distinction between porters and couriers. It is not necessary to consider the following interpretation the protocols as the personalities of porter's and couriers' because both of them returned to their ordinary life as residents of Nagir after the expedition was over. The author is aiming at, as was Imanish's original idea, the analysis of the modal personality of the Nagir people.

Table 1. Distribution of subject's age.

Age level	10	20	30	40	50	
Number of subject	1	13	9	3	1	27

mean : 30.4

The age distribution of the 27 subjects is presented in Table 1 (average being 30.4). Incidentally, the author tried to analyze the relation between the age distribution of the subjects and the constellation of the protocols from all possible aspects, but he could not find any significant differences in their personalities due to age. The report therefore, will not be concerned with the age differences.

#### Administration of the test

Dr. Imanishi had given the test to the interpreter before he began to administer it to the others. In this way Dr. Imanishi tried to familiarize the interpreter with the administration of the test. The interpreter was a teacher of a primary school in Nagir, and his protocol has been reproduced as Protocol N 1 at the end of this report. He only acted as interpreter for Burishushki speaking people who could not speak Urdu. In the case of subjects who could understand Urdu, Captain Batt, the liaison officer of the party, acted as interpreter.

According to Dr. Imanishi, the attitude and the interpreting of the interpreter during the administration of the test was satisfactory. The interpreter did not intervene in the test by talking unnecessarily, and his interpreting of the responses seemed reliably accurate since he translated word by word. Therefore, Dr. Imanishi does not consider that the protocols were substantially affected by the need for an interpreter.

The method of the test followed the ordinary rules of the technique except for response time. That is, after giving ordinary instruction for the test to the subject, the ten cards were shown one by one in order. Inquiry began after all the cards were shown. As for response time, in many cases one card was not shown for longer than 3 minutes. The reason being that there were many cases in which the subject held a card, and simply looked at the card without making any further response. In order to economize on the total time of the test, Dr. Imanishi had to limit the time to three minutes. When the responses could be freely beyond three minutes, he did not interrupt the subject. In fact except for the three subjects who responded longer than three minutes for four cards others all ended their responses within three minutes.

There were relatively many responses in number. Only once for Card V, and twice for Card VI, there was no response at all. Therefore it seems that the adminis-

tration of the test was good throughout the testing. All tests were given in the daytime with sufficient light.

### **Subjects' attitudes toward the test**

The attitude of the subjects toward the test was generally satisfactory. Only one subject (N 8) tried to chat with the interpreter during the test, but the interpreter did not pay any attention to him. In some cases the relatively smaller number of responses might cast doubt on whether rapport was achieved or not. However, according to Dr. Imanishi, the attitudes of the subjects did not seem to be hostile toward the test so that there would appear to have been as much rapport as with those subjects who made more responses. The author believes that these lesser responses are due to the particular of subject and was not conditioned by the difficulty of rapport.

On the other hand, the subjects gained one rupee after the test, so that they had no reason to reject the test. And there was no negative attitude toward the test as is often found among the Japanese who do not want to have their inner minds investigated by others. The protocols and the administrator's description of the subjects's attitude do not show any such tendency. Also they were not shy and very open. This point will be discussed later.

The reward for the test of one rupee was a substantial addition to their pay since a porter's ordinary pay was four rupees and a couriers', three rupees a day. During the test those who had already taken the test spoke about the test to the others who had not yet been tested, so that rapport increased as the test advanced.

Dr. Imanishi informed the author that the attitudes of the porter and the couriers of the Nagir district were quite similar to those of the Nepal peasants to whom he gave Rorschach tests during his investigation of a route to Mt. Manasulu. Neither the Nepal peasants nor the Nagir porters and couriers rejected the test, but neither did any subject show an active interest or curiosity in the test. Even in cases where rapport was very good, the subject's attitude towards the unknown ink blots indicated a sort of unconcerned feeling. Also their responses were usually very brief, and fragmented. Readers may recognize from the duplicated protocols that the responses are mostly expressed by discrete words rather than complete sentences. Dr. Imanishi expressly points out that this simplification has not been caused by the intervention of interpreter, but it is actually the subjects' manner of responding.

## INTERPRETATION

### **Productivity**

Minimum total number of reponses was 15, maximum was 68, and the median is 37.5. Table 2 shows the distribution and average of the total number of responses *R*. The number is about twice as large as compared to the average of household heads in a Japanese farming community, and a little more than the average figure for a normal American adult as reported by Beck<sup>1)</sup>. Therefore, setting aside the question of the quality, the productivity of the subjects was very high. The number of *R* can be in-

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1) Beck, S. J. 1950. p. 214. (2)

Table 2. Distribution of total number of response (*R*).

Level of <i>R</i>	10	20	30	40	50	60	
Number of subject	6	5	5	7	1	3	27

mean : 36.3, median : 37.5

creased by many factors so that we can not expect to draw out much information solely from this. But, at least, we can say that these figures are sufficient for us to estimate that the subjects are neither depressive nor constricted. Also if we consider the quality of the responses which we will discuss later and the subjects' lack of curiosity towards the test, it would lead us to such a conclusion.

At the same time, rejection, that is, cases in which the card produced no response, was evident only in one case for Card V and in 2 cases for Card VI. As a result of previous field works of this kind, we can say this is extremely low. This fact might mean the same thing as the high figure of *R*.

### Characteristics of the protocols

As previously described, most of the responses were single, discrete words. Subjects responded in this way to express themselves. Considering the large *R*, it is hard to interpret this as being due to timid or evasive attitudes of the subjects. I interpret this instead as an expression of a sort of assertive problem-solving tendency by the subjects, the key note being a lack of emotional rapport or curiosity towards such an impractical thing as an ink blot. (It may be possible that the subjects might have been motivated toward an unavoidable task in order to receive one rupee). As noted by H. Rorschach, the response of the subjects were *perceptive* rather than *interpretative* which leads us to believe that the subjects' introspective ability is lower than what we would normally expect.<sup>2)</sup> This interpretation can be supported by the succession of responses which shows this characteristics more clearly.

More than half of the protocols clearly show the succession of responses, especially those which belong to the nature and animal response, seem to show simple associations. The nature response is, as shown in Table 4, very frequent and it occupies a large portion of the total responses. A concrete example of this is as follows:

- Protocol N 22 Card VI
1. man's head.
  2. wing.
  3. mountain.
  4. crevasse.
  5. mountain top.
  6. jungle.
  7. *nallah* (valley) with water.

2) RORSCHACH, H. 1921 (38)

perceptive: assimilation without consciousness of assimilative effort.

interpretative: assimilation with consciousness of assimilative effort.

Quoted from Rorschach, H. Psychodiagnostics (english 5th, edition), p. 17.

As for the example of the succession of animal responses, the following will be sufficient.

- |                        |   |
|------------------------|---|
| Protocol N 26 Card VII | <ol style="list-style-type: none"> <li>1. camel neck.</li> <li>2. camel body.</li> <li>3. snake head.</li> <li>4. camel hump.</li> <li>5. bird head.</li> <li>6. nallah (valley), water is coming.</li> <li>7. jungle.</li> </ol> |
|------------------------|---|

The two above examples are typical of the responses to all 10 cards. For example it may also be found in responses to other categories such as human response. The two categories of responses, nature and animal are notable merely because they appear frequently. Moreover, the flow of responses usually utilize the simplest aspects of the blots which are commonly found at the center lines, small protrusions and at the uneven outlines of all cards. It is surprising that the subjects ignore the ordinary characteristics of the cards which are usually recognized by Japanese and Americans. However, it is not proper to conclude that all ten cards seemed quite similar and had no distinctive characteristics to each Nagir subject. As shown in the approach in Table 5, for massive blots they often make *d* (small usual detail) responses or *dd* (unusual small detail) responses; and for separate blots *D* (large usual detail) response. This type of approach is interesting because it is similar to the type of Nepal subjects of which I have previously reported in another article.<sup>3)</sup>

Examining the flow of responses, as previously noted, both cases (animal and nature) seem to be monotonous presentation of a series of concepts according to a simple association. In the latter case, although 1. camel neck and 2. camel body are recognized in continuous portions of the blot as if they were the neck and the body of the same camel, 4. camel hump is discerned from an utterly separate portion of the blot. Moreover the subject does not say that the response 1. and response 2. belong to the same camel. Throughout all the protocols this type of flow of responses is characteristic. (The quality of responses will be discussed later.)

My previous work, Tsumje villagers in Nepal, I discussed several types of flow of responses and through the classification of these several types, I considered them to be types of flow of responses akin to types found among children in Japan.<sup>4)</sup> The type of response found in the protocols of the Nagir is very even. It is akin to the type displayed by feeble-minded children who are interested in the test or by people whose intelligence is considerably low.

The frequency of responses concerned with nature such as snow, glacier, crevasse, mountain, *nallah* (valley), etc., can be interpreted in terms of the situation of the subjects at the time when the test was administered, since the test was administered

3) HUZIOKA, Y. 1957 (16)

4) INOUE, K. 1961 (23)  
HUZIOKA, *ibid.*

while traversing glaciers on their way to Concordia. However, since they did not make responses in confusing way it is possible to consider that the results of the test do express the characteristics of the subjects's personality.

### Readiness of response (Reaction time)

Reaction time, i.e., the pause between the moment when the subject touches a card and the moment when he begins to express a response, can not be said to be short if we consider the large number of total responses. Table 3 shows the reaction time for

Table 3. Table of reaction time (second).

Card	I	II	III	IV	V	VI	VII	VIII	IX	X
Min.	10"	5	6	12	7	7	15	5	15	5
Max.	150	95	50	135	120	110	65	95	180	200
Mean	50	23	21	41	34	38	34	20	46	42
Median	45	20	20	30	25	34	30	18	30	25

each of the cards. The average reaction time for all cards was 35 seconds. This is about the same length of time as that of household masters of Japanese farming and mountain villages. It is noteworthy that the Nagir subjects show relatively longer reaction time for cards I, IV, V, VI, which have massive blots than for the others, while in the case of the Japanese it is the reverse. (The reaction time for card VIII is short, as shown in Table 3. This is because of the animal responses for the lateral pink portion of the blot, and it is a very common phenomena found among groups throughout the world. So that this probably is not a specific character of the Nagir subjects.) It is also noticeable that the range of reaction time for cards II, III, VII, VIII is small. This leads to more responses per unit of time for these cards. For Card X subjects show the largest number of responses. Thus the subjects can make responses more easily for non-massive blots rather than massive blots. This tendency is also found among the inhabitants of Tsumje in Nepal.

It is possible to assume that this phenomena resulted from that subjects' consistent attitude of grasping details of the blots. As we can recognize from the approach portion of Table 4 and 5, the subjects usually show many *d* or *dd* responses for massive blots, but their reaction time is usually long. This means that they have faced more difficulty in coping with massive blots than with separated blots. Thus the subjects utilized the small zigzag of outline of the massive blots rather than dividing the mass in some way. In this respect while Japanese or American subjects can be said to show an adaptive attitude by making *W* responses to massive blots and *D* responses to separated blots, the Tsumje, Nagir and Hunza subjects can be described as showing a non-adaptive attitude by making *D* responses to both massive and separated blots. We will deal with the of problem of the quality of response later.

### Scoring of response

The system of scoring responses by symbols such as *d* or *dd* generally follows that

of Klopfer.<sup>5)</sup> The author is aware of the fact that *D* is defined relative to the frequency by which a parent population chooses certain portions of a blot, however, in order to contrast the difference between Nagir and Japanese subjects, I have defined "*D*" by the Japanese standard rather than constructing a Nagir "*D*" which would result from the total responses of Nagir subjects alone. In addition, it should be noted that the areas of *d* that Klopfer has accepted are not necessarily the only areas designated by the present article's usage of *d*. However, the Klopfer's definition of *d*, that is small areas easily perceived with relatively clear, projecting outlines, has been applied to define *d* areas in this article.

The score *dr* (rarely selected detail), which is given to a response towards some portion of a blot which is usually not chosen, was used in the protocols of Nagir and Hunza, but because of the small sample size, *dr* is included into *dd* for the calculation.

There were cases in which the subject's indication of portion of blot was ambiguous. It was frequently shown in responses such as mountain where it was not clear to what extent of a portion of the blot was thought to be a mountain. However, we can see from the subject's way of indicating the portion, that the subject was utilizing more than just the outline of the blot. In these cases, we scored responses *D* which pointed out large portions of outlines of those portions of the blots which are scored as *D*, and *d* to responses that pointed out small portions of the blot which are scored as *d*.

I experienced the most difficulty in scoring determinants, because the recorded words of the subjects were very limited. There is also a possibility of the records of inquiry being incomplete, however, from the general tendency of the contents of the responses and of the parts of blots selected by the subjects, it is more probable that the subjects' responses were brief and incomplete. Hence I finally decided to score determinants on the basis of the limited records of inquiry. Thus "is climbing" was a clue to score *FM* and "that colour" was a clue to score *CF*.

The large number of *F* responses which resulted after an initial scoring and the smallness of the sample made it difficult to analyse the form-quality of the responses. For this reason I made an analytic distinction in *F* responses in terms of the principle of "definite and indefinite". Thus *F* responses such as man, animal or building are given a score of *DF* or form definite, and those such as mountain, stone, or cloud were scored as *FD* or form indefinite. The reason being that the *DF* responses implied an image with a definite form in mind while in the latter or *FD* response, it is not possible to say that the image implies a specifically definite form.

As the record of inquiry does not clearly distinguish between *CF* (colour form responses) and *FC* (form colour responses) I also was forced to apply the same principle in the case of scoring *F* responses such as "green jungle" or "red stone" as I did in the case of distinguishing the quality of *F* responses. Thus "green jungle" and "red stone" were scored as *CF* because of an implied form indefiniteness.

I used Klopfer's scoring category to score the content of responses, but, in addition, I distinguished a new category called *land responses* (*L*), because responses such as "grass land", "jungle", "plain" etc. seemed to use only a two-dimensional extension of

5) Klopfer, B. and Kelley, D. 1946 (26)  
Klopfer, B. and others, 1954 (27)

Table 4. Table of scores (in actual number) (Nagir).

	I	II	III	IV	V	VI	VII	VIII	IX	X	R	%
<i>R</i>	89	108	117	83	91	89	91	95	89	124	976	100
<i>W</i>	4	4		11	9	4	7	1	4	2	46	4.7
<i>D</i>	4	37	91	25	4	34	39	60	58	110	462	47.3
<i>d</i>	44	42	18	24	58	26	25	7	10		254	26.2
<i>dd</i>	25	16	8	20	20	25	17	22	16	11	180	18.4
<i>S</i>	12	9		3			3	5	1	1	34	3.5
<i>M</i>		3	2					2	1	4	12	1.2
<i>FM</i>		1	4	1	2	3	1	24		4	40	4.1
<i>m</i>												
<i>k</i>												
<i>K</i>				3							3	0.0
<i>FK</i>												
<i>DF</i>	42	66	90	50	67	39	50	17	35	63	519	53.2
<i>FD</i>	47	30	14	29	22	46	38	30	25	33	314	32.2
<i>Fc</i>						1					1	0.0
<i>c</i>												
<i>C'</i>		1					2				3	0.0
<i>FC</i>			3					3	2	10	18	1.8
<i>CF</i>		7	4					16	26	9	62	6.4
<i>C</i>								3	1		4	0.0
<i>H</i>	1	3	2	1			1		2	3	13	1.3
<i>Hd</i>	10	8	19	10	14	2	1	4	11	2	81	8.3
<i>A</i>	4	15	70	13	10	13	18	26	7	52	228	23.4
<i>Ad</i>	21	28	1	18	27	18	24	10	10	10	167	17.1
<i>Ob</i>	7	16	9	8	19	12	2	4	8	12	97	9.8
<i>Arch</i>		3	1	1		2	5			2	14	1.4
<i>Pl</i>	4	8	6	13	5	8	2	14	8	30	98	10.0
<i>N</i>	39	19	8	13	15	30	24	21	19	11	199	20.0
<i>Geo</i>				1		1			2		4	0.0
<i>At</i>				1				3			4	0.0
<i>Art</i>	1		1						1		3	0.0
<i>Abs</i>												
<i>Fire</i>												
<i>Blood</i>		3						1	2	1	7	0.1
<i>Cloud</i>	1	1		2			2			1	7	0.1
<i>Smoke</i>												
<i>Land</i>	1	4		2	1	3	12	9	18		50	5.1
<i>Colour</i>								3	1		4	0.0

Gothic figures designate frequencies over one-thirds of number of subject, 27.



Table 5. Modal scores (Nagir).

	I	II	III	IV	V	VI	VII	VIII	IX	X	R
<i>R</i>	2.9	3.6	4.1	2.9	2.8	3.2	2.9	3.0	2.5	4.1	32.0
<i>W</i>				0.4							0.4
<i>D</i>		1.4	<b>3.4</b>	<b>0.9</b>		<b>1.3</b>	<b>1.4</b>	<b>2.2</b>	<b>2.1</b>	<b>4.1</b>	16.8
<i>d</i>	<b>1.6</b>	<b>1.6</b>	0.7	<b>0.9</b>	<b>2.1</b>	1.0	0.9		0.4		9.2
<i>dd</i>	0.9	0.6		0.7	0.7	0.9	0.6	0.8			5.2
<i>S</i>	0.4										0.4
<i>M</i>											
<i>FM</i>								0.9			0.9
<i>m</i>											
<i>k</i>											
<i>K</i>											
<i>FK</i>											
<i>DF</i>	1.6	<b>2.4</b>	<b>3.3</b>	<b>1.9</b>	<b>2.5</b>	1.4	<b>1.9</b>	0.6	<b>1.3</b>	<b>2.3</b>	19.2
<i>FD</i>	<b>1.7</b>	1.1	0.5	1.1	0.8	<b>1.7</b>	1.4	<b>1.1</b>	0.9	1.2	11.5
<i>Fc</i>											
<i>c</i>											
<i>C'</i>											
<i>FC</i>								0.6	0.9		1.5
<i>CF</i>											
<i>C</i>											
<i>H</i>											
<i>Hd</i>			0.7		0.5				0.4		1.6
<i>A</i>		0.6	<b>2.6</b>	0.5	0.4	0.5	0.7	<b>1.0</b>		<b>1.9</b>	8.2
<i>Ad</i>	0.8	<b>1.0</b>		<b>0.7</b>	<b>1.0</b>	0.7	<b>0.9</b>				5.1
<i>Ob</i>		0.6			0.7					0.4	1.7
<i>Arch</i>											
<i>Pl</i>				0.5						1.1	1.6
<i>N</i>	<b>1.4</b>	0.7			0.6	<b>1.1</b>	<b>0.9</b>	0.8	<b>0.7</b>		6.2
<i>Geo</i>											
<i>At</i>											
<i>Art</i>											
<i>Abs</i>											
<i>Fire</i>											
<i>Blood</i>											
<i>Cloud</i>											
<i>Smoke</i>											
<i>Land</i>							0.4		0.7		1.1
<i>Colour</i>											

Gothic figures designate dominancies of the score on a card.

the blot. Since I could not understand the psychological meaning of these responses, if any, I decided to note them separately from the general *N* category. However they are not separated from *N* responses in the analysis.

The author has discussed the scoring with Dr. Imanishi and with some graduate students in psychology who have been using the Rorschach technique. However the final decision about the scores was made by the author who is entirely responsible for them.

### Table of modal scores

Table 4 shows the scoring of all protocols of the 27 subjects for each card. The general tendency of the subjects is easily seen by the scores which appear in high frequency. However, since this includes the results of individual deviations, it is not an exact reflection of the modal tendencies. Table 5 is the product of the ratio between the number of respective subjects who were given a score for a cell to the total number of subjects, and the average number of scores in a cell of those subjects who were given score for a cell. Cells in which less than 1/3 (9) of the total subjects were not given a score, were not computed. Thus each cell in Table 5 can be considered as a modal readiness of a score of a group. Thus in Table 5 I have translated the actual scores in Table 4 to modal scores.

Table 5 represents the modal characteristics that the author has described in the section on characteristics of protocols. It is intended to give a framework to the following interpretations.

### Manner of approach and quality of response

Medians of percentages of each score are: *W* 3, *D* 53, *d* 26, *dd* 14, *S* 2. These figures show the subjects' ways of treatment of the blots. If we follow the method of Klopfer, it would be written as ((*W*)) *D* *d* *dd*. As a whole, *D* dominates, and *d* and *dd* shows distinctive appearance as compared to the cases of Japanese or Americans. If we trace this general tendency in each card, *d* and *dd* appears more in the massive blots, and *D* in the separated blots. From Table 5 we can see that dominant scores of each card is as follows: I-*d*, II-*d*, III-*D*, IV-*D* and *d*, V-*d*, VI-*D*, VII-*D*, VIII-*D*, IX-*D*, X-*D*.

When we consider the reaction time in relation to these frequencies it is possible to say that the approach of subjects heavily leans towards *D*. As they did not, or could not, divide *D* "positively" in the case of the massive blots, it seems that there is a sort

Table 6. Distribution of *W*%.

Level of <i>W</i> %	0	1	10	20	30	40	50	
Number of subject	10	10	3	2	1	1		27

median : 3%

Table 7. Distribution of number of *W*.

Number of <i>W</i>	0	1	2	3	4	~	7	
Number of subject	10	7	3	1	4		2	27

Table 8. Distribution of *D*%.

Level of <i>D</i> %	20	30	40	50	60	70	80	
Number of subject	1	6	5	11	3	1		27
median : 53%								

Table 9. Distribution of *d*%.

Level of <i>d</i> %	0	1	10	20	30	40	50	
Number of subject	1	1	6	13	5	1		27
median : 26%								

Table 10. Distribution of *dd*%.

Level of <i>dd</i> %	0	1	10	20	30	40	50	
Number of subject	1	8	9	4	5			27
median : 14%								

Table 11. Distribution of number of *dd*.

Number of <i>dd</i>	0	1	2	3	4	5	10~	
Number of subject	1	5	1	4	4	5	7	27

Table 12. Distribution of number of *S*.

Number of <i>S</i>	0	1	2	3	4	5	6	
Number of subject	12	5	6	1	1	2		27

of "rigidness" in the way of thinking of the subjects. However, when their quality of response and the many *d* are taken into consideration, it is not necessary to consider this "rigidness" in the subjects' thinking as an inability for flexible adaptability. I would like to consider this "rigidness" as a manifestation of a mind which upon encountering new, strange circumstances, treats them "externally", that is, with slight intention of assimilating them. It is a kind of mind that does not necessarily desire variety or richness. This is supported by the Dr. Imanishi's impression of the subjects' attitudes towards the test.

On the other hand, the subjects do show adaptation or flexibility of intelligence. That is to say, if we consider that the responses of Japanese or American in which subjects respond with *W* towards massive blots and with *D* towards separated blots are a form of adaptation with flexibility responding to the *Raumrythmik* of blots, the response of Nagir people in which they respond with *d* or *dd* towards massive blot should be treated as another form of flexibility. In brief, the subjects have a strong affinity for the small projections whereas Japanese or American do not have such affinity. Portions which are frequently selected by the subjects are listed in Fig. 1.

Fig. 1

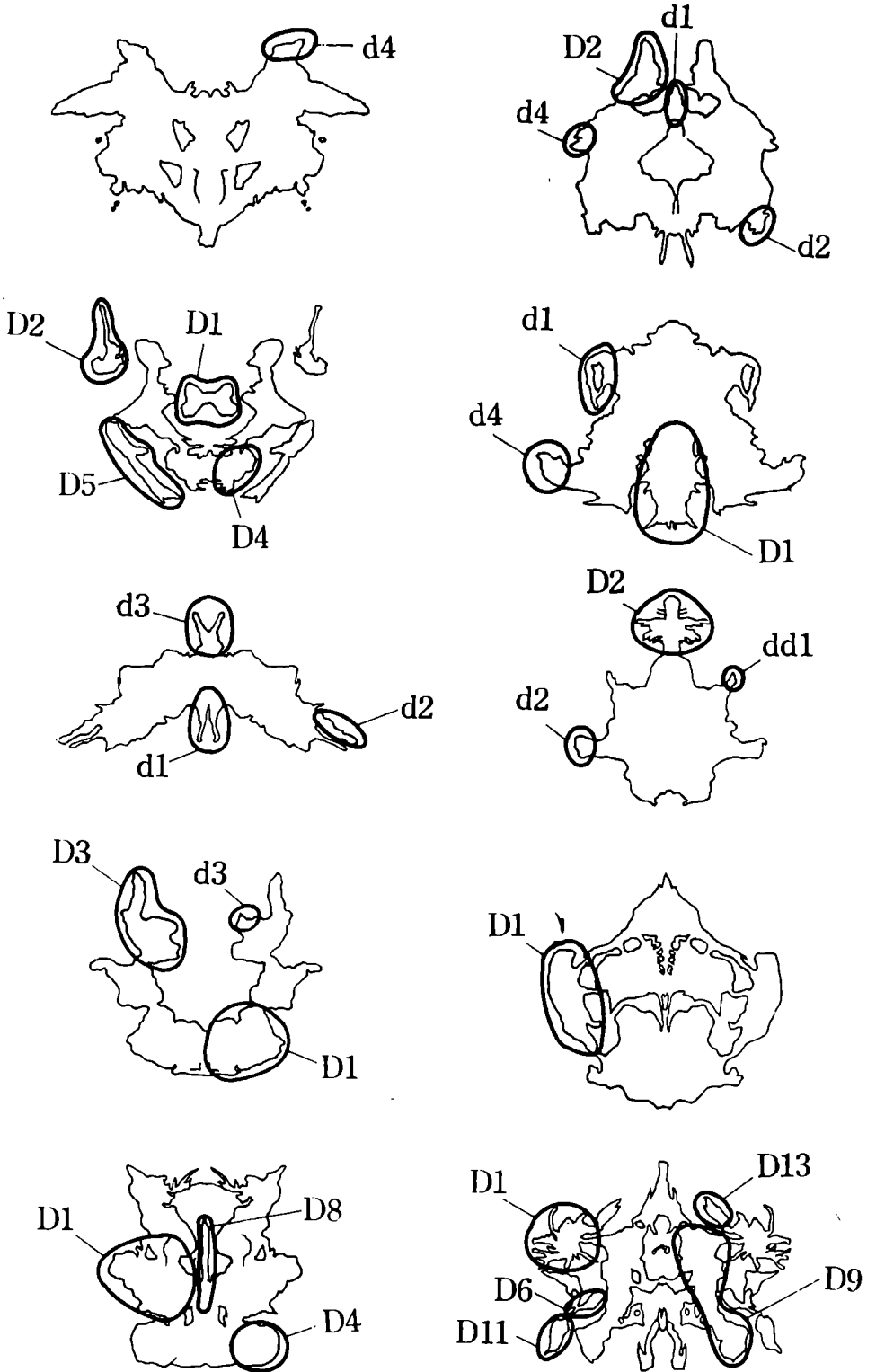


Table 13. Modal scorings of responses and their concepts.

I	II	III	IV	V	VI	VII	VIII	IX	X
<i>d DF Ad</i> Animal head	<i>D DF A</i> Animal Bird	<i>d DF Hd</i> Human head		<i>d DF Hd</i> Human head	<i>D FD N</i> Nallah Valley, (Water fall)	<i>D DF A</i> Camel Bird	<i>D DF A</i> Animal	<i>D DF Hd</i> Human head	<i>D DF A</i> Animal Bird
<i>d FD N</i> Mountain Rock	<i>d DF Ad</i> Animal head Animal mouth	<i>D DF A</i> Animal Bird Fish		<i>d DF Ad</i> Animal head, leg, tail		<i>d DF Ad</i> Bird's head		<i>D FD N</i> <i>D FD L</i> Nallah Land response	<i>D FD Pl</i> Tree Flower
<i>dd FD N</i> Glacier Mountain Crevasse Water fall						<i>D FD L</i> Land response			

The meaning of flexibility can not be determined simply by the scores of the approach. It is also matter of quality of the response.

Table 13 is a lists of the dominant concepts, such as the examples which follows:

- D*: animal and bird. (In addition to them, valley in Card VI, and land response in Card IX, and tree and flower in Card X)
- d*: mountain. (The concept is especially frequent in Card I, and in addition, human head, animal head in Cards II, III, V, VII)

The quality of assimilation indicated by these concepts would appear to agree with the quality of assimilation indicated by the dominant scores which might be estimated from Table 5 (e.g., *D DF A*, *d DF Ad*, *d FD N*, *dd FD N*).

From these results, we can say that the *d* or *dd* response, tends to be more form-indefinite than a *D* response. This can be interpreted as a failure of the basic trend to consistently pick out *D* areas. The quality of *W* responses which were found in small number is no exception to this trend.

Among all the *W* responses which totalled 46 the expected responses towards the massive blots such as bat or butterfly for Card I and Card V, or man or bear for Card IV, totalled no more than 10. No other *W* responses of higher quality were found in the protocol. While form-indefinite nature responses such as mountain and crevasse, land, or tree which are similar in quality totalled half of all the *W* responses. These kinds of *W* responses, however, are merely an enlargement of a perception of a portion of the blot rather than to the entire blot. In other words, it is merely a result of their "rigidness". Non-*N* and *Pl* responses also show inferior quality as compared to responses such as bat or butterfly. (For details, refer to Table 14.) If we consider *W*

Table 14. Whole response.

I 4		Ob	Aeroplane.	VII 7	
A	Butterfly.		Table.	Ob	Bull's eye (Target).
	Animal with many feet.		Fountain.	Arch	Gate and ground.
Pl	Tree with fruits (s).	Pl	Tree.		Sheep's house.
	Tree.	Geo	Map of a country.		House.
		L	Jungle with snow.	N	Mountain. 3.
II 4		V 9		VIII 1	
Ob	Tomb stone.	A	Bat. 2.	Ob	Cloth in red, green and white.
Arch	House with decoration.		Butterfly. 2.	IX 4	
			Bird.	Geo	Map of country.
L	Garden.	Ob	Aeroplane.	L	Jungle and mountain.
	Jungle with pond.	Pl	Tree. 2.		Different ground.
III	No <i>W</i> response.	N	Mountain.	Col.	Three kind of colour.
IV 11		VI 4		X 2	
H	Man, no head.	Arch	Bungalow.	Pl	Strange flower.
A	Frog.	N	Tree in the garden.	N	Mountain with many bird.
	Big bird.	L	Projection of land.		
	Bear. 2.				

responses which are good in quality being derived from the ability to abstract and theorize, the subjects of Nagir should be considered to have a personality less controlled by their intelligence and to be unskilled in the heuristic consideration of objects. But as they have given relatively large number of responses, it is not appropriate to say that they are totally inefficient towards impractical objects such as the inkblots. Nor is their intelligence near to the feeble-minded people as commonly defined.

If we had tried the Binet test on them, I surmise that their IQ would appear low. But we should recognize that the Binet test is structured to show only *a kind of intelligence* which is considered by us to be useful for our purposes. Similarly, the diagnosis of Rorschach protocols is regulated by examining the responses of the people whose intelligence are considered by us to be high. Taking the other aspect, it is possible to say that our intelligence has been changed towards the direction of the assimilation of meaningless, impractical inkblot when we are so instructed. If the quality of intelligence of the Nagir subjects are different from ours, the appearance of low-intelligence of the subjects in our scale can not be helped. Recalling that H. Rorschach pointed out that intelligence is always backed up by stocks of gestalt (*Engram* in Rorschach's term) which are called up by association, objects whose physical or chemical nature is same can be given different meaning by different individuals owing to the difference of the gestalt registered in their mind.

Therefore, by the reason that they have dominant *D* responses and by the fact that the *W* response disappears from the modal scores, we should not take lightly their concrete and practical approach as the basis of their mentality. But as a tendency it is possible to say that they are likely to be overly practical and they do not see things

except from the stand point of what is related to their ordinary concrete life, and they do not have much interest in the complicated interrelationships between things. This seems not only a problem of the intelligence, but rather a matter of their emotional rapport. We will discuss this later.

On the other hand, the frequent *d* or *dd* responses which corresponds to the *raumrythmik* of the blot series and the assertive outlook found throughout all protocols, it is possible to interpret this as the flexibility of their intelligence and that they may very likely be influenced by the outside world. Even when they cannot digest outside influences well, when there is something which is comparatively clear to them although it be a trivial thing, they start to respond rather actively. This can be supported by the existence of small number of *M* response and the quality of the colour response. The way of response is considerably stereotyped. The type of succession can hardly be called orderly, even if the manner of approach is taken into consideration. It would be more accurate to say it was loose. In this respect the limited theorizing ability of the subjects is supported.

The quality of space response *S*, of which we have not yet mentioned, does not disapprove the above interpretation. On the contrary it would support the interpretation. Out of all 34 *S* responses, there are only 4 genuine *S* (e.g., *filled-in S* response in which subject sees white space as a real substance). Rest of the *S* are utilized either as mere space or as the white colour. There are a few *S* attached to *W* response. (This is of course counted in *W* response as *Ws*. These are also not *filled-in S*.) Most of all *S* are snow, pond, crevasse, etc., and they are the same kind of idea as *d* or *dd* response. That is to say, for the subjects space is only a kind of distinctive parts of blot which could be easily used. Therefore, by the nature of *S* they can be included in the same category with the responses of *d* or *dd*.

It may be necessary to give different meaning to the large number of *d* and *dd* responses besides the one we have discussed because these scores characterize the protocols of Nagir people or Tsumje people and therefore it may have positive importance. Generally speaking, people who live close to nature and apart from civilization often have some particularly sharp perceptions when considered by our standard. For example, some people can tell the kind of animal by a faint sound and he can even tell what the animal is doing just by the sound. Or some other person can identify an antelope in the skyline of a distant hill that is nothing more than a dot. Or some other person can easily find a path and keep his bearing even when he is not familiar with the terrain. These perceptions are not different in their quality from ours in the sense that we would be able to obtain them if we had been trained enough, but, by and large, it is possible to say that for us these perceptions are very exceptional. However, the author does not have any proof to say that this particular character of their perception have given many *d* and *dd* in their protocols. So that he only intends to offer this assumption as an hypothesis.

### Affective sphere

As for the determinants which mainly concern the affective sphere of the subjects, there were a large number of *F* responses. As Table 4 and 5 show, 85.4 % of the total responses were *F*. As I have already mentioned, *F* has been divided to two categories:

*DF*, i.e., responses in which the actual concepts that a subject picks out is form-definite, and *FD*, where the concept is form-indefinite. In this case 37.7 % of all were *FD* and 62.3 % were *DF*.

Moreover when all responses were divided into a general category of form-definite and form-indefinite, the former which included *DF* of *F*, *M*(human movement response), *FM*(animal movement response), *FC*(form-colour response) and so forth was 61.4 %, and the latter which included the *FD* of *F*, *CF*(colour-form response) and *C*(pure colour response) or colour naming response was 38.6 % of all responses of the protocols.

The significantly large percentage of form indefinite responses indicate that the subjects cannot assimilate the blot well and that their perception of forms is not very sharp. Generally speaking, it is possible to say that high quality form responses indicate emotional stability and better control of emotions.

Thus the many form indefinite responses shown by the Nagir subjects' protocols, can be interpreted to mean either that the emotions of the subjects are unstable because of the subjects may feel a sort of insecurity, or that because their intelligence is low and egocentric, they do not show much interest in outside world.

We will be able to understand in just what way the Nagir people are emotionally unstable from their *M* responses and *C* responses of which there were a few, but we will deal with these responses later.

The high frequency of mountain, glacier, valley, flower among the *FD* of the Nagir people would be called good form responses, on the basis of frequency. However, because of the generally low ability of the Nagir people to assimilate and to perceive a blot as indicated by the significantly large percentage of form indefinite responses as previously mentioned, the author does not consider the high frequency of these *FD* responses as a criteria in accepting good form responses. This difference clearly shows that the Nagir subjects have a somewhat different series of blot perception from those which the author have accumulated previously. In other words, the character of the parent population is very different from other parent population of which the author is familar. This difference is the reason why the protocols presents the Nagir people as being of low intelligence. And this would suggest that there may be a lack of rapport in our contact with these subjects. I have mentioned that the intelligence is backed by a set of perceptions or gestalt which the subjects have in their mind.

In considering that the number of total response is large, and the median is 37.5, the number of *M* response is very small, and it does not appear on Table 5. The existence of *M* shows nothing more than the existence of individual variation. However the analysis of *M* responses will be usefull when we consider the affective sphare of the subjects. Among the 27 subjects *M* score appeared only once in 7 subjects' responses, twice in one subject's responses, and three times in one other subject's responses.

Among these 12 *M* responses, only 4 can be considered as genuine *M*, and all four responses are *dd*, and all say "a hand grasps something". It is very interesting because the other 8 *M* responses see a whole human figure and they are very close to *F* responses except for the case in which response is that "men see each other". We gave *M* score to their response reluctantly merely because they use the verb "standing". (Refer



Table 15. Human movement response (*M*).

II	3		<i>dd</i>	Man's hand, grasping chickin.	IX	1
<i>D</i>	Woman with red cloth, sitting.				<i>dd</i>	Man, only standing.
	Woman, standing.	VIII	2		X	4
	Hindu girls, see each other.	<i>dd</i>		Man's hand, catching tiger.	<i>D</i>	Human being, standing. 2.
III	2			Two hands, grasping each other.		Man, standing on something.
<i>D</i>	Human, standing				<i>dd</i>	Hand, pushing.

Table 15.)

*FM*(animal movement response) shows a tendency similar to *M*. The total of *FM* scores is 40. The number is larger than *M* score but are still only 4.1 % of the total response. Moreover, the only modal score is found in Card VIII. Card VIII has a well known lateral pink portion which, as far as we have found, calls up an animal movement response in high frequency through out the world. So that this response would not give any specific source of information in considering the characteristics of the Nagir people.

The verbs on which *FM* scores are based, are almost all naturally referred or added verbs of movement for certain forms such as flying (butterfly), flying (bird), walking (tiger), climbing (tiger) and so forth. Thus it is doubtful if these *FM* responses give any specific information about personality of the subjects except suggesting subjects' perceptive tendency. It looks as if it had shown simple association by the subjects.

These characteristics of *M* and *FM* indicate that the subjects operate on basis of practical, concrete actions in their human relations. Moreover these characteristics indicate a lack of an "inner world" as we Japanese understand it. They probably understand people superficially, and do not make contacts with their total personality. This interpretation can be supported more clearly by the nature of colour response and the distribution of the experience type.

Although the score of the colour response is only 8.2 % of total response, it is distinctive in comparison to *M* and *FM* scores. As the modal score, *CF* is found in Card VIII and Card IX, and both show characteristics of the Nagir people. However let us deal with *FC* first instead of *CF*.

Among colour responses *FC* is smaller in number. For instance, the main contents of *FC* are butterfly, animal, bird, and after the inquiry they are answered as by phrases such as "same colour", or "such colour". Accordingly we get an impression that these responses are additions to the initial perception of forms. That is, it seems that the subjects added certain colour to their concept simply because of the blot had colour. It is hardly possible to say that *FC* responses in general had assimilated the colour itself.

On the contrary, *CF* responses, i.e., responses by the idea of something that is form indefinite, it seems that the subjects's use of colour is clear. Content of *CF* responses largely consists of *Land* responses that the author categorized separately from *N* category i.e. the responses in which only the two dimensional expansion of

blot is utilized, and "flower" responses which seem to be form indefinite as it is unlimited as to shape. There are a few "blood" responses as well. (Table 16)

Table 16. Colour-form response (*CF*).

II	7		River.		Spring with grass.
<i>D</i>	Flag.		Decoration in the house.		Burnt rocky land.
	Map.				Stone.
	Flower. 2.	<i>dd</i>	Green land. 2.		Glacial ice.
	Blood. 3.		Glacier.		Red cloth.
			Glacial ice.		Flower.
III	4				
<i>D</i>	Flower. 4.	IX	26		Sky.
VIII	16	<i>W</i>	Map of country.		Ibex's blood.
<i>W</i>	Cloth, in red, green and white.		Different ground.	<i>dd</i>	Garden.
<i>D</i>	Flower. 2.		Jungle and mountain with tree.		Jungle.
	Blood.	<i>D</i>	Ground. 2.		Blood.
	Cloth.		Green land. 2.	X	9
	Land. 2,		Land with green grass.	<i>W</i>	Strange flower.
	Land with green grass.		Green grass. 4.	<i>D</i>	Flower. 5.
	Jungle ground.		Grass land. 2.		Mountain, grass.
	Grass of jungle.		Green jungle.		Stone.
					Blood.

Looking at these *CF* responses, we can find that they include several responses that they give the impression of colour naming such as "green land" or "different ground (*W*)" etc. It is interesting that there are only 4 cases which we scored as *C* (pure colour response) and they are in reality no more than colour naming. This would suggest a general tendency of the subject to use bright colour such as red and green. Our impression that an *FC* responses the subjects used colour secondarily is supported by this tendency.

As for the relation between the number of *FC* and that of *CF*, the subjects whose *CF* is more than *FC* in number is dominant, i.e., in 21 subjects out of all 27 subjects,  $FC < CF$ . Among the rest, 4 subjects are  $FC = CF$ , and 2 are  $FC > CF$ . There are 16 subjects whose *FC* is 0.

From the above facts, it may be that the colour responses pointed out above suggest the expression of affective maladjustment of the subjects. This sort of *CF* response seems to be rather avoiding the forms, and indicates that they do not express their sentiment without reserve. In many cases such a personality is disturbed in his behavior so that his actions are not always based on integrated judgement and self control. But it can not be said that the modal personality of Nagir subjects have such abnormalities as compulsive neurosis or catatony. If we consider the largeness of the response and their quality and the subject's tendency to use bright colours, one can assume that they may possibly have unstable extroversive behavior. However, although *N* response and the *Land* response seem to be the expression of crudeness, the

flower response seems a sort of expression of sociability. The *CF* responses in these cases are not an indication of impulsive behavior.

It is possible to assume that the subjects can easily be influenced by changes in the outside world. However their ability to assimilate the outside changes is weak and they adjust cursorily to the changes. In human relations the subjects have little emotional rapport and they are egocentric. The number and quality of *M* responses which could disprove this interpretation have already been discussed and the result as such support this interpretation. This point can be seen more clearly when we investigate the distribution of the Experience type.

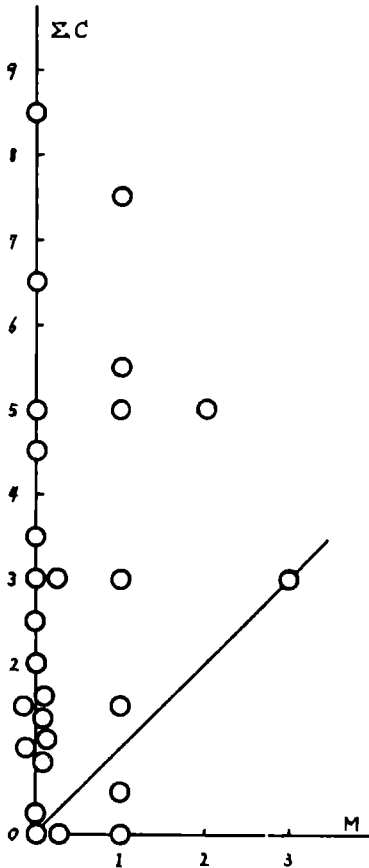


Fig. 2. Distribution of Experience type (Nagir).

As Fig. 2 shows, the distribution of the Experience type inclines to colour type, and  $M=0$  is largest in number. Subjects who can be classified as movement type number only two, and they are  $\Sigma C=0.5, M=1$  and  $\Sigma C=0, M=1$  respectively. There is one case of an ambivalent type of  $\Sigma C=3, M=3$ . Except for 3 subjects who are  $\Sigma C=0, M=0$ , all other 21 subjects are *C* type. The above mentioned 2 cases of  $M=1$  is also not sufficient to be *M* type. Therefore, the distribution of the experience type indicates that the subjects are unstable in their emotions, easily influenced by outside factors, and diffusive in their rapport. In other words, this distribution shows that the subjects lack to control their emotions by accurate intelligence, there-

fore they do not stabilize their emotions by digesting the changes of the outside world.

Because of the high percentage of  $F$  (Median 86%) of the Nagir people, the author would like to call the Experience type simply Form type or  $F$  type. (Table 17) This is not a common term in the Rorschach technique, but by naming this  $F$  type the author intends to distinguish subjects who had a high  $F$  %.

Table 17. Distribution of  $F$ %.

Level of $F$ %	30	40	50	60	70	80	90	
Number of subject			1	3	2	14	7	27

mean : 84%, median : 86%

Thus where the  $F$  % is high or as we call it here a case of  $F$  type, we have to consider the general quality of the responses. We must interpret case where  $DF$  is large, and where there are good form responses in sufficient number, as being a case where the subjects have a personality characterized by theoretical sophistication, suppressed emotion, rigidity and a lack of humour. Furthermore whether a case is  $M$  type or  $C$  type, we should interpret the personality by adding these factor's when the case shows high  $F$  %.

In the case of high  $F$ % of the Nagir people, because a significant portion of  $F$  response were form-indifinite, and because there was little variety in the contents of the responses (we will discuss this in detail later), we interpret that the Nagir subjects are not affluent in the expression of their sentiment, and that their out-look is insensitive. Although the Nagir subjects tend to be unstable in their emotion, and weak in their ability to digest the outside world. In short the quality of response of the Nagir seems to indicate crude ego control.

At the same time their personality is easily aroused by physical excitement combining the characteristics with the quality of the colour responses which we have already discussed. Thus in considering the manner of approach, I have the impression that their spontaneous behavior is fragmental and lacks reason from our point of view.

### Contents of responses

The author has described in the preceding sections that the subjects have a different character in the sense that their gestalt differed from ours in its emphasis. This will become clear the following analysis of the various content categories. (Lists of concepts for each content categories are arranged at the last of this section.)

#### *A and N responses*

It is clear from Table 5 that the largest and the most important responses are animal responses  $A$  40.5% and nature response  $N$  25.5%. The same thing can be found in median of all subject, i.e., the median of  $A$ % is 40%, the median of  $N$  is 21% (Tables 18, 19,)

From our previous analysis of the Nagir character the low  $A$  percent would seem to be in contradiction. However, a close examination of the quality of responses indicates that it may be possible to consider  $A$  and  $N$  responses are the same kind of response.

The  $A$  and  $Ad$  concepts are presented in Tables 23 and 24 which are notable for

Table 18. Distribution of *A*%.

Level of <i>A</i> %	10	20	30	40	50	60	70	80	
Number of subject	2	3	6	9	4	2		1	27

median : 40%

Table 19. Distribution of *N*% (including *L*%).

Level of ( <i>N</i> + <i>L</i> ) %	1	10	20	30	40	50	60	
Number of subject	4	7	6	5	4		1	27

mean : 25%, median : 21%

their poor quality in concepts such as bird, animal, wild animal and vague statements such as "like that" total about 1/3 of all *A* responses while the "head" comprises more than a half of all *Ad* responses. There were also some responses such as wing or feet in which the kind of animal was not specified.

Although the total number of *N* concepts in subjects' responses was 263, the variety or kinds of the concepts only totalled 32. The concepts which appeared in high frequency (and occupied 69% of the total number of *N* concept responses) were: mountain or mountain top-94, valley-26, land-15, crevasse-14, snow-12, glacier 10, stone 10, which indicate a tendency for the Nagir people to perceive *N* similarly. This fact also appears in Table 6 of the modal responses. Therefore, it would appear as if the subjects have a common character which is expressed by the commonness of their *N* responses. Moreover the forms used are mostly simple, that is, the contents of their responses can be easily associated with the form of the blot. Good examples are mountain responses using the protrusion of the edge of the blot, valley or water fall responses using only the features of the central part, ground, jungle and other land responses (*L*) using only the expansion of the blot.<sup>6)</sup> In its form quality these responses are either at the *A*-level or under the *A*-level. In short, the quality of the *A* and *N* responses differ very little and this characteristic seems to make it feasible to interpret protocols by adding *N* to *A*.

By this procedures the total for (*A* + *N*) would be 66.6% for Table 4 or total response and 65% by Table 20, the medians of the subjects' (*A* + *N*)%. The author believes, it can be interpreted to mean that the intelligence of Nagir people is low and stereotypic by our standard because of the lack of richness in their assimilation of the blots.

6) The category *L* response which I have analitically distinguished as a specific type of *N* response found among the Nagir, Hunza, and in Tsumje, Nepal. No such response is found among Japanese even in psychiatric patients. So that this kind of response may have a psychological meaning which is different from that with which we are familiar. However, since I was not able to make any substantial interpretation of this category I merely treated it as a kind of *N* response.

On the other hand the *L* response may not have any particular meaning and this sort of response may be no more than the same kind of response as stone, rock, cloud, etc. in their assimilation of the form of the blot.

Table 20. Distribution of ( $A+N$ ) %.

Level of ( $A+N$ ) %	30	40	50	60	70	80	90	
Number of subject		3	7	6	6	3	2	27

mean : 66.5%, median : 65%

### *Pl response.*

The high frequency *Pl* concept responses are non-specific ones such as tree, flower, branch (see Table 26.) These responses are so similar to an *N* response in quality as to almost be included into *N* responses.

The poor form-quality of both *N* and *Pl* responses and the large percentage of *N* plus *Pl* responses in the total of responses would probably indicate that the subjects tend to respond expediently without maintaining sufficient tension to resolve a problem. This is further supported by the poor form-quality evident in all responses in general.

### *H and Hd responses*

*H* is neglected in the modal score because of the smallness of *H* responses. At the same time because there are more *Hd* (mostly human head) than *H* (cf. Table 4, number of responses), it can be interpreted that subjects may have a certain inhibition in their human relations. This seems to be substantiated by the large *R*, assertiveness of the whole protocols, and the distribution of the experience type, and shows that the subjects are perceptive in their human relations. So that it is possible to conclude that the subjects grasp human beings and the behavior of human beings perceptively, and that they lack whole-hearted friendly relations based on emotional rapport. This conclusion would also agree with the previous interpretation regarding the simplicity of the verbs in *M* responses, or as that the verbs of *A* responses show little indication of any of elements of personification. In truth, however, it is difficult to say, whether this is actually an inhibition in their human relations, or whether their sentiment has simply developed in a direction different than ours.

### *Ob and Arch responses*

Of the total of 97 *Ob* responses, 55 separate *Ob* concepts could be calculated (Table 24). At first glance this would appear to be a large variety and hence indicate the richness of the subjects' association. However, since the range of variation among those concepts which appeared most frequently — in highest order of frequency they were: arrow or arrow head 11, cairn 8, tools for holding fires and scissors 4 — show such a limited range of variety, while concepts such as electric engine, aeroplane, key, umbrella and street lamp appear so infrequently and in most cases no more than once so that they would have to be classified as original, in reality, there is very little variety of *Ob* concepts or richness of association. The same can be said for *Arch* concept responses (see table 25). In short, from the inspection of *Ob* and *Arch* categories we ought to assume that the data supports the conclusion of the limited ability of association.

We were to make a generalized statement about the meaning of the character of the Nagir subjects' content of responses, assuming that cultural change in a certain group comes about mainly by the diffusion of civilization exerting influences, and that these changes are manifested to a certain extent in the content concepts of the responses of subjects, it would be possible to conclude that the Nagir people have been little influenced by the diffusion of civilization, and they show little interest in matters outside their own concrete world. In this respect they show a clear distinction to Tsumje people in Nepal who showed many responses related to religion.

It will not be necessary to discuss categories such as *At. Art, Blood, Cloud ect.*, because their frequencies are very low and thus belong to the results of individual variation.

Table 21. Concepts of human response, *H* and *Hd*.

<i>H</i>		<i>Hd</i>			
Human.	4	Head.	37	Body.	1
Man.	3	Hand.	14	Neck.	1
Woman.	2	Feet.	14	Mamma.	1
Hindu girl.	1	Arm.	6	Fingers.	1
Baby.	1	Face.	3	Fist.	1
Jungle man.	1	Leg.	3		
Giant.	1				82
	13				

Table 22. Concepts of animal response, *A*.

Bird.	50	Wild animal.	3	Fish	15
Hen.	14	Ox.	3	Butterfly.	12
Chicken.	2	Cow.	3	Bat.	2
Duck.	2	Ibex.	3	Snake.	1
Crow.	1	Rat.	3	Frog.	1
Gasir.	1	Horse.	2	Insect	1
	70	Stag.	2	Animal with human leg.	1
		Goat.	2		33
Animal.	23	Donkey.	2		
Tiger.	23	Lion.	2		
Camel.	17	Monkey.	2	<i>Total</i>	228
Dog.	15	River animal.	2		in 35 kinds of concept.
Bear.	5	Leopard.	1		
Walf.	5	Gurcus.	1		
Cat.	5	Mangoose.	1		

Table 23. Concepts of animal detail response, *Ad.*

Animal,	head.	11	Horse,	head.	3	Bird,	head.	11
	mouth.	3		neck.	1		neck.	4
	part.	2		tail.	1		beak.	2
	tail.	2			5		feet.	2
	face.	1	Ox,	head.	1		wing.	1
	leg.	1		horn.	1		mouth.	1
	feet.	1		upper part.	1		leg.	1
		21		feet.	1		part.	1
					4		tail.	1
Ibex,	head.	17						24
	horn.	2	Yak,	head.	1	Hen,	head.	4
	feet.	1		nose.	1		wing.	1
		20		mouth.	2			5
					4			
Camel,	head.	5	Jackal,	head.	1	Duck,	neck.	1
	hump.	4		arm.	1	Crow,	mouth.	1
	neck.	2		foot.	1	Fish,	head.	1
	body.	1		tail.	1	Snake,	head.	5
	mouth.	1			4		beard.	1
		13						6
			Wolf,	head.	3			
Dog,	head.	11	Stag,	head.	1	Frog,	leg.	1
	neck.	1		feet.	1		wing.	7
	teeth.	1			2		Feather.	1
		13					Mouth.	1
			Deer,	horn.	2	no	Feet.	1
Cow,	head.	5	Bear,	head.	2	speci-	Hump.	1
	tail.	1	Elephant,	head.	2	fication	Back.	1
	udder.	1	Goat,	head.	2		Tail.	1
		7	Monkey,	head.	2		Hook.	1
			Cat,	head.	1		Nipple.	1
			Bullok,	head.	1			15
Tiger,	head.	4	Donckey,	ear.	1			
	neck.	1	Fox,	head.	1			
	tail.	1	Mountain sheep,	head.	1			
		6						
							<i>Total</i>	171*
							Total number of	
							head is 96.	

\* The figure is over that of Table 4 because some subjects project more than one concept in a response. It is the same in Table 27.



Table 24. Concepts of man made objects, *Ob.*

Accessory of coat.	Fan.	Rope.
Aeroplane, tail of.	Flag.	Saddle.
wing of.	Fur.	Samovar.
Arrow, head. 11.	Foundation stone of bridge.	Scissors. 6.
Ax.	Gun.	Something made of wood.
Balance.	Glass. 2.	Spear.
Ball of badminton.	Hand saw.	Street lamp.
Bull's eye (target).	Handle of kettle.	Spike.
Button.	Instrument, 3	Stick. 4.
Cairn. 8.	-for catching fire. 7.	Sword.
Cap.	-for cutting wood.	Sword, end of.
Child's shirt.	-for making fire.	Table.
Cloth. 3.	-for making flower.	Table, legs of.
Doll.	Key. 2	Tank.
Door. 3.	Legs of wooden stand.	Tent's peg.
Decoration. 2.	Machine.	Tomb stone.
Electric engine.	Pillar.	Water fountain.
Eye glass. 2.	Pole.	Watch with rope.
Flower pot.		Umbllera. <i>Total 97</i>

Table 25. Concepts of architecture response, *Arch.*

House. 3.	Room.	Mosque.
House for sheep.	Gate. 3.	Bridge.
Bangalow.	Gate and wall.	
Roof of bangalow.	wall roof.	<i>Total 14</i>

Table 26. Concepts of plant response, *Pl.*

Tree.	50	Leaf.	1	Poplar.	3
Flower.	26		90	Black berry.	1
Branch.	6			Pomegranate.	1
Plant.	4	Decoration	1	Rose.	1
Bark.	1	Map made of			6
Root.	1	flower.	1		
Stump.	1		2		<i>Total 98</i>

Table 27. Concepts of natural objects, *N* (including *L*).

Mountain, and mountain top.	94	Pond.	6	Land.	15
— ridge.	1	Fountain.	1	Jungle.	14
Valley.	26	Lake.	1	Garden.	9
Crevasse.	14	River.	1	Ground.	6
Snow.	12	River bank.	1	Green grass.	5
Glacier.	10	Spring.	1	City.	1
Ice.	9		11	Field.	1
Water fall.	6	Star.	2	Plain.	1
Icicle.	3	Sky.	1	Town.	1
Moraine.	3		3		53
Hispar pass.	1	Stone.	10		
	179	Natural gate.	4		
		Hole.	2		
		Rock.	1		
			17		Total 263

### Individual variation

The author has tried to construct a modal personality of the subjects in the preceding sections. In this section I will discuss cases which are non-modal since the non-modal personality is related to the modal personality, and ultimately there should not be a fixed line drawn between modal and non-modal.

The large number of *R* is indicates a modal protocols, because, as the author has mentioned in the discussion of nature of protocols, *R* increases due to a flow of similar concepts which result from simple association. For example, they answer mountain or mountain top or other *N* response to a massive blot. So that subjects whose *R* is numerous have a modal pattern in their manner of approach, and will not be discussed in this section.

However, the case of *N* 27, whose *R* is the lowest (15), ultimately seems to have modal pattern in his manner of approach. It is natural to find such a case as *N* 27. In his case, we should pay attention to the facts that his response time was particularly long for massive blots, he had no answer for Card V; he had no *N* responses; his responses were all *H* or *A*, he used whole figure; and he had a high *DF*%. Although he is generally modal by suppressing his tendency of movement excitement more than modal personality, it gives the impression that he is gentler than the modal personality does. In these respect we have the impression that he is rather normal in comparison to *N* 5 whom we will describe later.

If we pick out non-modal personality in terms of the smallness of *R*, (besides *N* 27) we can pick out *N* 5, *N* 18, *N* 19, *N* 23. An interesting fact is that all are high in *W* response in actual number as well as in percentage. So that they are also obviously non-modal in the respect of the modal pattern of manner of approach.

In these 4 protocols, *W* responses total 22(48%) out of all *W* responses combined

for all subjects, and in each the  $W\%$  is 20% of their total responses.

Of the 4 cases, N 18 and N 19 are different from N 5 and N 23, in the quality of their  $W$  response.

In the case of N 5, "mountain" ( $FD$ ) is  $D$  in Card I; "aeroplane" ( $DF$ ) is  $W$  in Card V; no response is given for Card VI; "cloth is red, green and white," ( $CF$ ), "three kind of colour" ( $C$ ), "strange flower" ( $CF$ ) is  $W$  in Cards VIII, IX, and X respectively, and a Blood response ( $CF$ ) is given for Card X. These responses show that the subject is weak in form assimilation as compared to the modal subjects, and that his self control is weaker.

The aeroplane in Card V is a response which can be found mainly among lower grade primary school children in Japan. Colour naming response in Card IX is unusual even among children in kindergarten. The author thinks this subject is too low in his ability to be modal, that is, his ability of action is poor compared to the mode, and if we define the mode as normal, this case would look depressive and evasive, together with the cases of N 27, of whom we mentioned previously and N 23 who follows in the discussion.

In case of N 23, the pattern of manner of approach is same as mode, as the subject starts from mountain top ( $FD$ ) as  $d$  in Card I. Of all four  $W$ 's, 3 (Cards II, IV, VII) are  $W$ s as "a jungle with pond", "jungle with snow", "mountain and crevases and snow". In Card V he gives "tree" as  $W$  and he has no answer for Card VI. All content concepts of the entire protocol belonged to a modal series. His two  $CF$ 's are similar to colour naming in their nature because they are green grass and grass land which were derived by only changing his focus from one part of the blot to another. His response time is quite long except for Card II and Card IX. From these facts the author assumes this personality is constricted and weak in his ability to act despite the existence of two  $CF$ 's. From the constellation of the protocols of N 5 and N 23, it is possible to say that they are the same in their type of flow of responses as the modal subjects but inferior to the modal ones in their ability to act. Whereas, the author thinks that the cases of N 18 and N 19 are different from modal personalities.

The constellations of the protocols of N 18 and N 19 show a manner of approach that responds to massive blots with  $W$  responses. And content of their concepts seems to be of a different quality series from the mode. In the case as N 18, as  $W$  responses, there are: "house with decoration" (Card II), "map of a country", (IV), "bat, about to take off" (V), "projection of land," (VI), "map of country with colour," (IX). His  $W$  responses which are similar to the mode of concepts are mountain and land in Card VII and tree in Card I. In case of N 19, the subject presents concepts such as animal with many feet, tomb stone, bear standing, butterfly sitting in Cards I, II, IV and V. As modal concepts there are  $W$  responses in Cards VI (flower), VII (mountain) and IX (different ground). These  $W$  responses which are different from the mode in tendency. Although they are not always good in their quality of form perception, the contents are close to our standard, and it seems that they possess the minimum level of ability to identify a massive blot as a whole. Especially in case of N 18, the variety of concepts show that the subject has an active interest in the outside world and evaluates it. From the point of view of the mode, N 18 might look like an intellectual. From the typology of the form perception, N 18 is relatively closer to us than the modal subjects, so that we

might have expected there to have been a good mutual understanding between him and the Japanese members of the expedition party, but Dr. Imanishi does not mention anything particular about him. However, it is interesting to note that N 18 has stayed for a year in Kashmir as cook, and that N 19 has stayed in Karachi and Quetta for 6 years.

When I received the protocols from Dr. Imanishi, he gave me some information about the individual subjects together with general information on the administration of the test and his general impression about it. In this information he included two points: whether or not the subject had spend part of his lifetime outside of Nagir District, and whether or not he was cooperative to the expedition party.

Besides the two subjects, N 18 and N 19, people who spent part of their life outside of the Nagir District are, N 13 who visited Mecca, N 17 who worked as an labourer in Quetta, and N 28 who has been in Kashmir for 6 years as cook. Also we know that N 23 has visited Gilgit 6 times, but as we do not know if he spent much time there or not, we do not treat him as a man who has had life experiences outside of Nagir.

As for cooperation, sixteen subjects especially N 7, 12, 15, 20, 26 were cooperative to the expedition throughout most of the trip. N 2, 3 and 4 led the first revolt of porters and couriers and N 2 was especially non-cooperative. N 8, 11, 12, 16 formed the second revolt. N 16 used to behave badly during the trip. N 13 was noticed as an agitator of the revolts.

In this information, it is interesting that N 12 is included both in "good" and in "bad" categories, but the author cannot tell if it is due to his personality or not.

The author tried to check if there were any correlation between the protocols and the information about their behavior during the expedition, but he could not find any correlation. It may be natural because the Rorschach test is not a tool by which we can predict about the actual behavior of subjects in the future. However, it is possible to see a kind of correlation between a man who has either experienced life outside of the Nagir District or who intended to revolt or escape from the party, and subjects who have given at least one *W* response of the quality like bat or butterfly for Card V.

Eight subjects satisfy two conditions, that is, 1) spent part of their life outside Nagir or tried to revolt or escape and 2) giving *W* responses to the quality of bat, butterfly. Similarly, three satisfy the former condition and not the latter. Four satisfy the latter but not the former. And 12 do not satisfy either. According to Fisher's method of direct calculation of probability, the probability of the distribution of this figures is 1.9%. That is, this distribution can gain by mere chance only in the probability of 1.9%. So that we can say there is a correlation between these two conditions. It seems to the author that in order to adjust themselves to a different life, or to behave together as a group for revolt or escape, it required situational understanding through an active concentration of their behavior which would be manifested as a minimum condition to at least have the ability to give *W* responses of the quality described above. It is not necessary to integrate oneself in order to cooperate with others or be obedient.

Another notable case is N 17. Dr. Imanishi has pointed out that the subject looked to be a particularly unstable personality. The subject's manner of approach is modal, and the content of his responses is essentially not defferent from the mode. But in his protocol we recognize 3 *Blood* responses, and 5 *Cloud* responses 2 of which used black as

the basis for answering "such colour" to further inquiry. Although there are other subjects who gave *Blood*, *Cloud*, and *Anatomy* responses, N 17 is most frequently gave this sort of response. Considering the mutual connection of responses, he shows a tendency toward stronger idea perseverance than the mode. The many *Blood* and *Cloud* responses are the result of this tendency. It can be observed in Cards IV, V, and VI to an extreme extent. In Card IV, the protocols is, 1. bear's foot, 2. bear's tail, 3. bear, 4. bear's arm, 5. bear's head. The author gave *W* to 3 as main scores, and treated the others as additional scores. In the case of Card V; 1. jackal's arm, 2. jackal's foot, 3. jackal's head, 4. jackal's tail, and in case of Card VI where sequence is as tree, branch of tree, bark of tree, a main *W* score cannot be derived. Although the author has already made mention that this sequence is found in many protocols, N 17 is the most extreme case.

In spite of the modal aspects mentioned above, the author considers this to be a somewhat abnormal case in the sense that the aspects are also very extreme. While N 5 and N 23 would represent a depressive tendency, the case N 17 would represent an impulsive, maladjusted tendency.

There is another case which shows a similar sequence of the response to the case N 17. It is N 7. It is clear that manner of approach and the content of the concepts of the response of the case N 7 are as a whole shows a modal type. In Card VIII he gives responses using the lateral pink portion of the blot, which is usually seen as an animal. However, his response flows but part by part as follows: 1. foot of man, 2. foot of man, 3. neck of some animal. 4. two hands shaking each other. 5. this thing, whose head is an animal and whose foot is a human's, is lifting its foot. It is difficult to say if it is really morbid or not but the author feels some contamination of ideas exist in such a flow of responses. This strange flow of concept is expressed only by N 7. And it is interesting that only the case N 7 is classified as A type ( $M=3, \Sigma C=3$ ) among all the subjects in the distribution of Experience type (Fig. 2). This subject also gives a response, "woman sitting with red cloth", towards the red part of the upper portion of Card II which is a movement-colour response. From these facts N 7 has similar tendencies as N 17, and it seems that his personality is rather abnormal.

As for N 1 who was the interpreter during the expedition, his manner of approach and the content of his responses are completely modal, and there is no difference in quality from the modal Nagir protocols except in Experience type. Why are there few characteristics to show that he speaks English and he acted as an interpreter? His Experience type is *M* type from the figures:  $M=2, \Sigma C=1$ , but the quality of his *M* responses itself, as we have noticed when we dealt with the *M* responses, were those which have a secondary tendency such as "man standing", or "woman standing". Also there are other people whose  $\Sigma C$  is low. So that the Experience type itself of case N 1, in reality, does not differ particularly from the mode. The case of N 1 is definite proof of the fact that whatever the outlook of the modal personality of the Nagir people, their personality is not that of mentally weak people in the sense that we use this concept in Japan. Nor do they have unstable emotions approaching the abnormal. The modal personality is a result of the adaptation of people to the society in which they live, and it is something which has developed in relation to the culture. Thus in this section, the author intended to describe what their abnormal state is if we define their normal state in terms of their modal personality.

## MODAL PERSONALITY OF HUNZA PEOPLE

As we have only 5 cases of protocols of Hunza porters, we cannot consider their modal personality in as great detail as the Nagir people which we have already discussed. Though the number of Nagir, is not large, since there are 27 cases is less danger in making conclusions in so far as the modal personality is treated consistently, even though there may be some danger of mixing exceptional cases into the modal cases due to lack of information. However, because of the potentially interesting comparison between the Nagir and Hunza reaction to Rorschach, I have presented the data from these five cases without in any way trying to suggest that this is an accurate reflection of the Hunza population as a whole.

Keeping the smallness of the number of respondents in the mind, let us nevertheless assume that we can roughly estimate the modal personality of the Hunza people from these 5 cases. The general impression of the protocols of these 5 cases suggests that the modal personality of the Hunza people is basically similar to that of the Nagir people. However there are, of course, several differences between them and by comparing them with the results of the Nagir people, I will attempt to estimate the modal personality of the Hunza people.

In the manner of expressing responses and in the sequence of responses, the 5 cases almost completely match the Nagir protocols in general characteristics. For example, H 1's responses to Card I is as follows:

1. mountain. *d*
2. human foot. *d*
3. wing. *d*
4. hips of human being. *d*
5. scissors for cutting tin. *d*
6. stone man (cairn). *d*
7. snow cock. *dd*

The entire protocol is as perceptive as the Nagir people. The content of response seems to be a result of a very simple association in which the subject utilized the small unevenness or simple form of the blot. At the same time there are many *Ad*, *Hd*, *N*. The general tendency of a similarity in manner of approach can be observed in a very interesting way in the case of H 5. H 5 has responded to the test in English as did Nagir N 1 the interpreter. Towards the massive blots, (Cards I, IV, V, and VI) H 5 responded: butterfly to Card I; map of Australia to Card IV; bat as the first response to Card V. (No *W* response was given to Card VI). At the same time he shows a general tendency to give many *d* or *dd* of *Ad*, *Hd*, *N* responses to massive blots. As in the case of N 1 in the Nagir subjects, he can speak English which is very particular indication of intelligence, but it is interesting that such an achieved skill does not ultimately change the basic tendency of the subject.

The median reaction time of the hunza subjects are as follows: 35" for Card I, 23" for Card II, 10" for card III, 60" for Card IV, 30" for Card V, 35" for Card VI, 30" for Card VII, 15" for Card VIII, 15" for Card IX, and 25" for Card X. The tendency of being slow for massive blots and fast for separated blots is the same as that of the Nagir people.

The median of the total number of responses *R* for the 5 cases is 46 which is the case H 1. The general tendency we can say they have more *R* than the Nagir people.

As for the determinants, except H 3, *M* is small and *CF* dominant just as for the Nagir people. We can ignore the other determinant so that in their affective sphere, it is possible to say that the modal tendency of the Hunza people is essentially identical to that of the Nagir people. The distribution of Experience type is also the same as the Nagir's except for H 3. The content of the response is also identical to the Nagir people in both the frequency of *Hd*, *Ad*, *N*, and *Pl* responses, and their "Land responses" which can be distinguished, and in the kinds of card to which these responses tend to emerge.

These general tendencies are clearly observable from Table 28, the modal scores of Hunza. Table 28 was constructed in the same manner as Table 5 for the Nagir people, except for the modal ratios. As the modal ratio I would have preferred to use 1/3 as a limit but since there are only 5 cases, I omitted only those scores which appeared only once among the five cases. The trend found in the content category is that Hunza subjects have more *Ob*, and *N* but less *L* responses than the Nagir subjects, would hold even if the cases increased. Also there would not be much change in the dominance of *DF* responses to all Cards, even if the number of cases increased. So in these two respects and in the largeness of *R*, there are the noticeable differences between the Hunza people from the Nagir people.

The frequency of *DF* response is related to the frequency of *Ob* response as previously mentioned. Although the former's total number of responses is greater than the latter, the quality of *Ob* responses of the Hunza people is not much different from that of the Nagir people. Most of the *Ob* concepts are decorations or instruments, so that it would be hard to say that Hunza people have a more multifarious inner world than the Nagir people even though they do have more *Ob* responses. We can say, however, that the Hunza people are less evasiveness and steadier than the Nagir people because they have fewer *L* responses. In other words, the Nagir people look more depressive than the Hunza people. The largeness of *R* leads the author to think that the Hunza people have more ability to act. Although the Hunza people are gayer and more physically active, what the author means by active is that they are not evasive or depressive so that it is hard to tell whether Hunza people were simply more active toward an expedition trip than the Nagir people.

The problematic case among the 5 cases of Hunza subjects is H 3. His content of response is not much different from the other cases and his manner of approach all seems modal, but he gives 6 *M* responses, a colour response which is the only instance of a blood response. Of his 6 *M* responses, one in Card VIII is strange in that he sees a man at the lateral pink portion which is usually seen as an animal. His other 5 *M* responses are good in form perception and the concepts are those often found among Japanese or Americans. The number of his responses *R* 36 is the smallest among the 5 cases of the Hunza people but it is not really small. In Card X, he gives the concept "rat" three times although utilizing different portions. This kind of sequence of responses can be found in Cards I, II, IV and VI, but, as a similar tendency is found in many protocols of the Nagir subject, it is not exceptional. Therefore, H 3 is very dis-

Table 28. Modal scores of Hunza people.

	I	II	III	IV	V	VI	VII	VIII	IX	X	
<i>R</i>	4.2	5.2	5.2	4.4	4.4	4.6	4.2	4.8	3.6	5.6	46.2
<i>W</i>	0.4			0.4							0.8
<i>D</i>	0.8	1.8	4.0	0.8	0.6	1.4	1.4	3.2	2.6	5.0	21.6
<i>d</i>	2.2	2.0	0.4	1.8	2.2	1.4	1.6	0.4	0.4		12.4
<i>dd</i>	0.8	1.0	0.8	1.4	1.6	1.8	1.2	1.2	0.6	0.6	11.0
<i>S</i>		0.4									0.4
<i>M</i>										0.4	0.4
<i>FM</i>								0.4			0.4
<i>m</i>											
<i>k</i>											
<i>K</i>											
<i>FK</i>											
<i>DF</i>	2.2	3.8	4.0	3.4	2.8	4.0	2.4	2.0	1.8	3.8	30.2
<i>FD</i>	1.8	0.6	0.4	0.6	1.6	0.8	1.0	1.4	0.8	0.4	9.4
<i>Fe</i>											
<i>c</i>											
<i>C'</i>											
<i>FC</i>											
<i>CF</i>								0.6	1.0	0.4	2.0
<i>C</i>											
<i>H</i>			0.6							0.4	1.0
<i>Hd</i>	0.6		0.4	0.4	0.6	0.4	0.8		0.4		3.6
<i>A</i>	0.4	1.8	1.8	0.4				1.0		2.2	7.6
<i>Ad</i>	0.4	0.4	0.8	0.6	1.0	1.6	1.2	0.6	0.4	1.0	8.2
<i>Ob</i>	0.8	1.4	0.6	1.8	1.0	1.0	0.6	0.4		0.6	8.2
<i>Arch</i>						0.4					0.4
<i>Pl</i>					0.4			0.6	1.2	0.8	3.0
<i>N</i>	1.6	0.4		0.4	1.0	0.4	1.2	1.2	1.0	0.6	7.8
<i>Geo</i>											
<i>At</i>								0.4			0.4
<i>Art</i>											
<i>Abs</i>											
<i>Fire</i>											
<i>Blood</i>											
<i>Cloud</i>											
<i>Smoke</i>											
<i>Land</i>											
<i>Colour</i>											

Gothic figures designate dominancy of the score of a card.



tinctive among all 33 cases only solely because he has 6 *M* responses. For the reasons previously mentioned, although non-modal, he seems not to be a morbid man so that we will interpret his personality as emotionally stable, and slow in movements. The single *Blood* response is still questionable but the author can not give any interpretation for it in the constellation of his entire protocol.

In short, the modal personality of the Hunza people are more active in their behavior than the Nagir people, but the fundamental tendencies are the same as the Nagir people.

#### A COMMENT ON THE MODAL PERSONALITY OF SAMA VILLAGERS IN NEPAL.

Dr. Imanishi was the leader of a scout party sent to find a climbing route up Mt. Manaslu by the Japan Alpine Club in 1952-53. In December 1952, he administered the Rorschach tests to nine male porters in Sama village, Nepal. It was the first time to the author to see foreigner's protocols whose culture does not belong to that of Euro-american. The protocols have not been analysed though they are in the author's possession. After having reported the interpretation of protocols obtained from Tsumje people, the author could not yet figure up the modal personality of Sama people because of the small sample size and of the difference of the nature of the protocols from those of Tsumje. However, I would like to give some interpretation of Sama protocols at this chance.

Except for one who was over the age of 40, the rest were all in their twenties, their average age being 26.3 years. The median of total number of responses is 22.

It is possible to point out the different tendency in the nature of protocols of Sama people from those of Tsumje people. It is common among these 9 cases that their responses show clear-cut distinctions which are unlike the piece-meal tension discharge found in Tsumje people.

They seem to have relatively many form definite responses, and many *W* responses with form quality of "bat", "butterfly" and the like.

The tendency of approach which the author pointed out for people of Nagir and Tsumje, i.e. giving more *d* or *dd* for massive blots and spending more reaction time for them than for separate blots, is not distinctive among them. Although there are many *D* throughout all Cards. Number of *W* response also increases. Table 29 of modal scores shows the detail.

It seems that in their affective sphere they are alike to Tsumje as the quality of *M* responses and *C* responses are the same and the distribution of Experience type does not seem to be different from Tsumje too. But from the tendency of approach we can estimate that Sama people is more composed and has better self-control than Tsumje people.

When we arrange the frequency table of *l-c* combinations of the Sama people in order of frequency, the result is, X D6-A:8, II D2-A:8, VIII D1-A: 7, III D2-A:5, II d1-Arch:4, etc., and in comparing to those of Tsumje, only III D5-A which does not appear on popular level. (As for the *l-c* combination, refer chapter 2).

Especially from the fact that the content of II d1-Arch is "*chorten*" (a kind of Lama temple) and that there are many responses as "*chorten*" or other objects which are

Table 29. Table of odal scores (Sama).

	I	II	III	IV	V	VI	VII	VIII	IX	X	
<i>React. T.*</i>	36"	15	24	15	10	19	15	15	28	27	29"
<i>Resp. T.*</i>	2'21"	2'05	1'59	1'38	1'31	1'26	1'45	1'57	1'59	3'08	1'59"
<i>R</i>	2.1	2.5	2.2	2.0	1.7	0.7	1.1	1.6	1.4	3.2	18.5
<i>W</i>				0.6	0.7	0.7					2.0
<i>D</i>	0.8	1.9	1.9	0.8	0.4		0.8	1.6	1.4	3.2	12.8
<i>d</i>	1.3	0.6		0.6	0.6		0.3				3.4
<i>dd</i>			0.3								0.3
<i>S</i>											
<i>M</i>			0.3								0.3
<i>FM</i>								0.6		0.4	1.0
<i>m</i>											
<i>k</i>											
<i>K</i>											
<i>FK</i>											
<i>DF</i>	1.3	1.4	1.1	1.3	1.1	1.0		0.3	0.4	1.8	9.7
<i>FD</i>	0.9	0.3	0.4	0.6	0.6		1.1		0.3	0.3	4.5
<i>Fc</i>											
<i>c</i>											
<i>C'</i>										0.7	0.7
<i>FC</i>											
<i>CF</i>		0.3						0.6	0.7		1.6
<i>C</i>											
<i>H</i>			0.4								0.4
<i>Hd</i>											
<i>A</i>	0.6	1.1	1.1		0.6			0.9		2.4	6.7
<i>Ad</i>	0.3				0.6						0.9
<i>Ob</i>						0.4					0.4
<i>Arch</i>	0.3	0.6		0.6		0.4					1.9
<i>Pl</i>											
<i>N</i>	0.7	0.4	0.6	0.4	0.3		0.8	0.4	0.6		4.2
<i>Geo</i>											
<i>At</i>											
<i>Art</i>											
<i>Abs</i>											
<i>Fire</i>											
<i>Blood</i>											
<i>Cloud</i>											
<i>Smoke</i>											
<i>Rl</i>	0.6	0.9		0.8		0.4					2.7

\* Both show median of reaction time and response time.  
Gothic figures designate dominancy of the score of a card.

related to the Lamaism in Cards IV, VI etc., it seems that both Sama people and Tsumje people belong to a Tibetan cultural area, and they are identical in the pattern in respect of varieties of registered gestalts and function of reproduction of them.

### SUMMARY

1. In this chapter the author endeavored to interpret the protocols which were administered to couriers and porters by Dr. Imanishi in 1955 when he had travelled from Hunza to Concordia as a leader of the branch party of the KUSE.

2. Protocols of the Nagir people (27 cases) were mainly analysed in this chapter, and other protocols were discussed briefly at the end of the chapter.

3. The average age of 27 cases was 30.4. All of them were male.

4. The median total responses  $R$  was 36.3. Common general characteristics of the protocols were: brief responses, many by a single word; sequence of concepts which seem merely the result of simple association; many  $A$ ,  $Ad$ , and  $N$  responses resulting in the "Land responses", which designates responses using only two dimensional expansion of the blot as the modal one.

5. The average reaction time was 35". A tendency for subject to respond slowly to massive blots, and rapidly to separated blots.

6. Manner of approach was  $((W)) D \underline{d} \underline{dd}$ . Many  $d$  or  $dd$  emerge from massive blots and many  $D$  from separated blots.  $W$  can be ignored as a mode. There was no better form perception of  $W$  than "bat" "butterfly" to Card V. There is a positive correlation between the  $W$  response like bat or butterfly and subjects with life experience outside their native places, or participation in revolts or escape during the trip.

7. The most numerous of all determinant was  $F$  response, especially form indefinite  $F$  responses.  $M$  has been ignored from the mode. The colour response is distinctive among the protocols. There were few other scores of determinants.  $M$  and  $FM$  are mostly those which are based on verbs attached secondarily such as "standing" or "climbing". It is hard to think that the colour responses were a result of sufficient assimilation. Rather they tend to be colour-naming. The dominant responses were given  $CF$  as they are form indefinite. The dominant distribution of the Experience type is  $C$  type, but the whole emotionality should be considered on the basis of the high  $F\%$ . The median of  $F\%$  was 86%.

8. As for the contents of responses, there were many  $A$ ,  $Ad$ ,  $N$ ,  $L$ ,  $Pl$  responses.  $N$ ,  $L$ ,  $Pl$  seem especially to be due to crude form perception. The median of  $(A + N + L)\%$  is 65%. Responses which belong to the category  $Ob$  were mostly ordinary concepts so that the content of response as a whole looks very simple and no multifarious association is indicated.

9. Checking the individual protocols in terms of the modal characteristics, there are several individual variations. There are  $W$  and small  $R$ . Its manner of approach is non-modal, or when its manner of approach and other tendencies are modal they are expressed in a very extreme way.

10. The characteristics of the protocols of Hunza people is the same as that of the Nagir people. However, Hunza people have more  $R$  and less  $L$  and more  $Ob$  than

the Nagir people. The *F* response is dominant as in the case of Nagir people, but Hunza people have an higher ratio of form definite response. Consequently we can assume that the Hunza people have stabler ability to act. They are also more active and gayer than the Nagir people.

11. When we try to make up a modal personality of the Nagir people from the findings mentioned above, the result was as follows: (We will not repeat reasons why we reached this "make up" because we have already described it in each section.)

Subjects are very practical, and perceptive in recognitions of objects. They have little subjective volition for problem solving, but we see in their responses assertive ability to act and the tendency to be particular about trifles. Ego control for which rational introspection is presupposed is apt to be influenced from the outside world. Emotionality is not multifarious and it looks as if they are unemotional. They express little emotion, but is unstable, and there is a tendency to get excited easily. They are stereotypic and have little interest outside of their own world so that their intelligence looks very low. However, since flexibility of intelligence is clearly observed among them by their standard, this does not mean they are incompetent. In this respect we should keep in our mind that they have not developed toward our direction of evaluation in which we enlive even a meaningless, impractical ink blot.

In human relations they are extroverted but lack ability to have intimate and warm human relations based on emotional rapport. It appears that they are merely interested in the extroversive, practical behavior of others.

## Chapter 2 Group Ordination

### INTRODUCTION

The Rorschach test which has been widely used for psychological diagnosis in clinics has also many contributions to other fields. The possibility of its anthropological application was pointed out by H. Rorschach himself who gave special attention to Experience-type because of its potentially different distribution among groups of people. He mentioned, as an example, the difference between the Berners and the Appenzellers. Following Rorschach, Huzisawa 1930 (22) and Bleuler 1933 (3) tried to adopt this technique in anthropological field works, and subsequently numerous articles on Alorese, Americans, American Indians, Mexicans, Saipanese, Nepalese etc. appeared. J. Henry and M. E. Spiro 1953 (9) reviewed works of the early period of the field. Critics in themselves about the application of this technique in field work naturally was offered by anthropologists, as for example those of Mensch and Henry 1953 (31) and Mead 1953 (30). On the other hand, R. Linton 1945 (29), Hallowell 1955 (7) and others have mentioned the usefulness of the technique. Even though both pros and cons for the usefulness or reliability of the test as an anthropological method exist, and a final evaluation has not been established, the author has adopted this in his anthropological studies for the following reasons.

First, because the Rorschach test is based on a fixed series of ink blots which do not have any meaning by themselves, it can be used it for different culture-groups as a source of stimulation, free from cultural bias. Also since the requirements for the subjects are very simple, the instructions for the test is not likely to be misunderstood by a subject.

Secondarily, since Rorschach has provided a way to arrange the protocols quantitatively, we can compare the results in terms of a statistical treatment. This seems to be a most advantageous point the studying personality which is in its nature, a very qualitative entity.

Thirdly, as it is possible to use a set of uniform ink blots for any culture-groups in the world, we can compare the results of the tests of different cultures directly.<sup>7)</sup>

For the individual diagnosis, the interpretation is not merely based upon the quantitative scores. The responses are recorded in order that the subject has given, and the protocol as a whole has a form of record in a time series of responses. For the each blot is arranged in order, we know through our experience what effect it would give to subjects. So that we can inspect the sequence of responses through this empirical knowledge. For example, an animal response for the lateral pink portion of Card VIII is usually selected first by majority of subjects of the world, so if a subject had given this response at the end, it gives some information about subject's personality. Also such a process that a subject has been weakening his ability to assimilate colour in

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7) See HALLOWELL, R. I., HENRY, J. and others 1955 (7), for a more detailed discussion about the pros and cons of the Rorschach test as an anthropological field method.

blots would give certain meaning when we see his protocol in terms of a time series of responses. This method is called the sequence analysis. So that in case of individual diagnosis, it is possible to say that the important process of diagnosis is rather based on the sequence of responses. Why then, do we calculate scores, their total or ratios? The reason is that by doing this we provide a possibility of locating an individual in the modal personality of the parent population to which he belongs, using the numerical phase of his protocol. In estimating the modal personality of certain groups, qualitative treatment of protocols, such as sequence analysis for individual protocols, becomes very difficult. Therefore, a statistical analysis of numerical data is first utilized after which an interpretation of qualitative differences is made.

The method which is frequently used is to make distribution tables of each score, and to ascertain if there are any significant differences between the groups by  $\chi^2$  square or some other statistical test. In this way we calculate differences for each score by which we can estimate the qualitative differences between the groups. De Vos's comparison of Japanese descendants classified as Issei, Nisei, and Kibei in Chicago to each other and also each of them to American groups is a good example of a comparative study of this sort.<sup>8)</sup> His study was based on a statistically accurate stratified sample according to age, sex and socio-economic status. The advantage of this method is to insure a degree of objectivity. This method is especially useful in comparing sample groups of two different sub-populations which belong to the same parent population because of the statistical test's more precise deliniation of differences. At the same time, the preciseness of this method becomes disadvantageous trying to construct the modal character of a culture-group as a whole.

For a comparison of sample groups whose population are qualitatively very different from each other, such as a comparison between Japanese and inhabitants of Karakoram, this method seems to be overly precise because the raw statistical distribution of scores of such different groups is so different that it is not necessary to make  $\chi^2$  square tests to note the differences between them.

In comparison to De Vos, S.B. Sarason<sup>9)</sup> attempted to grasp the qualitative characteristics of the protocols in his "TRUK: Man in Paradise". Thus he used an intentional sampling, i.e., he selected samples of Truk people in terms of those among them who are liked, who are disliked, and who are neither liked nor disliked. In interpretation, he made individual diagnosis on the basis of which he wrote a general summary of qualitative differences. The advantage of this method is in the direct intention to grasp the qualitative characteristics of a sample group. However, the subjective qualitative character of this method, it might nullify the possibility of a direct comparison in a quantitative sense. Hence both De Vos and Sarason's methods in one way or another are not convenient in the statistically ordination of various culture-groups. In this chapter the author attempts to develop a new method of ordinating sample groups by means of a macroscopic view point based on the subjects' perceptions.

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8) DE VOS, George 1954 (4).

9) GLADWIN, Thomas and SARASON, Seymour B, 1953 (6).

CLASSIFICATION OF RESPONSES BY MEANS OF *L-C* COMBINATION

Besides the widely practiced method of finding differences according to the statistical distribution of each score and the interpretation of these differences for two groups, there is another method which has been practiced but which has not yet found positive usefulness. That is to compare popular responses of groups.

It is well-known that to anyone who administers Rorschach tests that the more contact he has with subjects in different countries or even within one country such as Japan the more he sees the variety of results possible. It is as if there were an unlimited variety. However, to a considerable extent there are many similar responses among the obtained responses especially with respect to responses to a certain specific part of the blot. This fact has been pointed out by H. Rorschach who took this as a standard to judge the *form* quality of the responses. (His idea has subsequently been revised into the present more precise method of form-level-rating.) At the same time, this fact has developed a trend to point out particular popular response which has been used as a point of comparison when this test is applied as one of the research methods in anthropology such as comparison of *P* responses among groups of American white children and American Indian children, or the comparisons of Indian groups by which the degrees of acculturation are different.

As Hallowell<sup>10)</sup> has paid attention to this point and he has written reviews on this problem, it is enough to point out that for comparison of two groups there is a method to compare responses *per se* by using, for example, *P* response besides the method of statistically comparing scores.

To compare responses directly *per se* means to distinguish the differences of character between two groups. We need, however, some kind of arrangement or classification to compare responses *per se* because there are a vast of variety of responses and they are too numerous to be used in their original forms. To arrange responses by scores is one of the great contributions of Rorschach's insight since scores can easily be compared.

For example, most would agree with the combined score *DFMA P* which is given to the response, 'four-legged animal' such as "Tiger walking across a rock", or "Jaguar watching an object on a stone" which are often produced for the lateral pink portion (D1) in Card VIII. These responses all contain a four-legged animal which is scored the same. The first 3 scores (*DFMA*) take attributes of the response, but the last score (*P*) takes a common form of a four-legged animal contained in the response. In this sense the last score is different from the rest. The common form in the above examples would be expressed as VIII D1-four-legged animal and because we can say the two responses are the same in this expression, we can simplify this expression as VIII D1-A, for simplicity. We call this location-content-combination, or simply *l-c* combination.

The symbol *A* (animal) of the content category includes as a rule not only four-legged-animals, but also birds, insects, and even protozoa, but once the projected location is decided, the range of variety is, in reality, surprisingly reduced. For *l-c* combination of VIII D1-A, there are few concepts expressed except four-legged animals. This fact is well known to anybody who is acquainted with the Rorschach test. Table 35 is a list

10) HALLOWELL. 1956 (8)

of popular *l-c* combinations and the lists of concepts related to these areas. From this Table we can see that this fact is, of course, not merely true for the specific location VIII-D1, but also true for the other specific locations. It is true also for many other *l-c* combinations which I did not list in Table 35 because of their low frequency. In other words, *l-c* combinations show the common form which are virtually built-in responses. Thus, when the number of responses which have a particular common form is high, it can be viewed as an equivalent to a *Popular*-form named by Hallowell.

Although it is always possible to get responses (for a specific location) whose specific form differs from the common form, the probability is so low as not to endanger the system of representing common forms by a *l-c* combination. The reason being that past experience has shown that specific locations invariably evoke common form response which led to the technique of specifying *Popular*-responses.

For example, Klopfer says in his explanation of *P* response:

“To card I as W or cut off W: Any creature with the body in the center D and wings at sides”, “To the black area of Card II (either as an Organized incomplete W, with or without the top center d, or as D): Any animal or part of an animal of the dog, bear, rabbit, bull or rhinoceros variety. Common characteristics include a rather large head (which frequently suggest puppies or bear cubs), a thick neck, invisibility or fore-shortening of rest of body, and frequently, emphasis on the surface of the skin,”<sup>11)</sup>

It is not necessary to quote all of the 10 *P* responses selected by Klopfer, however, the case of Card VIII is mentioned as it is related to the above mentioned VIII D-1:

“To the side D in Card VIII: Any kind of four-legged animal in any kind of motion. If the animals are inaccurately called birds or fish, only a tendency towards *P* can be scored. The same is true of animals not seen in action. Usually the colour is not used; When it is, it must be scored with an additional original score.”<sup>12)</sup>

Therefore, my method of creating *l-c* combination is: (1) to decide on a specific location, (2) to give a fixed number to it, (3) to determine the content category and (4) to combine this number with the symbol of the content category. The 10 *P* responses selected by Klopfer can be written: 1. I W2<sup>13)</sup>-A, 2. II D3-A, II D3-Ad, 3. III D8-H, 4. III D1-A, III D1-Ob, 5. V W2-A, 6. VI W1-A, VI D1-A, 7. VIII D1-A, 8. X D1-A, 9. X D2-A, 10. X D7-Ad.

11) KLOPFER, B. 1946 (26) p. 179

12) *ibid.* p. 180

13) There are usually two ways of utilizing the whole area in massive blots such as Cards I, IV, V. In one way, a subject sees a blot as a mass, and in the other, he sees it as a differentiated mass, that is, center D and side D. As their forms are different, I would give a fixed number for each such as W1 for the former and W2 for the latter. There is another type of response such as “face of fox”, “mask”, etc. I consider them to be another specific response of a basic differentiation of the mass-type response, but because they can be represented as I W2-Ad or I W2-Hd, it is not necessary to have a W3 for such responses.



Also in giving a specific fixed number to a specific blot, I have adopted a flexible approach similar to that of Klopfer, who considered D "with or without the top center *d*" (Card II). In this way responses with equivalent common forms are represented by the same *l-c* combination. I call this a method of classification of responses into *l-c* combinations.

Locations have been determined empirically by the subjects' actual selection of specific areas of the blots. In cases where common form responses were given to generally similar areas, that is, areas which may have included or excluded certain adjoining portions but were still the same general area, I made a flexible specification of the area and gave a fixed number to the general area as in the case of Card II. However in the cases where the subject chose an area of the blot which had never been selected previously, I gave the location a separate fixed number. Hence to determine the total number of locations, I simply noted each area which was chosen by a subject while taking care not to give the same fixed number to different areas and not to give different fixed numbers to generally similar areas.

There are cases, of course, where empirical determination of the locations has forced me to give more than one fixed number to overlapping and inclusive areas of the blot. For example, in Card III the human figure form has been designated as III D8 but the long strip at the lower lateral side which resembles the leg of the human figure has been designated as III D5, because of responses which see this area as a fish or non-human form. Finally I have also given separate fixed numbers to common form responses which are responses to the same general area but exclude or include areas different enough to suggest that a different perception is involved, as for example, a designation of III D6 for the response of human figure to Card III because the subjects views leg what is usually viewed as the arm in case of III D8. This is also similar way which Klopfer took in designating large usual details.

I have followed Klopfer to the extent that Klopfer has already given fixed numbers to specific locations, however, I have also made additional designations drawn from empirical data.

Since the content category of the *l-c* combination is a generalized category in which I have changed specific concepts into a general form, I used symbols which are similar to Klopfer's method of scoring the content category.<sup>14)</sup> As for the "fur" response which is frequent for Card IV is usually scored as *Aob*, but after obtaining clarification by inquiry or testing the limit, IV D1 is the head and IV D2 is the fore foot of the fur, I recognize it as (*A*) response and classify it into IV W2-A. Whereas, if the subject sees only a flat fur without seeing a head or foot, I recognize this as an *Ob* response and classify it into IV W1-*Ob* since there is no differentiation of the blot. Also in the case of responses such as ghost or spirit, I scored them as either (*H*) or (*A*) after the inquiry or testing the limit to which the subject says he feels as that there is something either human- or animal-like about the blot.

The purpose for creating *l-c* combinations, as mentioned in the main description, is to facilitate classifying equivalent common forms. In doing so, the focus is on the main common form in the same way that Klopfer designates *P*

14) The content categories which I used to make *l-c* combinations are the following: *H, Hd, A, Ad, Ob, Arch, Pl, N, Geo, At, Art, Abs, Blood, Cloud, Fire.*

responses as in the case of Card II, that is, conditionally "either as an organized incomplete *W* or not." Therefore the classification of responses differs from the routine scoring method. For example, a response at the center of Card VIII, "jaguars climbing to a top of the tree on both sides" can be scored as *W FM A*, but as a *l-c* combination, it is classified as VIII D1-A. Accordingly there is a case such as follows: The lateral quarter of the lower pink in Card IX (IX D4) is often seen as human head. In some of these responses the subject sees a human body at the blot areas attached to it, or sees a whole figure such as "baby" at the half of lower pink. In routine scoring the former is *Hd* and the latter is *H*, but as a classification of an *l-c* combination, both of them belong to IX D4-Hd. In this way, I have combined the *content* and *location* to create the *l-c* combination.

Thus the classification of responses into *l-c* combinations requires separate definition for deciding *l* and *c*, but in both cases the definition is based on previous experience. Thus the author has already reported results of classifying all responses obtained from 156 cases of house masters of farming and mountain villages in Japan whose ages are from 30 to 59, into *l-c* combinations and at least in Japan no negative critics have come forth during the three years since the report was published.

In the process of classifying common forms found in responses into *l-c* combinations, using *P* responses as examples, the important point is that all responses can be classified by this method. However, it should be noted that in order to recognize common forms among responses there must be a number of similar responses for the same blot area. In such cases it is possible to express common forms more specifically as "four-legged animal" or "winged creature". The fewer the number of responses projected to a certain location, however, the harder it becomes to describe explicitly a specific common form. Although theoretically even if there is only one response, it might be possible to decide what common form it has, the decision is tentative. In the same manner the greater the number of scanning lines which form the television picture the clearer the picture, a greater number of responses leads to a clearer idea of the concrete common form. Nevertheless, one can assume that a *l-c* combination derived from only one response does express a specific common form, until further evidence forces a revision.

Accepting this premise, the advantage of the *l-c* combination as means of classifying responses is that it includes all responses and not simply *P* responses, i.e., high frequency responses. As is clear in the works of Hertz<sup>15)</sup> and Hallowell<sup>16)</sup>, a comparison of *P* responses as such is no more than the initial step of investigating whether or not there are corresponding *P* forms and whether or not the specific concepts themselves correspond between two groups. This excludes the large number of common forms which can be found in two groups when all responses are compared and not just *P* responses. Thus the *l-c* combination method which provides a possible means to compare all responses obtained from any two groups, include the common forms in lower frequencies. It can be said as a more generalized method of comparison than that used in comparing of the *P* responses between groups.

15) HERTZ, M. R. 1938 (10)

16) HALLOWELL, A. I, 1956 (8)

GROUP COMPARISON BY MEANS OF *L-C* COMBINATION<sup>17)</sup>

By the method described above, the classification of responses obtained from a certain sample group resulted in a variety of *l-c* combinations. The number of *l-c* combinations with the same *f* is designated by *Sf* and the total number of responses classified into each *l-c* combination is designated by *f* i.e., the frequency of an *l-c* combination.

It is interesting that in the distributions of responses thus obtained, that the distributions of *f* show a common distribution pattern among cross-cultural groups.<sup>18)</sup>

The distributions of *f* for each group is as a whole holds to the law of Auerbach<sup>19)</sup> or the law of Zipf.<sup>20)</sup> That is, when we arrange all *l-c* combinations according to *f* and give them an order number accordingly which designated by *Rf*. (*Rf* of the *l-c* combination of the largest *f* is 1).

$$Rf \cdot f^m = \text{Const.} \quad (1)$$

where *m* is constant.

Therefore, by taking  $\log Rf$  and  $\log f$ , we obtain a linear graph where *m* is the gradient (Fig. 3).

The high *f* distribution for each group also holds to the law of Motomura's geometrical progression<sup>21)</sup>,

$$\log f + a(Rf - b) = 0 \quad (2)$$

where *a* and *b* are constants. A graph in which *f* is taken by logarithmic scale and *Rf* by a natural scale shows a straight line running from high *f* to low *f* until it levels off at a point where *f* was almost equal to 1/3 of the subjects.

When we put the number of variety of *l-c* combinations of which *f* are equal as *Sf*.

$$Sf \cdot f^n = \text{Const.} \quad (3)$$

Where *n* is a constant. When *n*=1, the formula (3) shows a harmonic series, so that we call it the law of like-harmonic series.

Formula (3) becomes a graph of straight line when *Sf* and *f* are both taken by a logarithmic scale and *n* is the gradient. This formula holds for *l-c* combination of low *f*. Although Formula (1) and the Formula (3) are similar in form, their mathematical meaning differs because the nature of the components differ, i.e., one is an order and the other is a number of *l-c* combinations with equivalent *f*'s.

17) This section includes the author's research since 1957. Because all reports except one were presented in Japanese, summaries of these reports have been reproduced here. HUZIOKA 1957 (16), 1957 (17), 1958 (18), 1959 (19).

18) The cross-cultural groups which the author uses in the description hereafter are 9 groups: 6 sample groups of male household masters of farm and mountain villages in Japan, Tsumje people in Nepal, a sample group of household masters of three farming villages in Thailand, and a group of Nagir people in Karakoram as has been described in the chapter 1.

19) AUERBACH, E. 1913 (1)

20) ZIPF, G. K. 1949 (42)

21) MOTOMURA, I. 1932 (32)

As for the relationship between single  $l$ - $c$  combination and its frequency, Fisher's law of logarithmic series and Preston's law of lognormality are well known. All of these laws are established on the basis of concrete data in the field of the ecology, and mathematically they are closely interrelated to each other and we know that some of them can be derived from the same assumption of the randomness.<sup>22,23)</sup> The results from applying these formulas to each group (see Fig. 3 through 5) mean that as far as the patterns of the distribution of  $f$  are concerned, i.e., the distribution patterns of the frequency of an  $l$ - $c$  combination show no essential cross-cultural differences. In other words it seems possible to compare cross-cultural sample groups directly on the basis of a method of  $l$ - $c$  combination classification. However, further quantitative comparisons of sample groups on the basis of these formulae is not very useful, because the constants in these formulae vary by the sample size of the groups, and the variation function is not clear. It would be better to have a method of comparison which is independent of the sample size of each group.<sup>24)</sup>

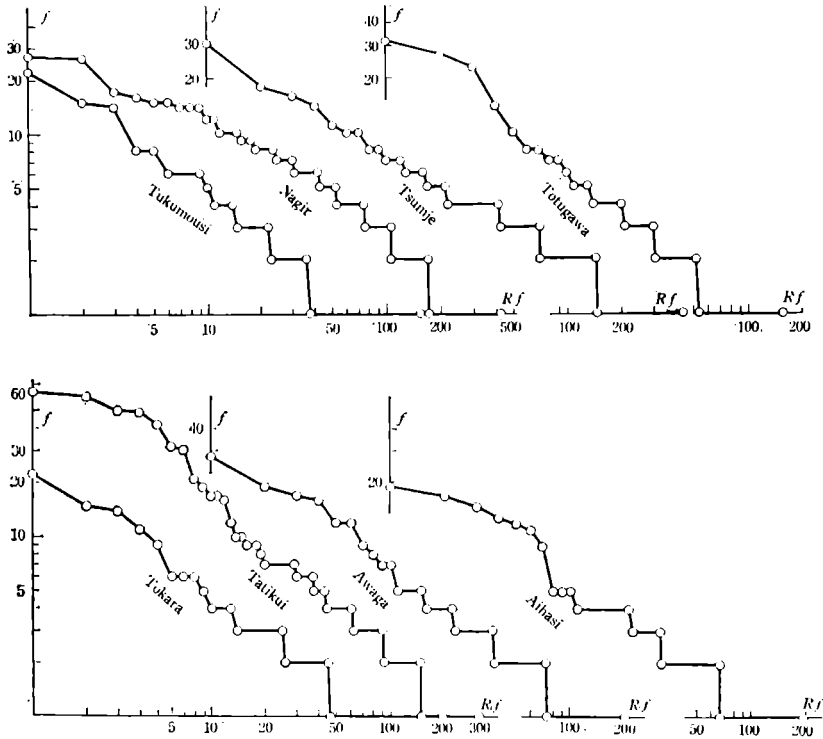


Fig. 3. Rank-frequency relations in the  $l$ - $c$  combinations obtained from various groups. Auerbach's law.

22) SHINOZAKI, K. and URATA, N. 1953 (40)

23) SHINOZAKI, K. and URATA, N. 1955 (41)

24) Differences between groups resulted from differences in  $m$ ,  $a$ ,  $b$ ,  $n$ , etc. in each formula when we use these laws of distributions directly as a quantitative comparison of groups, show richness of varieties of  $l$ - $c$  combination, that is, these constants become parameters of differences between groups. However as they vary according to the sample size of a group, they can not be used for comparison of

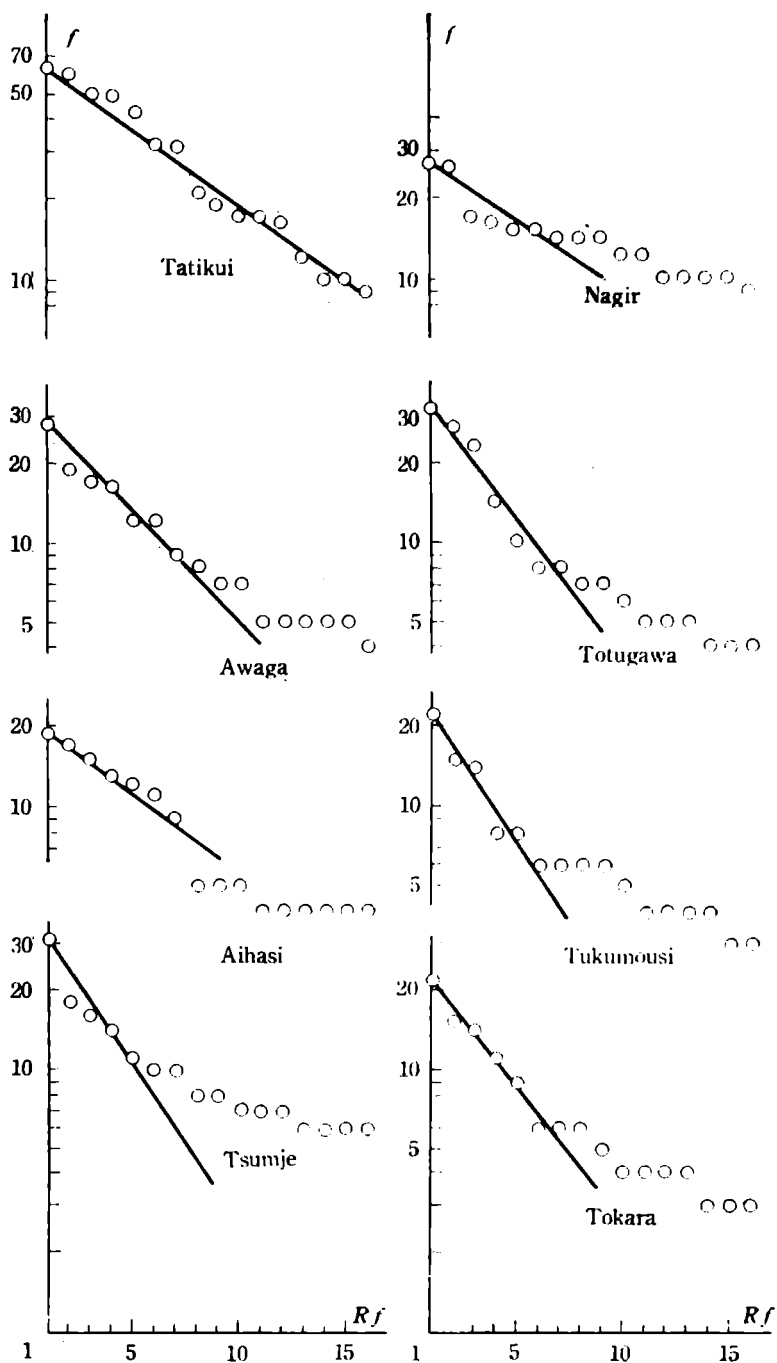
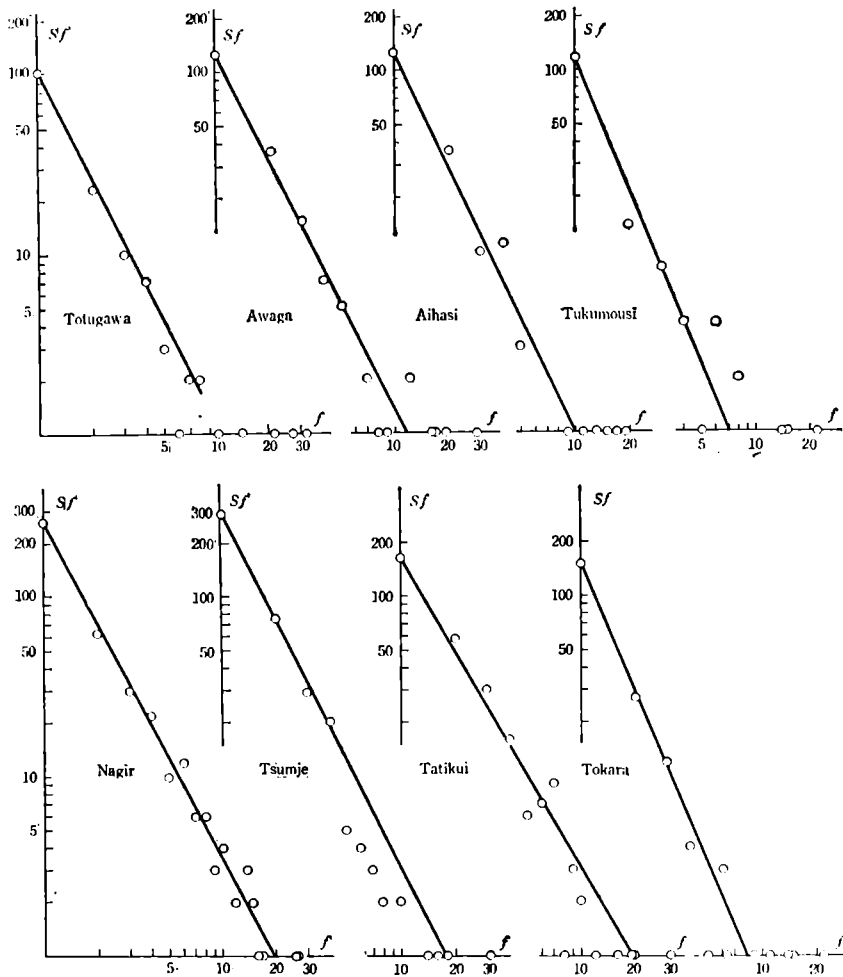


Fig. 4. Semi-logarithmic linearity between frequency and its rank of  $l-c$  combination. Law of geometric series.

groups of unequal size, but only for cases in which the sample sizes of the two groups being compared are equal. Shinozaki has pointed out that these laws of distribution hold fairly well when the sample size is relatively small.



**Fig. 5.** Double-logarithmic linearity between the frequency and the number of  $l$ - $c$  combinations. Law of like-harmonic series.

There is, of course, the problem which must be considered when we try to compare groups by the method of  $l$ - $c$  combinations. That is, as the author has previously mentioned, that a greater number of responses facilitates the selection of the specific common form, while the fewer the number of responses, the more tentative is the selection of a specific common form. Therefore, it would be more appropriate if we had a measure whereby the frequency of  $l$ - $c$  combinations was taken into account. Thus high frequency  $l$ - $c$  combinations corresponding to  $P$ -responses had more weight than less frequent  $l$ - $c$  combinations, although both should be calculated. This kind of measure has already been provided for ecological studies one of which is Motomura's correlation coefficient.<sup>25)</sup> It is defined as follows: (Formula 4).

Where two sample groups are A and B, and Motomura's correlation coefficient is  $r(A \cdot B)$ :

25) MOTOMURA, I. 1935 (33).

$$r(A \cdot B) = \frac{P}{r_A^2 r_B^2} \quad (4)$$

in which,

$$P = \frac{1}{N} \left( \sum f_A f_B - \frac{\sum f_A \cdot \sum f_B}{N} \right)$$

$$r_A^2 = \frac{1}{N} \sum f_A^2 - \bar{f}_A^2 \quad r_B^2 = \frac{1}{N} \sum f_B^2 - \bar{f}_B^2$$

In Formula (4),  $N$  means the total number of varieties of all  $l$ - $c$  combinations when group A and group B are combined, that is, when a same  $l$ - $c$  combination is found in both groups, it is calculated once.  $f_A$  and  $f_B$  are the frequencies of an  $l$ - $c$  combination found both in A and B. However for  $l$ - $c$  combinations found only either in A or in B but not in both,  $f=0$  for A or B depending on which fails to contain the particular  $l$ - $c$  combinations.

Formula (4) is the same in form as the formula which defines linear correlation between two variables, but its mathematical meaning is completely different because it adapted to handle more than two variables. Formula (4) was initially applied Motomura and later Kato and others<sup>26)</sup> demonstrated its usefulness, however, its mathematical meaning is not yet clear so that the estimate of its reliability of the obtained  $r(A \cdot B)$  is also unclear. This is its most disadvantageous point. To compensate this point, however, the author constructed several subgroups of 20 to 30 subjects by random sampling from a larger sample group of Tatikui and, in calculating the  $r(A \cdot B)$ 's for these subgroups, I consistently obtained a value around 0.85. So hence, when  $r$  is about 0.85, we cannot positively say that the two sample groups (A and B) belong to different parent population. As a result, when there are more common forms, especially  $P$  forms whose frequencies are almost equal, we obtain a larger  $r(A \cdot B)$  between two groups. Of course, we are theoretically assuming that an  $r=1.00$  between groups means that the two sample groups come from the same parent population.

Although Formula (4) has no relation to sample size, in practice, we are not be able to obtain reliable results when we compare groups where the sample sizes are not large enough, because  $f$  will be 0 in one or the other group too often.<sup>27)</sup> Table 30 and Fig. 6 show the  $r(A \cdot B)$ 's are close to the Tatikui's 0.85 for groups in Japan and Thailand but not in the case of the Nepal and Karakoram groups.

From Fig. 6 we can see clearly that groups of Japanese and the Thailand group have similar pattern curves but that they are very different from the pattern curves of the Nepal and the Karakoram groups. By this method we can measure quantitatively to what extent two groups have common forms of response in common, and at the same time, we can depict this fact by the pattern of the curve for each group.

26) KATO, M. and others. 1952, (25)

Fig. 6. Correlation chart between groups.

27) Sample sizes in the author's cross-cultural calculations were as follows: Tatikui 56, Awaga 21, Aihasi 15, Totugawa 28, Tukumousi 17, Tokara 19, Thailand 48, Tsumje in Nepal 25, Nagir in Karakoram 27.

Table 30.

	Tat.	Awa.	Aih.	Tot.	Tuk.	Tok.	Tha.	Nep.	Kar.
Tatikui									
Awaga	.82								
Aihasi	.86	.77							
Totugawa	.87	.77	.75						
Tukumousi	.77	.76	.71	.81					
Tokara	.76	.71	.65	.77	.74				
Thailand	.73	.67	.63	.77	.72	.75			
Nepal	.27	.30	.21	.29	.34	.41	.54		
Karakoram	.13	.20	.09	.38	.27	.32	.39	.55	

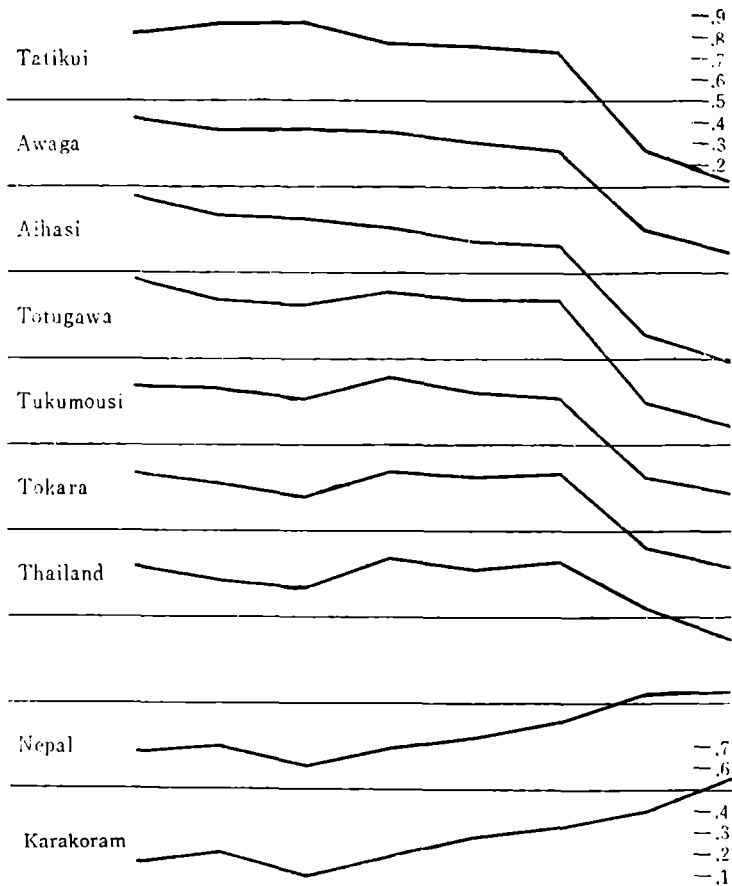


Fig. 6. Correlation chart between groups. (Huzioka, 1958)



As we can easily observe from Table 30 and Fig. 6,  $r(A \cdot B)$ 's ability to distinguish differences is weaker when the variety and frequency of each common form between groups is almost the same, and it is sharper when  $P$ -forms are perceptibly different between groups. In this respect this method contrasts with the method of ascertaining small differences between distributions in which scores are similar by a  $\chi^2$  square test. One might say that the method of comparing groups by using the results of  $r(A \cdot B)$  is a macroscopic comparison.

### GROUP ORDINATION BY MEANS OF FREQUENCY DISTRIBUTION OF LOCATION

As mentioned previously, if we treat all responses obtained from a sample group as an unit, and classify all responses into appropriate  $l-c$  combinations which represent their common forms, the frequency distribution of an  $l-c$  combination which holds to formulae (1), (2) and (3), would show a pattern that does not differ from one cultural-group to another. However, we are prevented from making the general quantitative comparison by use of these formulae because the constants in these formulae (1), (2) and (3) vary by the sample size of the groups, and since the variation function is not yet well understood, we can not rely on the quantitative results. Thus in this section, I will seek a new constant which is independent of sample size and will try to show another method of group ordination from the method discussed in the preceding section.

Beginning with the problem of sample size, we must pay attention to the extent to which the total number of the varieties would increase by the addition of one more subject to the total number of subjects. I hope to show how a theory used in ecological studies is useful in investigating the relationship between number of subjects and number of the varieties. All possible relationships can be represented by following four formulae<sup>28)</sup>. In each following formula  $S$  is the total number of the varieties from all subjects whose number is designated by  $M$ .

i. Arrhenius' formula

$$S = CM^n \quad 1 > n > 0 \quad (5)$$

where  $C$  and  $n$  are constants.

$S$  increases unlimitedly as the number of subjects increases. The slope of increase is shown by  $n$ . This is a case of open system.

ii. Fisher's formula

$$S = \alpha \log \left( 1 + \frac{\rho M}{\alpha} \right) \quad (6)$$

where  $\rho$  is the average number of response per subject and  $\alpha$  is a constant which is called by Fisher the *index of diversity*.

$S$  increases as the number of subjects increases. The degree of increase is shown by a constant value  $\alpha$ . This is also an open system.

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28) these formulae are all offered on the bases of empirical data. Some of them may be irrational at the extremes.

iii. Bryan's formula

$$S = \beta \left[ 1 - \left( 1 + \frac{\rho M}{\beta k} \right)^{-k} \right] \quad (7)$$

where  $\beta$  is  $S$  when  $M$  approaches infinite.  $k$  is a constant, positive number, and  $\rho$  is the average number of response per subject.  $S$  will reach a limited number when the number of subjects increase unlimitedly. This is a closed system.

iv. Kylin's formula

$$S = S_0 (1 - e^{-mM}) \quad (8)$$

where  $S_0$  becomes  $S$  when the number of subjects approaches infinite. This is also a closed system which  $S$  reaches its limit more quickly than Bryan's formula.

In order to decide which of these four formulae mentioned above can be applied and to investigate the pattern of increase of the total number of varieties of my data, I have assumed a smooth increase. In reality, subjects respond differentially so that if we draw an actual curve showing increase number of varieties, it would be jagged.

In order to have a smooth curve of increase of varieties as increase of number of subjects, it is necessary to calculate each  $S_i$  which is total number of varieties obtained from  $i$  number of subjects ( $i=1, 2, 3, \dots, M$ ).  $M$  is the actual total number of subject of a group.

To carry out this procedure, Shinozaki's formula was applied. It is:

$$S_i = S - \frac{1}{\binom{M}{i}} \sum_{\mu=i}^{M-1} \binom{M}{\mu} \cdot F(\mu) \quad \mu = M - m \quad (9)^{20)}$$

where  $S$  is the actual total number of varieties of  $l$ -c combination obtained from all  $M$  number of subjects.  $F(m)$  is a function of  $m$  which is the number of subjects who responded by a particular  $l$ -c combination, and value of  $F(m)$  equals the number of  $l$ -c combinations which are classified by the same  $m$ .

29) Some additional explanations will be given as follows. After enumerating all varieties of  $l$ -c combination, I investigated how many number of subjects responded by the particular  $l$ -c combination, (the number of subjects is called  $m$  on each variety of  $l$ -c combination) one by one. After the procedure I could classify all varieties of  $l$ -c combination on the basis of their  $m$ . Thus, the numbers of  $l$ -c combinations which have the same number of  $m$  are obtained correspondingly to each  $m$  ( $m=1, 2, 3, \dots, M$ ), and the numbers of  $l$ -c combination are designated by  $F(m)$

$$\sum_{m=1}^M F(m) = S$$

$S$  is the actual number of varieties of  $l$ -c combination in a group.

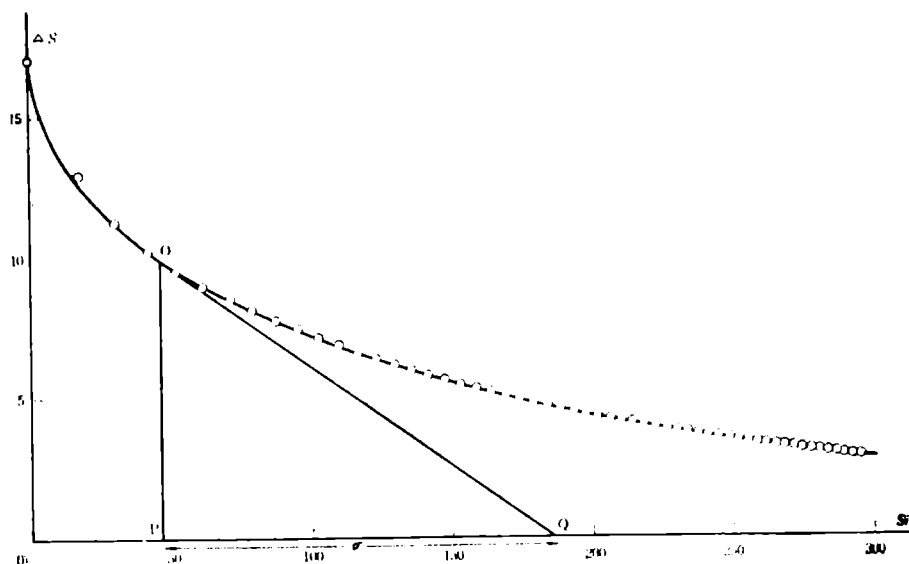
When we take out  $i$  number of subjects at random from total  $M$  number of subjects, the total number of ways of taking out  $i$  from  $M$  can be designated by  $\binom{M}{i}$  in which  $i=1, 2, 3, \dots, M$ . Each  $i$ -size sub-groups has its actual number of varieties of  $l$ -c combinations  $s_i$ . Therefore,  $S_i$  is the average of all  $s_i$ 's by  $\binom{M}{i}$ .

Having calculated all  $S_i$ 's it is possible to calculate increase of  $S_i$  when we add one more subject to a specific  $i$ , that is  $(i+1)$ . Thus:

$$S_{i+1} - S_i = \Delta S$$

when  $i=0 : S_i=0$  and  $\Delta S=S_1$

with the above information, it is possible to construct the  $S_i$ - $\Delta S$  curve needed to analyze  $\sigma$ . The value of  $\sigma$  is obtained from this curve as in Fig 7, i.e., by drawing a

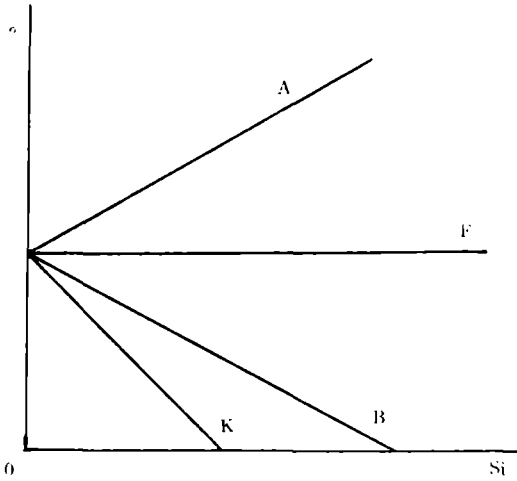


**Fig. 7.** An example of  $S_i$ - $\Delta S$  curve of Tatikui (56 subjects).  $S_i$  is average number of kind obtained from  $i$  number of subject.  $\Delta S$  is increased number of kind when we add one more subject to  $i$  number of subject ( $S_{i+1} - S_i = \Delta S$ ).  $OQ$  is a tangent.  $OP$  is vertical line from  $O$  to  $S_i$  axis. The length of  $PQ$  is represented by  $\sigma$ .

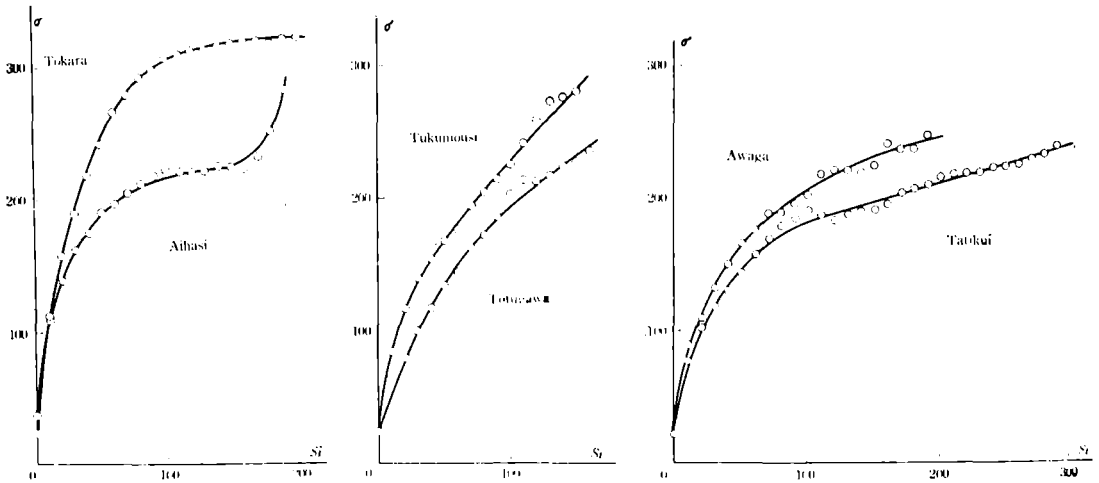
tangent from any point  $O$  on the curve and calling  $Q$  the point intersection with the  $S_i$ -axis; and by also drawing perpendicular from  $O$  to the  $S_i$ -axis and calling  $P$  the point of intersection with the  $S_i$ -axis,  $PQ = \sigma$ . In this way, the relationships between  $S_i$  and  $\sigma$  theoretically become straight lines as shown in Fig. 8.

When the gradient of the  $S_i$ - $\sigma$  line is in a range between 0 and  $\infty$  as  $A$  in Fig. 8, it fits the Arrhenius' formula. When the gradient is 0, i.e., if  $\sigma$  is constant to the value of  $S_i$ , as shown in  $F$  of Fig. 8, it fits the Fisher' formula, and in this case  $\sigma = \alpha$ . When the gradient is smaller than 0 but larger than  $-1$  as  $B$  in Fig. 8, it fits the Brian's formula. And when the gradient is  $-1$ , as  $K$  in Fig. 8, it fits the Kylin's formula.

In this way I tried to calculate the relationships between  $S_i$  and  $\sigma$ , and the results are shown in Fig. 9. At a glance, all groups appeared to fit Arrhenius' formula, however, except in the case of the Tatikui,  $n$ -exponent in this formula varied according to the number of subjects. Ideally the  $n$  is constant in the Arrhenius' formula so that in my calculations  $n$  were not constant, the relationship between  $S_i$  and  $\sigma$  could not be a straight



**Fig. 8.** The theoretical relations between  $Si$  and  $\sigma$ .  $Si$  and  $\sigma$  are the same with Fig. 7. When we represent the tangent of  $Si$ - $\sigma$  line by  $k$ , four formulae are determined as follows. When  $+\infty \leftarrow k > 0$ , A (Arrhenius'); when  $k=0$ , F (Fisher's); when  $0 > k > -1$ , B (Brian's); when,  $k = -1$ , K (Kylin's).



**Fig. 9.** The relation between  $Si$  and  $\sigma$  of Japanese six rural groups.

line. For this reason the results were unsatisfactory in terms of the fluctuations of the  $n$ -exponent in the formula.<sup>30)</sup>

As a result it is possible to say that to obtain a constant which is independent of sample size, the classification of responses based on the method of  $l$ - $c$  combinations is too fine. In order to find a classification system which will result in a stable pattern

30) However, the results may suggest some information about sample size. Because all groups showed a similar increase of  $\sigma$  in the range between 0 to 10 subjects. I drew  $Si$ - $\sigma$  curves for each card. Since the curves varied according to the particular Card, this phenomenon seems to be a result of treating the responses of all Cards as a whole. That is to say, as far as the method of  $l$ - $c$  combinations concerned, it is not possible to discover the particularity of group by a  $Si$ - $\sigma$  curve unless the number of subjects is at least 10 or more.

Additionally, the kinds of high ranking  $l$ - $c$  combinations (by frequency) in a group do not vary when the sample size is about 30 (Huzioka 1957) (17).

and thus obtain the constants for which we have been looking, it is possible to consider a classification based only on location, in place of a classification of *l-c* combination. As for location, there are always some subjects who responds to certain locations which have never been previously selected by any one which agrees with the empirically known fact that the Rorschach test is unlimited as far as the responses are concerned. Therefore, the appearance of the Rorschach responses should belong to an open system such as either Arrhenius's or Fisher's.

It is also empirically known that similar responses are likely to be evoked by the same locations on a blot. In other words, responses which have the same common form are likely to be evoked by the same location on a blot. So that in an *l-c* combination, the location is more important than its content. Table 31, the Table of *Content Spector of Locations* has been constructed to illustrate this fact. This Table shows the frequencies of the responses of the content category corresponding to each location most frequently selected by all six groups of Japanese, the Thailand group, the people of Tsumje in Nepal, and the Nagir in Karakoram. The columns in which the responses to a certain specific location is called the content spector of the location and the Table 31 shows among six groups of Japanese that both the locations of high frequency are very common and the content spector of these locations are common. It is due to this phenomena that the large Motomura's  $r$  found among Japanese groups.

The locations most frequently selected by Tsumje people and Nagir people as well as their content spectors are to a considerable extent common to each other, although they are not common to the groups in Japan. Thus the value of the  $r$  (Tsumje-Nagir) = 0.55. Therefore, the *content spector* of locations would indicate that it is possible to estimate the character of that parent population by a sample group.

The important point is that a location which evokes many responses shows clearly a pattern in the content spector and that the greater frequency choosing different locations leads to a greater difference of content spectors. In addition, it is possible to assume that even a small frequent location has its content spector because a form of every parts of Rorschach blots is fixed. In short, the fact that the specific locations have been selected by a group represent the character of the whole group to a considerable extent.

On this basis I have drawn up a list of the varieties of locations selected by a sample group and the frequency (number of responses projected towards the location) of each variety. Using this list which defines every location obtained from a group, it is possible to calculate the  $S_i$  by Shinozaki's formula and examine the relationship between the  $S_i$  and the  $\sigma$ . The results are in Fig. 10. The nature of the curves for all groups in Fig. 10 indicate that Fisher's formula is applicable. In the case of the Nagir's curve, which starts out as straight horizontal line, but later bends.

From Fig. 10 the Nagir group's curve would fit Fisher's formula to its starting part and later would fit Arrhenius' type,<sup>31)</sup> and their  $\alpha$  value is very large in comparison

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31) Arrhenius type: The  $\sigma$  value which corresponds to  $S_i$  on the gradient part of Nagir's curve (in Fig. 10) is equal  $\alpha$  value when we assume the gradient part to be a Fisher's type











Table 31-5.

		<i>H</i>	<i>Hd</i>	<i>A</i>	<i>Ad</i>	<i>Ob</i>	<i>Arch</i>	<i>Pl</i>	<i>N</i>	<i>Geo</i>	<i>At</i>	<i>Art</i>	<i>Abs</i>	<i>Fi</i>	<i>Bl</i>	<i>Cl</i>	<i>resp.</i>
V-d2	Tatikui				2												2
	Awaga									1							1
	Aihasi	1		1						1							3
	Totuga.																0
	Tukumo.																0
	Tokara		1														1
	Thailand		1		1												2
	Tsumje		4	2	3												
Nagir		7	3	4	1		1										16
V-d3	Tatikui				3												3
	Awaga																0
	Aidasi				2												2
	Totuga.		1														1
	Tukumo.																0
	Tokura		2														2
	Thailand		3		1				1								5
	Tsumje				1	4		1			1						7
Nagir		1		8	5		1	1								16	
VI-W1	Tatikui			17		32		2	1		2						54
	Hwaga			1	1	9		1			1						13
	Aihasi	1		3	1	15					3						23
	Totuga.			6		6		1									13
	Tukumo.			3		8		3			1						15
	Tokara			1		6											7
	Thailand	1		11		3	3		1		1						20
	Tsumje	1		4		2	2	2				1					12
Nagir						1	1	1				1				3	
VI-D2	Tatikui			7		6	2	4									19
	Awaga			3		3		1			1						8
	Aihasi			2		2											4
	Totuga.			2		1	1	1									5
	Tukumo.			1		1											2
	Tokara							2									2
	Thailand		1					1									2
	Tsumje					1	1	1									3
Nagir			6		1		3									10	
VI-D4	Tatikui										1						1
	Awaga					1											1
	Aihasi								1								1
	Totuga.										1						1
	Tukumo.																0
	Tokara												1				1
	Thailand																0
	Tsumje							1									1
Nagir								10								10	
VI-d2	Tatikui																0
	Awaga				4												4
	Aihasi																0
	Totuga.																0
	Tukumo.				1												1
	Tokara			1													1
	Thailand			1	1			1									3
	Tsumje		2	6	5				1								13
Nagir			6	4				1	4	1						16	





Table 31-8.

		<i>H</i>	<i>Hd</i>	<i>A</i>	<i>Ad</i>	<i>Ob</i>	<i>Arch</i>	<i>Pl</i>	<i>N</i>	<i>Geo</i>	<i>At</i>	<i>Art</i>	<i>Abs</i>	<i>Fi</i>	<i>Bl</i>	<i>Cl</i>	<i>resp.</i>
X-D6	Tatikui			2				1									3
	Awaga			1													1
	Aihasi			4													4
	Totuga.			1													1
	Tukumo.			3													3
	Tokara			3													3
	Thailand			14													14
	Tsumje	1		16													17
Nagie			14													14	
X-D9	Tatikui	3		2				1		2	1	1					10
	Awaga									4							4
	Aihasi	1		2						2							5
	Totuga.									3							3
	Tukumo.									2							2
	Tokara	1									1						2
	Thailand			2					5						1		8
	Tsumje		1	2	1				1							2	7
Nagir			3				5	2						1		11	
X-D11	Tatikui			5				1		1							7
	Awaga			3				1									4
	Aihasi			1							1						2
	Totuga.			1													1
	Tukumo.			3													3
	Tokara			1				1									2
	Thailand			2				1									3
	Tsumje			7													7
Nagir			16	1				1								18	
X-D13	Tatikui			3													3
	Awaga			1													1
	Aihasi			1													1
	Totuga.																0
	Tukumo.																0
	Tokara			4													4
	Thailand			3													3
	Tsumje			4				1									5
Nagir			10													10	

Table 32.  $\alpha$  values.

	Tatikui	Aihasi	Awaga	Totugawa	Tukumousi	Tokara	Thailand	Tsumje	Nagir d. Hunza
Number of subjekts	56	15	21	28	17	19	48	31	33
Total number of responses	1045	384	430	363	282	346	728	805	1241
Number of varieties of locations	148	112	125	94	310	142	184	236	256
$S_i$ (when $S_i=1$ )	16.4	22.1	19.2	11.9	15.2	17.1	14.9	24.9	37.6
$\sigma_0$ (when $S_i=0$ )	36	50	41	23	33	65	59	180	90
$\alpha$ (estimated from $S_i \sim \sigma$ curve)	55	55	74	51	73	127	135	135	162
$\alpha$ (calculated)	47.1	53.2	59.2	41.1	58.5	91.0	79.3	112.4	96.8

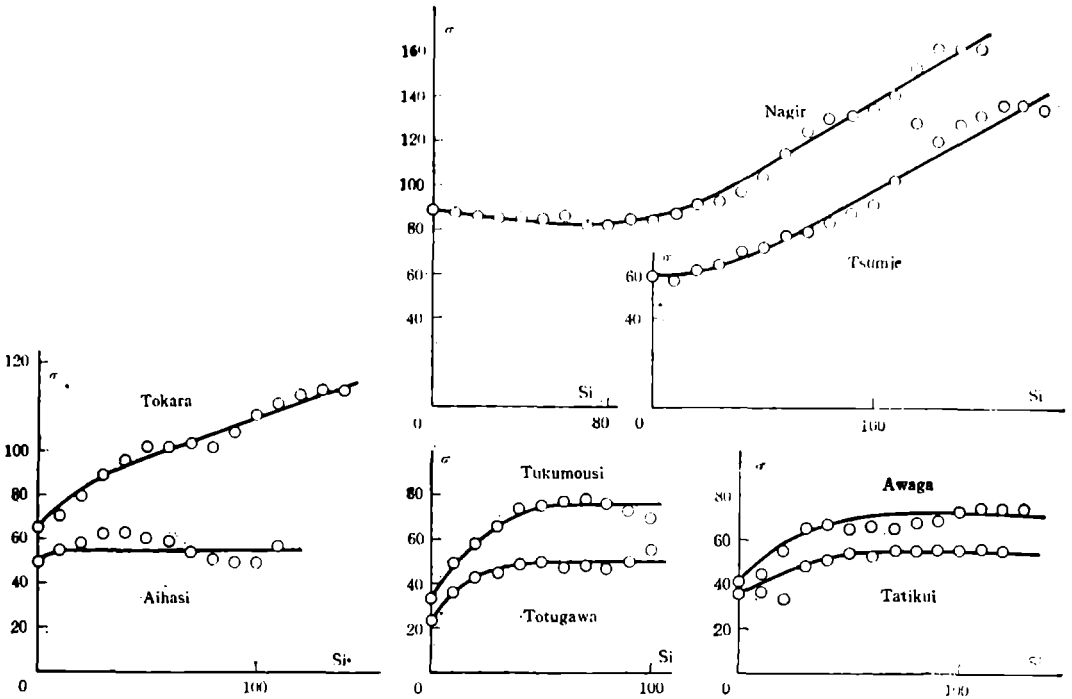


Fig. 10. The relationship between  $Si$  and  $\sigma$  (results from classification of location).

to all groups of Japanese (Table 32).<sup>32)</sup> This indicates that the Nagir subjects have randomly selected locations according to their specific individual preference. In short, in comparison to cases in Japan, they have a low degree of commonness of common forms within their group. Thus Fisher's  $\alpha$  can be considered an index of diversity of perception, in the case of the Rorschach test.

It is possible to present a method of group ordination by the following two steps:

(1) Because the varieties of location which are most frequently selected by the Nagir or Tsumje people differ from those of Japanese groups, it is possible to say that for specific populations, the probability that specific locations will be selected is hypothetically pre-determined by a population's common experiences. Therefore, an estimate of the probabilities of specific locations being selected can be determined by means of an investigation of a sample group of the specific population, where  $P_i$  is a probability of a specific  $i$  location being selected by the sample group,  $P_i$  equals the following:

$$P_i = \frac{N_i}{M}$$

32) Table 32: Assuming that Fisher's formula is applicable to all groups, the  $\alpha$  value of each group can be estimated by a drawing. Taking  $i$  number of subjects on logarithmic abscissa and corresponding  $Si$  on natural ordinate, we have a curve for a group. The tangent gives a value of the group. For a more accurate calculation of the  $\alpha$  and its reliable range, refer to Fisher 1943 (5).

$M$  is the total number of subjects in the group, and  $N_i$  is the number of subjects who selected specific  $i$  location.<sup>33)</sup> Thus the difference of probabilities to select the same specific locations between two groups A and B as a whole can be defined as,

$$D_{(A \cdot B)}^2 = \sum_i^S (P_{iA} - P_{iB})^2 \quad (10)$$

where  $P_{iA}$  and  $P_{iB}$  are probabilities for the same specific  $i$  location being selected by both A and B groups respectively. When a specific location is not selected by both groups, that is, in cases where it is selected only by A or B, the  $P_{iB}$  or  $P_{iA}$  would be zero.  $D_{(A \cdot B)}$  is, therefore, defined as the *Distance* between group A and B.

Table 33 lists the results of the calculation of *Distances* between each group respectively which shows that the greater the difference in the high  $p$  locations selected by two groups, the larger will be the *Distance* between them.

Table 33. Distanse.

	Tati.	Awa.	Aiha.	Totu.	Tuku.	Toka.	Thai.	Tsumje	Nagir
Tatikui	*								
Awaga	1.205	*							
Aihasi	1.121	1.537	*						
Totugawa	1.000	1.302	1.625	*					
Tukumousi	1.186	1.348	1.516	1.155	*				
Tokara	1.281	1.460	1.693	1.128	1.210	*			
Thailand	1.422	1.472	1.735	1.160	1.308	1.329	*		
Tsumje	2.478	2.279	2.581	2.297	2.184	2.061	1.844	*	
Nagir	3.515	3.183	3.518	3.354	3.220	3.018	2.955	2.164	*
$\sum p_i^2$	2.474	2.580	2.904	2.023	2.271	2.125	3.725	2.484	3.611

As in the case of Motomura's  $r$  in the preceding section, there is less *Distance* between Japanese groups than between a Japanese group and the Nagir or Tsumje people.

(2) The index of similarity<sup>34)</sup> between two groups A and B designated by  $\theta$  on the basis of the probability of a specific location being selected, can be calculated as follows:

$$\theta = \sum_i^S \frac{2\omega}{P_{iA} + P_{iB}} \quad (11)$$

in which  $\omega$  represents the smaller of the values  $P_{iA}$  or  $P_{iB}$ .

33) When  $S$  designates the total number of varieties of locations for two groups, it is possible to designate each location by an  $i$  order number. Thus  $\sum_i^S P_i$  means summation of all  $i$ 's ( $i=1, \dots, S$ ).

Fig. 11. The chart of group ordination.

34) There are several methods of calculating similarities between two groups. Motomura's  $r$  is one, but the method which I applied in this section was used by GLEASON (1920), an ecologist, because the calculation of  $\theta$  is easier than Motomura's  $r$ , rather than because it is the more mathematically reliable method, which has not yet been determined.

Table 34. Coefficients of similarity  $\theta$ .

	Tati.	Awa.	Aiha.	Totu.	Tuku.	Toka.	Thai.	Tsumje	Nagir
Tatikui	*								
Awaga	.697	*							
Aihasi	.712	.645	*						
Totugawa	.694	.640	.565	*					
Tokumousi	.657	.629	.616	.619	*				
Tokara	.608	.600	.561	.580	.620	*			
Thailand	.602	.649	.543	.561	.584	.560	*		
Tsumje	.381	.473	.425	.353	.431	.435	.482	*	
Nagir	.304	.383	.355	.244	.349	.380	.368	.559	*

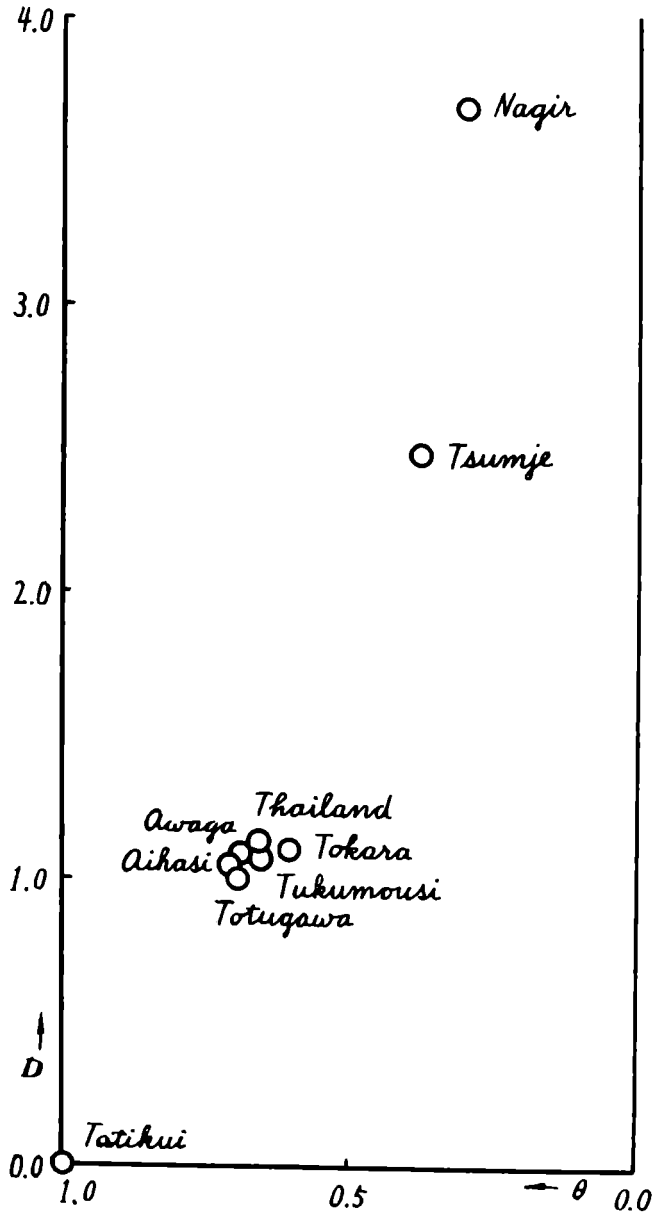


Fig. 11. The chart of group ordination.



Table 34 lists the results of the calculation of indexes of similarity between each group respectively which shows that the index is greater between groups such as between Japanese groups than between a Japanese group and the Nagir or Tsumje people.

By these two steps, I can obtain two values,  $D$  and  $\theta$  for any two groups. It is, therefore, possible to plot each group as a dot by means of the co-ordinate axes of  $D$  and  $\theta$ . However, since both  $D$  and  $\theta$  are simply relative values between any two groups, it is necessary to take one group as a standard in order to plot each group on the same graph. In Fig. 11 in which the Tatikui group in Japan is used as a standard (any group can arbitrarily be taken as the standard), it can be seen that the Japanese groups and the Thailand group are located close to each other, while the Tsumje and Nagir groups are located far from both the Japanese and Thailand groups. By this method of group ordination we have a good indication of how much the way of perceiving the Rorschach blots by the former groups differs from that of the latter groups.

## DISCUSSION

In the previous section, I have presented a classification of responses by means of  $l$ - $c$  combinations, a method of and the results of group ordination based on this classification. The  $l$ - $c$  combinations are representations of common forms found among all responses. The values of  $D$ ,  $\theta$  and Motomura's  $r$  are qualitative values which are used to indicate to what extent common forms exist between two groups. As clearly shown by the formulae which define these values, these values rely heavily upon the extent to each  $P$  response which exists in each of two groups. As the author's method is nothing more than a generalization of the comparison of  $P$  responses between groups, and since this method has been used in other studies, I will first consider the  $P$  responses as such and then consider comparison by common forms and meanings of the values  $r$ ,  $D$ ,  $\theta$  which are derived by my method.

In order to consider the  $P$  responses as such, it is necessary to discuss some aspects concerning the method used in other studies. Beginning with content, there are two ways of deciding upon the content of  $P$  responses. One is to decide on the basis of the common forms contained in such responses as "winged creature", or "four-legged animal", as exemplified by the method of Klopfer. The other is to decide on the basis of the more concrete concepts such as, for example, determining as  $P$  responses "bat" and "butterfly" in  $W$  of Card I, as Piotrowski has done, or only determining as a  $P$  response "bat" as done, according to Hertz, by Gardner. Using concrete concepts as a basis for deciding content seems to be more useful for diagnosing an individual subjects who belongs to a specific parent population which has already been determined. However for cross-cultural comparisons of groups, this method is not preferred by the author because concepts differ between groups taken cross-culturally, and as clearly shown in the Table 35 of the table of high frequency  $l$ - $c$  combinations and their concepts, the reason that we can specify concepts such as "bat" or "butterfly" in Cards I or V is merely because "bat" or "butterfly" appear in high frequency among all the concepts of  $W$  responses for Cards I and V. However, in a case such as Card VIII, where it did not seem appropriate to specify the concrete concepts because of the diversity of concepts, and yet since one can recognize that their common form is equivalent, even

Table 35. *L-C* combinations with high frequency.

<i>l-c</i> combination	freq.	Concepts and their frequency
I W2-A	152	but 88, butterfly 52, brid 4, beetle 3, moth 2, flying-squirrel 2, dragonfly 1.
II D3-A	74	bear 23, animal 13, dog 11, wild boar 8, monkey 4, rabbit 4, cattle 4, elephant 4, pig 1, camel 1, mole 1.
III D8-H	88	human figure 53, caricature 21, skeleton and miscellaneous 14.
IV W2-A	98	animal skin 28, bat 18, animal 13, insect 10, butterfly 7, bear 5, lobster 4, monkey 3, frog 3, fish 2, bird 2, gorilla 1, flying squirrel 1, deer 1.
V W2-A	173	butterfly 93, bat 73, flying-squirrel 3, bird 3, moth 1.
VI W1-Ob	76	decoration 27, musical instrument 27, <i>gunpai-utiwa</i> 9, miscellaneous concepts 13.
VIII D1-A	142	animal 42, bear 27, leopard 13, rat 10, tiger 10, furseal 6, dog 5, badger 5, cat 4, lion 4, wild boar 3, pig 2, monkey 2, frog 2, lizard 2, squirrel 1, fox 1, mole 1, fish 1, chameleon 1.

The table was arranged from the protocols obtained from six Japanese rural communities. Subjects are 156 male adults (house holders, age 30-59)  
The Table 1 in Huzioka 1959 (19) was revised.

Piotrowski or Gardner could not help but specify the "concrete" concept in terms of "animal" or "any four-legged animal, specified or not". In such cases, they specify *P* responses by their common form and not by their concrete concept. Thus by trying to specify concrete concepts, the diversity of opinions simply complicates the problem of comparison.

For the same reason, it is not appropriate to apply the determinant as a condition as Klopfer did when he defined the animal response for Card VIII as a *P* response because of the difficulty of consistently considering such a determinant in the comparison of cross-cultural groups.

Klopfer himself has specified such responses ribbon, bow tie, butterfly, to the center red area of Card III as *P* responses, but has not adopted colour as a condition by which *P* responses can be determined because of the large number of responses which are not colour responses. Thus, to take determinants into consideration is only useful in a fixed parent population such as American white and not in cross-cultural comparisons of groups. Therefore, the only consistent means of considering *P* responses is by common form alone. In this sense, a *P* response means high frequency responses which have common forms. A more reliable method of comparing groups would be by applying mathematics. In order to do so one must first determine the common forms of *P* responses, and second, to examine how concepts differ between groups even though they have equivalent common forms.

Hallowell has pointed out that empirically the same blot area evokes responses of similar content, and that such responses appear in a set order of frequency, from high,

median, to low in such a way as to allow him to conclude that, "we can expect the same kind of distribution in other cultures as in our own". To follow up this statement, and to show that this is so, I have attempted in the body of this report to illustrate by means of a method of *l-c* combination that cross-cultural groups can be compared on the bases of distribution patterns. By plotting distribution curves for each group respectively based upon the relationship between the total number of varieties of *l-c* combination and the frequency of each variety of *l-c* combination. It was possible to compare the groups and to show that this distribution pattern has the same characteristics for any of the cultural groups which I was investigating. Thus the formulae suitable for the curves resulting from my plotting of the data were (1) (2) (3) (5) (6) and (4). The common property of these formulae is that they all deal with two variables, and that they have no relationship to causality, nor to the particular elements *per se*. It is the same way that a normal curve does not relate to causality nor to the particular elements *per se*. In short, they only differ from a normal curve by the fact that they deal with two variables.

The use of these laws has already been widely recognized in the field of ecology as suitable for examining the relationships between the number of species and, the number of individuals which belong to the species. Moreover, there are rich examples by Auerbach<sup>35)</sup> on the relationship between the size of cities and their frequency, and by Zipf<sup>36)</sup> on linguistics on the relationship between words and their frequency. Also there are many examples in the natural world which these laws are suited. For example, Auerbach's formula can be applied to the size of area of main island in the world and their frequency. Law of lognormality can be applied to the average rainfall of many places in the world and their frequency and the law of like-harmonic series can be applied to the size of earthquakes and their frequency in Japan. Moreover, these laws are closely related to each other because they can be derived from a kind of mathematical randomness.<sup>37)</sup> In short, these laws are generally found when we deal with some sense of variety and its frequency. In the same way, my curves deal with the relationship between the variety of *l-c* combinations and their frequency.

Besides the problem of the distribution pattern, Hallowell raised other problems including the number of *P* responses which exist in certain group; whether we can say that the number of *P* responses is limited for a group; and how many *P* responses exist as universals? Hertz has summed up the diagnostic significance of *P* responses as being an "intellectual adaptation to collective thinking", "the subject's participation in collective thought", or "the ability to adjust to the practical requirements of life, to a sufficient participation in collective or common thinking".<sup>38)</sup> This being so, the phenomena that in a certain group, a large number of *P* responses would mean that the collective or common thinking of members of that group is strong. Thus when the data of adult Ojibwas were summed up by Hallowell, the large number of *P* responses he believed to be related to the mode of life of the Ojibwas who "both in winter and summer [these

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35) AUERBACH 1913 (1)

36) ZIPF 1949 (42)

37) SHINOZAKI 1955 (41)

38) HERTZ 1938 (10)

Table 35. *L-C* combinations with high frequency.

<i>l-c</i> combination	freq.	Concepts and their frequency
I W2-A	152	but 88, butterfly 52, brid 4, beetle 3, moth 2, flying-squirrel 2, dragonfly 1.
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III D8-H	88	human figure 53, caricature 21, skeleton and miscellaneous 14.
IV W2-A	98	animal skin 28, bat 18, animal 13, insect 10, butterfly 7, bear 5, lobster 4, monkey 3, frog 3, fish 2, bird 2, gorilla 1, flying squirrel 1, deer 1.
V W2-A	173	butterfly 93, bat 73, flying-squirrel 3, bird 3, moth 1.
VI W1-Ob	76	decoration 27, musical instrument 27, <i>gunpai-utiwa</i> 9, miscellaneous concepts 13.
VIII D1-A	142	animal 42, bear 27, leopard 13, rat 10, tiger 10, furseal 6, dog 5, badger 5, cat 4, lion 4, wild boar 3, pig 2, monkey 2, frog 2, lizard 2, squirrel 1, fox 1, mole 1, fish 1, chameleon 1.

The table was arranged from the protocols obtained from six Japanese rural communities. Subjects are 156 male adults (house holders, age 30-59)  
The Table 1 in Huzioka 1959 (19) was revised.

Piotrowski or Gardner could not help but specify the "concrete" concept in terms of "animal" or "any four-legged animal, specified or not". In such cases, they specify *P* responses by their common form and not by their concrete concept. Thus by trying to specify concrete concepts, the diversity of opinions simply complicates the problem of comparison.

For the same reason, it is not appropriate to apply the determinant as a condition as Klopfer did when he defined the animal response for Card VIII as a *P* response because of the difficulty of consistently considering such a determinant in the comparison of cross-cultural groups.

Klopfer himself has specified such responses ribbon, bow tie, butterfly, to the center red area of Card III as *P* responses, but has not adopted colour as a condition by which *P* responses can be determined because of the large number of responses which are not colour responses. Thus, to take determinants into consideration is only useful in a fixed parent population such as American white and not in cross-cultural comparisons of groups. Therefore, the only consistent means of considering *P* responses is by common form alone. In this sense, a *P* response means high frequency responses which have common forms. A more reliable method of comparing groups would be by applying mathematics. In order to do so one must first determine the common forms of *P* responses, and second, to examine how concepts differ between groups even though they have equivalent common forms.

Hallowell has pointed out that empirically the same blot area evokes responses of similar content, and that such responses appear in a set order of frequency, from high,

median, to low in such a way as to allow him to conclude that, "we can expect the same kind of distribution in other cultures as in our own". To follow up this statement, and to show that this is so, I have attempted in the body of this report to illustrate by means of a method of *l-c* combination that cross-cultural groups can be compared on the bases of distribution patterns. By plotting distribution curves for each group respectively based upon the relationship between the total number of varieties of *l-c* combination and the frequency of each variety of *l-c* combination. It was possible to compare the groups and to show that this distribution pattern has the same characteristics for any of the cultural groups which I was investigating. Thus the formulae suitable for the curves resulting from my plotting of the data were (1) (2) (3) (5) (6) and (4). The common property of these formulae is that they all deal with two variables, and that they have no relationship to causality, nor to the particular elements *per se*. It is the same way that a normal curve does not relate to causality nor to the particular elements *per se*. In short, they only differ from a normal curve by the fact that they deal with two variables.

The use of these laws has already been widely recognized in the field of ecology as suitable for examining the relationships between the number of species and, the number of individuals which belong to the species. Moreover, there are rich examples by Auerbach<sup>35)</sup> on the relationship between the size of cities and their frequency, and by Zipf<sup>36)</sup> on linguistics on the relationship between words and their frequency. Also there are many examples in the natural world which these laws are suited. For example, Auerbach's formula can be applied to the size of area of main island in the world and their frequency. Law of lognormality can be applied to the average rainfall of many places in the world and their frequency and the law of like-harmonic series can be applied to the size of earthquakes and their frequency in Japan. Moreover, these laws are closely related to each other because they can be derived from a kind of mathematical randomness.<sup>37)</sup> In short, these laws are generally found when we deal with some sense of variety and its frequency. In the same way, my curves deal with the relationship between the variety of *l-c* combinations and their frequency.

Besides the problem of the distribution pattern, Hallowell raised other problems including the number of *P* responses which exist in certain group; whether we can say that the number of *P* responses is limited for a group; and how many *P* responses exist as universals? Hertz has summed up the diagnostic significance of *P* responses as being an "intellectual adaptation to collective thinking", "the subject's participation in collective thought", or "the ability to adjust to the practical requirements of life, to a sufficient participation in collective or common thinking".<sup>38)</sup> This being so, the phenomena that in a certain group, a large number of *P* responses would mean that the collective or common thinking of members of that group is strong. Thus when the data of adult Ojibwas were summed up by Hallowell, the large number of *P* responses he believed to be related to the mode of life of the Ojibwas who "both in winter and summer [these

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35) AUERBACH 1913 (1)

36) ZIPF 1949 (42)

37) SHINOZAKI 1955 (41)

38) HERTZ 1938 (10)

people] live in small face-to-face group characterized by the limited range of social roles that are defined by the traditional kinship pattern", from which he finally concluded that "the high number of  $P$ 's may be an index to the correlation between manner of living and the conformity to a highly homogeneous pattern in psychological outlook".<sup>39)</sup>

The author agrees with the direction that Hallowell took, but is dissatisfied with his treatment of  $P$  responses. We should always consider  $P$  responses in terms of both the kinds of  $P$  and the frequency of each kind of  $P$ . The concentration of  $P$  responses should also be considered. Theoretically speaking, there may be cases in which the number of the kinds of  $P$  is small while the frequency of each kind of  $P$  is extremely high, or vice-versa. Also there are many responses whose frequency are not sufficient to be classified as a  $P$  response but should still be considered in order to make a more complete comparison.

The curves of formulae (1) and (2), (in Fig. 3, 4), slope from left to right, that is from  $P$  responses and to individual variations such as  $f=1, 2$  or  $3$ . Between the two extremes there are the intermediate responses which represent neither individual variations nor  $P$  responses. As it is impossible to draw a clear-cut border between  $P$  responses and intermediate responses on the curves, the degree of concentration of similar responses can be more accurately ascertained by considering all the responses obtained from a group. Thus to ignore part of the responses is merely an expedient. However, as I myself was unable to find a means of measuring the degree of concentration, I have taken as an alternative, Fisher's  $\alpha$ , i.e., an index of diversity.

Since the  $\alpha$  derived from the  $l-c$  combination method indicated that this classification was too refined, I tried classifying responses by location alone. I obtained satisfactory results (Fig. 10), although by making this adjustment the method becomes even more macro-scopic. The rationale for classifying by location alone is based on the fact that while the blot areas selected most frequently differs between groups which are for example, between the Nagir group and a group in Japan, similar responses are likely to be evoked by the same location. Therefore the  $\alpha$  derived by this method show that when the  $\alpha$  value is small, the subjects within a group are more likely to select the same blot areas, and to respond similarly to each other in general. This is what an  $\alpha$  value means. Therefore, when a group of Ojibwa adults has 23 varieties of  $P$  response which are related to their life in a face-to-face groups, it is natural to expect that the value of  $\alpha$  will be small. But since  $\alpha$  is an index of diversity and not a measure which directly shows the degree of concentration of  $f$ , there is in fact no guarantee that  $\alpha$  will not become large even in the above mentioned case. Therefore, we hope that in the future a measure will be invented which directly represents the degree of concentration of  $f$ .

Let us next consider the number of universal  $P$ 's of Hallowell. It was Hertz who first recognized 6  $P$  responses which from her investigations all scholars accept. Hence, she has called these forms *universal populars*, i. e., they are not influenced by factors such as sex, age, race, area, etc. Hallowell, in comparing  $P$  responses of Ojibwa children and adults accepted the following: "animals" for Card VIII, "animals" for Card II, "rabbit" for Card X, and "winged creature" for Card V which are commonly found in

both groups as universals. He concluded that, "These 4 *P* forms [four of which are included in the 6 universal *P* responses of Hertz] are in a category that transcend age differences, national differences, and cultural differences in so far as they are now known to occur among children adults in more than one nationality group in western culture and is comparable sub-groups of the Ojibwa Indians".

However, the activities of Imanishi and Kawakita force us to revise the number so that the only universal popular remaining is, "animals" for Card VIII which is shown clearly by the Table 36. In fact we may even have to assume that the only universal popular, left at present, Card VIII "animal", may also lose its "universality" if there were more data from the different parts of the world. Assuming that this response remains an universal popular forever, we might say that this is one perception of forms which

Table 36. Popular *l-c* combinations with their concepts (Nagir).

<i>l-c</i> combination and number of resp.	concepts
I d4-Ad 10	animal head (dog 3, cow 2, wolf 2, animal, bear, elephant).
II D2-A 14	bird 5*, hen 3*. dog 2, animal, beast, horse, cat.
d1-Ob 9	arrow head 5, instrument for catching fire 2, spike, umbrella.
III C2-A 26	bird 16, hen 2, chicken. animal 2, dog 2, baby walf, goat, tiger.
D4-A 9	cat 2, cow 2, animal, dog. bird, hen. insect.
D5-A 16	fish 14. river bird. bear.
d2-Hd 14	human head 14.
IV D4-N 10	valley 9, water fall.
VII D1-N 10	garden 3, jungle 2, field, ground, land. stone 2.
D3-A 12	camel 9, ox : d2 is head. bird, river animal : d3 is head.
VIII D1-A 25	tiger 18, lion 2, animal, deer, leopard, monkey. animal with animal head and human limb.
IX D1-N 14	green grass 4, green land 2, ground 2, grass land, green jungle, land, spring with grass. glacial ice. sky.
D4-Hd 11	man's head 7, woman's head 2, human head, baby (whole figure).
X D1-P1 15	flower 8, tree 6, plant.
D6-A 14	animal 3, stag 2, baby ibex, baby walf, wild animal. hen 3, bird 2. baby fish.
D11-A 16	dog 2, animal, cat, mangoose, rat, river animal. bird 5, hen 3, duck.
D13-A 9	rat 2, animal, dog. bird 5.

\* Including three cases in which heads are into D3, hence "head is not seen."

anybody as an human being must acquire, or is it simply that the forms of the area of the blot of Card VIII is so picture-like? In any case, it does not seem that the number of kinds of universal  $P$  has important meaning.

Hallowell concluded after comparing  $P$  responses not only of the Ojibwas but also those of five other American Indian groups with varying cultural background, and finding common  $P$ 's among them that, although there were differences in the order of its frequency of common  $P$ 's. "These data do not permit us to assume that, as we move from one people to another, we should expect to find a totally distinct series of  $P$  forms in each case". The author's results do not support this conclusion.

Therefore, it is possible to conclude that the clinical meaning of  $P$  response is supported by the fact which every group shows the same distribution pattern of  $f$  cross-culturally and thus there can always be expected high frequent responses in every group no matter what the response is, and that whether a certain response is accepted as a  $P$  response in a group or not is related to the group's parent population. As to the Hallowell's data above cited, means that those groups as such can be sub-groups of the same parent population.

Turning now to a comparison by common forms, and if concept of common form can be substituted for  $P$  form, Hallowell's comment would have important meaning for anthropological studies. The crucial point in dealing with common forms is that the two processes are independent of each other, that is, that a certain common form can be found in a group is independent of the frequency with which the common form is found as a  $P$  form. Thus, by neglecting frequency many common forms can be found universally! For instance, a "fish" response to the lower lateral, D5 in Card III (III D5-A) would be a  $P$  form among the Nagir and Tsumje people but not among the Japanese groups in which this form was only given by 8 subjects out of 156. In spite of the low frequency, all of 8 responses are "fish" and only the concrete concept differ from those of Nagir and Tsumje. Also, the "bird" and "animal" responses to the outer gray brown portion of Card X (X D6-A) are  $P$  forms among the Nagir and Tsumje people, and although they appear among American white, American Indian and Japanese groups, they are not  $P$  merely because of their median frequency. Moreover, animal responses to upper lateral red in Card III (III D2-A) also appear with high frequency, and are listed in the Table of  $F+$  responses (Hertz, and Beck). As far as subjects see "animal" at the areas, they should have replied that it is an animal whose head is at the lower portion and whose tail is stretched, and often whose head is twisted to its back. Only concrete concepts which fill the common form (III D2-A) differ by the living places of groups according to Karakoram, Nepal, America, Japan.

The response to upper center  $d$  in II dl-Arch is "*chorten*" and "*mane*" in case of Tsumje and Sama. This sounds very specific in these Nepalese groups, but if we call this common form, "tower", although there are only 3 cases found in groups in Japan, all of 3 responses are "tower", as concepts, one is expressed by light-house and two are by "a kind of tower". In the U. S., there should be many subjects who selected this portion of blot because Beck defines this area by  $D$ . And the author believes we can expect that some of the responses should be "tower". This is really found in the  $F+$  Table of Hertz and Beck.



On the other hand, only a few subjects among the Nagir and the Tsumje give concrete concepts such "eagle" and "bird" to *W* in Cards I and V while in the case of the U. S. and Japan there are a great number of responses such "bad" or "butterfly". However in terms of common form, they are both "winged creature" and if we ignore frequency, they can be called universals among those cultures.

As is clear even in the examples mentioned above, when we only pay attention to common forms without counting their frequencies, there are quite a number of common forms to be recognized "universally" despite differences of cultural background. From this fact, it is obvious how limited a comparison of only *P* forms is for the comparison of two groups. This matter has never been treated rightly as evidenced by my having pointed out its importance in the preceding section. However in the case of the comparisons of Hertz or Hallowell, attention has on only been paid to the problem of the common *P* forms and the number of common *P* forms while the fact that there are many other common forms among groups has been ignored. (Of course, for convenience' sake, *P* form series should be constructed and compared, because the way of assimilation of the blots by the group is expressed to a certain extent by the dominant common forms and by the order of the common forms)

In order to have a complete comparison which shows to what extent two groups are similar in their blot assimilation we must have two entire common form series of two groups under comparison. After obtaining common form series, quantitative measure is more effective and it becomes possible to have a way of ordinating of groups. Thus *D*,  $\theta$  and Motomura's *r* are employed in the present report. Then what these measures mean?

As is well empirically known that any blot or any part of a blot has been given a particular form-quality so that by accepting the instructions for the test, a subject is motivated to perceive the form quality of a blot, to assimilate it, and to add some ideas about it. Thus a subject's response to a blot depends upon the variety of gestalts which he has stored, and his ability to reproduce these gestalts. Where a group has shared a common field and culture, the members of such a group should register many common gestalts, and there should be a common pattern in the variety of their gestalts as well as in their ways of adjusting to the external world. It is, therefore, possible that there will be differences between cross-cultural group in their ways of assimilating the ink blots and that such differences may be a basis for comparing groups. On these assumptions I have devised the above method of representing, common forms, as a means of measuring a subject's perception and assimilation of the blots. Thus the significance of  $\theta$ , *d* and Motomura's *r* is that the degree of similarity of difference between two groups' way of responding to a series of ink blots. In other words, these values are kinds of measure of affinity of perception of two groups.

Assuming the above to be true, the fact of the small *r* between groups of Japanese and a group of Tsumje or Nagir people would mean that the preponderant varieties of gestalts registered and their ways of reproducing them differ between these two. By tentatively using one group as a standard, and by calculating the *r* value between this standard group and other group, all groups can be located so as to express a definite affinity according to the standard. This is nothing but an ordination or groups by

their perception.

It is natural to assume that when an interpreter fixes the parent population to which he himself belongs as a standard, he will have more difficulty to understand groups which have less affinity to his standard, and the possibility of misunderstanding will increase. Even in the case of appearance of many space responses in Samoa on which there has been discussions among scholars, if space responses are truly numerous, there would naturally be small affinity (small  $r$ ) between people in Samoa and the sample groups of normal American. So that the problem of the numerous space responses is a different matter from the small  $r$ , and it should be studied separately from the small  $r$ . The small  $r$  itself is merely suggesting that analogous interpretation based on American standard are likely to lead misunderstandings. The author himself must confess that he has less confidence himself in his interpretation of Nagir people in Chapter I than that of the Tatikui group in Japan.

However, there is another important matter which needs to be emphasized. That is the fact that the differences of variety and frequency of common forms between population, estimated by their sample groups, do not indicate immediately the differences of the cultures themselves. As we have pointed out before, people of Tsumje and people of Nagir have a similar pattern of their modal approach and  $r$  between them is as high as 0.55, despite the fact that their cultural backgrounds are very different, that is, Tsumje is being in the culture area of Lamaism and Nagir in the Islamic culture. This fact would justify the caution mentioned above.

Another example had been offered by Hallowell. Beside Ojibwa Indians, he has treated 5 other sub-groups of Menomini, Tuscarora, Wind river Shoshone, Zuni, and Navaho. Their cultural background as well as their degree of acculturation differs from one another, but when Ojibwa was used as the standard, the series of  $P$ -forms of these 5 sub-groups were very identical although there were differences in the order of frequency. Therefore, we can estimate that they should have in common a considerable number of common forms which are not as frequent as level of  $P$  response, and  $r$  between these groups would naturally be high.

As for a macro-scopic example, it is well known fact that  $P$ -forms found in Japan and in the U. S. are identical to a considerable extent, and it is clear in Table 35. So that we can expect a high  $r$  between them despite the great differences of cultures between two countries. What brings about, then, the high  $r$ ? Of course, as we mentioned in the preceding section, the more common in their common forms and the closer their frequency, the higher  $r$  can be expected. Why are there the case in which there are many common form in spite of differences of concrete cultural characteristics.

The answer may be found in the facts dealing with the modal personality of Nagir people in the Chapter I. The Nagir group, of which  $r$  is very small in relation to Japanese, has so many form indefinite responses. Blots are not so well assimilated by subjects.

The way of evaluating responses was originally provided by H. Rorschach. It evaluates the ability of subjects to enlive as meaningless an object as an ink blot and to see specific human figures in action in the blot. This way of evaluation is expressed more clearly in the well-arranged system of Klopfer's form-level rating scale than in

the time of H. Rorschach. Therefore, it is natural that people like Japanese who develop towards good assimilation of blots much more remarkably than Nagir people, would have similar result to American who develop the same way towards assimilating blot, because the form quality of the blot is fixed.

Of course, we are now only considering common forms of the responses and not the concrete concepts of the responses. If we consider the concrete concepts, there clearly exists differences of cultural characteristics internalized by the subjects. For example, both Japanese and American have many *Ob* responses (*W* or *D1*) to Card VI, but there are many responses as "metal ornament hunged at the edge of roof of the Buddhist temple" or "the referee's fan for Japanese wrestling (*gunpai utiwa*)" among Japanese, and many "fur" among American.

If we borrow the geometrical expression, the Rorschach protocol is as if it were a result of *projection* of personality of subject to a *plane* called the ability of blot assimilation. So that it is quite possible that different groups, which originally have different cultures and occupy different localities in the *space*, could show close *projections* to the *plane*. This is true not only about the case of cross-cultural comparisons, but also about development of personality, or about comparisons of normal and abnormal.

As for the development, Hallowell has pointed out that among Ojibwa, children have such a *P* response as a form indefinite response "cloud" in Card VII, but it disappears among adults, and such a response as "winged creature" in Card V become *P*. This suggests that, in the process of personality development, children tends to change themselves towards to give more form definite response and to use larger blot area, i. e., to become able to assimilate blot more than before.

Among peoples whose development towards the better assimilation of blots, it is possible to say that the results of Rorschach test of abnormal personality are generally shown by their lowering of ability of assimilation or of mismanagement of blot assimilation. (Though in some cases abnormal subjects overly assimilate. For example, even when their response is in a modal common form of the population, he would attach specific or important sentiment to it that subjects with normal personalities would never do.) Therefore, we may find out among peoples whose direction of personality development are not the same as American in their blot assimilation, their protocols would have abnormal outlook to the superficial eye. The author has pointed out this false abnormality in the Chapter I, and Oberholtzer, at his application of this test in the anthropological field, has already pointed out as follows:

"I have mentioned more than once the similarity between the Rorschachs of the Alorese and the pathological findings of traumatics, some neurotics, and some schizophrenics. The Alorese, of course, are none of these; nor are they epileptics, although their colour reactions are comparable. No one of these diagnoses can hold its ground when we know everything about their tests; it is only a more or less remote analogy. The Alorese Rorschachs are something *sui generis*." (Oberholtzer (34) p. 601)

As is clear from the preceding discussions, the problem of the degree of commonness of common forms which is related to the value of  $r$ , is not related to the overt pattern of each individual culture, but is related to the ability of blot assimilation of personality (both developmental and cultural).

Even two groups of which cultures are different had shown a large  $r$ , since the common forms of two groups are common, the usefulness of the cross-cultural method would not be lost. Even though the common forms of two groups are common, the concrete concepts would clearly reflect differences of results of two cultures internalized by subjects, and distribution of determinants of responses would be different also. Therefore we can expect as the next step a precise method with which we can compare concrete contents and determinant of each common form one by one.

We have dealt with the Motomura's  $r$  throughout the preceding discussion, but as the author has mentioned several times,  $D$  and  $\theta$  are both nothing but a simplified forms of the  $I-c$  combination method in order to obtain a constant  $\alpha$  which is independent from the sample size. So that for the meanings of  $D$  and  $\theta$  the discussions are completely the same to those for  $r$ .

The two methods of  $r$ , and of  $D$  and  $\theta$ , have their advantages and disadvantages in each, as we have described in each section about them, and the author cannot decide which is more useful, at least at the present stage of research. For this point, we must have empirical considerations by utilizing new data.

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APPENDIX

**Duplications of protocols**

Notes to duplications.

1. N, H, S, T affixed to the protocol number designate N: Nagir, H: Hunza, S: Sama, T: Tsumje respectively.
2. Answers to inquiry follow on a colon.
3. Explanations or notes to responses are put in parentheses.
4. Response times for each card are not always mentioned when they are three minutes.
5. The original english expressions by the interpreter were reproduced with some corrections.

N 1 Age. 20

I		
1√ 45"	Mountain top.	d FD N
2√	Feet, main's.	d DF Hd
3√	Aeroplane wing.	d DF Ob
4	Like a dog.	dd DF A
5	Like a hand.	d DF Hd
3'	(Card is not turned.)	
II		
1∧ 10"	Mountain top.	d FD N
2	Glacier. (Tongue of).	dd FD N
3	Cloud.: Colour is first determinant.	D CF Cloud
4√	Like man's face.	dd DF Hd
5√	Rat.: Only head.	d DF Ad
3'		

## III

1^	20"	Neck and Head.: Man's.	d DF Hd
2		Look like fish.: Not swimming.	D DF A
3		Elbow.: Man's.	D DF Hd
4<		Man's head.	d DF Hd
5V		Looks like a bird.	D DF A
	3'		

## IV

1^	45"	Bone with meat.	d Fc Aat
2		Mountain.	d FD N
3		Bird's head and neck.	d DF Ad
	3'		

## V

1	1'	Glacier.: The end of glacier, like plate II.	d FD N
2		Tool which hold fire.	d FD Ob
3		Men standing on the top of mountain.	dd M H
4		Like hand.	dd DF Hd
	2'45"		

## VI

1^	40"	Like insect.	D DF A
2		Like a dog face.	dd DF Ad
3		Mountain top.	dd FD N
	2'57"	(Card is not turned.)	

## VII

1^	1'05"	Tree and man on the mountain.	d FD(M) Pl(H)
2		<i>Nallah</i> (valley) which water come down from.: Water is moving.	d FD(FK) N
3		These are mountain and glacier.	D FD(FK) N
	3'		

## VIII

1^	10"	Looks like tiger.: Now climbing up.	D FM A
2		<i>Nallah</i> .	(dd FD N)
3		Bone without meat.	D FD Aat
4		This is mountain. Between mountains, <i>nal-</i> <i>lah</i> comes down.	D FD N



2'45"

IX

1<	30"	Animal head.	D DF Ad
2		Pond, water comes down from the mountain.	S FD N
3		Man's head.	D DF Hd
4		Woman, standing and man, looking down.: Man looks at scenery, not woman. Woman is standing, stretching her hand.	dd M H
5		Glacier.: Head of glacier, not such colour.	D FD N

2'40"

X

1^	25"	Animal, jumping.	D FM A
2		High tree, upper part is cut.	D FD Pl
3		Snake's head, looking up.	D DF Ad
4		Goat's head.	D DF Ad
	3'	(Dog, in jumping shape.)	(D DF A)

N 2 Age. 40

I

1	20"	Mountain ridge.	d FD N
2		Mountain top.	d FD N
3		Ziimu (Letter, G).	d DF Letter
4		Pole.	dd DF Ob

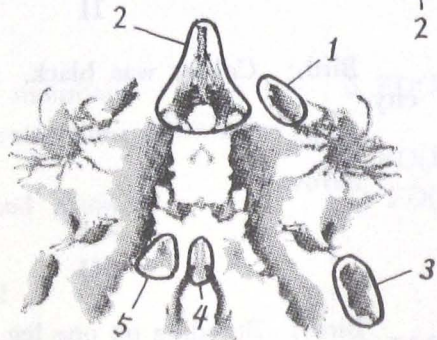
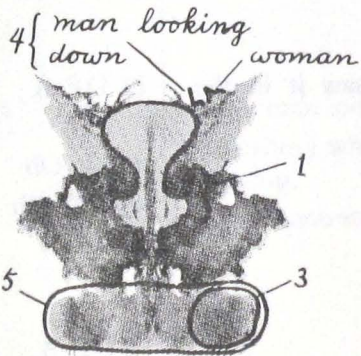
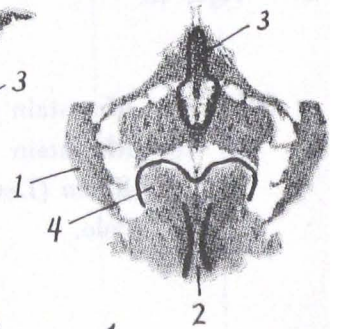
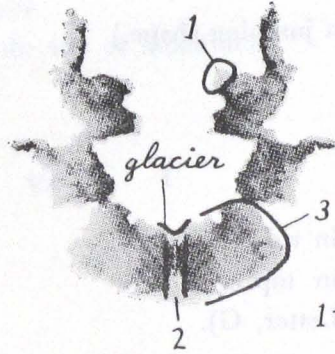
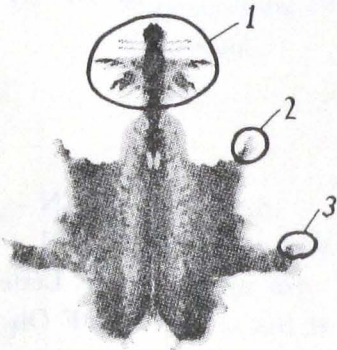
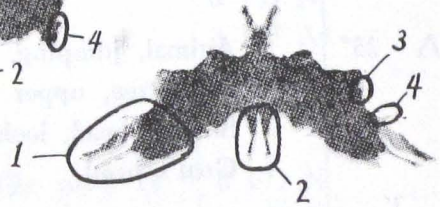
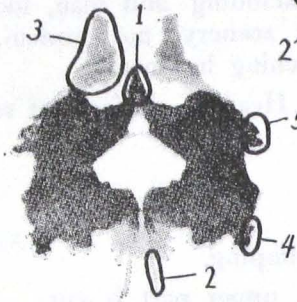
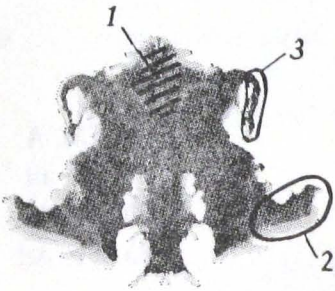
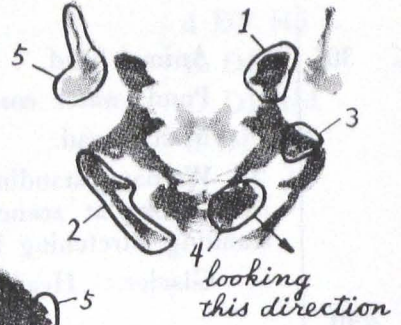
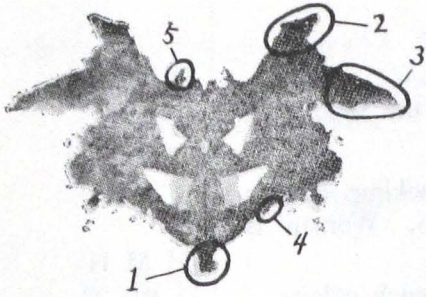
II

1	60"	Bird.: Colour was black. He saw it in the city.	D DF A
2		Spike.	d DF Ob
3		Arrow.	dd DF Ob
	3'20"		

III

1	32"	Bird.: Standing on one leg.	D DF A
2		Instrument for cutting wood.	D DF Ob
3		Sword end.	D DF Ob
4		like man's head.	d DF Hd
5		The peg of tent.	dd DF Ob

N1



3'

IV

1 40" Man.: No head, leg with boot. W DF H

3'

(Mountain top.) (No location recorded).

V

1 20" Ibex's horn. d DF Ad

2 Tiger's tail. d DF Ad

3 Man's leg. d DF Hd

4 Stone sheet. d FD N

\*

VI

1 25" Wing.: Wing only. D DF Ad

3'

(Bird's neck.) (D DF Ad)

VII

1√ 45" Bull's eye.: A concentric circle of farget. W DF Ob

2 Ax.: This is shaft. D DF Ob

5'

VIII

1 35" Animal, climbing mountain, seeing deer.: Tiger. Deer is not seen. D FM A

2 Looks like mountain. D FD N

2'37"

IX

1 1'15" Looks like green grass. D CF L

2 Animal legs and tails, and tails tie each other.: Three legs are seen. d DF Ad

2'55"

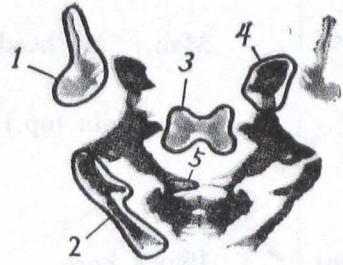
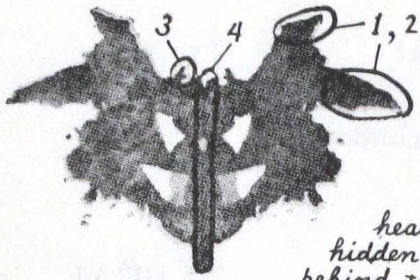
X

1 1'35" Instrument for holding fire. D DF Ob

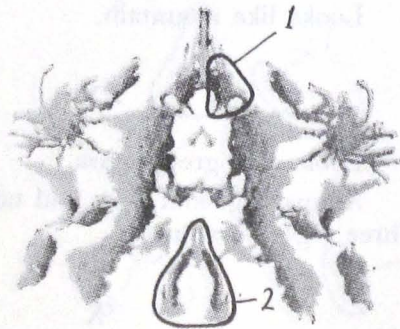
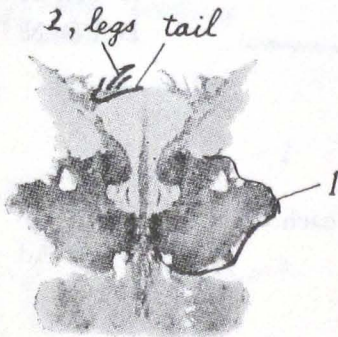
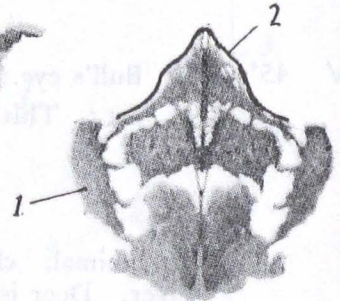
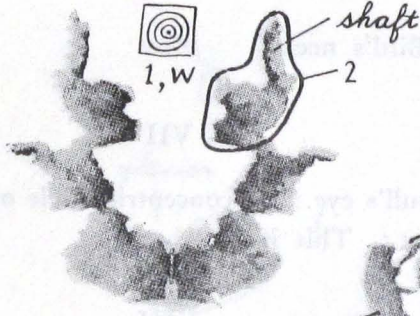
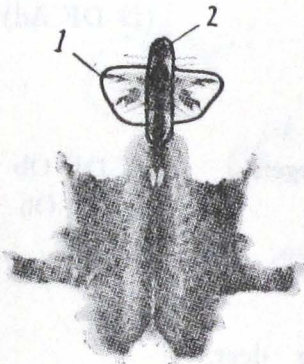
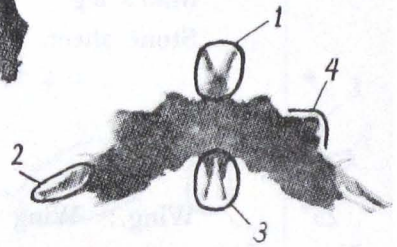
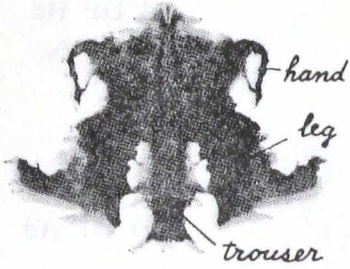
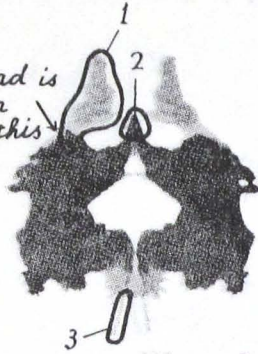
2 Scissors with handle. D DF Ob

3'

N2



head is hidden behind this part



N 3 Age. 23

I

1	50"	Butterfly.	W DF A
2		Fish's head.	d DF Ad
3		Head of animal.: The animal is <i>moskat</i> . (This seems to be yak.)	d DF Ad
4		Tree.	d FD Pl

II

1	35"	Plant.	d FD Pl
2		Mountain top.	d FD N
3		Animal mouth.: The animal is rat.	d DF Ad
4		Man's head.	d DF Hd
5		Bird.: Head concealed.	D DF A
	*	(Turned the card)	

III

1	10"	Fish.: Not swimming.	D DF A
2		Man's head and man's neck.	d DF Hd
3		Cat.	D DF A
4		Tree.	D FD Pl
5		Butterfly.: Shape and colour.	D FC A
6		Bird (rashap).: White and black.	D DF A

IV

1^	50"	Feet.	D DF Hd
2<		Cloud over the mountain.: Black part is mountain, pale part is cloud.	D FD Cloud
	*		

V

1√	7"	Tool for holding fire.: <i>Sharana</i> .	d DF Ob
2		Bird's tail.	dd DF Ad
3		Feet and body.: Backward statue. Legs have no fingers on account of frostbite.	d DF Hd
4		Some kind of cultivated plants.: Root.	d FD Pl
	*		

## VI

1	10"	Snake head.	d DF Ad
2		Butterfly.	D DF A
3		Like mountain.	d FD N
4		Dog's head, neck.	d DF Ad
5		Fur.: The right side of fur.	D Fc Aob
6		Accessory of coat made of nickle.	d DF Ob

## VII

1	30"	Bird's head.	d DF Ad
2		Big stone.	D FD N
3		Gate and ground.	Ws DF Arch
4		Mountain top.	d FD N
5		Tree.	D FD Pl

## VIII

1	5"	Tiger.: Looks slowly towards ibex.	D FM A
2	√	Ground.: Graze cow. Only from shape, not from colour.	D FD L
3		Mountain.	D FD N
4		Mountain.	dd FD N
	2'50"		

## IX

1	15"	Electric engine in Mir's house.: Such colour, somehow shape also.	D FC Ob
2		Man's head.	D DF Hd
3		Water throwing on the ground.: (Subject points to a spot of water on the ground.)	D FD Art.
4		Big tree by the Mir's house.: Poplar.	D DF Pl
	2'55"		

## X

1	5"	Dog runs.	D FM A
2		Rat.	D DF A
3		A kind of plant.	D FD Pl
4		Hopar glacier.	D FD N
5		Bird.	dd DF A
6		Stump of tree.	D FD Pl

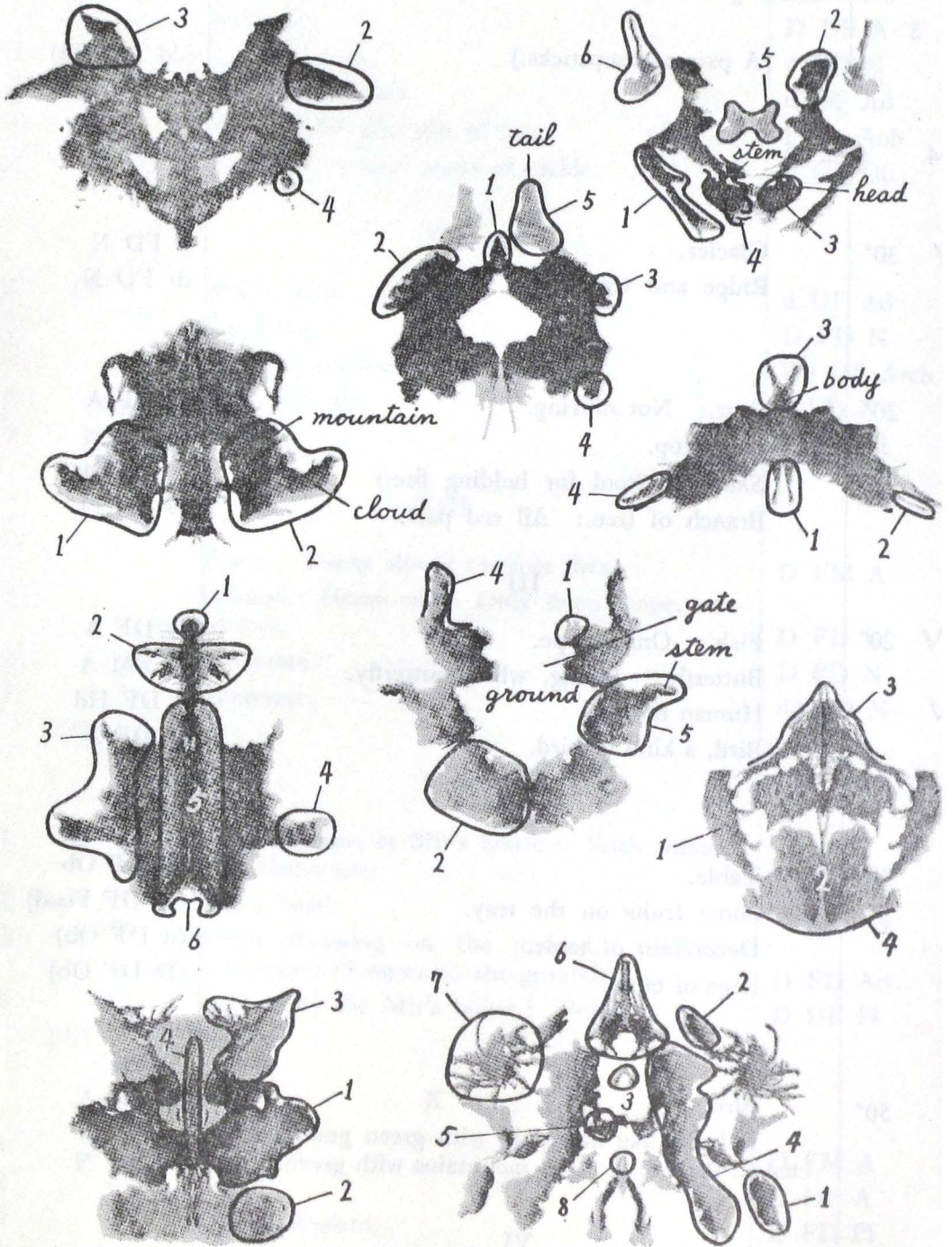
7		Plant.: Plant, which grows in jungle and smells good.	D DF PI
3'		(A pair of chopsticks.)	(dd DF Ob)

N 4 Age. 25

I			
1√	30"	Glacier.	S FD N
2		Ridge and tree.	dr FD N
II			
1	20"	Bear.: Not moving.	D DF A
2		Earth top.	D FD N
3		<i>Sharanah</i> (tool for holding fire.)	d DF Ob
4		Branch of tree.: All red part.	D FD PI
III			
1.√	20"	Fish.: Only shape.	D DF A
2		Butterfly.: Flying, white butterfly.	D FM A
3√		Human head.	d DF Hd
4		Bird, a kind of bird.	D DF A
IV			
1	30"	Table.	W DF Ob
2		Some fruits on the tray.	(D DF Food)
3		Decoration of table.	(d DF Ob)
4		Legs of table.	(D DF Ob)
V			
1	50"	Bird.	W DF A
2		It looks like mountain with green grass reflected in the water.: All mountains with green.	W FD N
VI			
1	55"	Like a bird.: Not living bird, a sculpture, seen in the palace in Kashmir.	D DF (A)
2		Like mountain.	dd FD N



N3



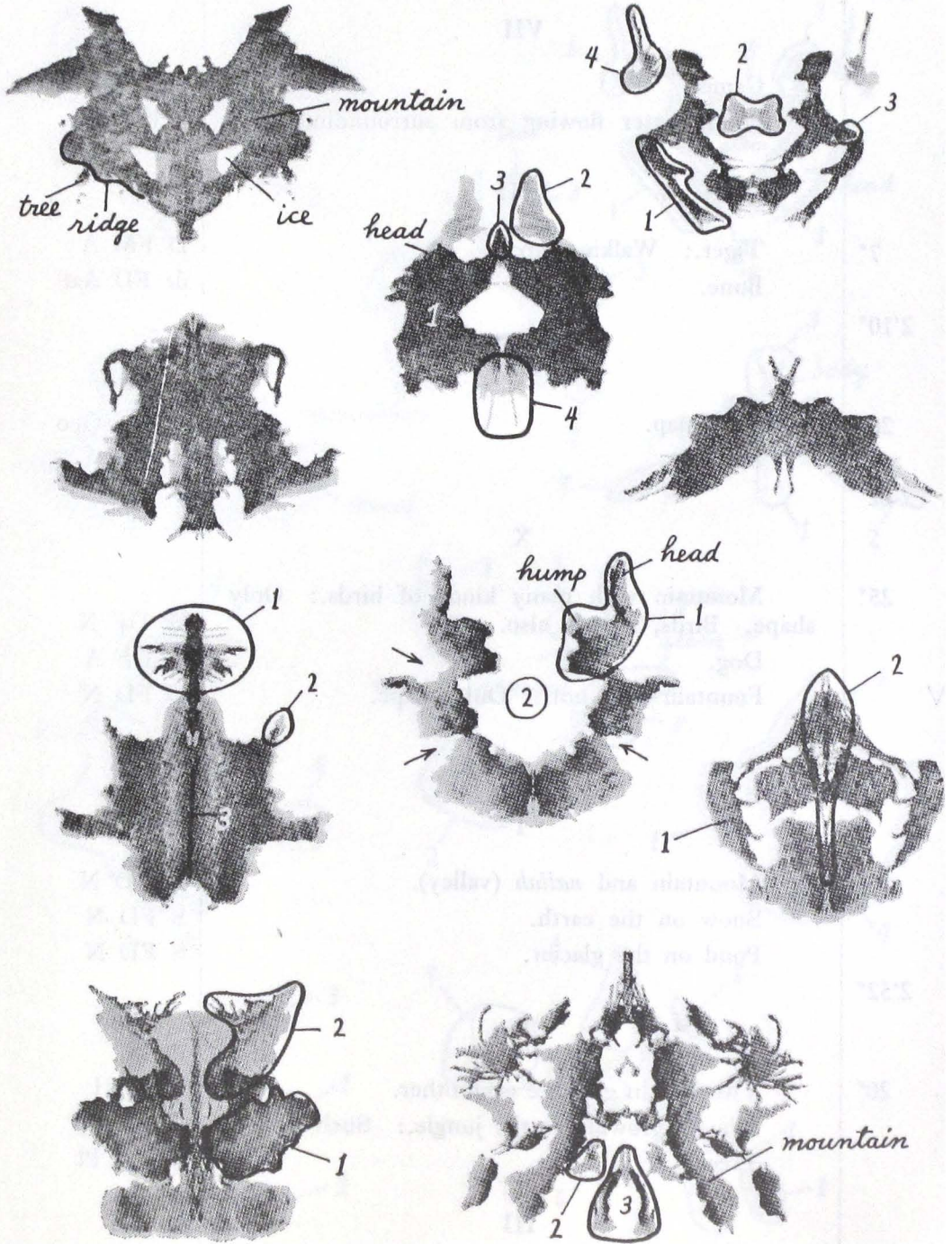


3		Waterfall.	D FD N
	2'36"		
VII			
1	*	Camel.	D DF A
2		Pond, water flowing from surroundings.	S FD N
VIII			
1	7"	Tiger.: Walking up.	D FM A
2		Bone.	dr FD Aat
	2'10"		
IX			
1	20"	Like map.	D FD Geo
2		Ibex.	D DF A
	2'22"		
X			
1	25"	Mountain with many kinds of birds.: Only shape. Birds, shapes also.	W DF N
2		Dog.	D DF A
3√		Fountain runs out.: Only shape.	D FD N

N 5 Age. 25

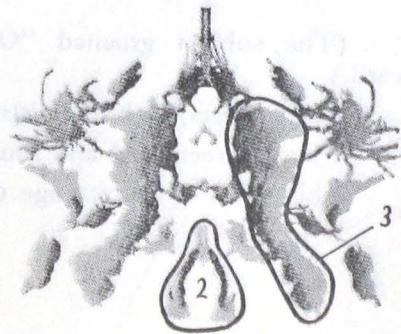
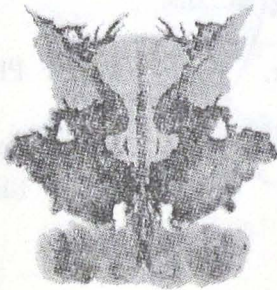
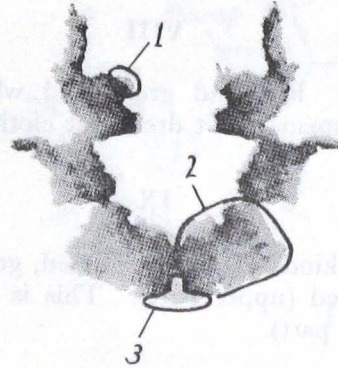
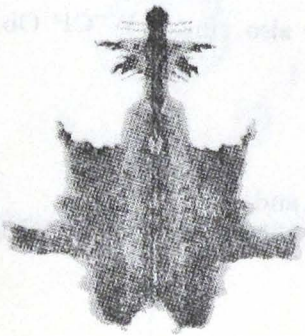
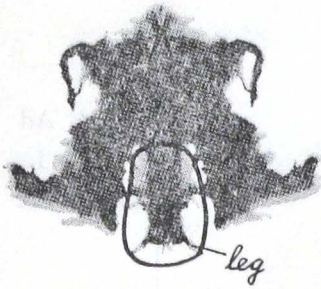
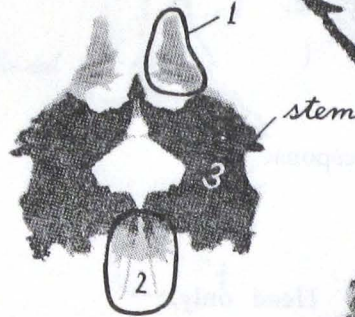
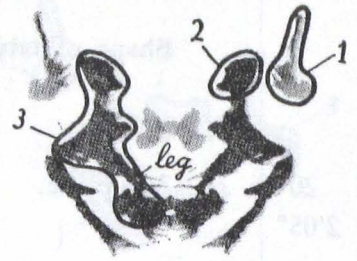
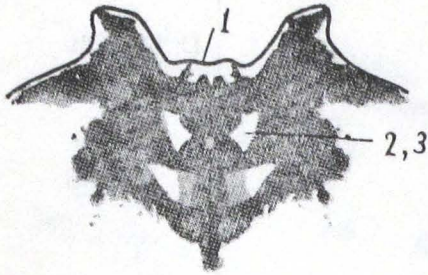
I			
1	20"	Mountain and <i>nallah</i> (valley).	D FD N
2		Snow on the earth.	S FD N
3		Pond on the glacier.	S FD N
	2'52"		
II			
1	20"	Two Hindu girls see each other.	D M H
2		Flower, growing in the jungle.: Such colour.	D CF Pl
3		Tree.	D FD Pl
III			
1	50"	Bird.	D DF A
2		Man's head.	d DF Hd
3		Ibex.	D DF A

N4



	2'15"		
		IV	
1	*	Shape of table.	D DF Ob
		V	
1	20"	Acroplane.	W DF Ob
	2'05"		
		VI	
	2'	No response.	
		VII	
1	25"	Hen.: Head only.	d DF Ad
2		Garden.	D FD L
3		Fall of glacier.	dd FD N
	1'58"		
		VIII	
1	*	Cloth.: Red and green and white also, for dress of woman. Not dress but cloth.	W CF Ob
		IX	
1	45"	Three kinds of colours.: Red, green and blue. Blue and red (upper part). This is the colour of sky (green part).	W Cn Colour
	1'03"		
		X	
		(The subject groaned "Oo" looking at the card.)	
1	20"	These (blots) look like a strange flower. I know green, red and blue.	W CF Pl
2		This looks like a strange doll.	D DF Ob
3		It looks like blood.	D CF Blood
	2'52"		

N5



N 6 Age. 47

I

1^	50"	Mountain top. (The subject kept the card apart from his eyes at his arms length.)	d FD N
2		Waterfall.: (Centre line only.)	dd FD N
3^		Animal head.: Tiger's.	d DF Ad

II

1^	25"	Big gate.	S DF Arch
2		Like picture.: Like flag, such color. He saw it in the city.	D CF Ob
3		Like blood.	D CF Blood
4		Wild animal.: Head, small white spot is eye.	d DF Ad
5		Like button.	dd DF Ob

III

1^	35"	Tank.: (Subject saw the tank in Iran on the way of his pilgrimage.)	D DF Ob
2^		Dog is hanging.	D FM A
3		Like hand.	d DF Hd
4^		Number of this tank.	D DF Letter

IV

1	15"	Like city.: (Subject sees from the mountain). Houses are shaded with clouds.	dd KF L
2		Wolf.: Sitting.	d DF A
3		Dog's head.	dd DF Ad
4		Mountain.	dd FD N

V

1	20"	Animal head.: Bird's neck.	dd DF Ad
2		Mountain.	dd FD N
3		Black cloud.: (The idea was withdrawn.)	
4		Like piled stone.: <i>Thmaray</i> (Cairn)	d FD Ob

VI

1	35"	Hand.: Human hand.	dd DF Hd
---	-----	--------------------	----------

2	Wing.	D DF Ad
3	Wolf's head.	d DF Ad

## VII

1√	16"	Woman head.	dd DF Hd
2√		Hole.	S FD N
3√		Waterfall.: Water is falling.	dd FD N
4√		Bullock head.	dd DF Ad

## VIII

1∧	7"	Tiger.: Climbing.	D FM A
2		Watch with rope.	D DF Ob
3		Cloth.: From this colour.	D CF Ob
4√		Man's hand.: Catching the tiger.	dd M Hd
5		Glass.	S DF Ob

## IX

1√	20"	Man's head.	D DF Hd
2		Ibex's head.	dd DF Ad
3√		Blood.	dd CF Blood
4		Green grass.	D CF L

## X

1∧	15"	Bird.: Sitting, this bird's back is white.	D DF A
2		A tree.	D FD Pl
3		Gate.	D DF Arch
4		Eye-glass.	D DF Ob
5		Hen.: After killed, it is hanging.	D FM A
6		Balance.	D DF Ob

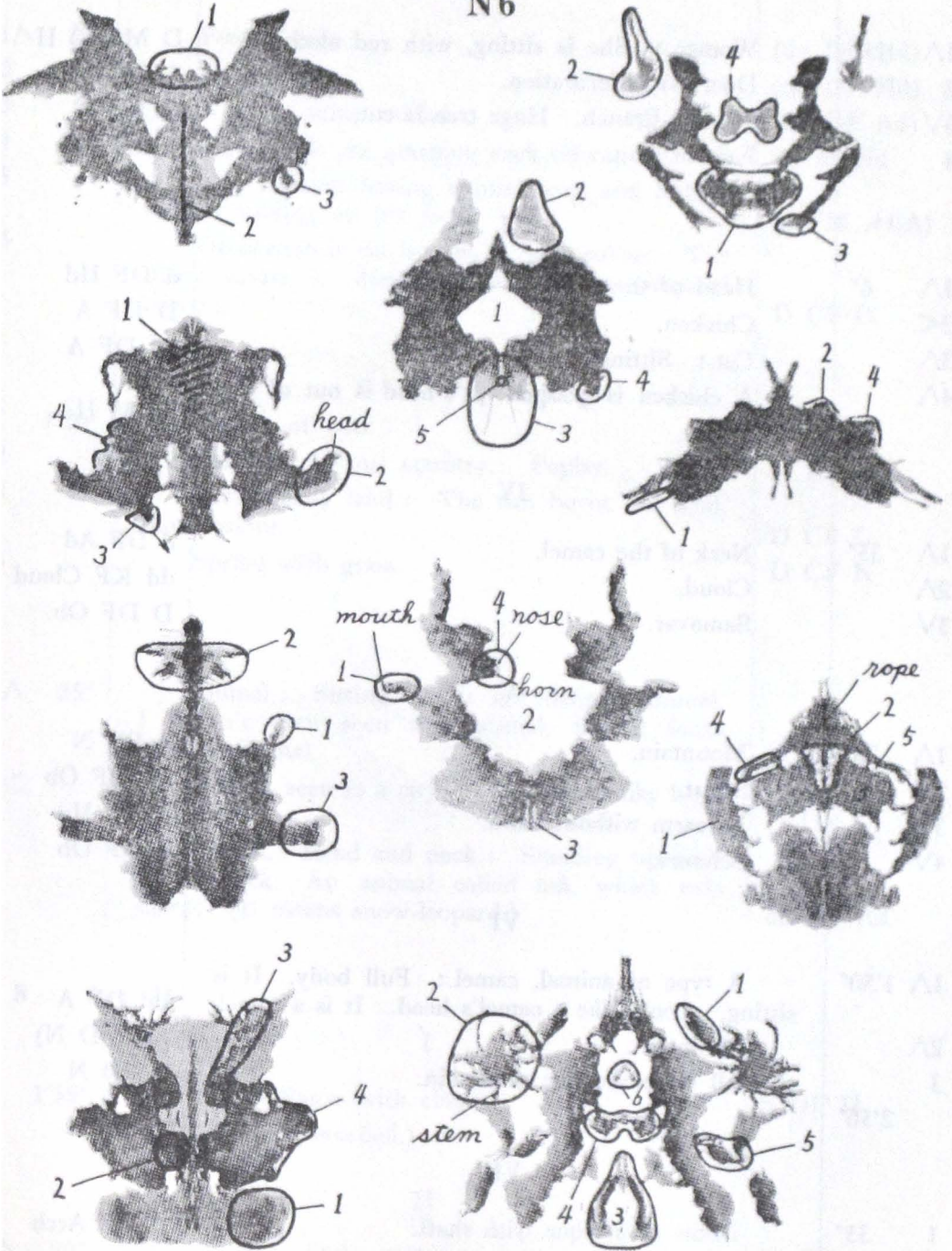
N 7 Age. 30

## I

1√	1'20"	Mountain.	d FD N
2√		Man.: Head and neck.	d DF Hd
3√		Cow.: Head.	dd DF Ad
4∧		Bear.: Head.	d DF Ad



N6



## II

1^	15"	Woman.: She is sitting, with red cloth.	D M(FC) H
2		Door with decoration.	S DF Ob
3√		Tree.: Branch. Huge tree is cut.	D FD Pl
4		Face of man.	d DF Hd

## III

1^	6"	Head of the man.	d DF Hd
2<		Chicken.	D DF A
3^		Cat.: Sitting.	dd DF A
4^		A chicken is grasped: It's head is out of the hand.	dd M Hd

## IV

1^	35"	Neck of the camel.	d DF Ad
2^		Cloud.	dd KF Cloud
3√		Samovar.	D DF Ob

## V

1^	20"	Mountain.	d FD N
2√		Spear.	dd DF Ob
3√		Forearm without hand.	d DF Hd
4√		Scissors.	d DF Ob

## VI

1^	1'50"	A type of animal, camel.: Full body. It is sitting. Looks like a camel's head. It is a camel.	dd DF A
2^		Mountain.	(dd FD N)
3		All these are like mountain.	d FD N
	2'56"		

## VII

1	35"	Dome of mosque with shaft.	d DF Arch
2		End view of the wall of roof.: (It is not clear that which part is 1 or 2 on location chart.)	d DF Arch
3		Cultivated land.: *Here is not cultivated. There are stones.	D(S) FD L
	3'45"		



VIII

1^	20"	Foot of man.	(dd DF Hd)
2		Foot of man.	(dd DF Hd)
3		Neck of some animal.	(dd DF Ad)
4		Two hands are grasping each other.	dd M Hd
5		The creature having animal head and human foot is holding up it's foot.	D FM A(A)
6		Decoration in the house.: Such colour. The Mir's house is decorated with these coloured flowers.	D CF Pl

IX

1	1'10"	Branch of tree.	d FD Pl
2		Tall tree in our country.: Poplar.	D DF Pl
3		Burnt rocky land.: The sun burnt the land. Such colour.	D CF L
4		Spring with grass.	D CF N

X

1^	35"	Animal.: Sitting. It is not definite animal. I haven't even seen this animal, but it looks like an animal.	D DF A
2<		Animal, seen in a city.: The animal like bird, like hen.	D DF A
3		Animal. Head and neck.: Standing up with craned neck. An animal called <i>tah</i> , which eats sheep. (It means snow-leopard.)	dd DF Ad

N 8 Age. 28

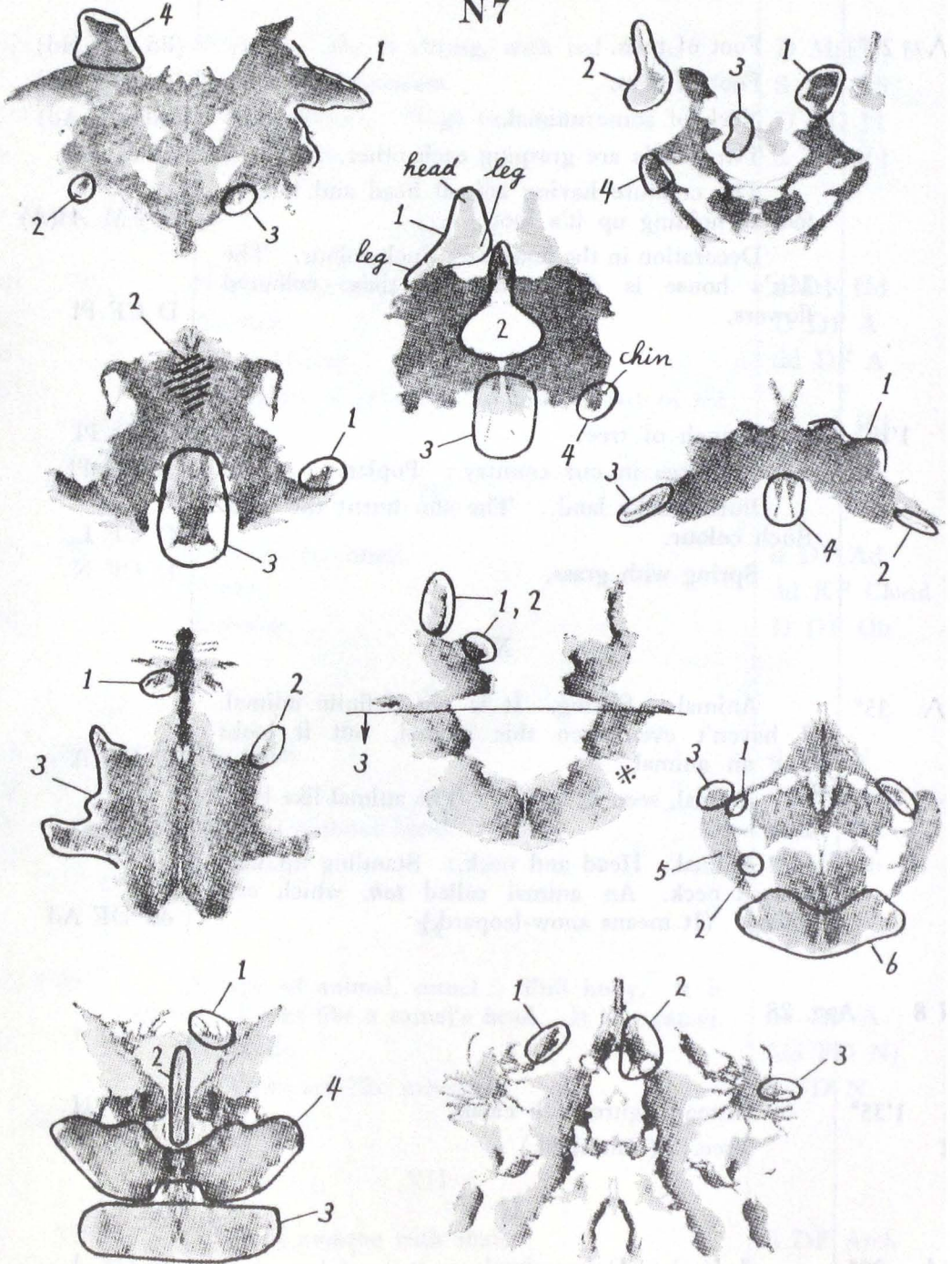
I

1	1'35"	Human figure with cloak.	S DF H
2		Tree.: (Cancelled.)	

II

1^	20"	Animal.: Only animal.	D DF A
2^		Map.: Cut from flower. Colour.	D CF Pl
3		Tiger's head. (The translator captain Butt made the subject turn the card.)	D DF Ad
	2'35"		

N7



III

1^	30"	Hen.	D DF A
2		Bird on the mountain.	dd DF A
3		Stone.	D FD N
4^		River bird.: A bird, called <i>tyumu</i> . Looking down the bird.	D DF A
5√		Cow.: Calf.	D DF A
	2'25"		

IV

1^	25"	Bird with long neck.: Only head and neck.	d DF Ad
2		Feet of man.	dd DF Hd
3		Camel.: Sitting.	D DF A
4		Legs of the wooden stand.	dd DF Ob

V

1^	40"	Head of tiger.: Face.	dd DF Ad
2		Something made of wood.: An instrument for physical exercise.	d DF Ob
3		Some animal.: An animal called <i>gharkas</i> is on the mountain.	d DF A
4		Garden.	D FD L

VI

1^	45"	Head of animal.: Dog.	dd DF Ad
2		Flower.: A decoration of house, made of wood.	dd DF Ob
3		Flower.: (The same explanation with 2.)	dd DF Ob
4		House.	D DF Arch

VII

1√	15"	Animal.	dd DF Ad
2√		Garden.: (Bed of flowers.)	D FD L
3√		Shaggy tail of animal.: (The subject explained that a monkey is sitting,—from both 1 and 2 —, but the examiner can not grasp what it means.)	d DF Ad
4√		Face of some animal.: With opening mouth.	dd DF Ad
	2'33"	Cow.	

## VIII

1^	15"	Animal.: Holding something.	D FM A
2		Tree.: (Forgotten.)	dd FD Pl
3		Animal, as big as a cat on the mountain.: Head only. (In white.)	dd DF Ad
4		Heart of the cow.	D FC Aat
5		Liver.	D FC Aat
	2'56"		

## IX

1^	25"	Rope.	dd DF Ob
2		Cap.	d DF Ob
3		Head of man.	D DF Hd
4		Green grass.	D CF L
5		Flower.	D FD Pl
6		Head of mountain goat.	D DF Ad

## X

1	20"	River animal.: (Forgotten.)	
2		River animal.: (Forgotten.)	
3^		Wolf.	D DF A
4		Animal called mangoose.	D DF A
5		Goat's head.	D DF Ad
6		Flower pot.	D DF Ob
7		Man, sitting on something.	dd M H

**N 9** Age. 30

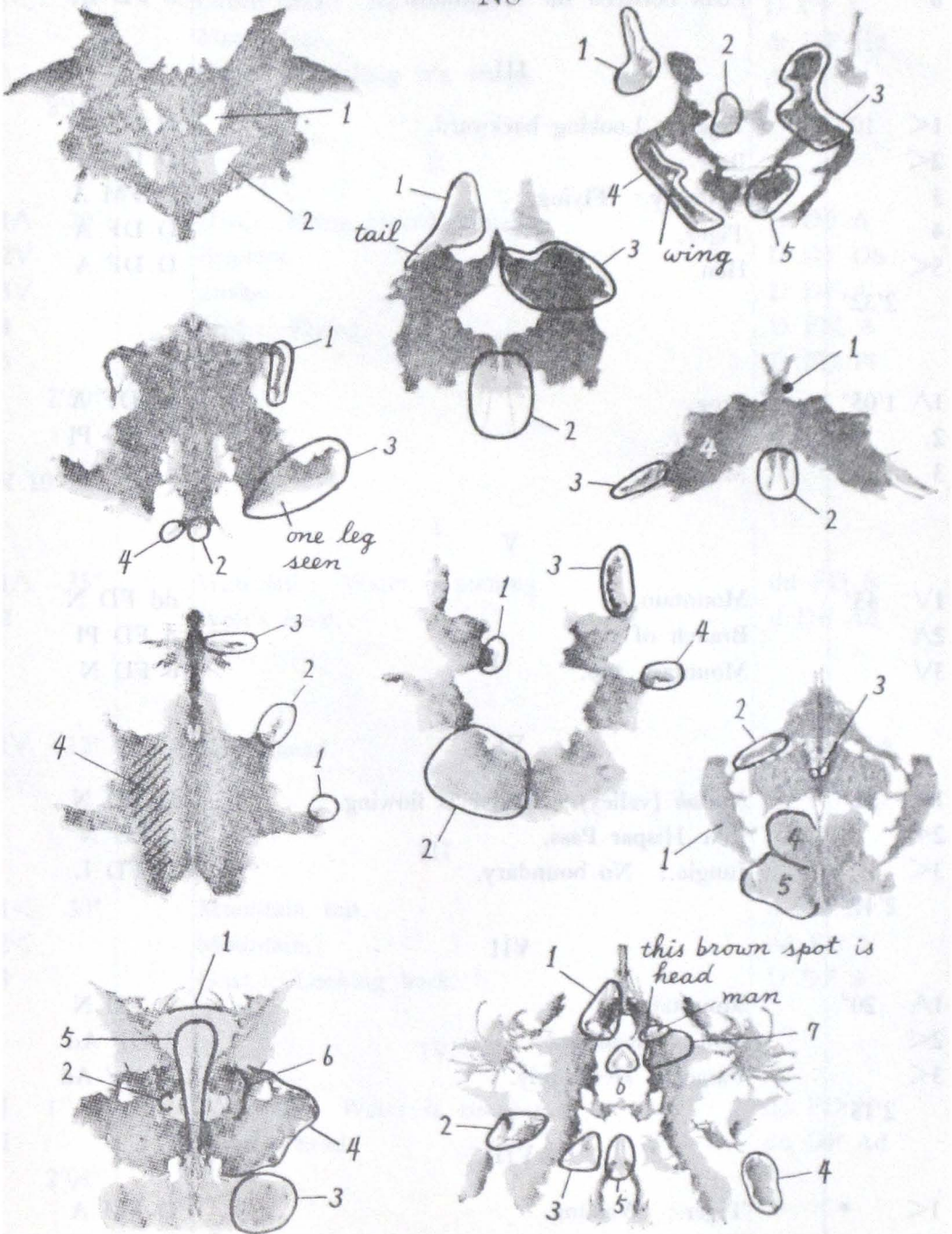
## I

1^	40"	Dog's head.	d DF Ad
2^		Mountain top.	d FD N
3^		Crevasse.	dd(S) FD N
4		Jungle.: No boundary.	dr FD L

## II

1^	30"	Cat.	D DF A
2^		Mountain top.	d FD N
3^		Ibex's head.	d DF Ad
4^		Tree.	D FD Pl

N8



5<	Mountain.	d FD N
6	Plain between the mountains.	S FD L

## III

1< 10"	Tiger.: Looking backward.	D DF A
2<	Bear.	D DF A
3	Butterfly.: Flying.	D FM A
4	Tiger.	D DF A
5<	Hen.	D DF A
2'32"		

## IV

1^ 1'05"	Frog.	W DF A
2	Flower.	D FD PI
3	Mountain.	d FD N

## V

1V 45"	Mountain.	dd FD N
2^	Branch of tree.	d FD PI
3V	Mountain top.	d FD N

## VI

1^ 32"	<i>Nallah</i> (valley).: Water is flowing.	D FD N
2<	Like Hispar Pass.	d FD N
3<	Jungle.: No boundary.	D FD L
2'47"		

## VII

1^ 20"	Mountain.	D FD N
2<	Bird.: Head only.	d DF Ad
3<	Camel.: Head only.	D DF Ad
2'15"		

## VIII

1< *	Tiger.: Walking.	D FM A
2^	Tree.	D FD PI
3V	Flower.	D FD PI
4V	Cow.: Head.	d DF Ad
2'11"		

IX

1<	45"	Green land.: No boundary.	D CF L
2		Man's face.	dr DF Hd
3		Hen.: Stretching it's wings.	d DF A
	2'19"		

X

1^	20"	Hen.: Being picked feathers.	D DF A
2V		Scissors.	D DF Ob
3V		Snake.	D DF A
4		Bird.: Flying.	D FM A
5		Tree.	D FD Pl
	2'50"		

N 10 Age. 18

I

1^	35"	Waterfall.: Water is coming.	dd FD N
2		Wolf's head.	d DF Ad

II

1V	12"	Hen's head.	dd DF Ad
2V		Dog.	D DF A

III

1<	30"	Mountain top.	d FD N
2<		Mountain.	dd FD N
3		Goat.: Looking back.	D DF A

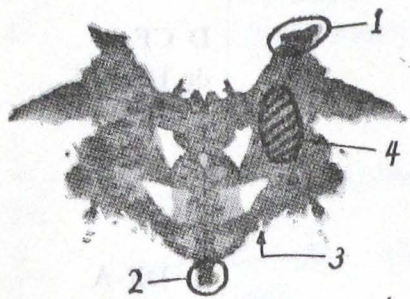
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1	1'	Waterfall.: Water is running.	dd FD N
2		Horse's head.	dd DF Ad
	2'04"		

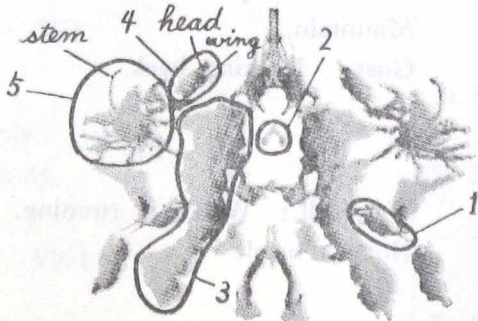
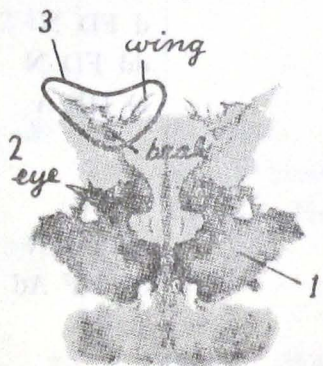
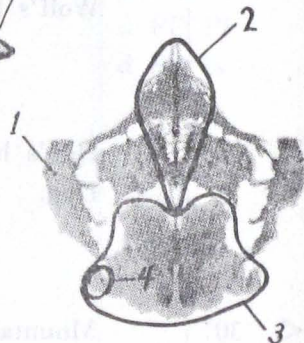
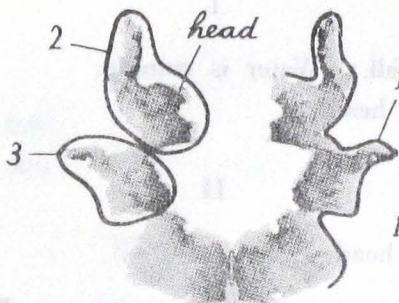
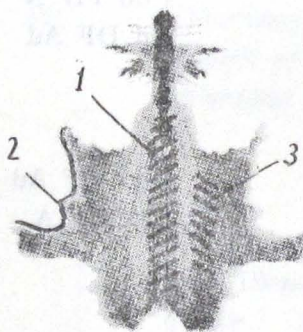
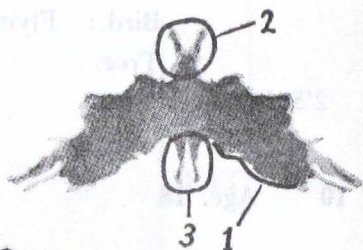
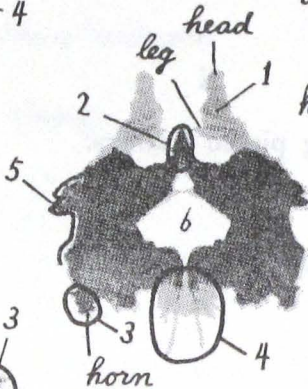
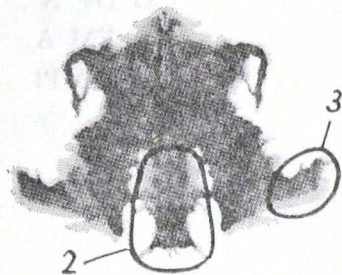
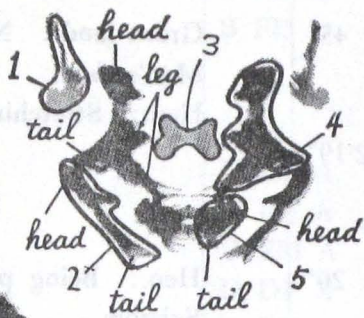
V

1^	35"	Crevasse.	d FD N
	2'40"		





N9





VI

1^ 40"	Bird.: Flying.	D FM A
1'57"		

VII

1< 1'	Hen's head.: Open mouth.	d DF Ad
2<	Fox.: Head only.	dd DF Ad
2'37"		

VIII

1 20"	Water is coming.	dd FD N
2<	Tiger.: Walking, seeing underside.	D FM A
2'32"		

IX

1V 20"	Waterfall.: Water is running.	D FD N
2<	Ibex's head.	D DF Ad
2'40"		

X

1^ 30"	Moraine.	D FD N
2^	Bird.: Shape.	D DF A
3V	Ibex's head.: (Ibex is withdrawal at inquiry, and the subject said just crevasse.)	(D FD N) (D DF Ad)
2'40"		

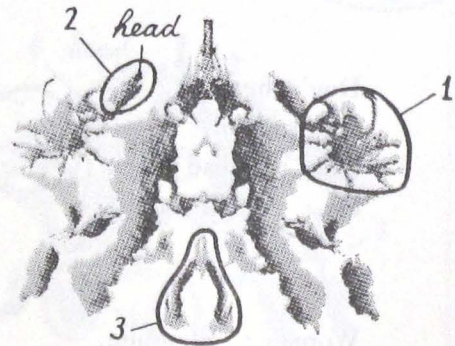
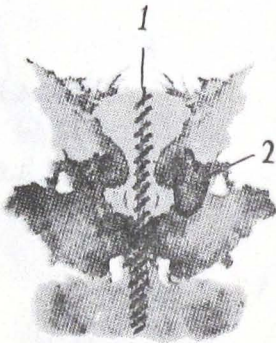
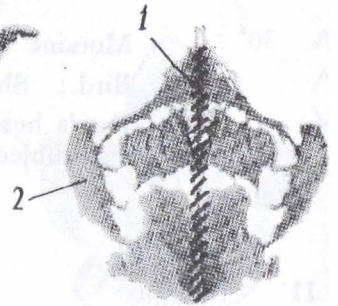
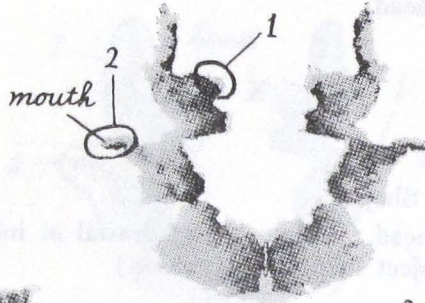
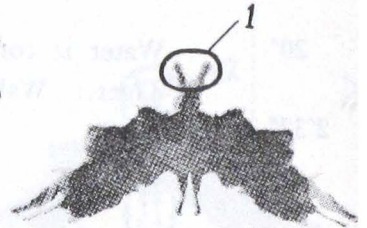
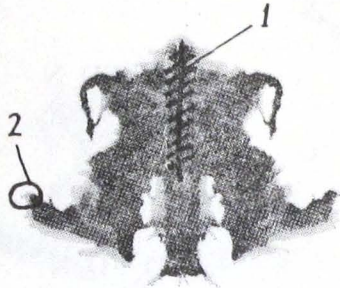
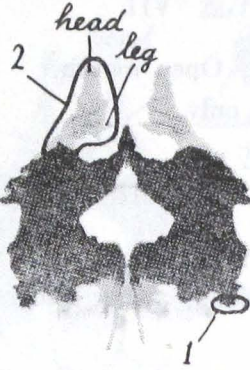
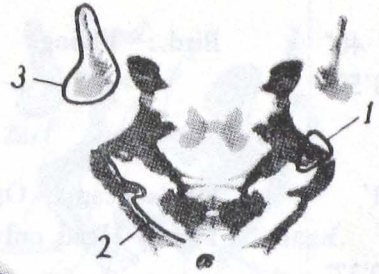
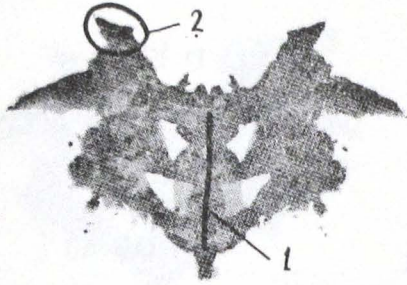
N 11 Age. 36

1^ 22"	Dog's head.	dd DF Ad
2^	Cow's head.	d DF Ad
3V	Goat.: Head only.	dd DF Ad
4<	Ox.: Whole body.	S DF A

II

1^ 7"	Woman.: Standing.	D M H
2<	Crow.: Crow's mouth.	dd DF Ad
3<	Mountain top.	d FD N
4<	Ox.: The upper part of ox.	d DF Ad
2'30"		

N 10



III

1<	20"	Bird.: Facing to the front.	D DF A
2^		Man's head.	d DF Hd
3<		Wall and gate.	D DF Arch
	2'27'		

IV

1^	17"	Bird.: A big bird, <i>gasir</i> .	W DF A
2^		Wild animal.: Sitting, head only.	d DF Ad
3V		Tree.	D FD PI
	1'45"		

V

1V	20"	Cat.: Sitting.	d DF A
2<		Gun.	d DF Ob
3V		Child hand.: Two hands.	d DF Hd
4		Saddle.	d DF Ob
	2'37"		

VI

1^	7"	<i>Narow</i> .: An instrument for making flour.	D DF Ob
2V		Yak.: Only head.	d DF Ad
3		Child shirt.: Only a sleeve is seen.	dd DF Ob
	2'10"		

VII

1	20"	Camel.: Holding up it's head, head only.	D DF Ad
2		Camel.: Whole body.	D DF A
3		Bird.: The bird is sitting which flies at night but is not determined what kind of bird it is from their interpretation.	D DF A
	1'40"		

VIII

1<	32"	Tiger.: Two are coming close to fight.	D FM A
2^		Tree.: Poplar.	D DF PI
3V		Tree.	D FD PI
	1'51"		

IX

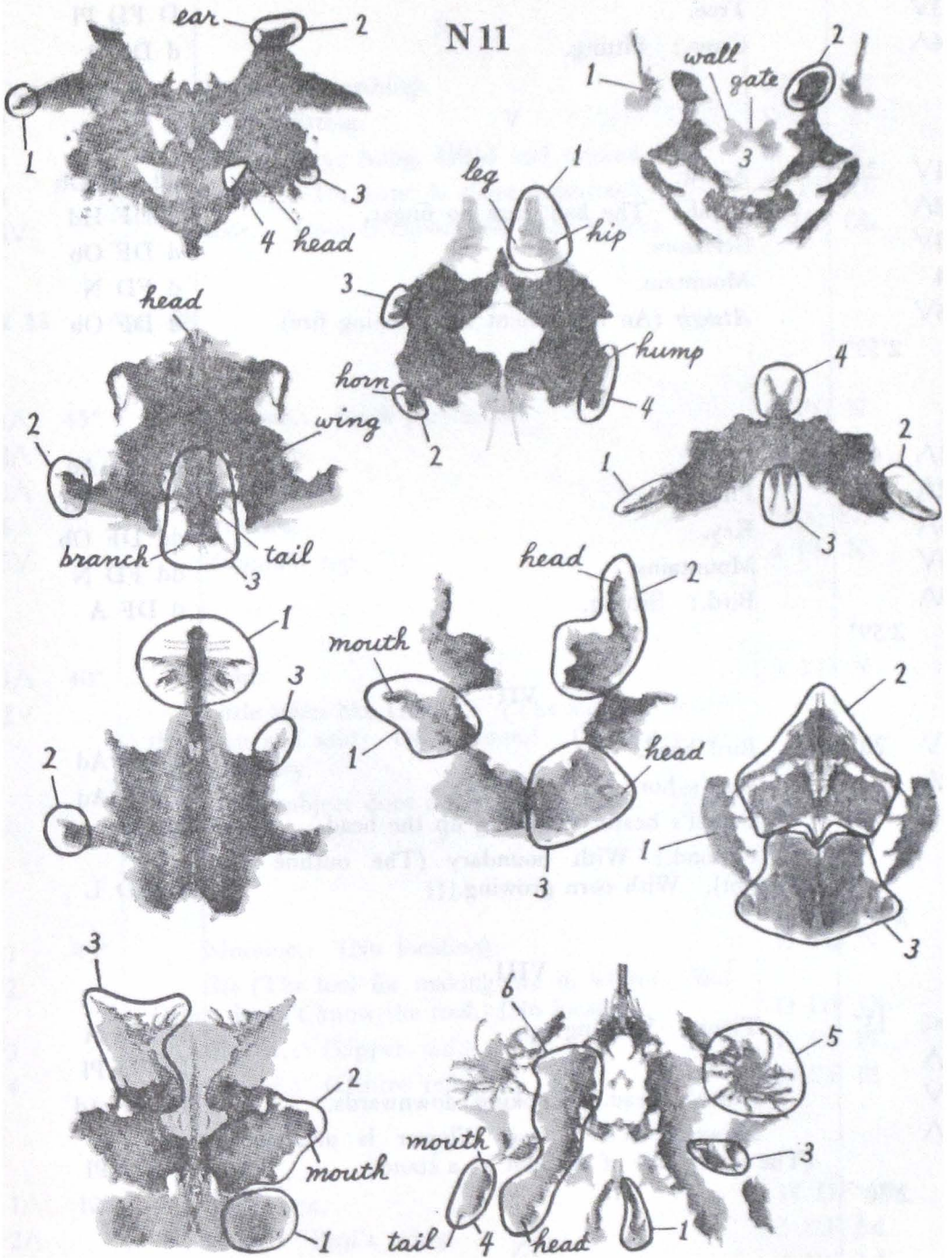
1	35"	Woman's head.	D DF Hd
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2	Duck.	D DF A
3	Tree.	D FD PI
2'34"		
X		
1∨ 20"	Bird.: This bird has a mane.	D DF Ad
2∧	Machine.: (The record of the location has been missed.)	D DF Ob
3∨	Donkey.	D DF A
4∨	Bird.: Sitting.	D DF A
5<	Flower.	D FD PI
6<	Hen.	D DF A

## N 12 Age. 24

I		
1∧ 30"	Human feet.	d DF Hd
2∧	Mountain top.	dd FD N
3∧	Key.	d DF Ob
4∨	Mountain	dd FD N
II		
1∧ 10"	Mountain top.	d FD N
2	Hen.: Walking.	D FM A
3<	Yak Head.: Only mouth.	d DF Ad
4∧	Flower.: Colour is first determinant.	D CF PI
5	Man head.: Profile.	d DF Hd
240		
III		
1< 25"	Bird.: Looks behind.	D DF A
2<	Fish.: It's not swimming.	D DF A
3∧	Butterfly.: Shape.	D DF A
4∧	Man head.	d DF Hd
5∨	Man head.	D DF Hd
2'47"		
IV		
1∧ 1'	Tiger.: 'Tiger is bending.	d FM A
2∧	Cow head.	d DF Ad

N11



3∨	Tree.	D FD Pl
4∧	Crow.: Sitting.	d DF A

## V

1∨ 20"	Arrow.	dd DF Ob
2∧	Hand.: The hand has no finger.	d DF Hd
3∨	Sciissors.	d DF Ob
4	Mountain.	d FD N
5∨	<i>Atshgir</i> (An instrument for catching fire).	d DF Ob
2'53"		

## VI

1∧ 40"	Wing.	D DF Ad
2∧	Pillar.	D DF Ob
3∧	Key.	dd DF Ob
4∨	Mountains.	dd FD N
5∧	Bird.: Sitting.	d DF A
2'59"		

## VII

1∨ 20"	Bird head.	d DF Ad
2∧	Ibex's horn.	d DF Ad
3<	Camel's head.: Holding up the head.	dd DF Ad
4	Ground.: With boundary (The outline of the blot). With corn growing.	D FD L
2'46"		

## VIII

1< 15"	Tiger.: Walking up.	D FM A
2∧	Tree.	D FD Pl
3∨	Horse's head.: Looking downwards.	D DF Ad
4∧	Flower.: It's a rose. Flower is arranged, (The lower part of the blot is) a stand.	D FC Pl
2'30"		

## IX

1< 30"	Man head.	D DF Hd
2<	Ibex's head.	D DF Ad
3	Tree.	d FD Pl
2'20"		

X

1√ 35"	Hand.: Is pushing.	dd M Hd
2	Bird.: Sitting.	D DF A
3	Bird.: Being hung, killed and pucked.	D DF A
4	Flower.: It's hape is more important.	D FD Pl
5√	Door.: Door is closed and knob is seen.	S DF Ob

N 13 Age. 28

I

1^ 45"	Crevasse.: Black part is ice.	S FD N
2^	Mountain.	D FD N
3^	Wolf's head.	d DF Ad
4	Crevasse.	dd(s) FD N
5√	Mountain top.	d FD N

II

1^ 40"	Pond.	S FD N
2√	Little town like Hispar.: (The subject denied the town and said) Only ground. Ground without boundary. (This subject does not turn the plate. He is watching intently).	dr FD L

III

1 45"	Moraine.: (No location).	D FD N
2	Sto (The tool for making fire in winter. But Salim doesn't know the tool.) (No location).	D DF Ob
3	Flower.: (Upper red.)	D CF Pl
4	Flower.: (Centre red.)	D CF Pl

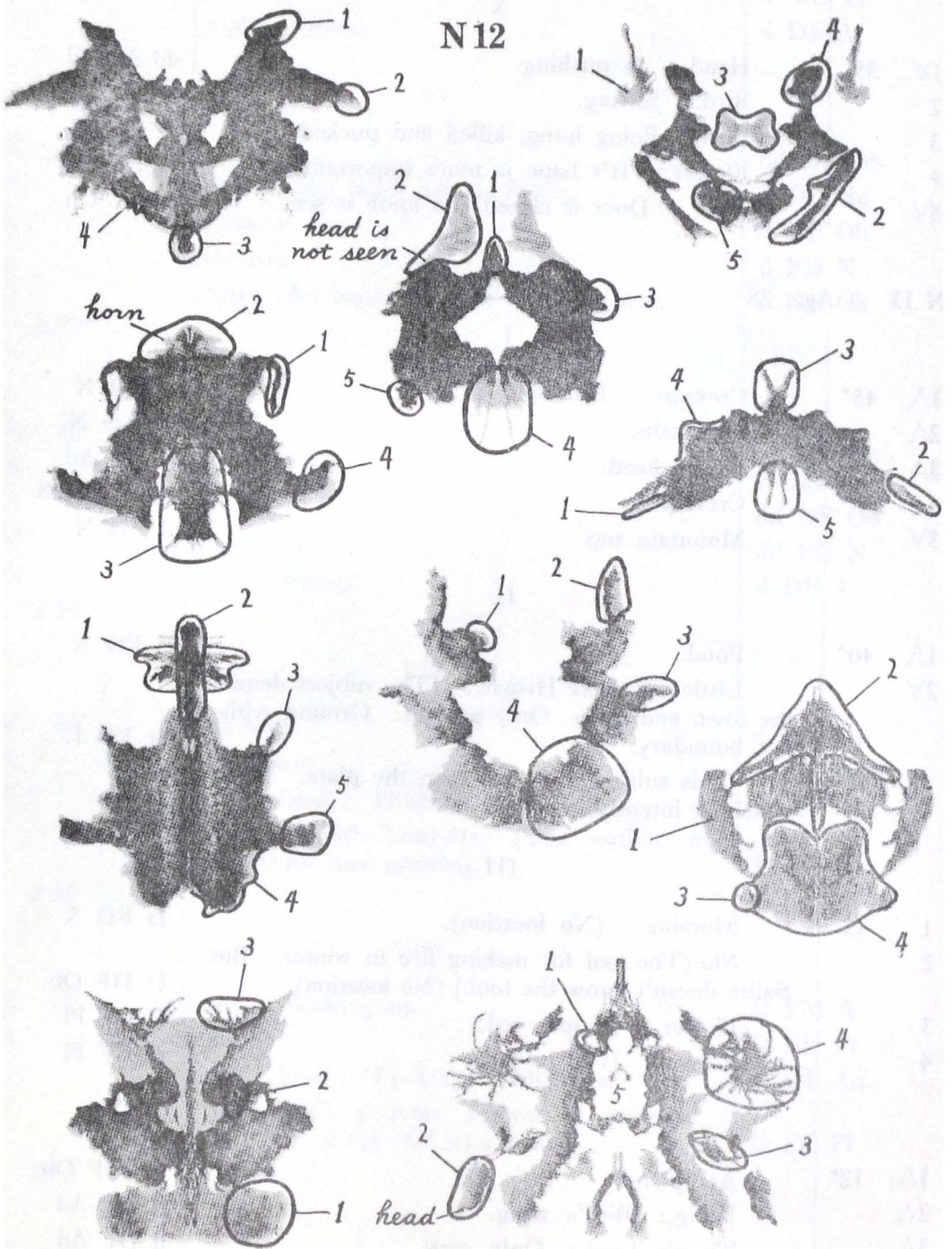
IV

1^ 12"	Aeroplane.	W DF Ob
2^	Wing.: Bird's wing.	d DF Ad
3^	Tiger's head.: Only ears.	d DF Ad
4	Mountain.	dd FD N

V

1.√ 1'15"	Stick,	dd DF Ob
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2√	Stick.	d DF Ob
3	Stick.	d DF Ob

VI

1	40"	Bungalow.: This is chimney of bungalow.	W DF Arch
2		Street.	d FD Geo
3		Valley.: No water.	D FD N

VII

1√	1'05"	House.: (The subject pointing the center space of the blot), in this we keep sheeps and goats.	Ws DF Arch
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VIII

1	20"	Tiger.: Walking.	D FM A
2		Garden.	D FD L

IX

1∧	2'10"	Green land.	D CF L
2		Human head.	D DF Hd
3∧		Wooden stick.	d DF Ob
		(The subject looks the cards dully. He seems to be absent-minded as if he would look at the cards all day long without concerning his situation.)	

X

1∧	1'45"	Flower.	D FD Pl
	3'		
2∧		Flower.: (Neglected).	
	4'		

N 14 Age. 20

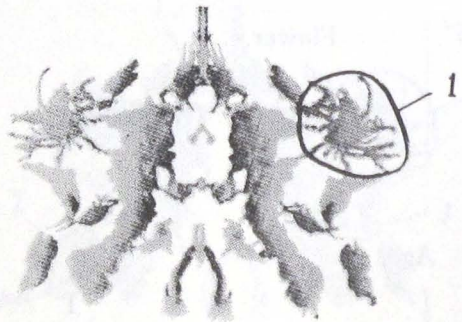
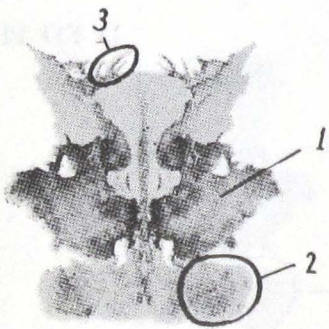
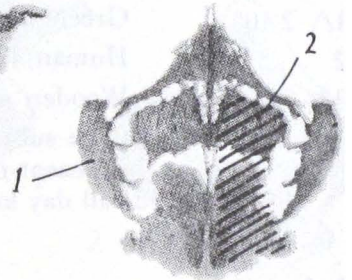
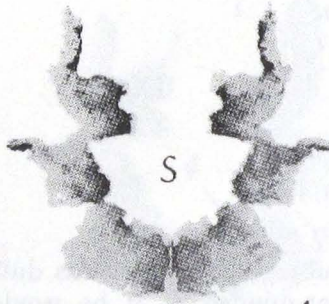
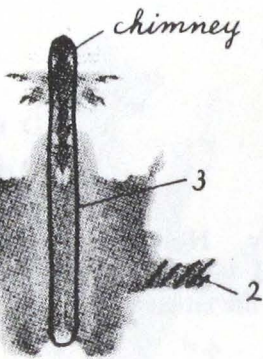
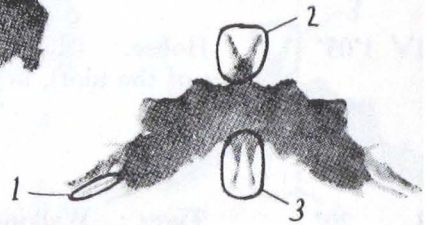
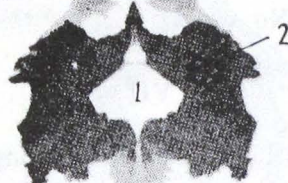
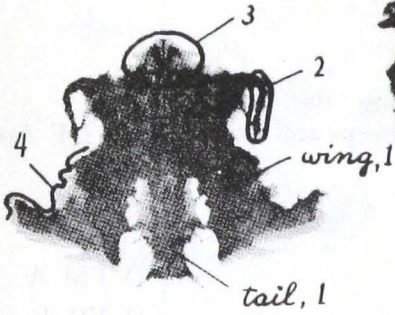
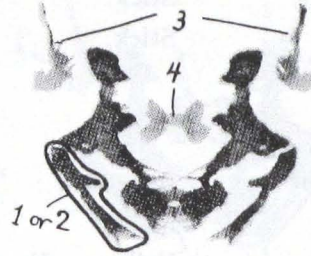
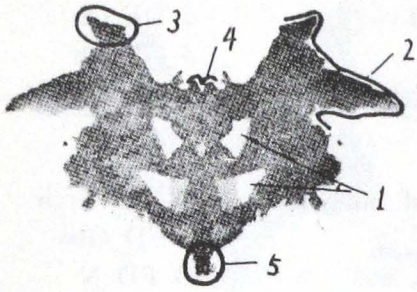
I

1∧	2'30"	Elephant's head.	d DF Ad
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II

1∧	5"	Camel's head.: Looking up.	D DF Ad
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N 13



2^	Horse's tail.	dd DF Ad
3v	Animal head.: Yak's head.	d DF Ad
4v	Camel's hump.	d DF Ad
5^	Udder of cow.	dd DF Ad

III

1^ 20"	Fish.: Not swimming.	D DF A
2^	Glass.	D DF Ob
3^	Man's head.	d DF Hd
4<	Bird.: Looking backwards.	D DF A
5v	Bird.: Sitting on the branch.	D DF A
2'52"		

IV

1^ 40"	Man's feet.	D DF Hd
2^	Handle of kettle.	d DF Ob
3v	Aeroplane tail.	d DF Ob
4v	Tree.	D FD Pl
2'35"		

V

1 20"	Butterfly.: Flying.	W FM A
2	Tool for holding fire.	d DF Ob
3	Hand.: Without fingers.	d DF Hd

VI

1v 40"	Leaf.	D FD Pl
2	Wing.	D DF Ad
3v	Valley.: Water is running.	D FD N

VII

1< 25"	Camel.: Looking up. Body is also seen.	dd DF A
2^	Camel.: Looking up. Body is also seen.	D DF A
3^	Garden: No boundary.	D FD L
4^	Valley.: Water is running.	d FD N
2'37"		

VIII

1< 10"	Tiger.: Walking up.	D FM A
--------	---------------------	--------

2√		Flower.: Colour first, only flower.	D CF PI
3^		Tree.	D FD PI

## IX

1√	40"	Fan.: Only shape.	D DF Ob
2		Deer's horn.	d DF Ad
3		Ground.: Like this green. No boundary.	D CF L

## X

1√	55"	Feet.	dd DF Hd
2√		Flower.: From colour.	D CF PI
3<		Mountain.	dd FD N
4^		Scissors.	D DF Ob
5√		Bird.: Sitting.	D DF A

## N 15 Age. 50

## I

1^	35"	Elephant's head.	d DF Ad
2^		Dog's head.	d DF Ad
3^		Deer's horn.	d DF Ad
4√		Bird's mouth.	dd DF Ad
5√		Cairn.	dd FD Ob

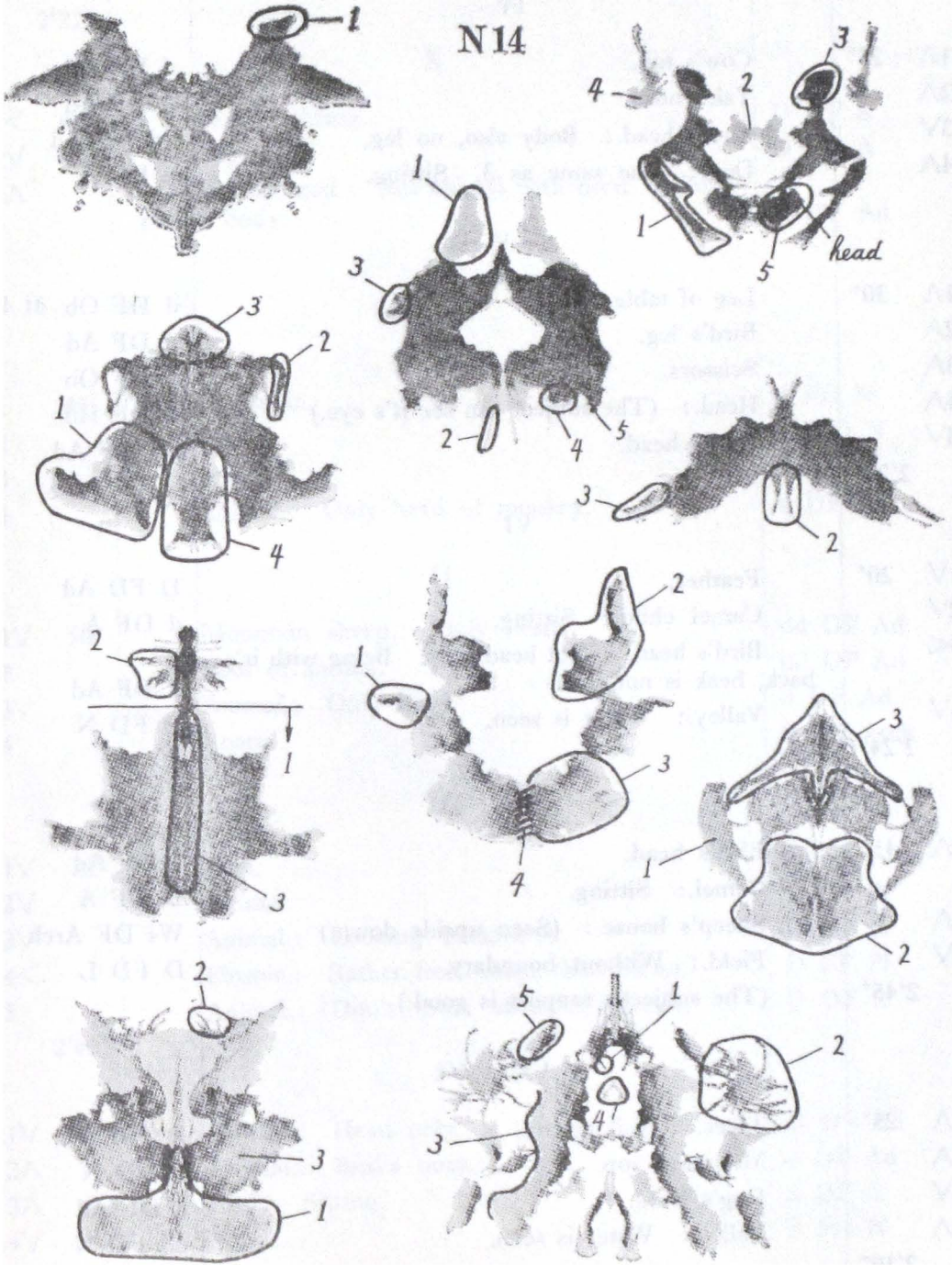
## II

1<	25"	Bird.: Head is cut.	D DF A
2<		Donkey's ear.	d DF Ad
3√		Tool for holding fire.	d DF Ob
4√		Valley.: Water is coming.	dd FD N
5√		Man's head.	d DF Hd
6√		Ox's horn.	dd DF Ad

## III

1^	20"	Bird.: Looking backwards.	D DF A
2^		Cow.: (Turned the card) sitting.	D DF A
3^		Man's head.	d DF Hd
4		Fish.: Not swimming.	D DF A

N14



## IV

1^	25"	Cow's tail.	d DF Ad
2^		Yak's nose.	d DF Ad
3V		Bird's head.: Body also, no leg.	dd DF Ad
4^		Dog.: The same as 3. Sitting.	d DF A

## V

1^	30"	Leg of table.	d DF Ob
2^		Bird's leg.	d DF Ad
3^		Scissors.	d DF Ob
4^		Head.: (The subject can see it's eye.)	d DF Hd
5V		Bird's head.	dd DF Ad
	2'26"		

## VI

1V	20"	Feather.	D FD Ad
2V		Camel child.: Sitting.	d DF A
3<		Bird's head.: Not head only. Being with it's back, beak is not seen.	d DF Ad
4V		Valley.: Water is seen.	D FD N
	2'24"		

## VII

1^	45"	Bird's head.	d DF Ad
2		Camel.: Sitting.	D DF A
3^		Sheep's house.: (Seen upside down.)	Ws DF Arch
4V		Field.: Without boundary.	D FD L
	2'45"	(The subject's rapport is good.)	

## VIII

1^	25"	Tiger.: Walking up.	D FM A
2^		Mountain top.	D FD N
3V		Dog's head.	d DF Ad
4^		Valley.: Water is seen.	dd FD N
	2'19"		

## IX

1V	35"	Animal.: Sitting.	D DF A
2<		Man's head.	D DF Hd

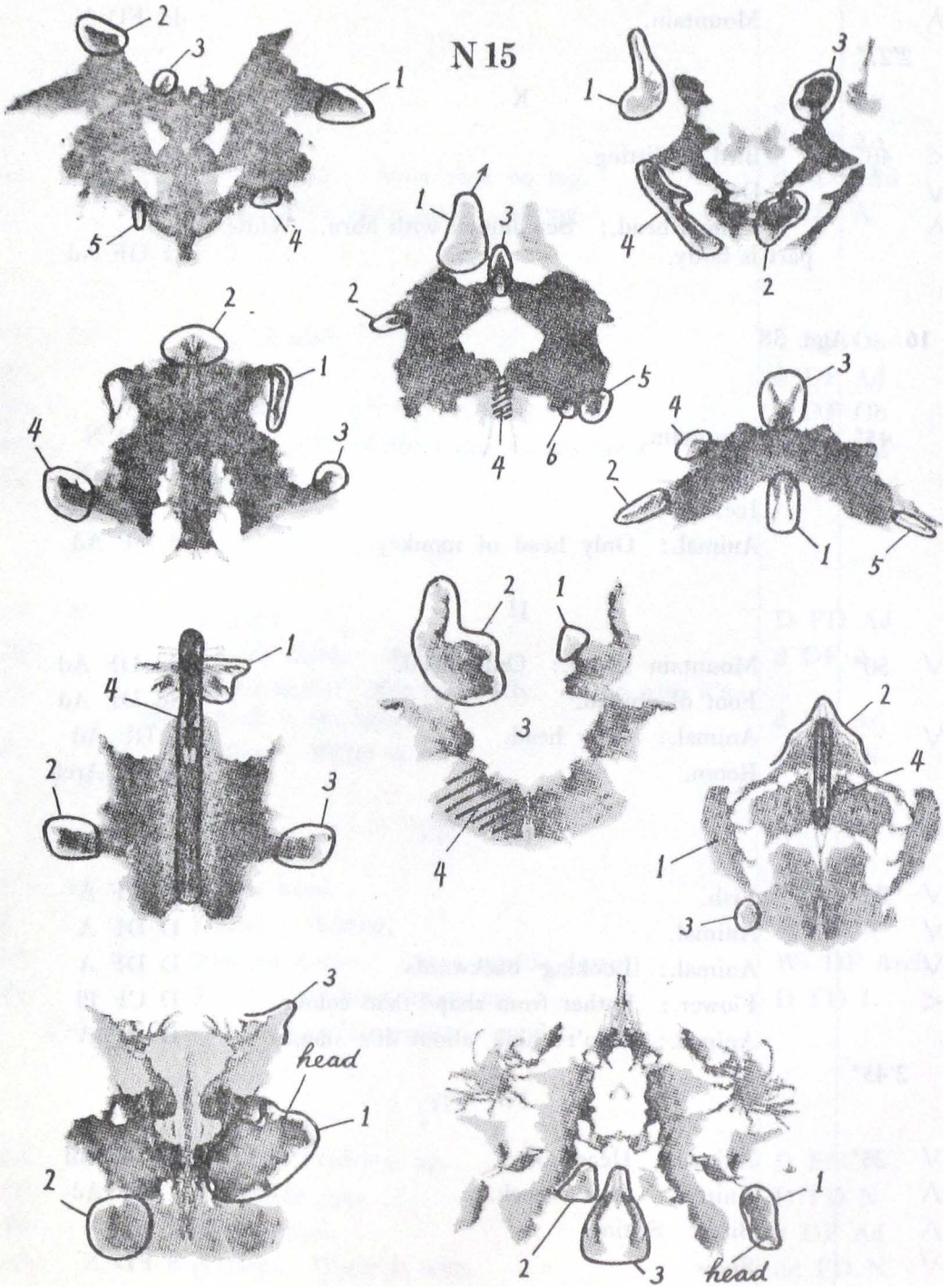
3^		Mountain.	dd FD N
	2'27"		
X			
1<	40"	Bird.: Sitting.	D DF A
2∨		Dog.	D DF A
3^		Animal head.: Sea animal with horn. White part is body.	D DF Ad

N 16 Age. 38

I			
1	45"	Mountain.	d FD N
2		Ice.	dr FD N
3		Ice.	S FD N
4		Animal.: Only head of monkey.	d DF Ad
II			
1∨	50"	Mountain sheep.: Only head.	dd DF Ad
2		Foot of animal.	dd DF Ad
3∨		Animal.: Only head.	d DF Ad
4		Room.	S FD Arch
III			
1∨	25"	Fish.	D DF A
2∨		Animal.	D DF A
3∨		Animal.: Looking backwards.	D DF A
4<		Flower.: Rather from shape than colour.	D CF Pl
5		Animal.: Don't think about it's name.	D DF A
	2'45"		
IV			
1∨	25"	Animal.: Head only.	D DF Ad
2^		Animal.: Bird's neck.	d DF Ad
3^		Bird.: Sitting.	d DF A
4∨		Snow.	S FD N
V			
1^	30"	Animal.: Only head.	d DF Ad



N 15





2V	Animal.: Sitting.	d DF A
3V	Mountain.	dd FD N
4^	Mountain.	dd FD N
5V	Mountain.	d FD N
6^	Tree.	dd FD Pl

VI

1^ 25"	Mountain.	dd FD N
2^	Flowers, growing on the mountain.	D FD Pl
3^	River bank.	dd FD N
4^	Animal.	d DF A
5V	Ice.	d FD N

VII

1^ 30"	Animal.	d DF A
2V	Lake.	S FD N
3^	Glacial ice.: Black part. From colour.	d FD N
4^	Stone.	D FD N
5V	Animal.: River animal, like tortoise.	D DF A

VIII

1< 5"	Lion.: Standing, and holding something.	D FM A
2V	Mountain.	dd FD N
3V	Human face.	d DF Hd
4^	Snow.	S FD N
5V	Mountain.	dd FD N
6V	Glacial ice.: From colour.	dd CF N

IX

1^ 35"	Mountain.	d FD N
2<	Glacial ice.: From colour only.	D CF N
3^	Stone.: From the colour. (Is there any stone of such colour?) Yes.	D CF N
4^	Tree.	D FD Pl

X

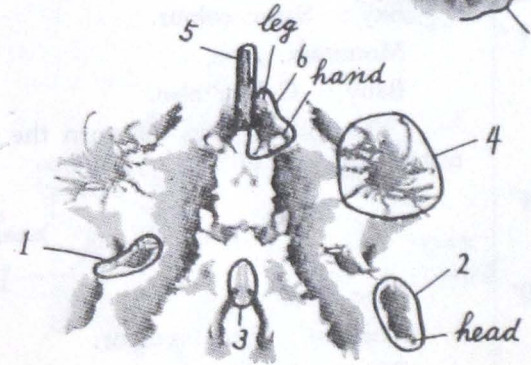
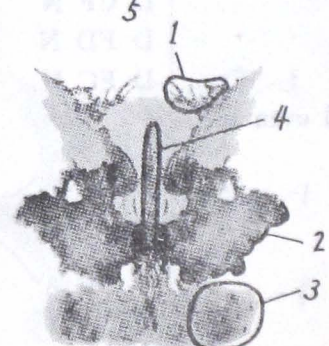
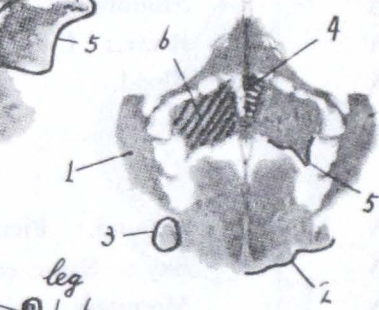
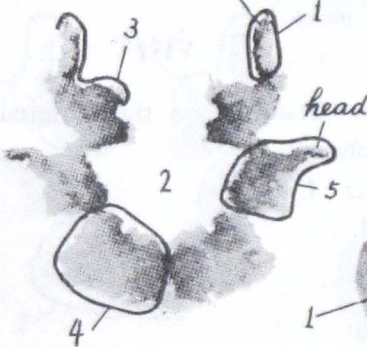
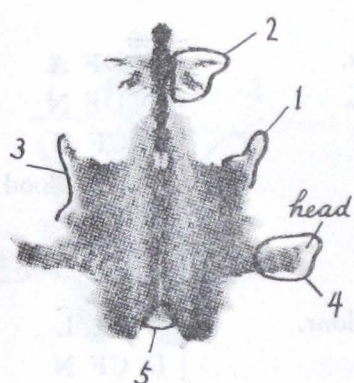
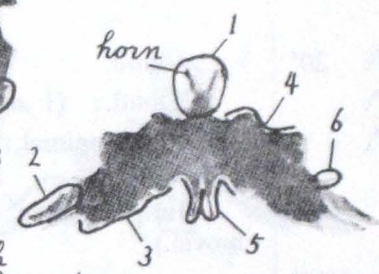
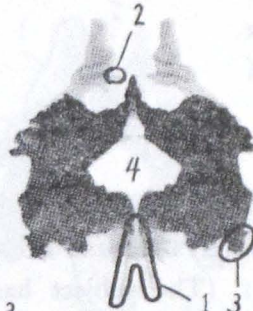
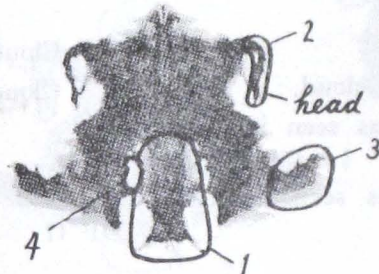
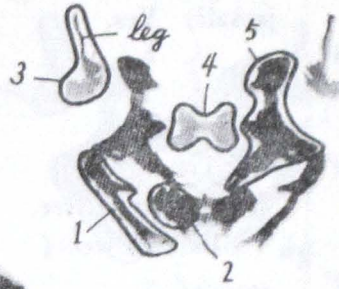
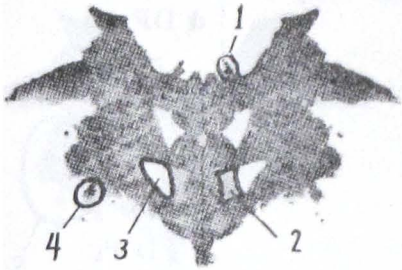
1V 25"	Stag.: Standing. Same colour.	D FC A
2<	Animal.: Same colour. Rat.	D FC A

3√	Human being.: Standing.	D M H
4√	Flower.: Shape.	D FD Pl
5√	Ibex.: (Confused into other idea.)	
6√	Human being.: Standing, not dancing.	D M H

## N 17 Age. 25.

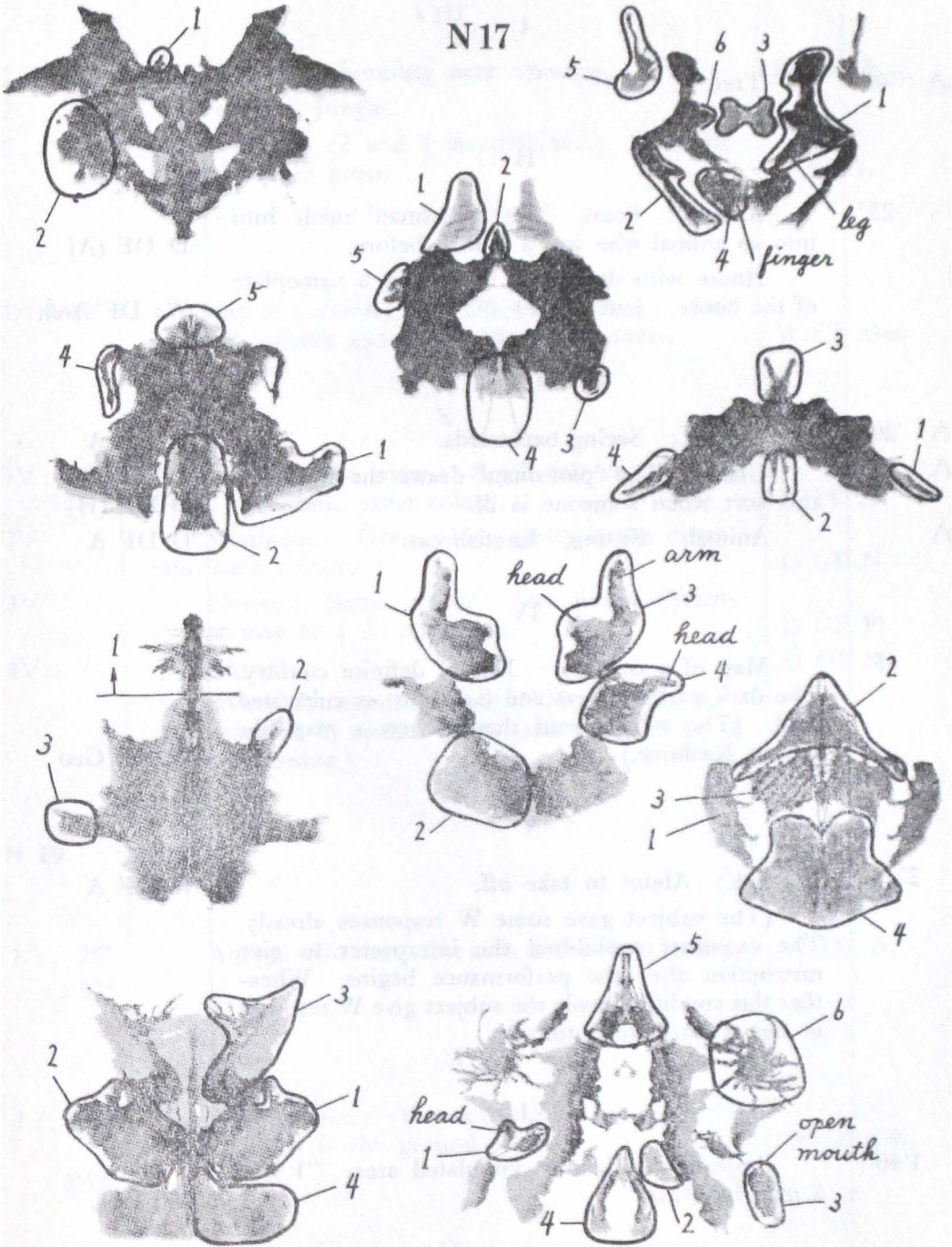
I		
1^ 1'10"	Mountain.	d FD N
2^	Cloud.: Shape.	d FD Cloud
II		
1^ 15"	Blood.	D CF Blood
2^	Monkey.: Head.	d DF Ad
3√	Animal.: Head of bear.	d DF Ad
4^	Blood.	D CF Blood
5^	Cloud.: Only shape.	d FD Cloud
III		
1^ 25"	Human.: Standing, whole body.	D M H
2^	Fish.: Shape.	D DF A
3^	Pomegranate.: Colour is first determinant.	D FC Pl
4^	Foot of man.: This is finger.	D DF Hd
5^	Hen.: It's not looking backwards.	D DF A
6	Mountain.	dd FD N
IV		
1 30"	Bear's foot.	(D DF Ad)
2	Bear's tail.	(D DF Ad)
3	Bear.	W DF A
4	Bear's arm.	(d DF Ad)
5	Bear's head.	(d DF Ad)
2'27"		
V		
1 25"	Jackal's arm.	d DF Ad
2	Jackal's foot.	d DF Ad
3	Jackal's head.	d DF Ad

N 16



4	Jackal's tail.: (Do you see a whole body of jackal?) Yes.	d DF Ad
1'35"		
	VI	
1^ 20"	Tree.	D FD Pl
2^	Branch of tree.	dd FD Pl
3^	Bark of tree.	d FD Pl
1'22"		
	VII	
1^ 20"	Cloud.	D C'F Cloud
2^	Cloud.: (1 and 2) Colour is like cloud.	D C'F Cloud
3^	River animal.: (The subject has seen it in Karachi.)	D DF A
4	Jungle man.: (The subject has seen it in movie.)	D DF H
1'27"		
	VIII	
1^ 20"	Lion.: Standing on the mountain.	D DF A
2^	Mountain.	D DF N
3^	River.: Colour.	D CF N
4^	Blood.	D CF Blood
1'36"		
	IX	
1^ 15"	Ground.: Piece of land. Same colour.	D CF L
2^	Sky.: Same colour.	D CF N
3^	Mountain.	D FD N
4<	Baby.: Colour also. (The subject does not turn the card even the tester direct to do so.)	D FC H
1'14"		
	X	
1^ 20"	Baby fish.	D DF A
2v	Chicken.: Same colour.	D FC A
3v	River animal.	D DF A
4^	Animal: Donkey's head and leg.	D DF A
5^	Mountain.	D FD N
6^	Cloud.: Form.	D FD Cloud,
2'		

N17



N 18 Age. 25

## I

1/\ 40" Tree. W FD PI

## II

1 25" Animal.: Beast. The 'piousman' made him into an animal who was a human before. D DF (A)

2 House with decoration.: This is a nameplate of the house. (cut off W) Ws DF Arch

## III

1/\ 20" Animal.: Seeing backwards. D DF A

2/\ Giant.: The 'piousman' draws the figure of this sort when someone is ill. D DF (H)

3/\ Animal.: Sitting. English cat. D DF A

## IV

1 45" Map of a country.: Not of definite country. The dark part is forest and light part is cultivated land. (The subject said that he saw a map like this in Kashmir.) W KF Geo

## V

1 2' Bat.: About to take off. W DF A

(The subject gave some W responses already. The examiner prohibited the interpreter to give instruction after the performance begins. Whether this condition made the subject give W responses or not is worth to inquiry.)

## VI

1 1'40" Projection of land.: Populated area. "I saw a map like this." W FD L

## VII

1 35" Mountain land.: (The subject does not turn the card without instruction. He gaze the card without saying no more response.) Ws FD N

VIII

- |   |     |   |        |
|---|-----|---|--------|
| 1 | 10" | Leopard.: Jumping over crevasse.                              | D FM A |
| 2 |     | Forest.: Jungle.  |        |
| 3 |     | Ground.: (2 and 3 is combined.) Over the ground jungle grows. | D FC L |

IX

- |    |       |   |          |
|----|-------|---|----------|
| 1^ | 1'15" | Map of a country with different colours.: The different colours show the different countries. | W CF Geo |
|----|-------|---|----------|

X

- |    |     |   |         |
|----|-----|---|---------|
| 1V | 60" | Animal in the snow.: Small animal, saw it in Burzil mountain, same colour.  | D FC A  |
| 2V |     | Mountain.: Grass which grows in the mountain, such colour.  | D CF N  |
| 3V |     | Flower.: Same colour. Any flower (Whatever it may be I do not care).  | D CF PI |
| 4V |     | Animal.<br>(When the examiner handed the card, the subject received it upside down, and he gaze on it without turning.) | D DF A  |

N 19 Age. 27

I

- |    |              |   |        |
|----|--------------|---|--------|
| 1^ | 25"<br>1'52" | Animal with many feet seen in the water spring. | W DF A |
|----|--------------|---|--------|

II

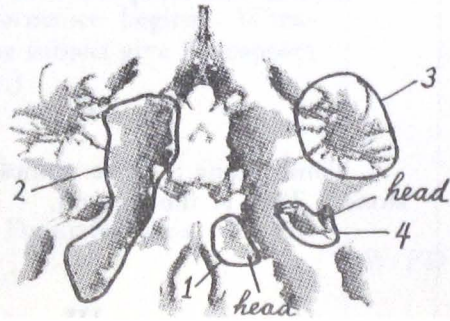
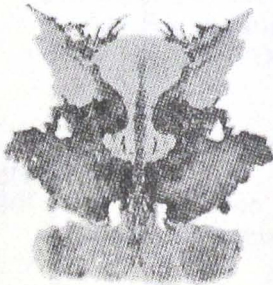
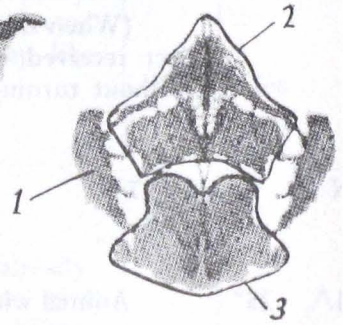
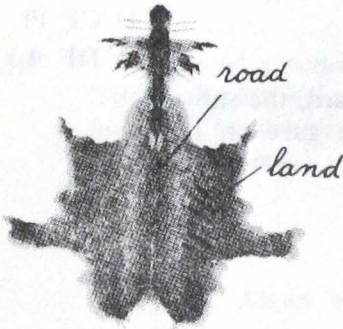
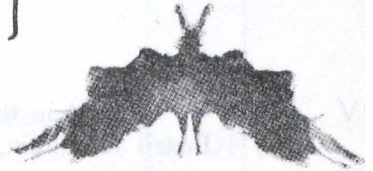
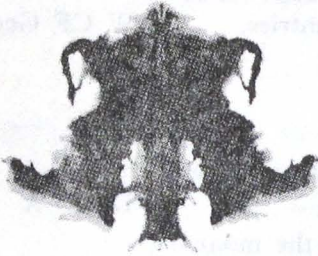
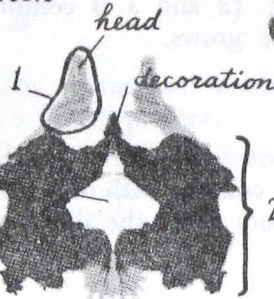
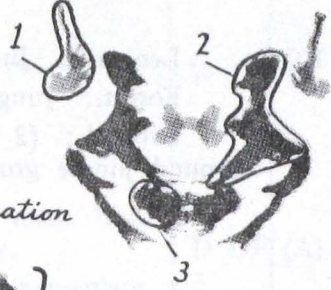
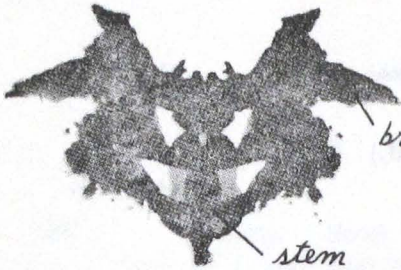
- |     |              |   |         |
|-----|--------------|---|---------|
| 1.^ | 15"<br>2'32" | Tomb stone.: Two stones, top of the tomb stone. This is the ground. | W DF Ob |
|-----|--------------|---|---------|

III

- |   |     |                           |          |
|---|-----|---------------------------|----------|
| 1 | 15" | Wolf.: Standing.          | D DF A   |
| 2 |     | Cub.: Baby wolf. Sitting. | D DF A   |
| 3 |     | Cub.                      | dd DF A  |
| 4 |     | Nipple.                   | dd DF Ad |



N 18





IV

1 25" Bear.: Standing. W DF A  
2'

V

1^ 40" Butterfly.: Sitting. W DF A

VI

1^ 1' Flower. W FD PI  
2^ A part of flower.: (being included in 1.)

VII

1^ 30" Mountain. W FD N  
2 Snow. dd FD N  
3 Icicle. d FD N  
4 Frog's leg. d DF Ad  
2'53"

VIII

1^ 25" Monkey is climbing on tree. D FM A  
2^ Black fruit, black berry.: Not this colour. D FD PI

IX

1^ 30" These are all different ground each other. In the middle, canal.: Here is the top. Here grows grass in summer. Plants are dead in winter. W CF L  
2^ Woman's head. D DF Hd  
2'52"

X

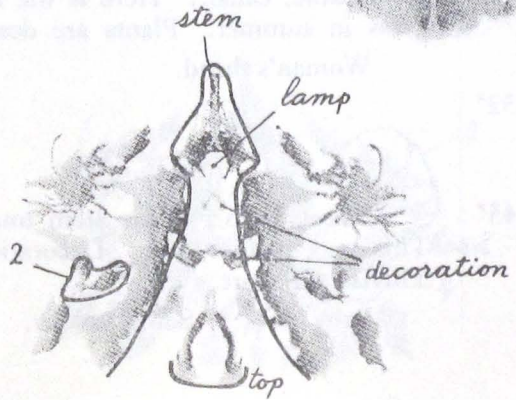
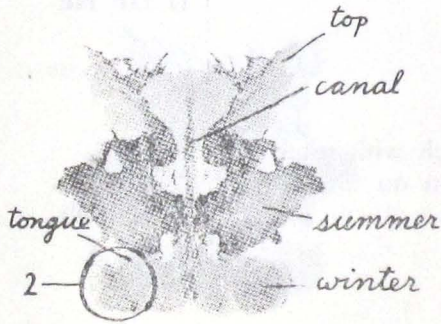
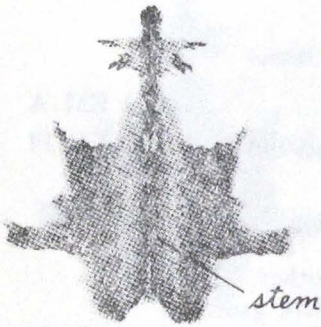
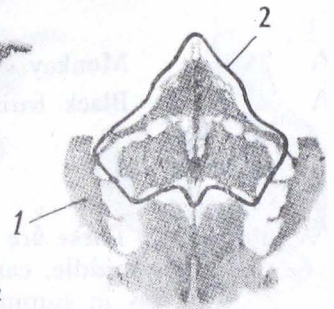
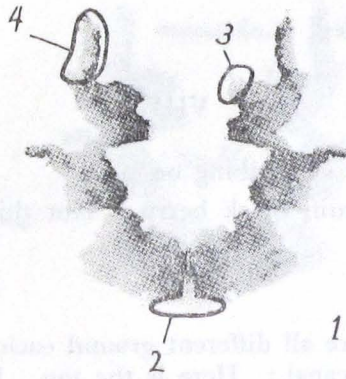
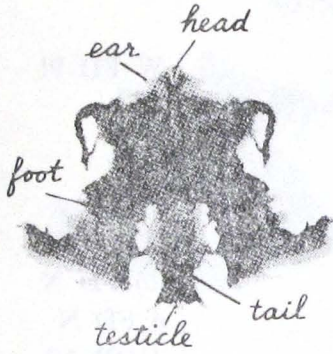
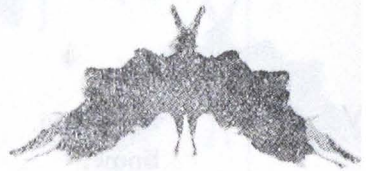
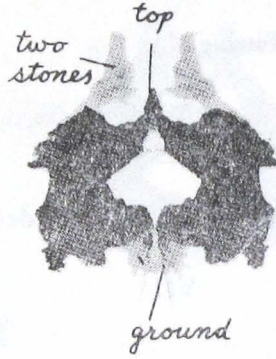
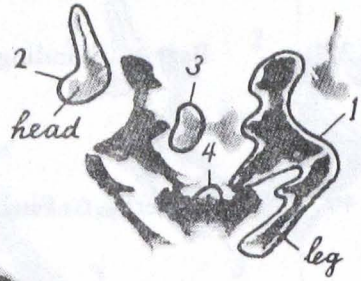
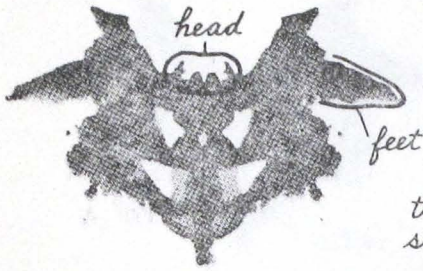
1^ 45" Street lamp.: This stem touch with ground. This part is the lamp. Decoration on the lamp. This is top part. dr DF Ob  
2 Baby ibex.: Same colour. D FC A

N 20 Age. 26

I

1< 25" Glacier. dr FD N  
2< Mountain. d DF N

N 19



3^	Hand.	d DF Hd
4^	Crevasse.	S FD N

II

1^	20"	Man's foot.	D DF Hd
2^		Arrow head.	d DF Ob
3^		Pond.	S FD N
4^		Glacier.	D FD N
5v		Cairn.	D FD Ob
6v		Ice fall.	d FD N

III

1^	51"	Man's head.	d DF Hd
2^		Fish.: Sitting.	D DF A
3<		Bird.: Seeing backward.	D DF A
4v		Butterfly.: Shape.	D DF A
5<		Mountain.	D FD N

IV

1^	25"	Like a roof of bungalow.	D DF Arch
2v		Tree.	D FD Pl
3v		Mountain.	D FD N
4<		Glacier.: Shape.	D FD N
	2'49"		

V

1^	20"	Tree. (cut off W.)	W FD Pl
2^		Tool for holding fire.	d DF Ob
3^		Bird's feet.	d DF Ad
4<		Arm.	d DF Hd
	2'24"		

VI

1^	15"	Tree.	D FD Pl
2<		Mountain.	dd FD N
3<		Mountain top.	d FD N
4v		<i>Nallah</i> (valley).: Water is coming.	D FD N
	2'03"		

## VII

1V	20"	Jungle.: No boundary, but shape.	D FD L
2<		Mountain.	dd FD N
3<		Camel.: Sitting.	D DF A
4V		<i>Nallah</i> with water.	d FD N

## VIII

1^	15"	Tiger.: Pulling.	D FM A
2^		Tree.	D FD PI
3V		Flower.: Colour is first determinant.	D CF PI
	1'44"		

## IX

1V	25"	Jungle.: From shape, not such colour.	D FD L
2^		Mountain.	D FD N
3<		Land.: With green grass, no boundary.	D CF L
4		Crevasse.	D FD N
	1'52"		

## X

1^	15"	Tree.	D FD PI
2^		Bird.: Not flying, same colour.	D FC A
3^		Bird.: Killed and stripped off the skin, shape.	D DF A
4<		Tree.: Shape. Tree, cut down only.	D FD PI
5V		Ibex's head.	D DF Ad
6V		Tree.	D FD PI

## N 21 Age. 29

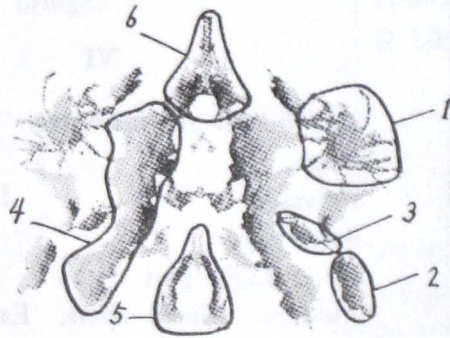
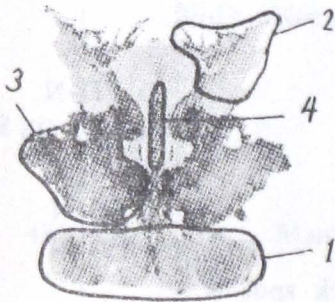
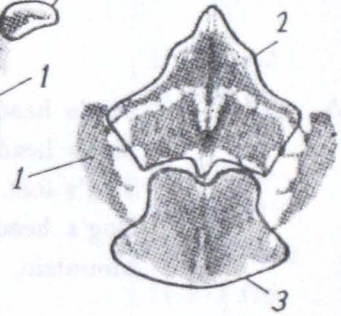
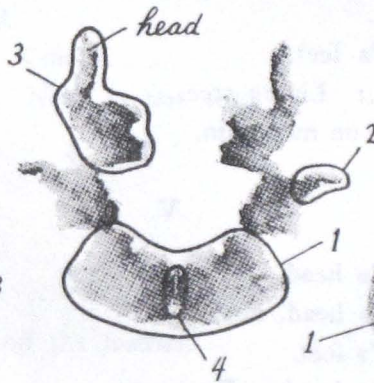
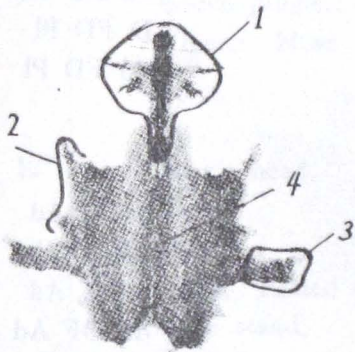
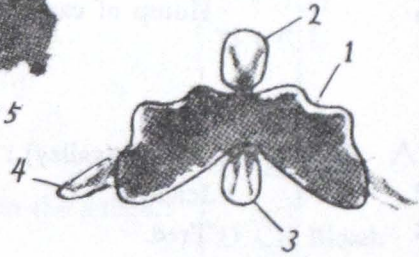
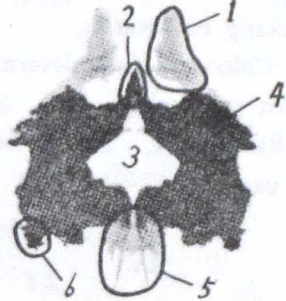
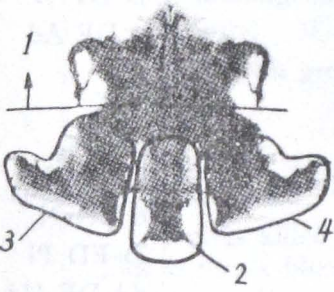
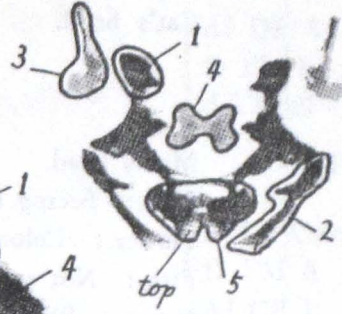
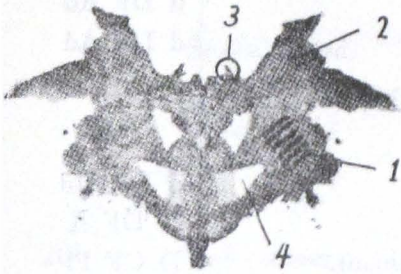
## I

1	1'15"	Tree, with fruits.	Ws FD PI
2		Star.	dd FD N

## II

1^	20"	Garden.: Only black part. Shape.	W FD L
2^		Arrow's head.: Only head.	d DF Ob
3^		Dog.	D DF A
4^		Pond.	S FD N
5V		Bird's feet.: Many. Each protrusion is feet.	dd DF Ad

N 20



6√		Tiger's head.	d DF Ad
7√		Cat's head.	d DF Ad

## III

1∧	17"	Man's head.	d DF Hd
2		Bird.: Seeing backwards.	D DF A
3		Flower.: Colour is first determinant.	D CF Pl
4		Fish.: Not swimming.	D DF A
5		Insect.: Black part. Sitting on the ground.	D DF A
6		Hump of camel.	d DF Ad

## IV

1∧	15"	<i>Nallah</i> (valley).: Water is coming.	D FD N
2		Icicle.	d FD N
3		Tree.	D FD Pl
4		Man's feet.	dd DF Hd
5		Tree.: Living tree.	D FD Pl
6		Plant on mountain.	dd FD Pl

## V

1∧	20"	Stag's head.	d DF Ad
2		Bird's head, neck.	dd DF Ad
3		Stag's feet.	d DF Ad
4		Dog's head.: Ear, nose.	dd DF Ad
5		Mountain.	d FD N

## VI

1	30"	<i>Nallah</i> (valley) with water.	D FD N
2		Cairn.	dd FD Ob
3		Crevasse.	d FD N
4		Stone sheet.	d FD N
5		Ice.: Light part.	d FD N
6		Flowers.: Small spots. Each black spot is flower.	dd FD Pl

## VII

1∧	40"	Hen's head.	d DF Ad
----	-----	-------------	---------

2^	Snake's head.	dd DF Ad
3^	Garden.: Shape, no boundary.	D FD L
4^	Tree body.	d FD Pl

VIII

1	20"	Red (colour.)	D Cn Colour
2		Tiger.: Climbing.	D FM A
3		Green land.: Colour.	dd CF L
4		Flowers.: White parts, shape.	S FD Pl
5		Land with green grass.: Colour.	D CF L

IX

1^	20"	Ibex's head.	D DF Ad
2^		Ibex is killed, blood is coming in the <i>nallah</i> .: This is ibex's blood.	D CF Blood.
3^		Green jungle.: Colour.	D CF L
4^		Tiger.: Head. Neck is not seen.	d DF A

X

1^	12"	Ibex's head.	D DF Ad
2^		Tree.	D FD Pl
3^		Hen.	D DF A
4^		Hen.: Peeled off the feather.	D DF A
5^		Tree stand.	D FD Pl
6^		Bridge.	D DF Arch
7^		Foundation-stone of bridge.	D FD Ob
8^		Bird.: Not flying.	D DF A

N 22 Age. 24

I

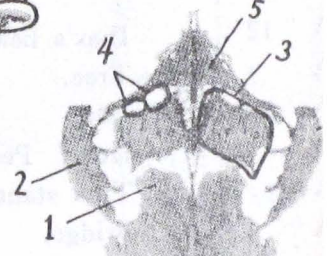
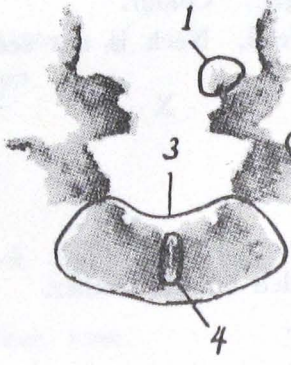
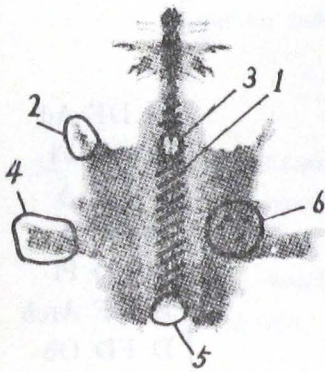
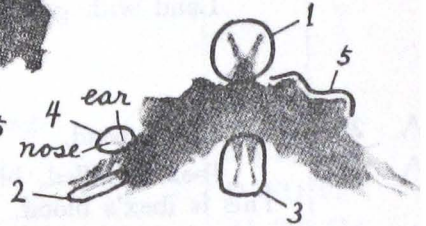
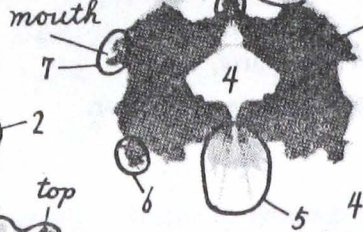
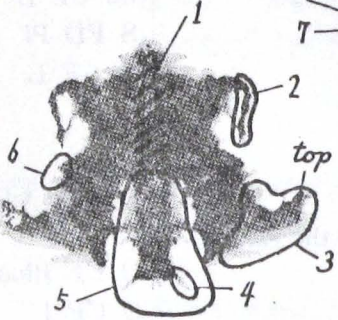
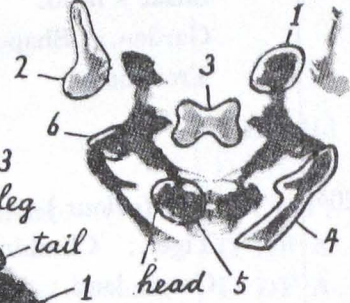
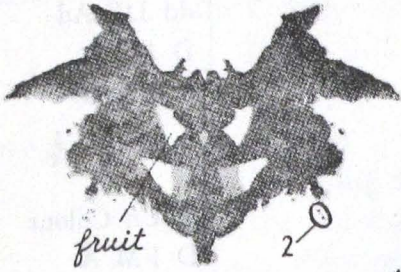
1^	45"	Foot.: Man's foot.	d DF Hd
2^		Hand.	d DF Hd
3		Crevasse.	dd FD N
4		Ice crevasse.	S FD N
5		Head.	dd DF Hd

II

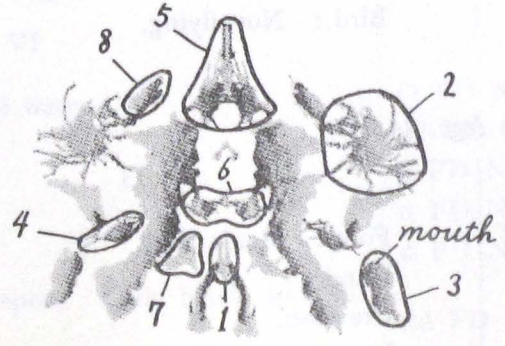
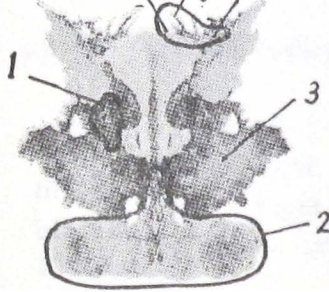
1^	25"	Head of arrow.	d DF Ob
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N21



4 tail leg head





2^	Tiger.: Only head.	D FD Ad
3^	Pond.	S FD N
4^	Icicle.	dd FD N
5^	Dog's head.	d DF Ad
6v	Man's head.	d DF Hd

2'03"

III

1	20"	Man's head.	d DF Hd
2		Bird.: Seeing backwards.	D DF A
3v		Fish.: Not swimming.	D DF A
4		Butterfly.: Shape.	D DF A
5		Dog.: Sitting.	D DF A

2'03"

IV

1^	20"	Tree.	W FD Pl
2^		Hole.	S FD N
3^		Branch.	dd FD Pl
4^		Man's neck.	d DF Hd
5^		Dog.: Sitting.	d DF A
6^		Mountain.	dd FD N
7^		Gate.: Natural gate.	dd FD N
8v		Ox's head.	dd DF Ad

V

1^	15"	Ibex's head.	d DF Ad
2<		Arm.	d DF Hd
3^		Hump.	d DF Ad
4^		Back.	dd DF Ad
5^		Tail.	dd DF Ad
6^		Feet.	d DF Ad
7^		Nipple.: Human's.	dd DF Hd

2'17"

IV

1^	17"	Man's head.	d DF Hd
2^		Wing.	D DF Ad
3<		Mountain	d FD N
4<		Crevasse.	dd FD N

5^	Mountain top.	dd FD N
6^	Jungle.	D FD L
7^	<i>Nallah</i> (valley) with water (white part).	D FD N

2'45"

## VII

1^ 25"	Camel.: Sitting.	D DF A
2^	Snake's head.	dd DF Ad
3^	<i>Nallah</i> .	d FD N
4^	Jungle.: With boundary, from shape. (The examiner wondered how the subject could have a concept of jungle from shape of the blot.)	D FD L
5^	Crevasse.	dd FD N

1'42"

## VIII

1^ 8"	<i>Nallah</i> with water.	dd FD N
2^	Mountain top.	dd FD N
3^	Tiger.: Going.	D FM A
4^	Dog.: Only head.	d DF Ad
5^	Camel's head.	d DF Ad
6	Snow.	S FD N
7	Mountain.	dd FD N
8	Ox's feet.	dd DF Ad
9	Red (colour).	D Cn Colour

## IX

1^ 25"	Man's head.	D DF Hd
2^	Ibex's head.	dr DF Ad
3^	Tiger.: Dead.	d DF A
4^	Gate.: Natural.	dd FD N
5^	<i>Nallah</i> with water.	D FD N
6^	Cairn.	dd FD Ob
7^	Snow.	S FD N

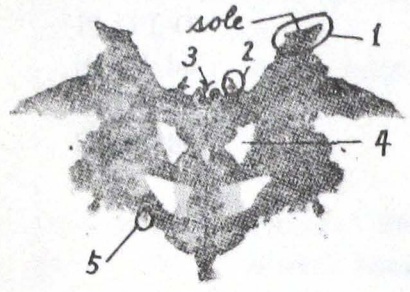
## X

1^ 10"	Ibex's head.	D DF Ad
2<	Stag.	D DF A
3<	Bird.: Not flying, with such colour.	D DF A
4^	Tree stand.	D FD Pl

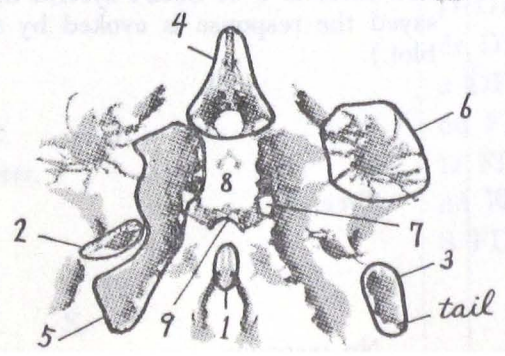
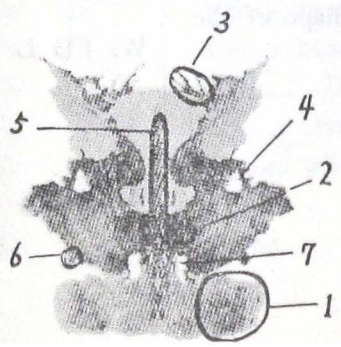
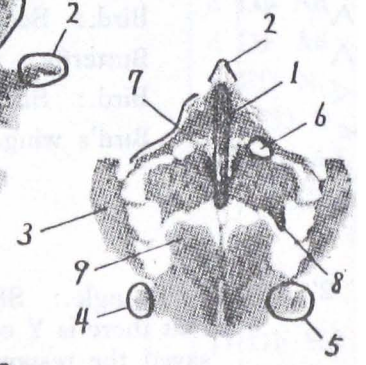
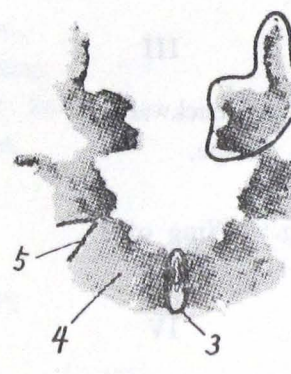
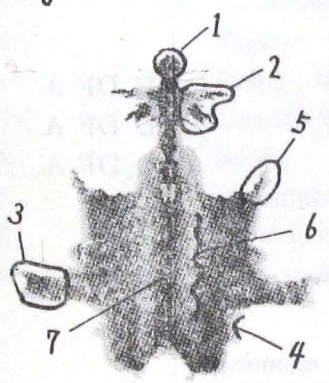
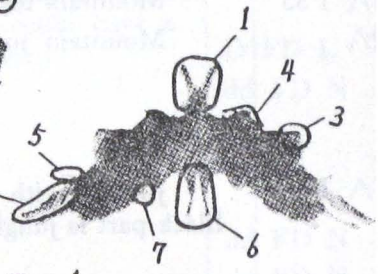
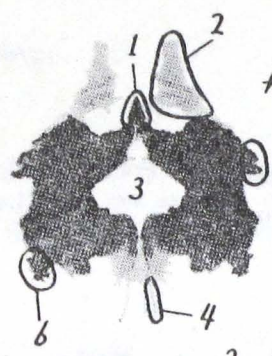
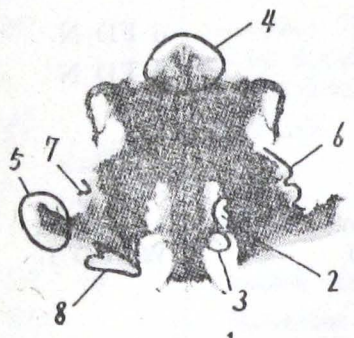
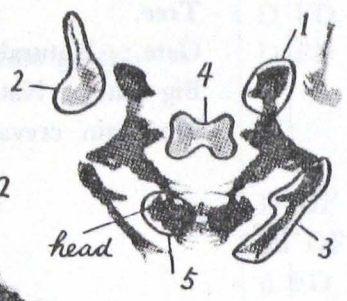
5V	Body of tree.: Not such colour.	D FD PI
6V	Tree.	D FD PI
7V	Gate.: Natural gate.	dd FD N
8V	Big gate.: Natural gate.	dr FD N
9V	Mountain crevasse.	dd FD N

N 23 Age. 30

I		
1^ 1'35"	Mountain top.	d FD N
2^	Mountain top.	d FD N
II		
1^ 1'35"	Jungle with pond.: Jungle, from shading. Black part is jungle, center space is pond.	Ws FD L
III		
1^ 7"	Bird.: Seeing backwards.	D DF A
2^	Butterfly.: Shape.	D DF A
3<	Bird.: Sitting.	D DF A
4<	Bird's wing.: Wing of 3.	—
2'07"		
IV		
1 2'	Jungle.: Shape. (It seems to the examiner that there is Y of Beck's system though the subject said the response is evoked by the shape of the blot.)	Ws FD L
V		
1< 1'20"	Tree.	W FD PI
VI		
	No response.	
VII		
1 1'	Mountain and crevasse and snow.	Ws FD N



N 22



VIII

Horse's neck.

dd DF Ad

IX

Green grass.: Colour.

D CF L

*Nallah* (valley): Water is seen.

D FD N

Grass land.: Colour.

D CF L

Mountain.: Such colour.

D FD N

X

Dog.: Sitting.

D DF A

1

I

Mountain top.

d FD N

Foot.

d DF Hd

Snow.

S FD N

Crevasse.

dd FD N

Fist.

d DF Hd

Arrow.

dd DF Ob

Stone.

dd FD N

II

Arrow.

dd DF Ob

Hen.

D DF A

Arrow head.

d DF Ob

Snow.

S FD N

Black stone.

D C'F N

Yak mouth.

d DF Ad

III

Camel.: This part is back (D5).

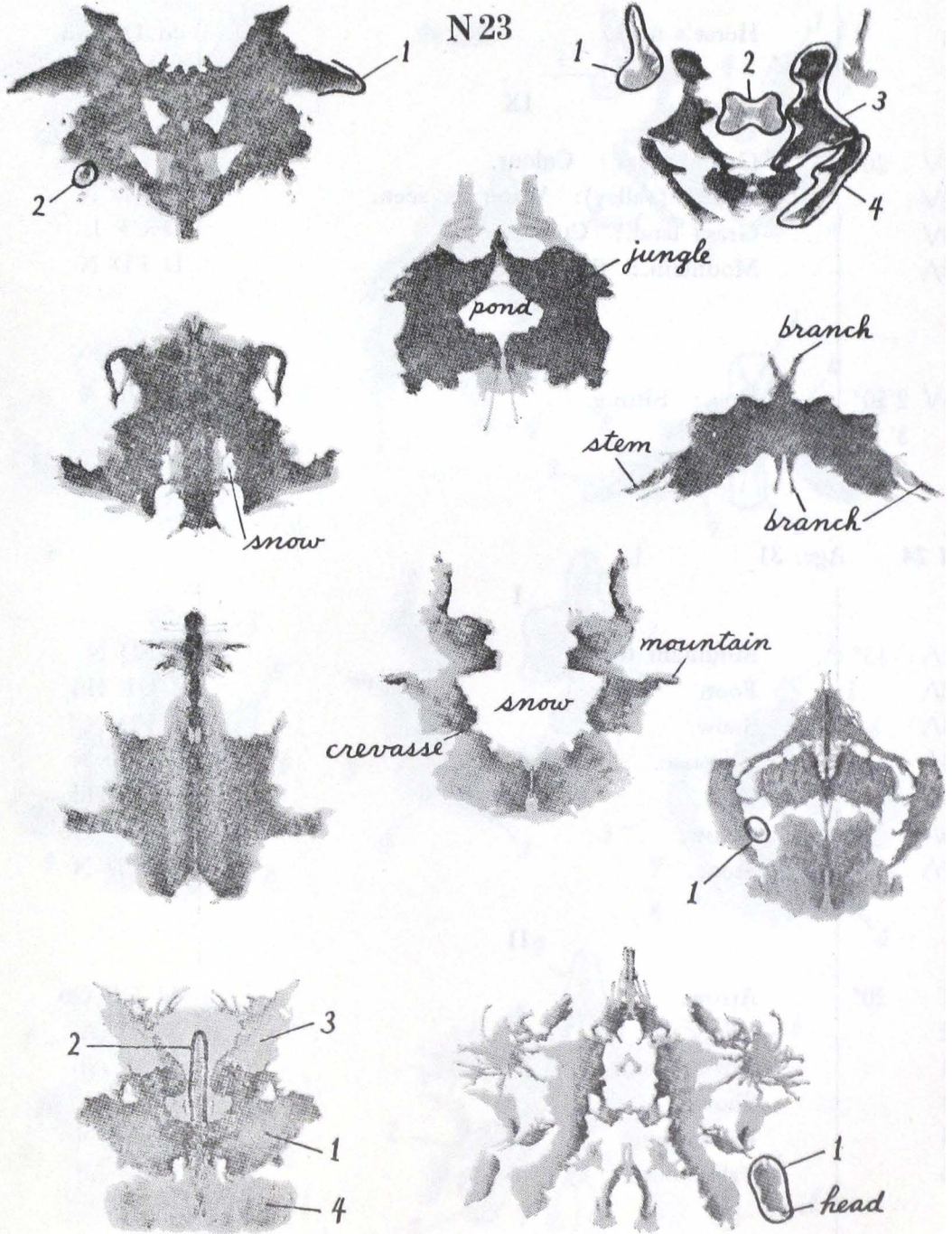
D DF A

Bird.: Seeing backwards.

D DF A

Glass.

D DF Ob



4^	Fish.: Not swimming.	D DF A
5√	Stone.	D FD N

IV

1	15" Arm.	d DF Hd
2	Bone.	D FD Hat
3	Feet.	D DF Hd
4	Leg.	D DF Hd
5	Snow.	S FD N
6	Little branch.	dd FD Pl
7√	Dog's teeth.	dd DF Ad

V

1^	25" Dog.	D DF A
2^	Wing.	D DF Ad
3^	Mountain.	d FD N
4^	Hand.	d DF Hd
5√	Leg.: Human.	d DF Hd

(The subject does not turn the card spontaneously without a suggestion.)

VI

1^	8" Hen's wing.	D DF Ad
2^	Snake's head.	d DF Ad
3^	Beard of snake.	dd DF Ad
4^	Mountain.	d FD N
5^	Little mountain	dd FD N
6^	Cairn.	dd FD Ob
7^	<i>Nallah</i> (valley): A little of water.	D FD N
8√	Hook.: Natural hook, like bird's beak.	dd DF Ad

VII

1	20" Camel.: Sitting.	D DF A
2	Ox.: Head resembled to camel's but body does not.	D DF A
3	Camel.: Hang his head.	D DF A
4	Land.: Shape.	D FD L
5	<i>Nallah</i> with very pure water.	d FD N

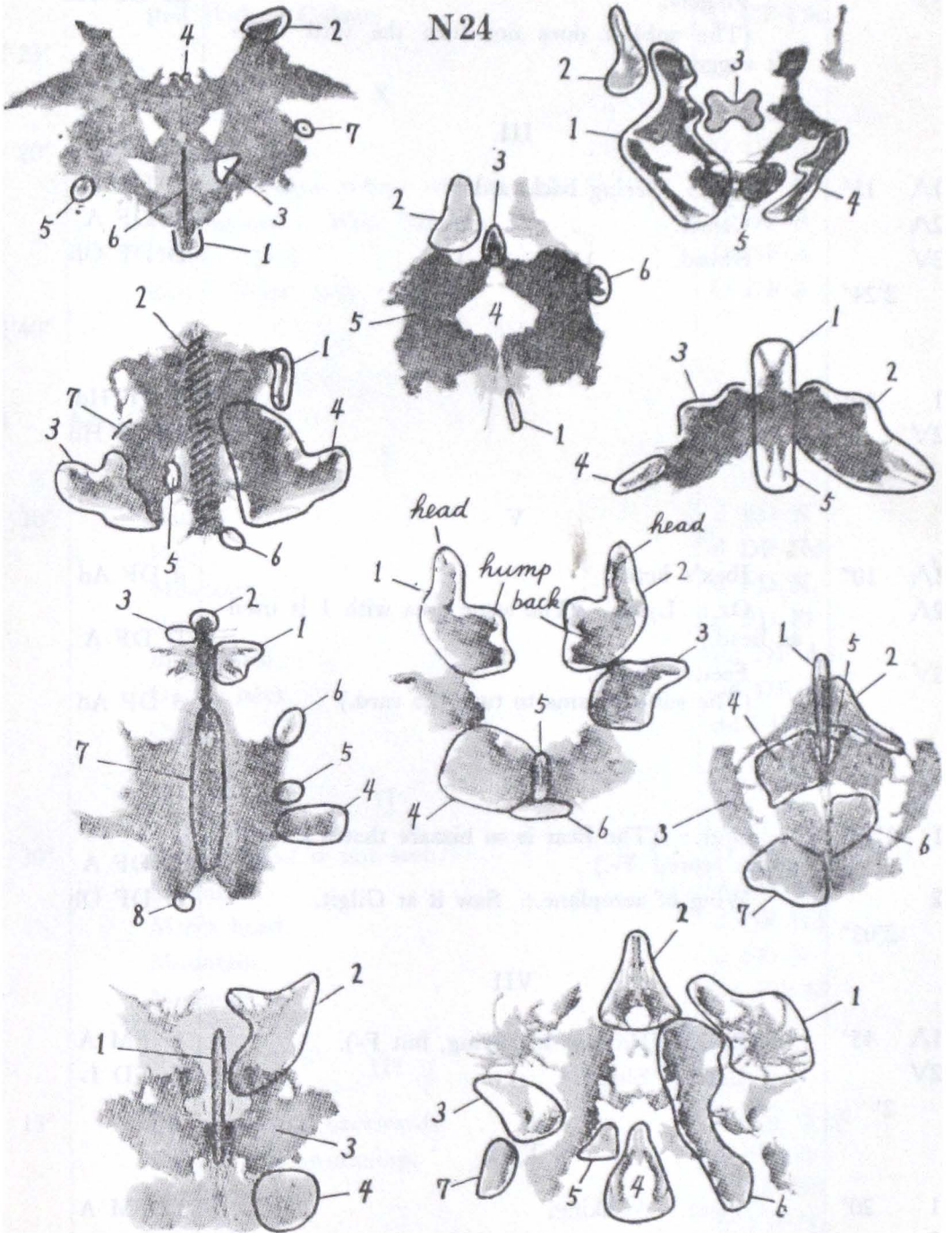
6	Glacier.	d DF N
2'05"		
VIII		
1^ 15"	<i>Nallah</i> , no water.	dd FD N
2^	Hand.	dd DF Hd
3^	Tiger.: Climbing.	D FM A
4^	Green land.	dd CF L
5^	Snow.	S FD N
6^	Winter season, the grass of jungle became like this.	D CF L
7v	Animal.: Wild animal.	D DF A
IX		
1^ 35"	<i>Nallah</i> with little water.	D FD N
2^	Tree.: Shape only.	D FD Pl
3^	Grass land.: Colour.	D CF L
4<	Man's head.: Looking grass land, shape.	D DF Hd
2'19"		
X		
1 30"	Tree.	D FD Pl
2	Tree.	D FD Pl
3	Flower.: Colour.	D CF Pl
4	Ibex's head.	D DF Ad
5	Dog.: Shape.	D DF A
6	Tree body.: Fell down, shape.	D FD Pl
7v	Stone.: With such colour.	D CF N

N 25 Age. 35

I		
1^ 1'05"	Dog's head.	d DF Ad
2^	Star.	S FD N
3^	Hand Saw.	S DF Ob
II		
1^ 10"	Horse.: No head, only shape.	D DF A
2^	Umbrella.	d DF Ob



N24



3√		Fingers. (The subject does not turn the card without suggestion.)	dd DF Hd
		III	
1∧ 15"		Dog.: Seeing backwards.	D DF A
2∧		Camel.	D DF A
3√		Sword.	D DF Ob
	2'24"		
		IV	
1 50"		Arm.	d DF Hd
2√		Feet.	D DF Hd
	2'03"		
		V	
1∧ 10"		Ibex's head.	d DF Ad
2∧		Ox.: Lying. (The same area with 1 is used as head.)	D DF A
3√		Feet.: Ibex's. (The subject came to turn the card.)	d DF Ad
	1'48"		
		VI	
1 1'10"		Bear.: (The Bear is so bizzare that it's worth to be scored F-.)	D DF A
2		Wing of aeroplane.: Saw it at Gilgit.	D DF Ob
	2'03"		
		VII	
1∧ 45"		Bird.: (He says it's flying, but F-).	D FM A
2√		Land.: Shape.	D FD L
	2'		
		VIII	
1 20"		Tiger.: Walking.	D FM A
2		Red colour.: See only colour.	D Cn Colour
	1'24"		
		IX	
1∧ 30"		Bird.: Ready to stand,	D DF A

2V	Red cloth.: Colour.	D CF Ob
1'23"		
	X	
1^ 20"	Rat.: Shape.	D DF A
2^	Flower.: Same colour with the blot.	D CF Pl
3V	Wild animal.: Wolf, hanging.	D DF A
4V	Horse.: (F-).	D DF A
5V	Rat.: Shape only.	D DF A
2'40"		

**N 26** Age. 27

	I	
1 10"	Rock.	d FD N
2^	Hand.	d DF Hd
3^	Mountain.	d FD N
4^	Tree.	d FD Pl
5^	Bird's beak.	dd DF Ad
6^	Duck's neck.	dd DF Ad
7V	Cairn.	dd FD Ob

II

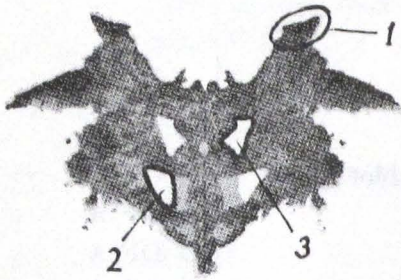
1^ 30"	Hen.: Head is not seen.	D DF A
2<	Mountain.	d FD N
3V	Man's head.	d DF Hd
4V	Mountain.	d FD N
5V	Mountain.	dd FD N

III

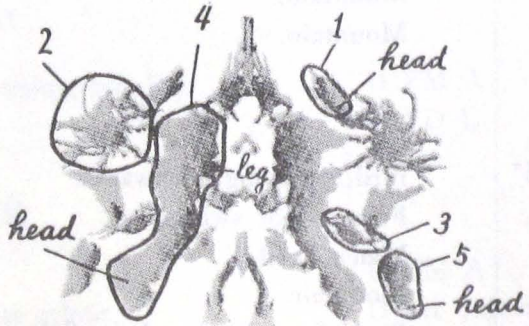
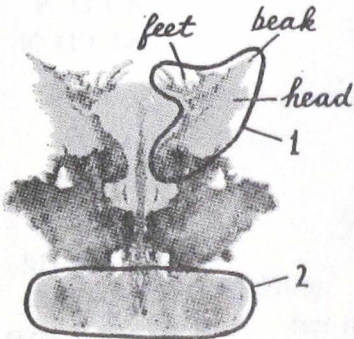
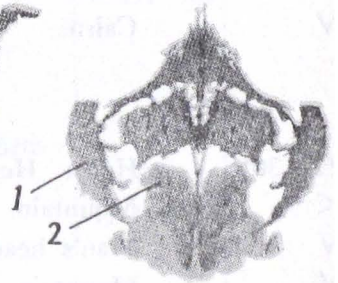
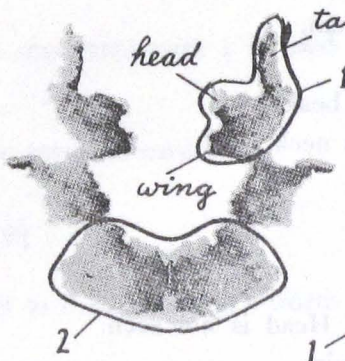
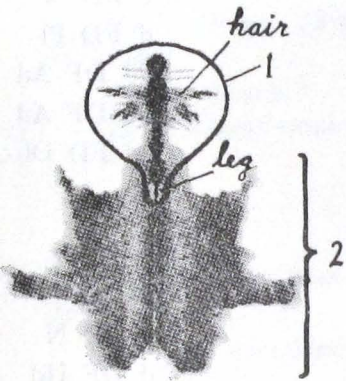
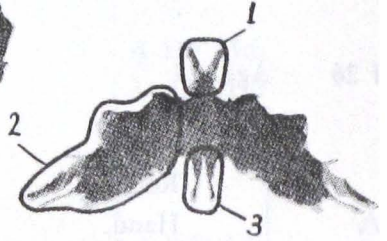
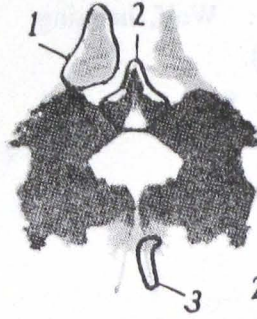
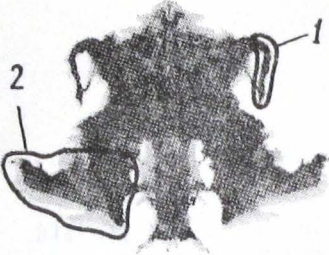
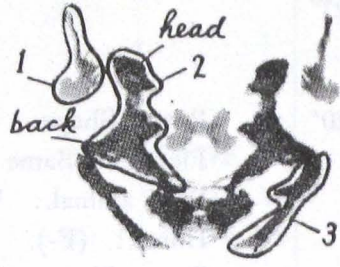
1 15"	Bird.: Seeing backwards.	D DF A
2	Fish.: Not swimming.	D DF A
3	Man's head.	d DF Hd
4	Mountain.	D FD N
5	Butterfly.: Such colour, flying.	D FC(FM) A
2'		

IV

1^ 20"	Wing.	d DF Ad
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N 25



2^	Bird.	d DF A
3^	Mouth.: Animal mouth.	dd DF Ad
4^	Tree.	D FD Pl
5V	Animal mouth.	dd DF Ad

(The examiner can not understand the nature of 3 and 5.)

V

1^	10"	Arm.	d DF Hd
2^		Arrow.	dd DF Ob
3^		Ibex's head.	d DF Ad
4^		Mountain.	dd FD N
5V		Mountain.	dd FD N
6V		Man's Feet.	d DF Hd

1'55"

VI

1^	15"	Bird with wing and mouth.: Flying.	D FM A
2^		Animal.: Sitting.	d DF A
3^		Cairn.	dd FD Ob
4^		Mountain.	dd FD N
5^		<i>Nallah</i> (valley).: With water. (The subject turns the card for himself. The interpreter made him turn it before.)	D FD N
6V		Hook.: Natural hook.	dd DF Ad
7V		Bird's head.	dd DF Ad

VII

1^	15"	Camel's neck.	d DF Ad
2^		Camel's body.	dr DF Ad
3^		Snake's head.	dd DF Ad
4^		Hump.: Camel.	dd DF Ad
5^		Bird's head.: Open mouth. (The interpreter made the subject turn the card.)	d DF Ad

6V		<i>Nallah</i> .: Water is coming.	d FD N
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7V		Jungle.: Shape, but no boundary.	D FD L
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(The answer to inquiry "shape" can't be understood. When the examiner asked "Can you see jungle without this color?", he replied "no".)

2'50"

## VIII

1^	10"	Tiger.: Walking.	D FM A
2^		Animal head.	d DF Ad
3^		<i>Nallah.</i> : Water flowing.	dd FD N
4^		Horse's head.	d DF Ad
5^		Land.: Same colour with the blot.	D CF L
6^		Glacier.: Same colour with the blot.	dd CF N
7√		Land.: Same colour with the blot.	D CF L

2'42"

## IX

1^	15"	Animal head.	dd DF Ad
2^		Mountain.	dd FD N
3^		Garden.: Same colour with the blot.	dd CF L
4^		Jungle.: Same colour with the blot.	dd CF L
5^		Arrow.	dd DF Ob
6^		<i>Nallah.</i> : Water flowing.	D FD N
		(The interpreter made the subject turn the card.)	
7√		Mountain.	dd FD N
8√		Ibex's head.	dd DF Ad

## X

1^	10"	Dog.: Running.	D FM A
2^		Flower.: Same colour with the blot.	D CF Pl
3^		Flower.: Same colour with the blot.	D CF Pl
4^		Animal.: Dead.	D DF A
5^		Hen.: Same colour with the blot.	D FC A
6^		Ibex's head.	D DF Ad
7^		Wild animal.	D DF A
8^		Tree body.	D FD Pl
9^		Tree.	D FD Pl
10√		Animal mouth.	dd DF Ad
11√		Duck.: Same colour with the blot.	D FC A

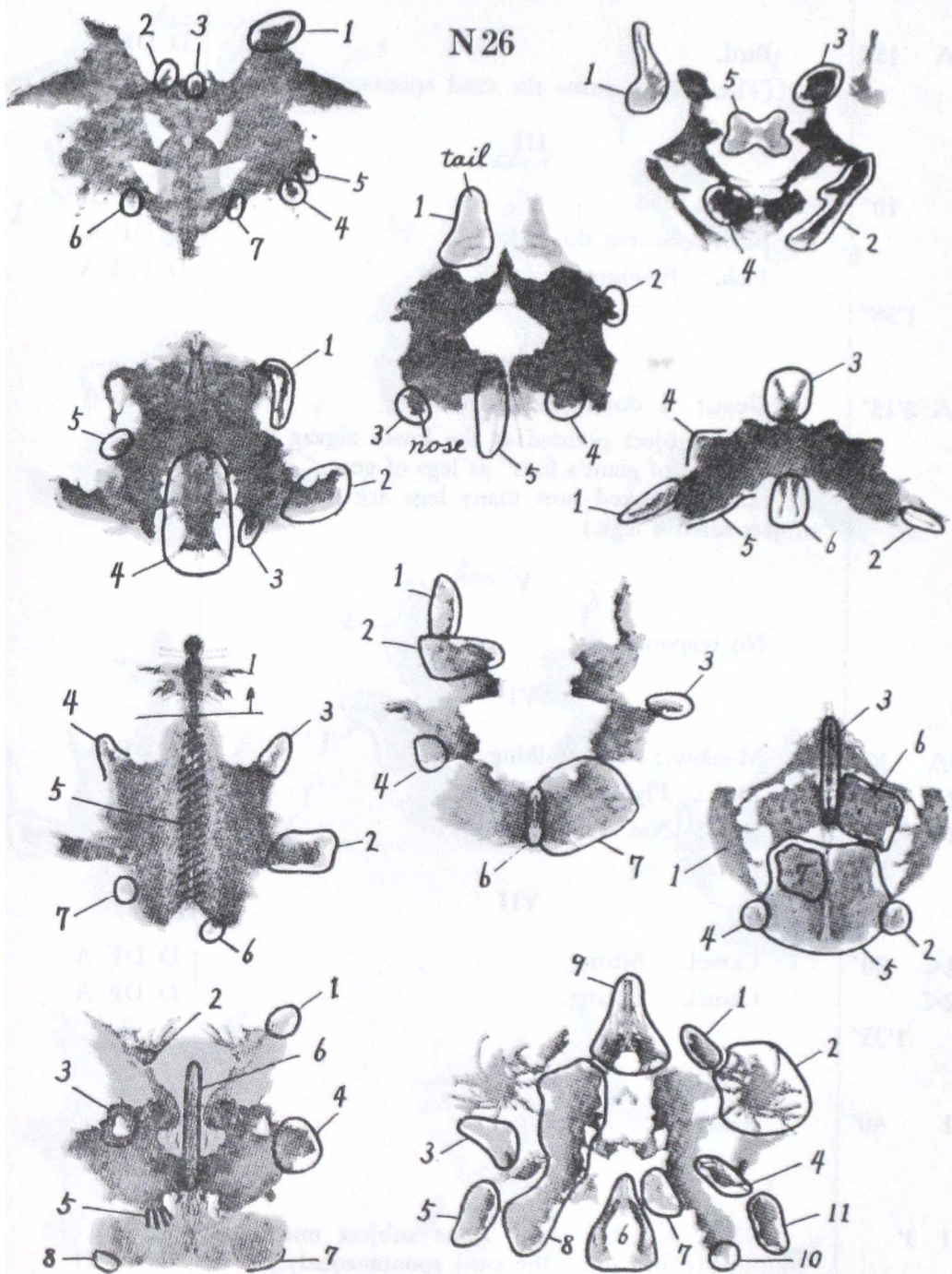
N 27 Age. 40

## I

1^	1'30"	Cow.	D DF A
2^		Man's head.	d DF Hd

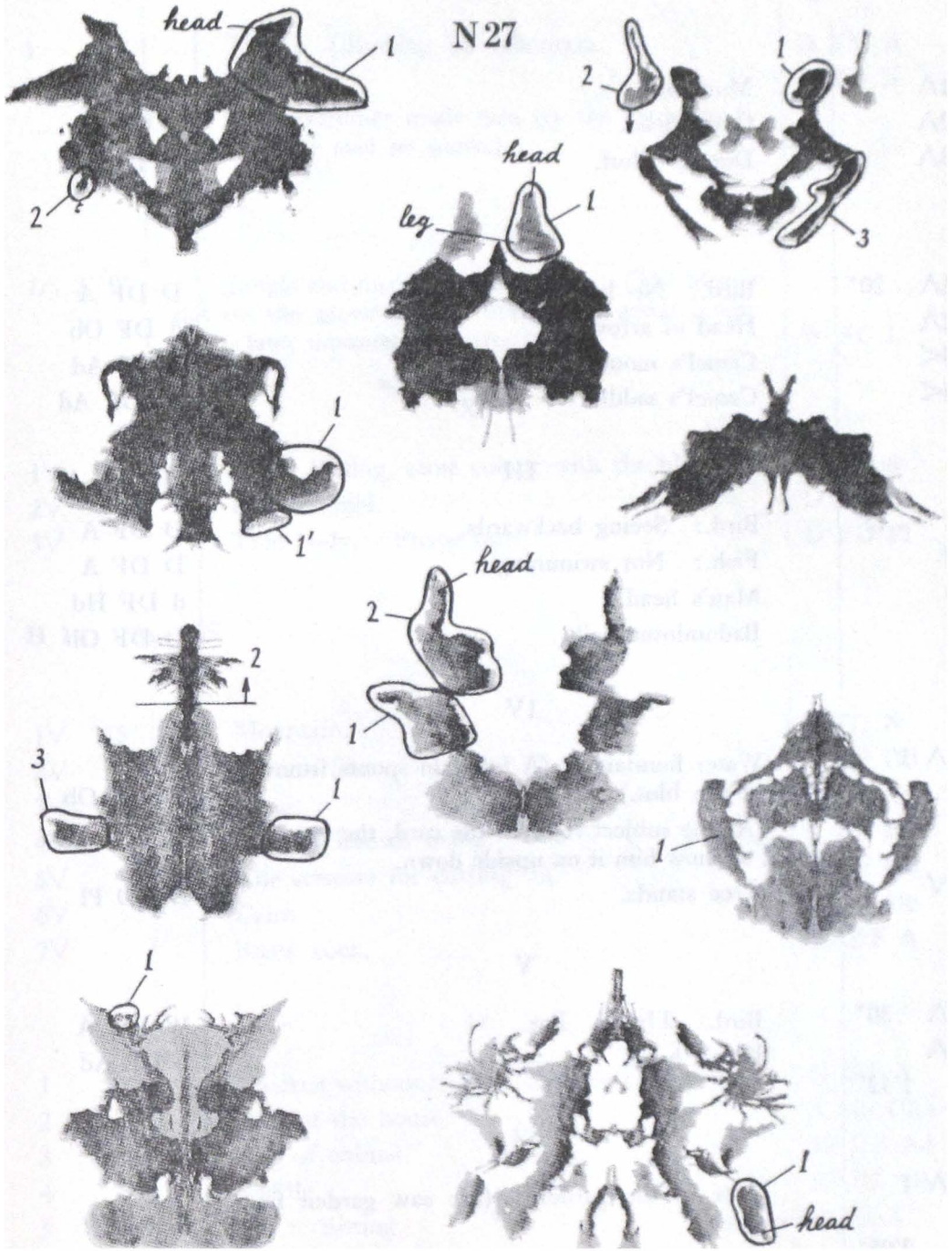


N 26



II		
1^ 15"	Bird. (The subject turns the card spontaneously.)	D DF A
III		
1 10"	Man's head.	d DF Hd
2	Bird.: Seeing this side.	D DF A
3	Fish.: Swimming.	D FM A
1'58"		
IV		
1^ 2'15"	Goat.: I don't know. (The subject pointed at the lower zigzag outline of "heel of giant's foot" as legs of goat. When the examiner asked how many legs are there, the subject said 8 legs.)	D DF A
V		
	No response.	
VI		
1^ 30"	Monkey.: Not walking.	d DF A
2^	Bird.: Flying.	D FM A
3^	Dog.: Not walking.	d DF A
1'57"		
VII		
1< 30"	Camel.: Sitting.	D DF A
2<	Camel.: Sitting.	D DF A
1'35"		
VIII		
1 40"	Tiger.: Walking up.	D FM A
IX		
1 3'	Man, standing only. (The subject murmurs continually and turns the card spontaneously.)	dd M H
X		
1^ 3'20" 3'30"	Hen.: Sitting, same colour with the blot.	D FC A





N 28 Age. 30

I			
1^	*	Mountain.	d FD N
2^		Cow's head.	d DF Ad
3^		Door.: Shut.	D DF Ob
II			
1^	20"	Bird.: No head.	D DF A
2^		Head of arrow.	d DF Ob
3<		Camel's mouth	d DF Ad
4<		Camel's saddle.	dd DF Ad
III			
1	15"	Bird.: Seeing backwards.	D DF A
2		Fish.: Not swimming.	D DF A
3		Man's head.	d DF Hd
4		Badominton ball.	D DF Ob
IV			
1^	1'	Water fountain.: (A fountain spouts from the top of the blot.)	W DF Ob
		(As the subject rejected the card, the examiner tried to show him it on upside down.)	
2V		Tree stands.	D FD Pl
V			
1^	30"	Bird.: Flying. Bat.	W FM A
2^		Ibex's head.	d DF Ad
	1'42"		
VI			
1^	1'	Tree in the garden.: (He saw garden first, next, tree.)	W FD N
	2'05"		
VII			
1V	1'	Mountain.	D FD N
2		Camel.: Sitting.	D DF A

VIII

1	20"	Tiger.: Climbing up mountain.	D FM A
2		Mountain. (The examiner made him try the card upside down but he said no more.)	D FD N

2'13"

IX

1^	2'30"	Jungle and mountain with trees.: (The idea is not on the green part at first, next, green jungle on it, later mountain and tree.)	W FC L
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X

1V	25"	Cat.: Sitting, same colour with the blot.	D FC A
2V		Dead animal.	D DF A
3V		Tree body.: Shape only.	D FD PI

H 1 Age. 35

I

1V	15"	Mountain.	d FD N
2V		Human foot.	d DF Hd
3V		Wing.	d DF Ad
4V		Hips of human being.	d DF Hd
5V		The scissors for cutting tin.	d DF Ob
6V		Cairn.	d FD Ob
7V		Snow cock.	dd DF A

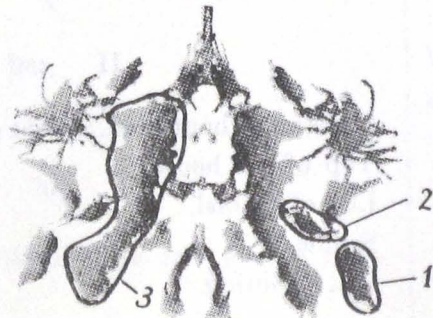
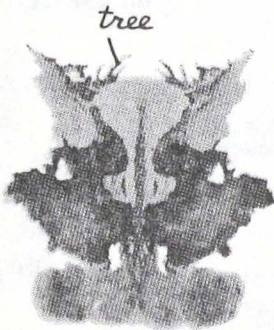
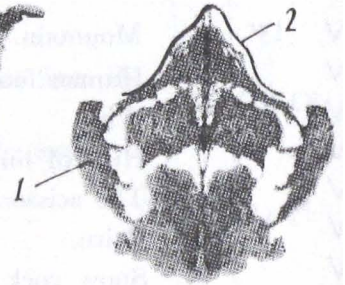
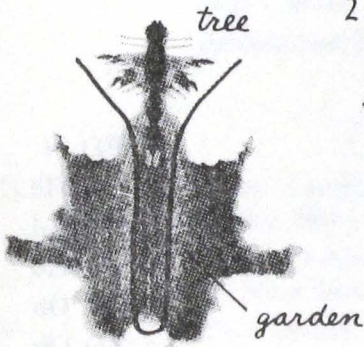
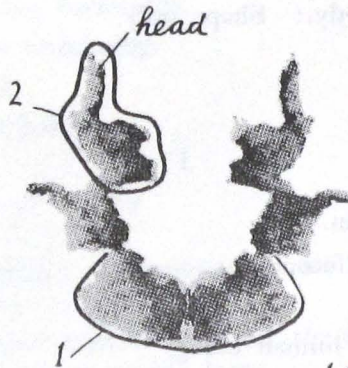
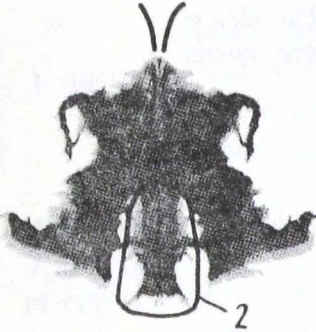
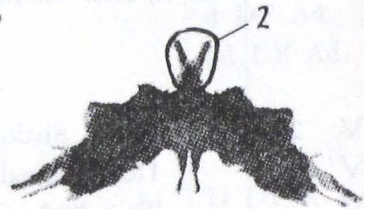
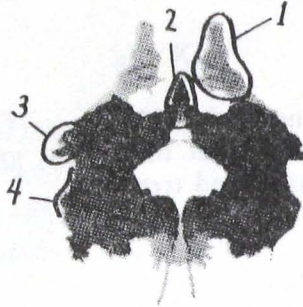
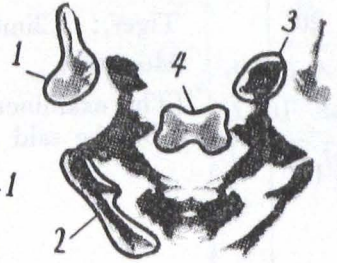
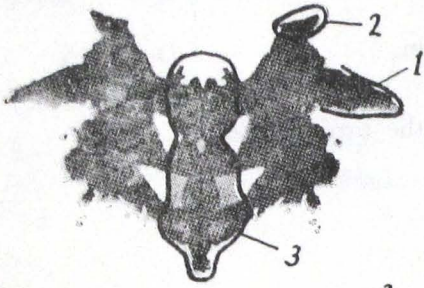
II

1	25"	Chicken without head.: Not colour but shape.	D DF A
2		Top of the house.	d DF Ob
3		Leg of animal.	dd DF Ad
4		Saddle.	dd DF Ob
5		Cat.: Sitting.	d DF A

III

1	10"	Human being.	D DF H
2<		Small animal.	D DF A

N 28



3<		Fish.: Not swimming.	D DF A
4√		Flower.: Same colour with the blot.	D CF PI
5√		Flower.: Same colour with the blot.	D CF PI
	1'37"		
IV			
1	30"	Handle of samovar.	d DF Ob
2		Human's foot.	D DF Hd
3		Decoration of house, wooden carving.	D DF Ob
	2'13"		
4		Plain, ground.: Colour.	d C'F L
V			
1	15"	Stretching leg of animal.	d DF Ad
2		Ears of a rabbit.	d DF Ad
3		Legs of chair.	d DF Ob
4		Outline of mountain.	d FD N
	1'20"		
VI			
1	15"	Pillar and its decoration.	D DF Ob
2		Decoration of side of house.	dd DF Ob
3		Nail of the leopard.	dd DF Ad
4		Chimney. (projecting at the side of the house).	d DF Arch
	2'25"		
VII			
1√	25"	Teeth of wild wolf.	d DF Ad
2√		Shaggy tail of wolf.	dd DF Ad
3		Black stone.: Like slate, to use for making plain.	D C'F N
	2'		
VIII			
1	8"	Monkey.: Standing.	D DF A
2		Flower.: Same colour with the blot.	D CF PI
3		Dog's head.	d DF Ad
4		Pillar with coloured decoration.	D FC Ob
	1'22"		

## IX

1	15"	Petal of flower.: Same colour with the blot.	D FC Pl
2		Some kind of flower he has seen.: Same colour with the blot.	D CF Pl
3		Something green but I can not tell it.	D CF Colour
	1'26"		

## X

1	10"	Horn of the ibex.	D DF Ad
2		Young animal in the mountain.: Lying.	D DF A
3		Rat.	D DF A
4		Petal of flower.: Same colour with the blot.	D FC Pl
5		Bird.: Flying, colour is not necessary.	D FM A
6		Flower.: Same colour with the blot.	D CF Pl
7		Decoration between two pillars in such colour.	D FC Ob

H 2 Age. 22

## I

1	20"	Top of mountain.	d FD N
2		Dog's head.	d DF Ad
3		Hips of human being.	d DF Hd
4		Comb.: Wooden.	S DF Ob
5		Stomach.	dr DF Hat
6		Ground.: Same colour with the blot.	dr C'F L

## II

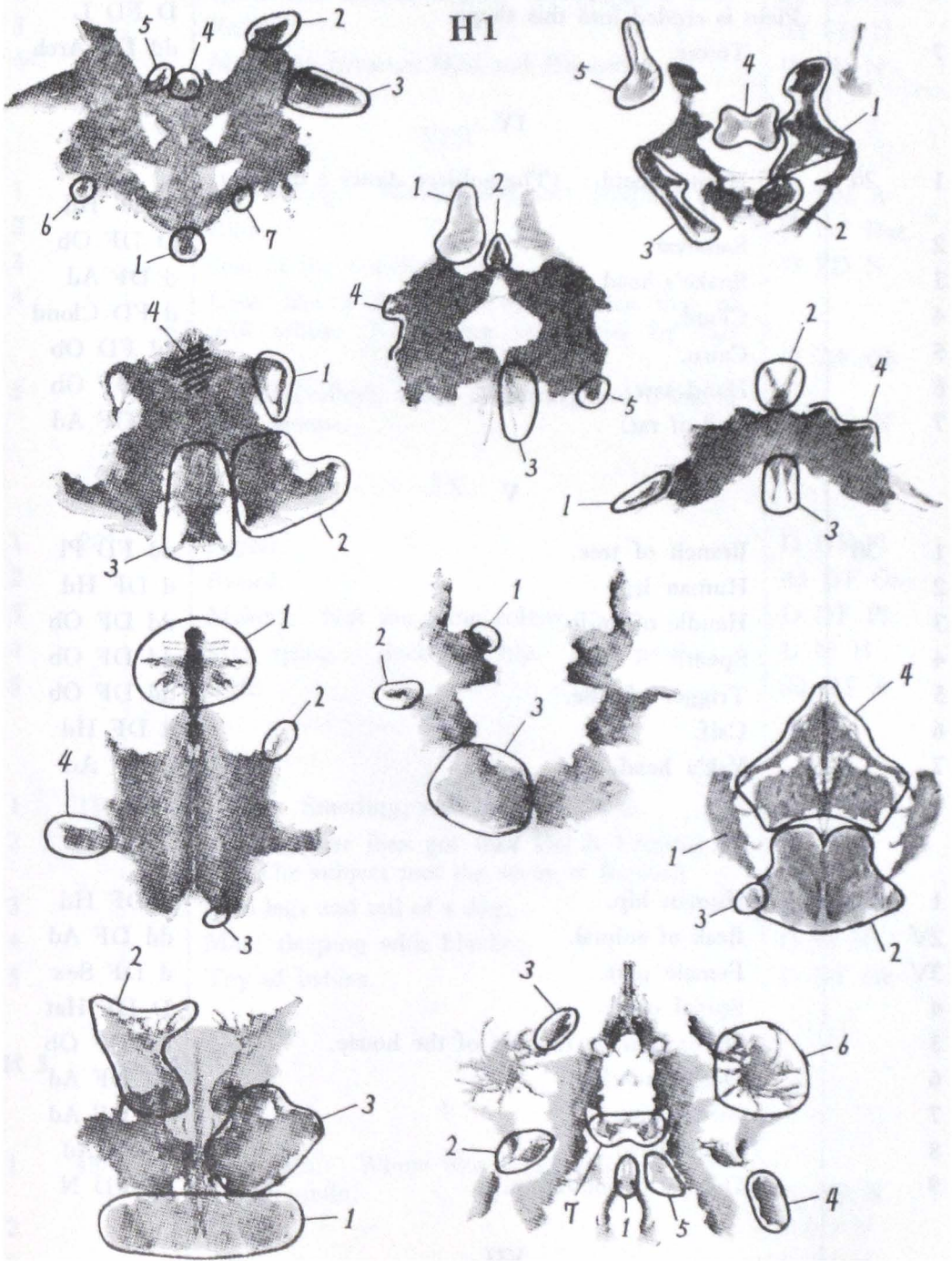
1	30"	Leopard without head.	D DF A
2		Decoration of house.: (At the top of roof.)	d DF Ob
3	√	Duck in the water.	dd DF A
4	√	Mast.	dd DF Ob
5	√	Singing bird.: Head only, red bird.	d FM A

## III

1	5"	Bat.: Flying.	D FM A
2		Horse's body.	D DF Ad
3		Yak's head.	d DF Ad
4		Fish.: Swimming.	D FM A
5		Scorpion.	D DF A



H1



6		Plain, black plain.: Not black. Plain only. Plain is eroded into this shape.	D FD L
7		Tower.	dd DF Arch

## IV

1	20"	Human hand.: (The subject shows a dancing posture.)	d DF Hd
2		Samovar.	D DF Ob
3		Snake's head.	d DF Ad
4		Cloud.	d FD Cloud
5		Cairn.	dd FD Ob
6		Hand saw.	dd DF Ob
7		Tail of rat.	dd DF Ad

## V

1	30"	Branch of tree.	dd FD Pl
2		Human leg.	d DF Hd
3		Handle of knife.	dd DF Ob
4		Spear.	dd DF Ob
5		Trigger of rifle.	dd DF Ob
6		Calf.	d DF Hd
7		Yak's head.	d DF Ad

## VI

1	30"	Human hip.	d DF Hd
2	√	Beak of animal.	dd DF Ad
3	√	Female part.	d DF Sex
4		Spinal cord.	D DF Hat
5		Decoration on the top of the house.	dd DF Ob
6		Dog's mouth.	dd DF Ad
7		Bird's wing.	dd DF Ad
8		Frogs head.	d DF Ad
9		Outline of mountain.	dd FD N

## VII

1	15"	Camel.: Sitting. Neck stretched.	D DF A
2		Cairn.	d FD Ob
3		The head of animal on the mountain.	dd DF Ad



4<		Looks like human head.: With eyes.	dd DF Hd
5		Valley.	dd FD N
6<		Mountain between Hini and Khanabad.	D FD N

VIII

1	15"	Like a frog.: Moving and now stopping.	D FM A
2		Ribs.	D DF Hat
3		One of the mauntain top.	D FD N
4		Look like a flag.: (He remembers that of red and white. Not being influenced by this colour.)	D DF Ob
5		<i>Nallah</i> (valley), water is flowing and bringing sand and stones.	dd FD N

IX

1	20"	Poplar.	D DF Pl
2		Sword.	dd DF Ob
3		Melon.: Not the same colour.	D DF Pl
4		Man stiing.: Back and hip. It if profile.	D M H
5		Bird.	dd DF A

X

1	15"	Lion.: Standing, stretching the arm.	D DF A
2		Ibex.: (The ibex got shot and is hanging at a pole. The subject met the scene at Batula.)	D DF A
3		Two legs and tail of a dog.	dd DF Ad
4		Man, sleeping with blanket.	D M H
5		Toy of babies.	D DF Ob

H 3 Age. 30

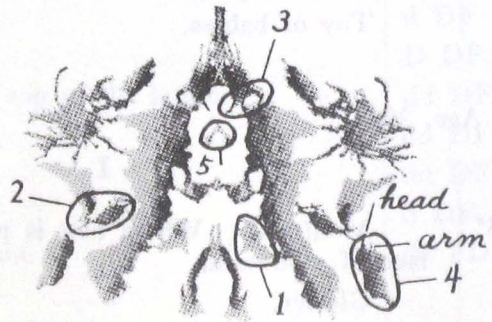
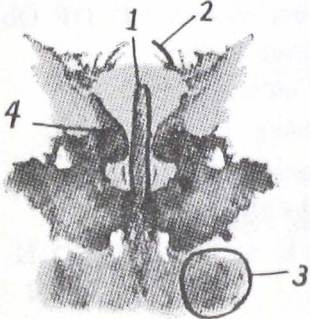
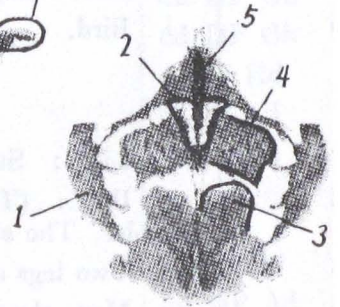
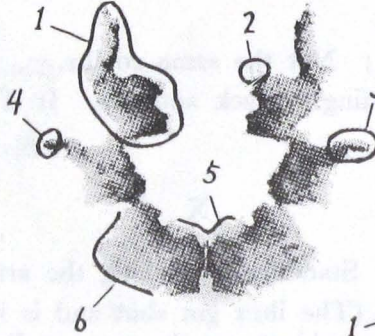
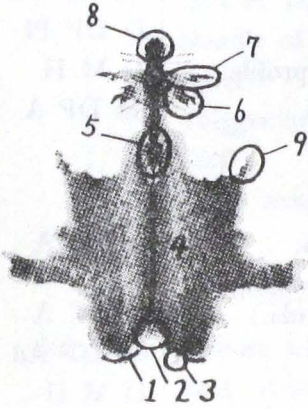
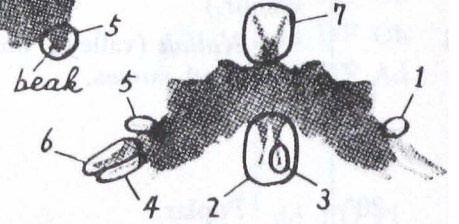
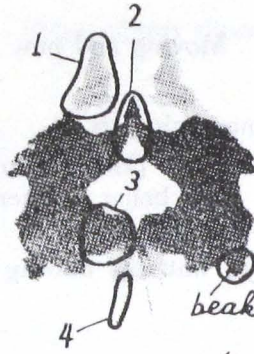
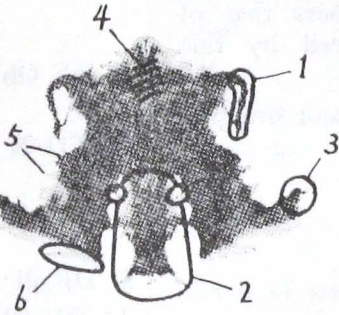
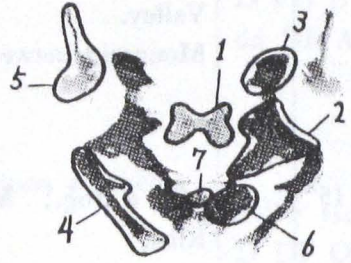
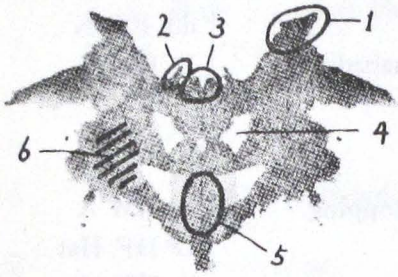
I

1	45"	Mountain.: Whote blot is mountain. Snow, face of mountain.	W FD N
2		Glacier.	d FD N
3		Glacier.	d FD N

II

1	13"	Man.: Sitting.	D M H
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H2



2		House.	S DF Arch
3		Human face.	d DF Hd
4		Decoration on the door.: Colour.	D FC Ob
5		Decoration on the top of house.	d DF Ob

III

1	30"	Human being.: Both talking to each other.	D M H
2		Dog.: Looking backwards.	D DF A
3		Feet wear. <i>Pabbu.</i> : The colour is not necessarily to be the same with the colours of the blot.	D DF Ob
4		Human leg.	D DF Hd
	2'52"		

IV

1	60"	Decoration of the coat.	W DF Ob
2		Handle of a pot.	d DF Ob
3		Leg of a pot.	dd DF Ob
	2'10"		

V

1	40"	Sleeping human being.	D M H
2		Wooden post in the ground.	D DF Ob
3		Like snow.: The surface of the glacier ice. (not space.)	dd FD N

VI

1	45"	Aeroplane.: (He saw it in Gilgit.)	W DF Ob
2		Tail of the plane.	(D DF Ob)

VII

1	35"	Human face.: Opening the mouth to eat something.	D M Hd
2		Decoration of a topee.	d DF Ob
3		Human neck.	dd DF Hd
4		Door.: Closed.	d DF Ob
5		Human back.	D DF Hd
		(1, 3 and 5 make one series.)	

VIII

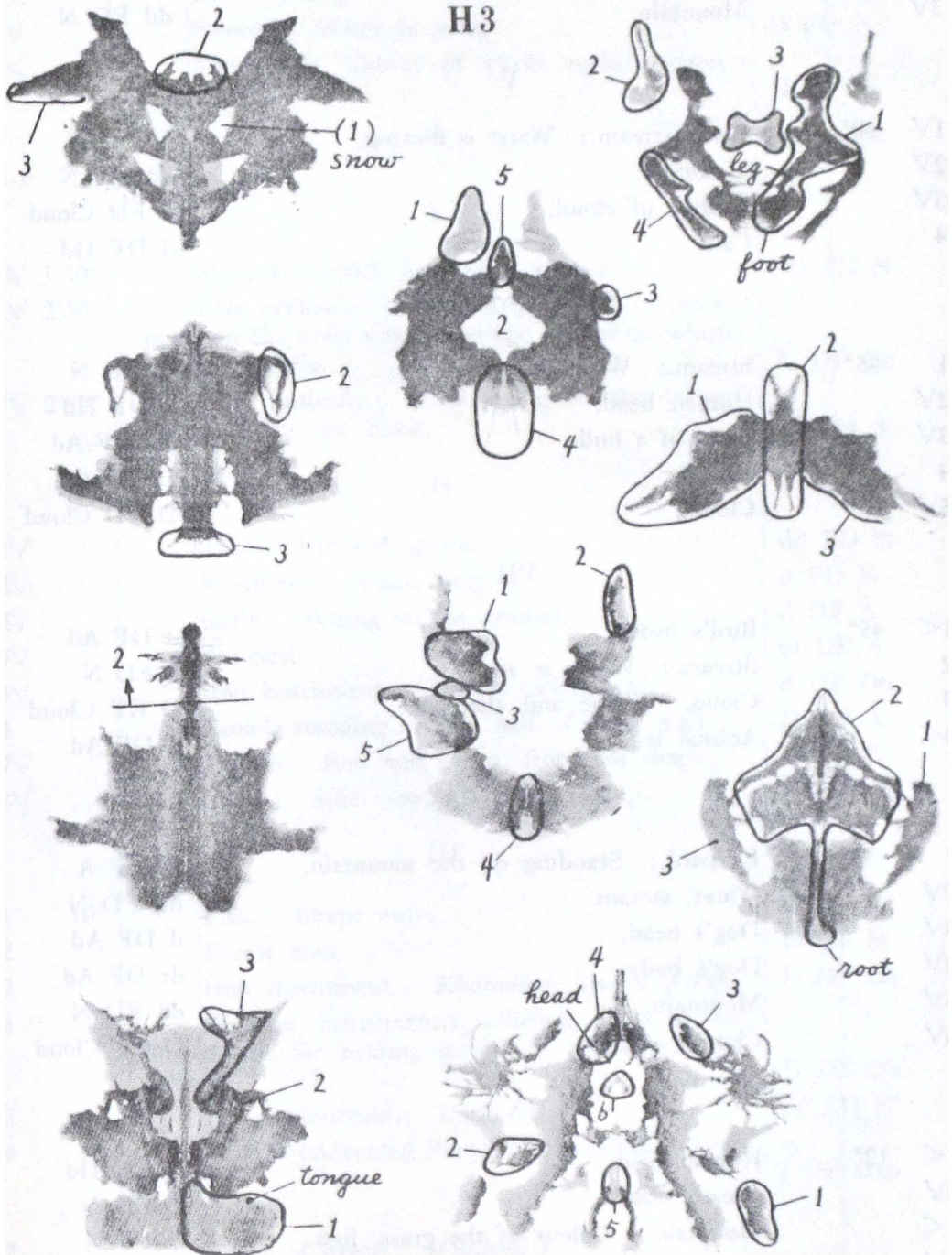
1	17"	Human being.: Clinging tree.	D M H
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2		Tree.: Shape only.	D FD Pl
3<		Looks like a dog.: Standing and eating something.	D FM A
IX			
1V	45"	Human face.	D DF Hd
2<		Goat's head.	D DF Ad
3V		Blood.: Colour.	dr CF Blood
X			
1	40"	Rat.: Shape only.	D DF A
2		Rat.: Shape only.	D DF A
3		Rat.: Shape only.	D DF A
4V		Human.: Human being climbing on the pillar.	D M H
5		Goat's head.	D DF Ad
6V		Chilli.	D DF Pl

**H 4** Age. 32

I			
1	35"	Stream of water.: Water is coming.	dd FD N
2		Mountain.	D FD N
3		Cloud.: Shape.	D FD Cloud
II			
1	20"	Dog.: Standing.	D DF A
2		Animal head.	d DF Ad
3		Like mountain.	D FD N
III			
1	25"	Goat.: Looking backwards.	D DF A
2		Human arm.	D DF Hd
3		Rabbit's head.	d DF Ad
4		Chicken.	dd DF A
5		Leg of Rabbit.	dd DF Ad
IV			
1	1'	Bat.	d DF A

H3



2		Leg of bat.	d DF Ad
3√		Mountain.	dd FD N
V			
1√	50"	Water stream.: Water is flowing.	D FD N
2√		Mountain.	dd FD N
3√		Outline of cloud.	d FD Cloud
4		Calf.	d DF Hd
VI			
1	35"	Stream.: Water is seen.	D FD N
2√		Human head.	d DF Hd
3√		Horn of a bull.	dd DF Ad
4		Leaf.	D FD Pl
5√		Cloud.	D FD Cloud
VII			
1<	45"	Bird's head.	d DF Ad
2		Stream.: Water is seen.	d FD N
3		Cloud.: Shape and shading.	D KF Cloud
4<		Animal leg.	d DF Ad
VIII			
1	5"	Leopard.: Standing on the mountain.	D DF A
2√		Water, stream.	dd FD N
3√		Dog's head.	d DF Ad
4√		Dog's body.	dr DF Ad
5√		Mountain.	dd FD N
6√		Cloud.: Colour.	D CF Cloud
IX			
1<	12"	Human head.	D DF Hd
2√		stream, water.	D FD N
3<		Mountain.: Colour of the grass, first.	D CF N
4√		Goat's leg.	d DF Ad
X			
1√	25"	Horns of animal.	D DF Ad

2√	Horse's hoof.	dd DF Ad
3<	Rat.: Sitting.	D DF A
4√	Stream.: Water is seen.	D FD N
5<	Mountain.: Colour of burnt rocks suggest a mountain.	D CF N

H 5 Agc. 20

I

1√ 1'30"	Mountain which is <i>Hone</i> at Hunza.	D FD N
2√ 2'30"	Like ornament of woman at Hunza.: Ornament on the head when marriage and so on which is named <i>silcila</i> .	D DF Ob
3√ 2'50"	Like butterfly.: It is flying in the forest, coloured but not black.	W FM A

II

1√	Tree.: Not red, green.	dd FD Pl
2√	Mountain.: Shape only.	d FD N
3√	Eagle.: Sitting on the ground.	d DF A
4√	Sea-bird.	D DF A
5√	Iron instrument of Hunza called <i>zapi</i> .	d DF Ob
6	Camel, standing.: The half of black part.	D DF A
7√	Flower.: Red and green, from the shape.	D CF Pl
8√	Heart.: Side view. It looks really.	S DF Hat

III

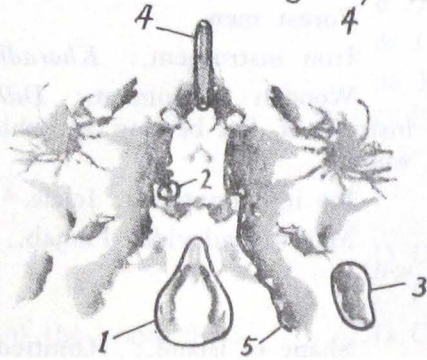
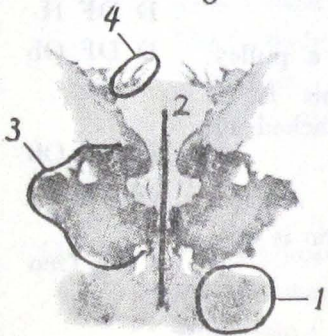
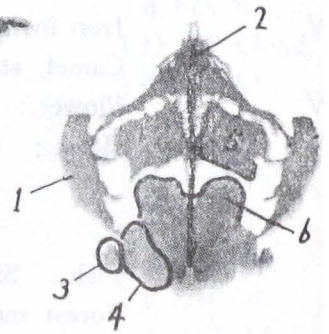
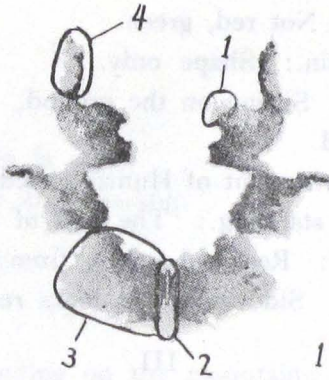
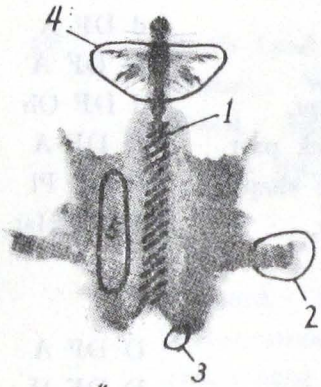
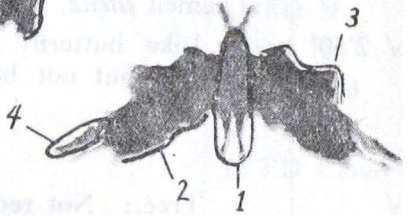
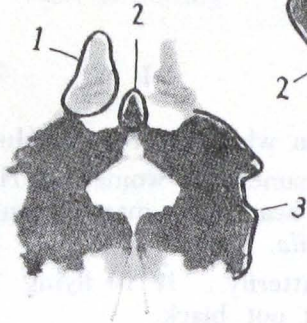
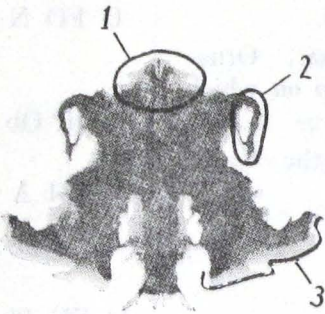
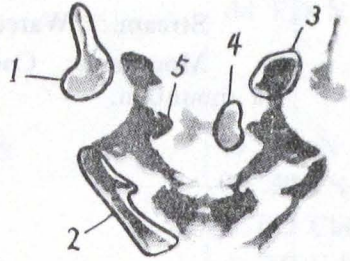
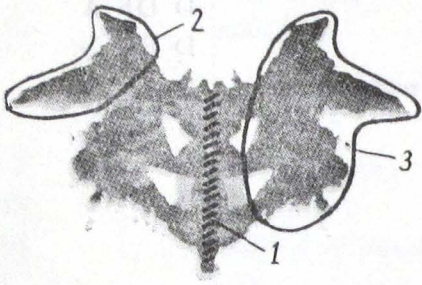
1	10"	Fish.: Shape only.	D DF A
2		Forest men.	D DF H
3		Iron instrument.: <i>Kharadhun</i> , like a pulley.	D DF Ob
4		Wooden instrument.: <i>Dilkhas</i> . This is an instrument for beating ax which is attached on wood.	D DF Ob
5		Ice in mountain.: Icicle.	dd FD N
6		Map of undevied Punjab.: (Location is missed).	? DF Geo
	3'		
7		Shape of island.: (Omitted.)	

IV

1	1'35"	Owl.: Sitting on the stone.	D DF A
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H4





2√		Projected mountain.: Projected outside.	d FD N
3		Map of Australia.	W DF Geo
4		Teeth of hand saw.	dd DF Ob

V

1	15"	This is like shape of a bat.	W DF A
2√		Head of snake.	dd DF Ad
3		Mountain.	d DF N
4		Leg of cat.: Cat sleeps.	d DF Ad
5		Tree on the mountain.	dd FD Pl

VI

1	35"	Picture of bird.	D DF (A)
2		Picture of light-house.: Only picture he saw.	d DF Arch
3		Anus of sheep.	d DF Ad
4		A kind of wing.	D DF Ad
5		Stone-peg.: On the way up.	dd DF Ob

VII

1	30"	Head of camel at drinking water. (with gesture.)	d FM Ad
2		Cave in the forest.	dd FD N
3		Roof of grave, flat stone.	D FD N

VIII

1	15"	Like a shape of figer.	D DF A
2		Human skeleton.	D DF Hat
3		Green field with grass.: Natural.	D CF L
4√		Top of mountain.	dd FD N
5		Unprepared pillar.	dd FD Pl
6		This is a top of Rakaposhi.	D DF N

IX

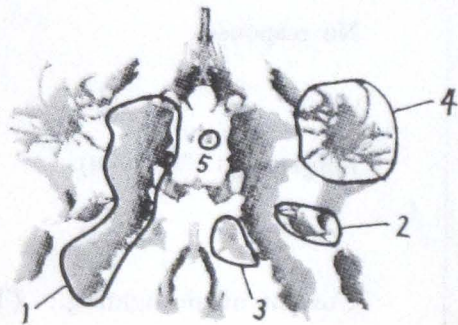
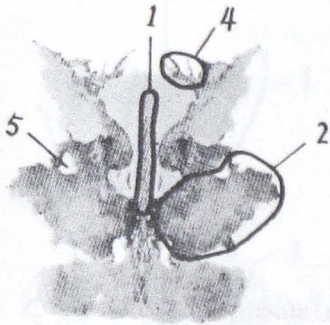
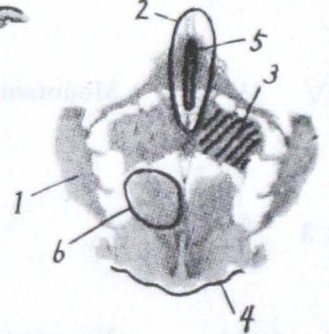
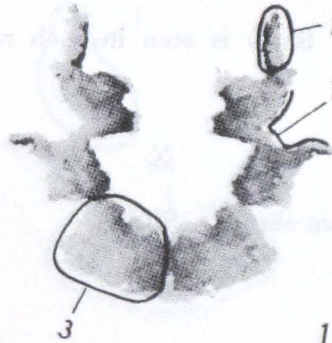
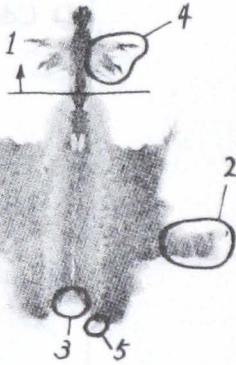
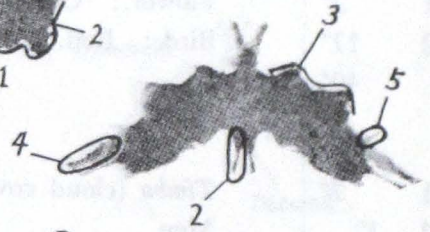
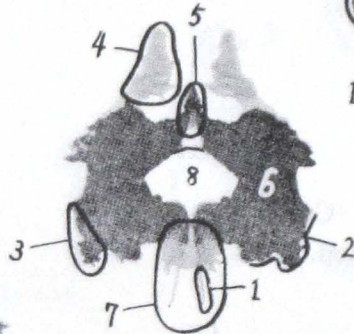
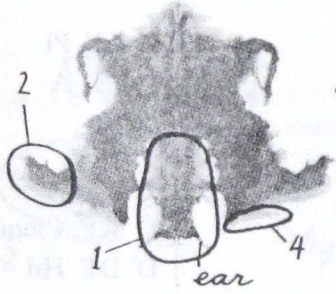
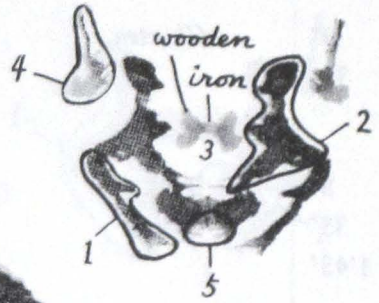
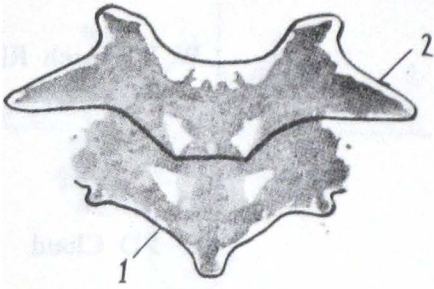
1	5"	Tall tree.	D FD Pl
2√		Big stone in the forest.	D FD N
3		Like a lake.: Such colour. (Location is missed.)	? CF N

4		Medical flower called <i>baruhan dil.</i> : Shape. They grow near to canal (in the forest) ground and attach.	d DF Pl
5		Natural small tank, pond.	S FD N
X			
1	30"	Like a lake in shape.	D FD N
2		Beast.: Head is not seen.	D DF A
3		A bird.: Shape only.	D DF A
4		Shape like a machine.	D DF Ob
5		Pear.: Not colour.	dd DF Pl
6	3'	Wasp of the door.: (Omitted.)	

S 2 Age. 29

I			
1	√ 55"	<i>Doruti</i> (an instrument which Lama make someone touch).	D DF Ob Rl
2	2'	Butterfly.	D DF A
II			
1	15"	<i>Pungen</i> (Mt. Manaslu).	S FD N Rl
2	1'30"	Mountain tiger.: Sitting.	D DF A
	1'50"		
III			
1	6"	Men.: Two men. Standing face to face each other.	D DF H
2	24"	Fish.: Swimming.	D FM A
3	40"	Rock pinnacle.	dd FD N
	1'05"		
IV			
1	1'30"	<i>Gyabu</i> (a god).: A picture in gompa. Good god.	W DF (H)
2	2'35"	<i>Naike</i> .	D FD N
V			
1	29"	Tree.	W FD Pl
	1'12"		

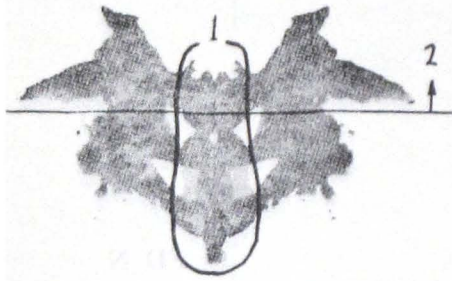
H5



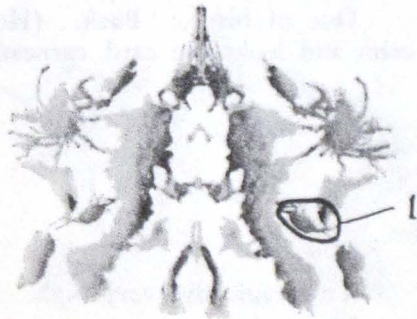
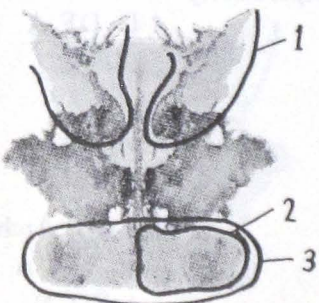
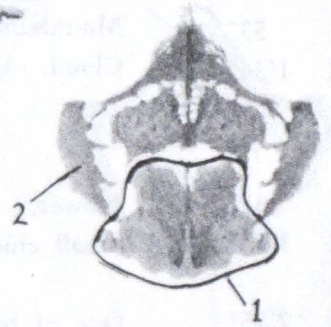
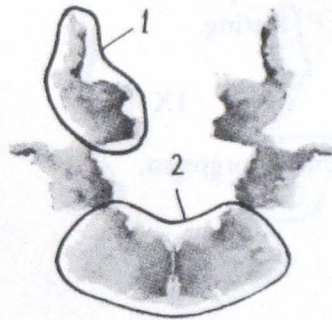
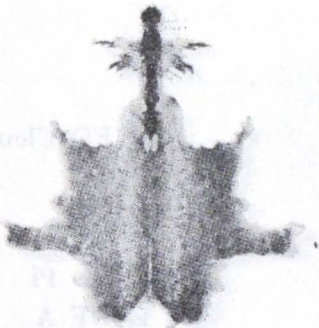
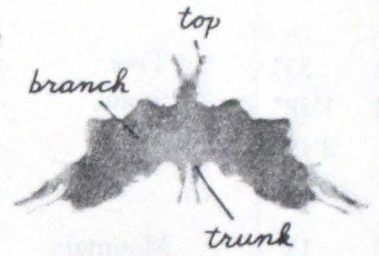
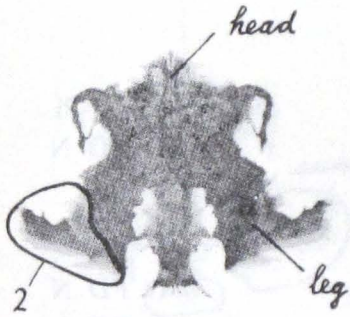
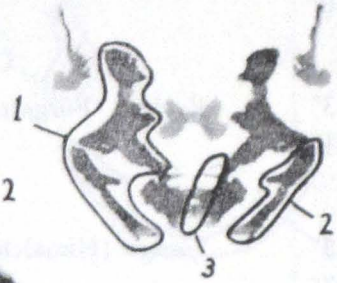
			VI			
1	9" 36"	<i>Chorten.</i>				W DF Arch Rl
			VII			
1	8"	Rock.				D FD N
2V	35" 1'45"	Cloud.				D FD Cloud
			VIII			
1	2"	Flower.: Colour.				D CF Pl
2	17" 40"	Bird.: Red.				D FC A
			IX			
1	7"	<i>Timba</i> (cloud covering mountain).				D KF Cloud
2	1'	Men.				D DF Hd
3	1'02" 1'59"	Snow.: Snow is seen in such red colour in spring.				D Cdes N
			X			
1V	35" 1'17"	Mountain sheep.: Sitting.				D DF A

S 3 Age. 22

			I			
	1'19"	No response.				
			II			
1	10"	<i>Pungen</i> (Mt. Manaslu).				d FD N
			III			
1	1'15"	Current of air fighting.: (Thunder storm).				Dr mF N
2	2'05"	Dog.: Sitting.				D DF A
			IV			
1	10"	Mountain.				d FD N



S2

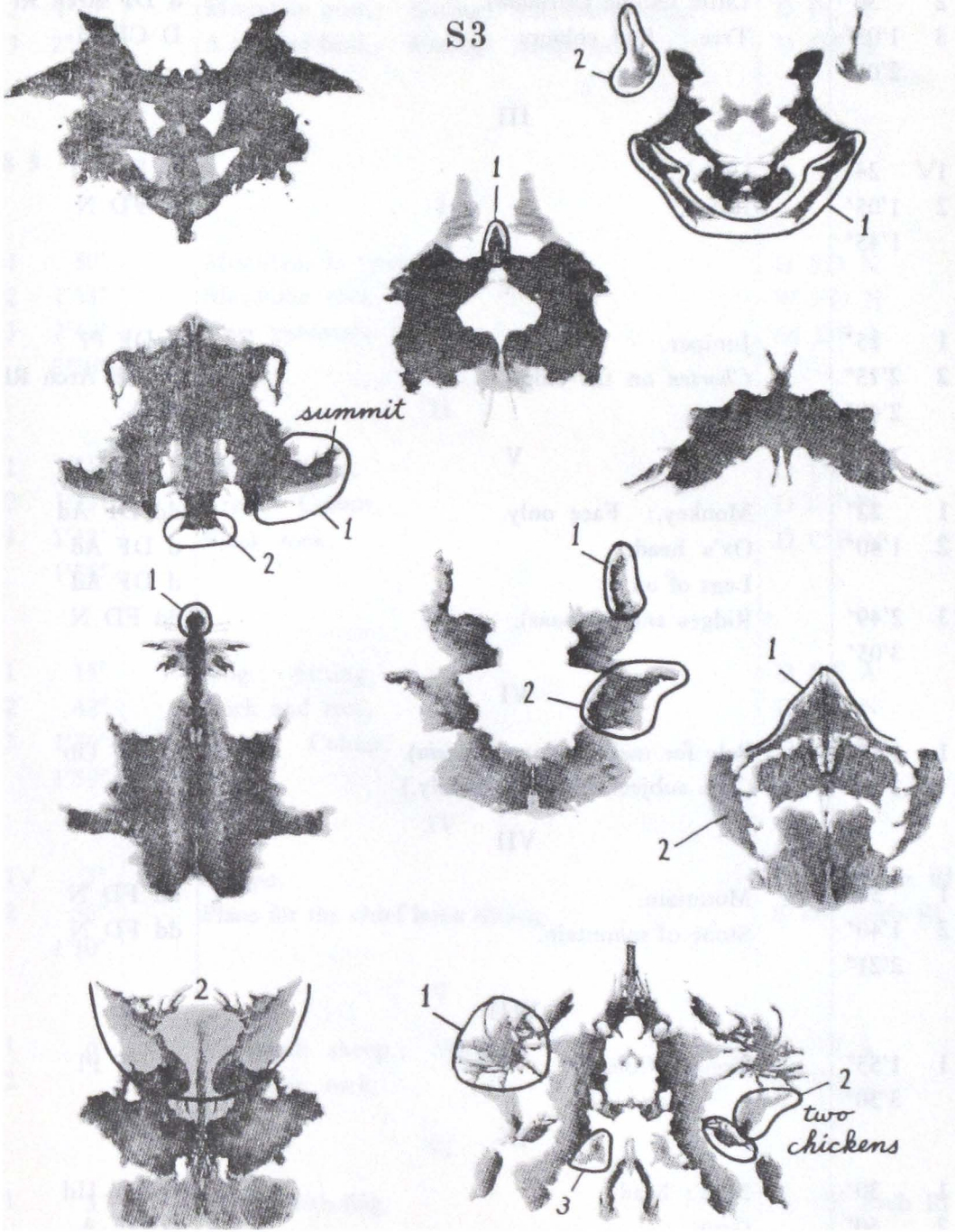


2	44" 1'30"	<i>Pumba</i> (a kind of pot used by lama).	D DF Ob Rl
		V	
1	3" 1'31"	Eagle.: Forgotten.	(W DF A)
		VI	
1	45" 1'47"	<i>Gamgo</i> (Himalchuli).	d FD N
		VII	
1	53"	Tree.	d FD Pl
2	1'38" 2'16"	Stone.	D FD N
		VIII	
1	15"	Mountain.	D FD N
2	30" 1'21"	Monkey.: Sitting.	D DF A
		IX	
1	53"	Mountain.: Forgotten.	
2	1'34"	Cloud.	D FD Cloud
		X	
1	31"	Flower.	D FD Pl
2	1'35"	Small chicken.	D DF A D DF A
3	2'55"	One of birds.: Back. (He is comparatively calm and looks the card earnestly.	D DF A

## S 4 Agc. 25

		I	
1√	35"	<i>Compa</i> .	d DF Arch Rl
2		This eagle flies very high.	dd FM A
3	1'43" 2'09"	Mountain.	d FD N
		II	
1	15"	Yak.: Sitting.	D DF A





2	30"	Little temple ( <i>Mendan</i> ).	d DF Arch RI
3	1'05"	Tree.: Red colour.	D CF PI
	2'05"		
III			
1V	24"	Cloud.	D FD CI
2	1'05"	Ridge.	D FD N
	1'45"		
IV			
1	25"	Juniper.	d DF PI
2	2'15"	<i>Chorten</i> on the ridge.	D DF Arch RI
	2'49"		
V			
1	22"	Monkey.: Face only.	dd DF Ad
2	1'40"	Ox's head.	d DF Ad
		Legs of ox.	d DF Ad
3	2'49"	Ridges and <i>la</i> (pass).	dd FD N
	3'05"		
VI			
1	1'55"	Pole for making flower ( <i>misin</i> ).	D DF Ob
	3'20"	(The subject responds calmly.)	
VII			
1	50"	Mountain.	dd FD N
2	1'40"	Stone of mountain.	dd FD N
	2'21"		
VIII			
1	1'55"	Tree.: Colour.	D CF PI
	3'30"		
IX			
1	30"	Man's head.	D DF Hd
2	50"	Goat.	D DF A
	1'20"		
X			
1	20"	A kind of eagle.: Shape. Eagle's head. Not flying.	D DF Ad

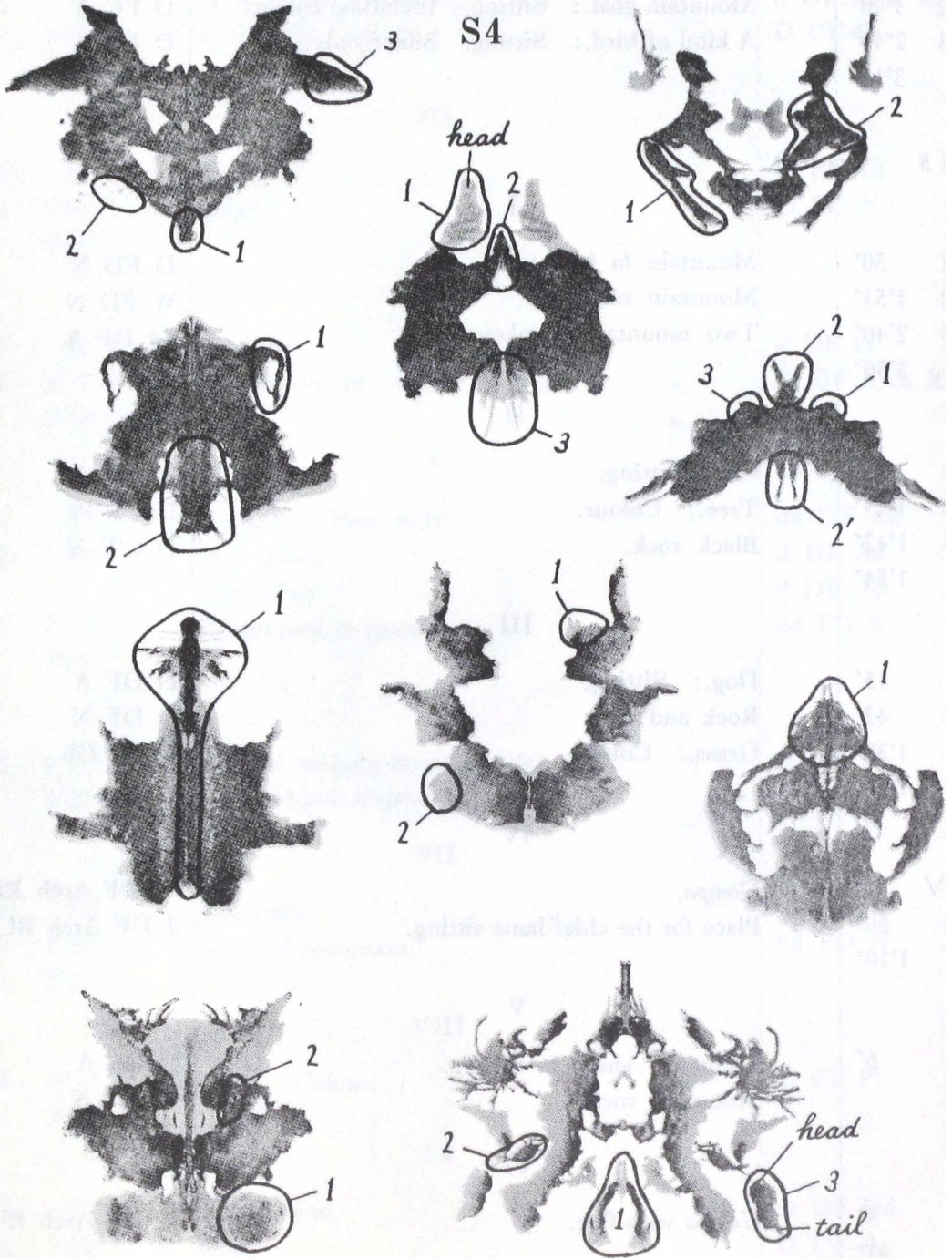


2	1'20"	Mountain goat.: Sitting. Including colour.	D FC A
3	2'40"	A kind of bird.: Sitting. Shape only.	D DF A
	3'15"		

S 5 Age. 20

I			
1	50"	Mountain <i>la</i> (pass).	D FD N
2	1'53"	Mountain rock.	W FD N
3	2'40"	Two mountain monkeys.	dd DF A
	3'30"		
II			
1	51"	Ox.: Sitting.	D DF A
2	1'23"	Tree.: Colour.	D CF PI
3	1'42"	Black rock.	D C'F N
	1'54"		
III			
1	15"	Dog.: Sitting.	D DF A
2	42"	Rock and tree.	D DF N
3	1'30"	Grass.: Colour.	D CF Ob
	1'59"		
IV			
1√	7"	<i>Gompa</i> .	W DF Arch RI
2	50"	Place for the chief lama sitting.	d DF Arch RI
	1'10"		
V			
1	6"	Mountain sheep.: Sitting.	D DF A
2		Mountain rock.	W FD N
VI			
1	5"	<i>Gompa</i> with flag.	W DF Arch RI
	41"		
VII			
1√	13"	Rock and water.	Ws FD N
2		Road.	d DF Geo
	1'44"		

S4



VIII

1	27"	Tree and two monkeys are eating fruits.: One leg is catching the tree.	W FM A (D FD Pl)
	1'16"		

IX

1	37"	Landscape with water, forest and ridge.	W CF N
2	1'36"	In the forest two white stones are seen.	(S C'F N)

X

1	24"	Two <i>dims.</i> : Sitting.	D DF A
2	1'	Small bird.: Flying.	D FM A
3		Black eagle.	D FC A
4	2'05"	Fig.: Sitting, colour.	D FC A
	2'40"		

S 6 Agc. 29

I

1	19"	Crab.: With head and tail.	D DF A
2	53"	Ridge.	d FD N
3	1'10"	Cloud.	d FD Cloud
4	1'30'	<i>Chorten.</i>	d DF Arch Rl
	1'55"		

II

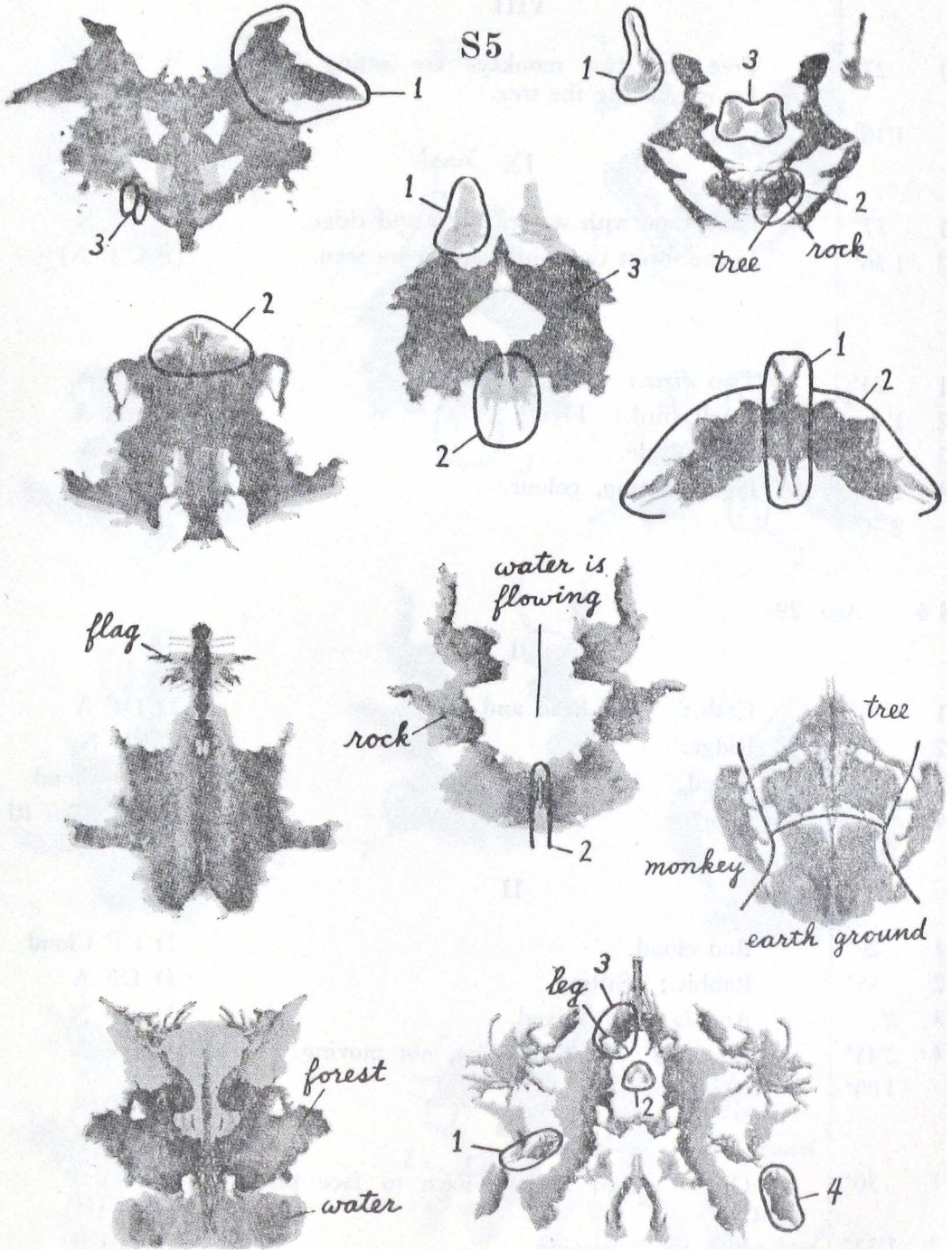
1	20"	Red cloud.	D CF Cloud
2	45"	Rabbit.: Sitting.	D DF A
3	2'	And <i>la</i> (pass) mixed.	D FD N
4	2'45"	Elephant.: Just standing, not moving.	D DF A
	3'09"		

III

1	30"	Giant.: Two giants. Face to face just to fight.	D M (H)
2	1'33"	Fish.: Swimming.	D FM A
3	2'10"	Himalayan bird.: Two birds. Sitting.	dd DF A
	2'36"		

IV

1	15"	<i>Chorten.</i>	d DF Arch Rl
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2√ 1'30"	Small temple.	D DF Arch Rl
3> 2'30"	Mountain tiger.: Sitting.	D DF A
2'34"		

V

1 21"	Man's leg.	d DF Hd
2	Snake.: Head only.	d DF Ad
3 1'27"	Smoke of train.	D FD Smoke
2'08"		

VI

1 12"	Large pole.	D DF Ob
2√ 1'45"	Big watch.	D DF Ob
3< 2'50"	Sugar factory.	D DF Arch

VII

1√ 15"	Two fields.	D FD L
2 1'45"	Artificial tiger.: In the <i>gompa</i> (face only).	D DF (Ad) Rl
1'55"	(The subject responds calmly too).	

VIII

1 13"	Flag.	D DF Ob
2 1'07"	Monkey.: Tries to climb tree.	D FM A
3 1'37"	Inside gompa, there are beautiful cloth. That	D CF Ob Rl
2'37"	cloth.	

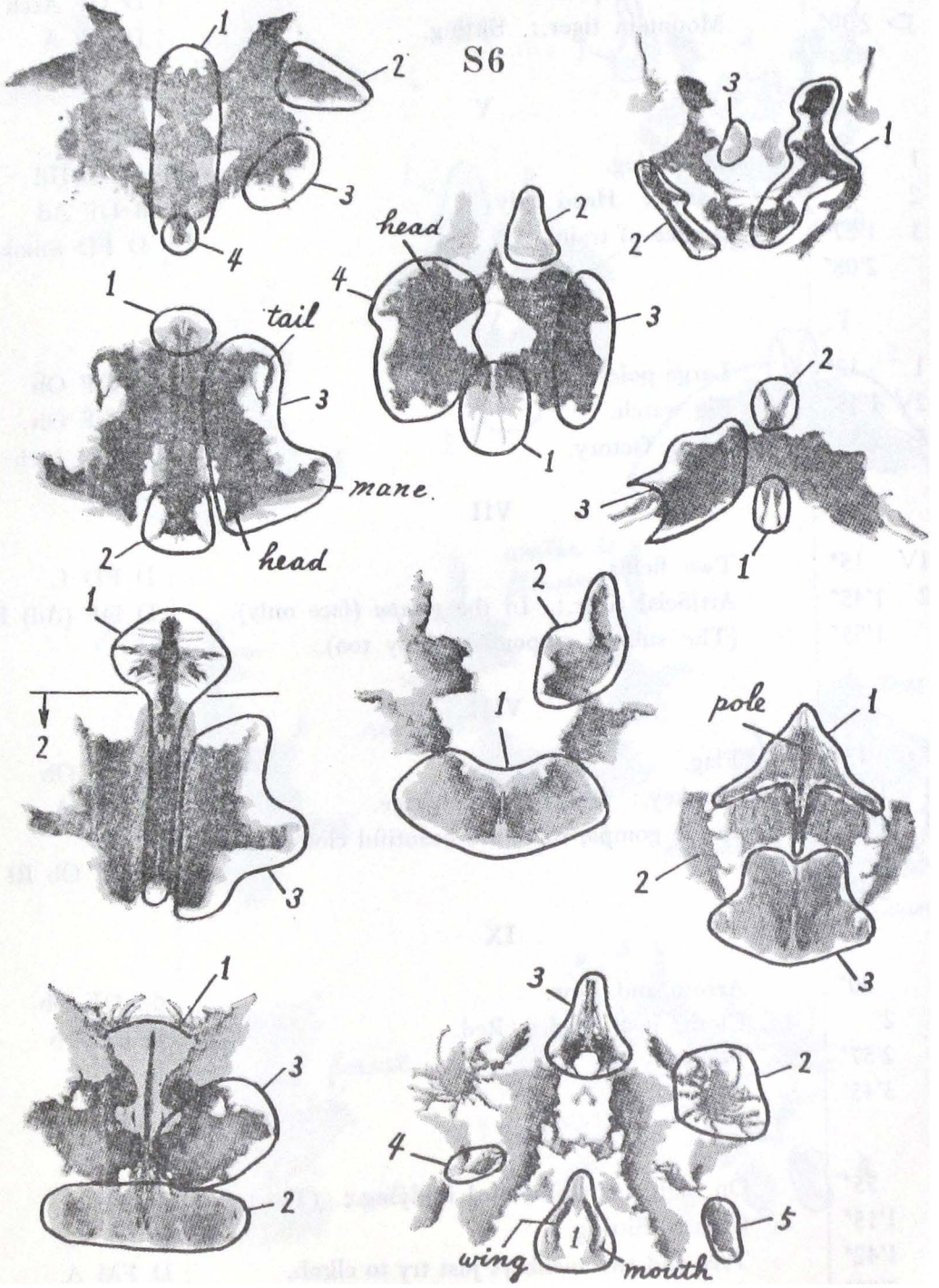
IX

1 30"	Arrow and bow.	dd DF Ob
2 2'	Cloth, just dyed.: Red.	D CF Ob
3 2'57"	Forest.	D CF L
3'45"		

X

1 35"	On high mountain, bird is flying.: (Two).	D FM A
2 1'15"	Crab.: Sitting.	D DF A
3 1'42"	Tree and two menkeys just try to climb.	D FM A
4 2'23"	Goat with large horn.: Colour and shape.	D FC A
5 3'12"	Worm living in water like leech but it does	D DF A
4'11"	not suck the blood.: Shape. Moving.	





S 7 Age. 23

I			
1	12"	Stumps.	D FD Pl
2	54"	Wing of eagle.	D DF Ad
	1'48"		
II			
1	9"	Temple of Gaya.	d DF Arch Rl
2	1'05"	Monkey.: Sitting.	D DF A
3	1'30"	Cockscomb.	D FC Ad
	2'07"		
III			
1	18"	Thunder god.	D DF (A) Rl
2	1'55"	Monkey.: Seeing backward. Just only seeing.	D DF A
	2'26"		
IV			
1	10"	Frog.: Sitting.	W DF A
	1'06"		
V			
1	10"	Eagle.: Flying.	W FM A
2	47"	Horn which lama blows.	d DF Ob Rl
	1'12"		
VI			
1	27"	Little tiger.: Very angry.	W DF- A
	1'12"		
VII			
1√	37"	Ridge.: Forgotten.	
2	1'24"	Peak.	d FD N
	1'39"		
VIII			
1	15"	Small chicken.: Sitting.	D DF A
2	1'24"	Ground.: Sometimes in such colour. Shape. (He has seen such ground at the <i>Pungen</i> side.)	C CF L
	1'57"		

## IX

1	27"	White mountain, Himalaya.	D FD N
2	54"	Lake.: Water is in such colour.	D CF N
3	1'30"	Tibetan red dress.	D CF Ob
	1'50"		

## X

1	25"	Himalayan goat.: Sitting, such colour.	D FC A
2	1'16"	Two snakes.: Sitting.	D DF A
3	2'	<i>Gompa.</i>	D DF Arch Rl
4	2'56"	Cloud.	D FD Cloud
	3'25"		

S 8 Age. 24

## I

1	12"	Mountain.	d FD N
2	35"	Mountain bird, sitting.	d DF A
3	1'06"	Dog, barking.: Head only.	d FM Ad
4	2'05"	Key.	d DF Ob
	2'21"		

## II

1	15"	<i>Chorten.</i>	D DF Arch Rl
2	40"	Mountain sheep.: Walking.	D FM A
3	1'20"	Bird's head.	D DF Ad
	2'04"		

## III

1	25"	Monkey.: Two monkeys, looking each other.	D DF A
2	1'08"	Elephant.: Sitting.	D DF A
	1'20"		

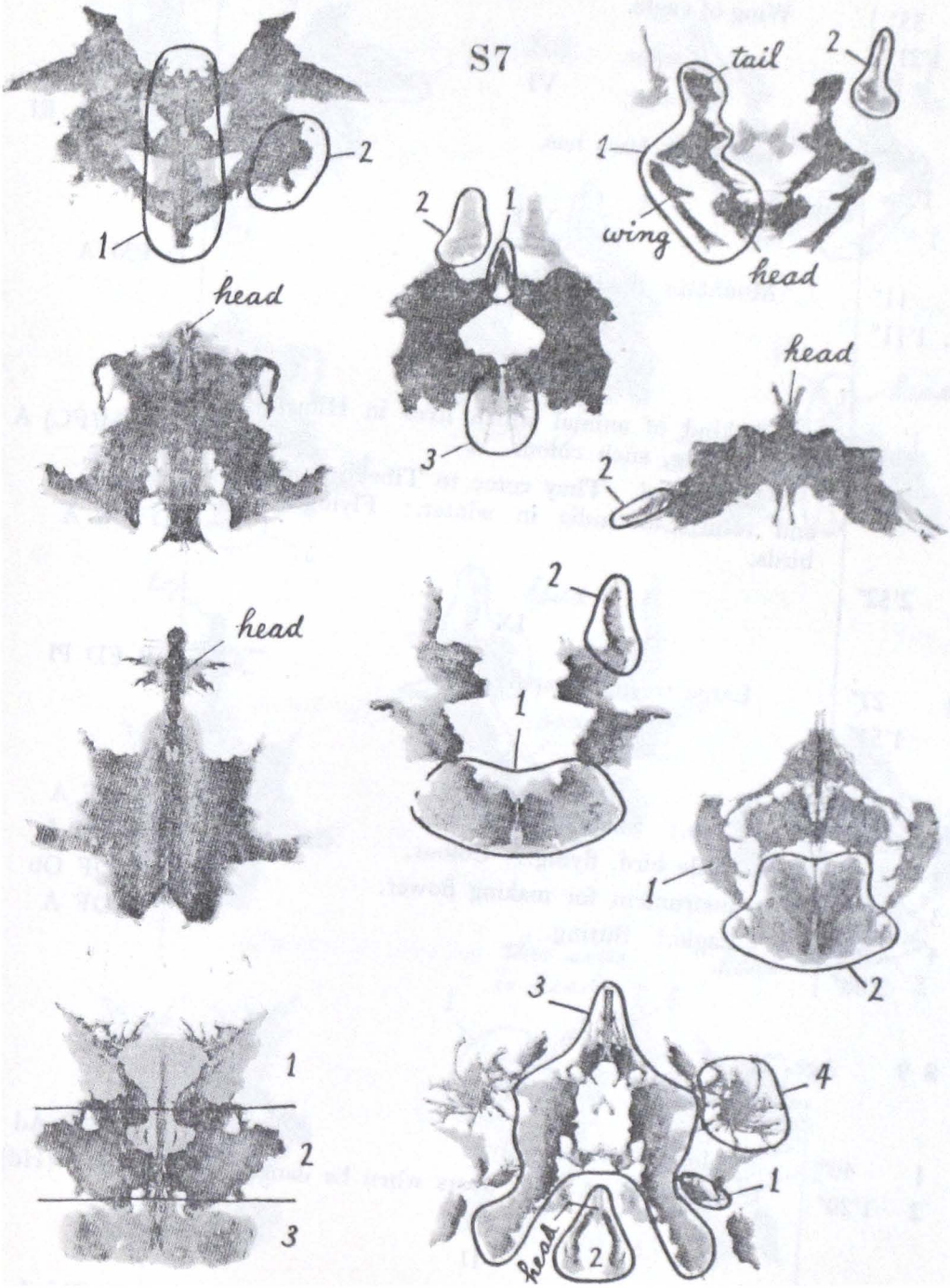
## IV

1	10"	Mountain.	W FD N
2	1'18"	Stump.	D FD Pl
	1'38"		

## V

1	8"	Mouse.: Sitting.	D DF A
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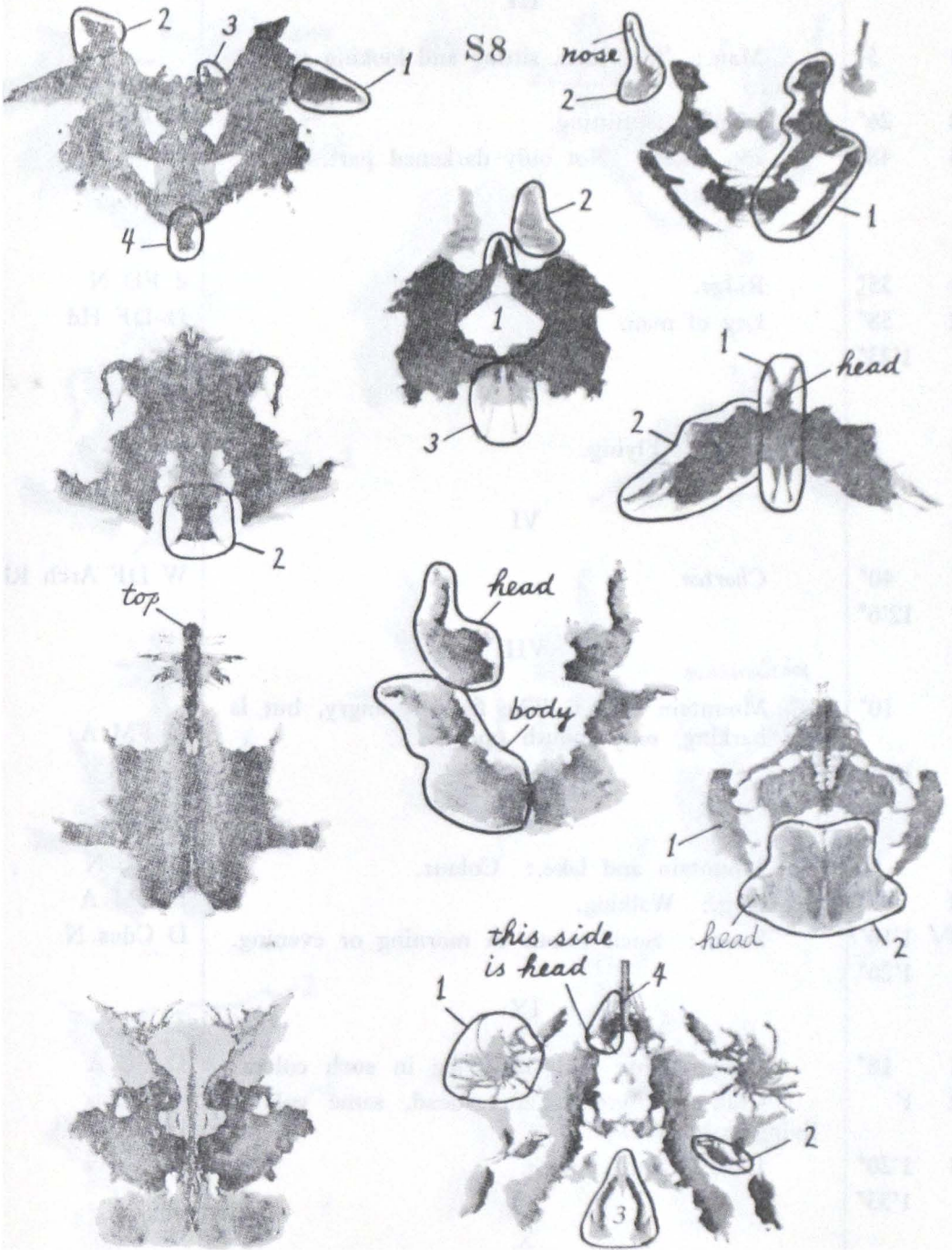




2	55" 1'21"	Wing of eagle.	D DF Ad
VI			
1	19" 1'	Bell which lama has.	W DF Ob Rl
VII			
1	11" 1'11"	Mountain tiger.: Barking.	D FM A
VIII			
1	1'	A kind of animal which lives in Himalaya.: Just walking, such colour.	D FM(FC) A
2	2'11" 2'52"	Large bird. They come to Tibet in summer and return to India in winter.: Flying. Two birds.	D FM A
IX			
1	27" 1'51"	Large tree.: Shape.	W FD Pl
X			
1	20"	Crab.: Shape. Sitting.	D DF A
2		Little bird, flying.: Colour.	D FM A
3		Instrument for making flower.	D DF Ob
4	2'58" 3'08"	Eagle.: Sitting.	D DF A

## S 9 Age. 21

I			
1	40"	Horse.: Head only.	D DF Ad
2	1'20"	Mask which lama wears when he dances.	d DF (Hd) Rl
II			
1	10"	Deer.: Walking.	D FM A
2	37"	Woman's vulva.: White part.	S DF Sex
3	1'40" 1'54"	<i>Chorten.</i>	d DF Arch Rl



## III

1	5"	Man.: Two men, sitting and looking at each other.	D M H
2	26"	Monkey.: Sitting.	D DF A
3	48"	Ice, icicle.: Not only darkened part.	d FD N

## IV

1	35"	Ridge.	d FD N
2	58"	Leg of man.	D DF Hd
	1'33"		

## V

1	4"	Eagle.: Flying.	W FM A
	40"		

## VI

1	40"	<i>Chorten.</i>	W DF Arch RI
	12'6"		

## VII

1	10"	Mountain tiger.: The tiger is angry, but is not barking, only mouth open.	D FM A
	1'04"		

## VIII

1	6"	Mountain and lake.: Colour.	D CF N
2	40"	Dog.: Walking.	D FM A
3√	1'10"	Snow.: Such colour in morning or evening.	D Cdes N
	1'26"		

## IX

1	18"	Frog.: Frog with little leg in such colour.	D FC A
2	1'	Crab.: A month after dead, same colour, living in his village.	D FC Ad
3	1'20"	Lake.: Such colour.	D CF N
	1'33"		

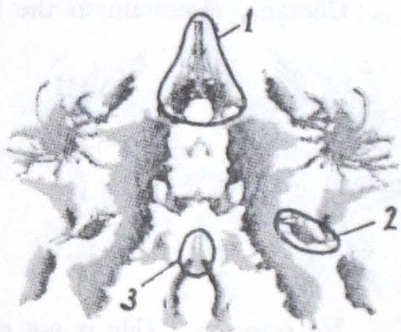
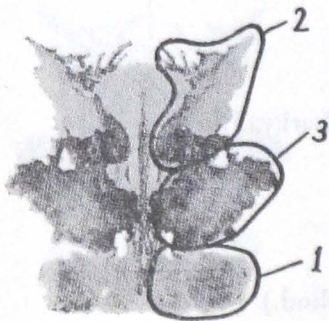
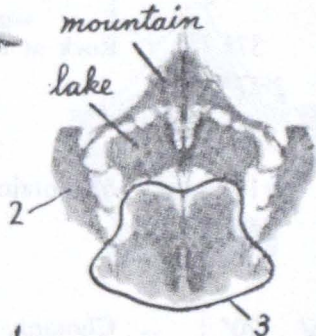
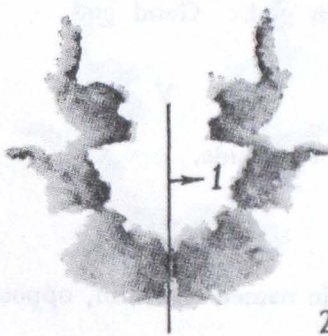
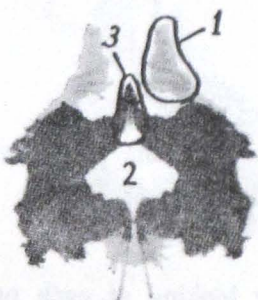
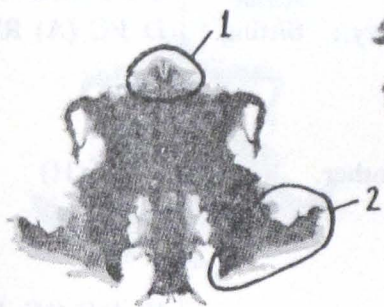
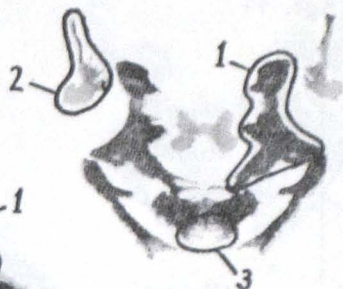
## X

1	27"	<i>Pungen</i> (Mt. Manaslu).	D FD N RI
2	1'	Himalayan sheep.: Sitting, such colour.	D DF A
3	1'50"	Goat.: Head only.	D DF Ad
	2'36"		





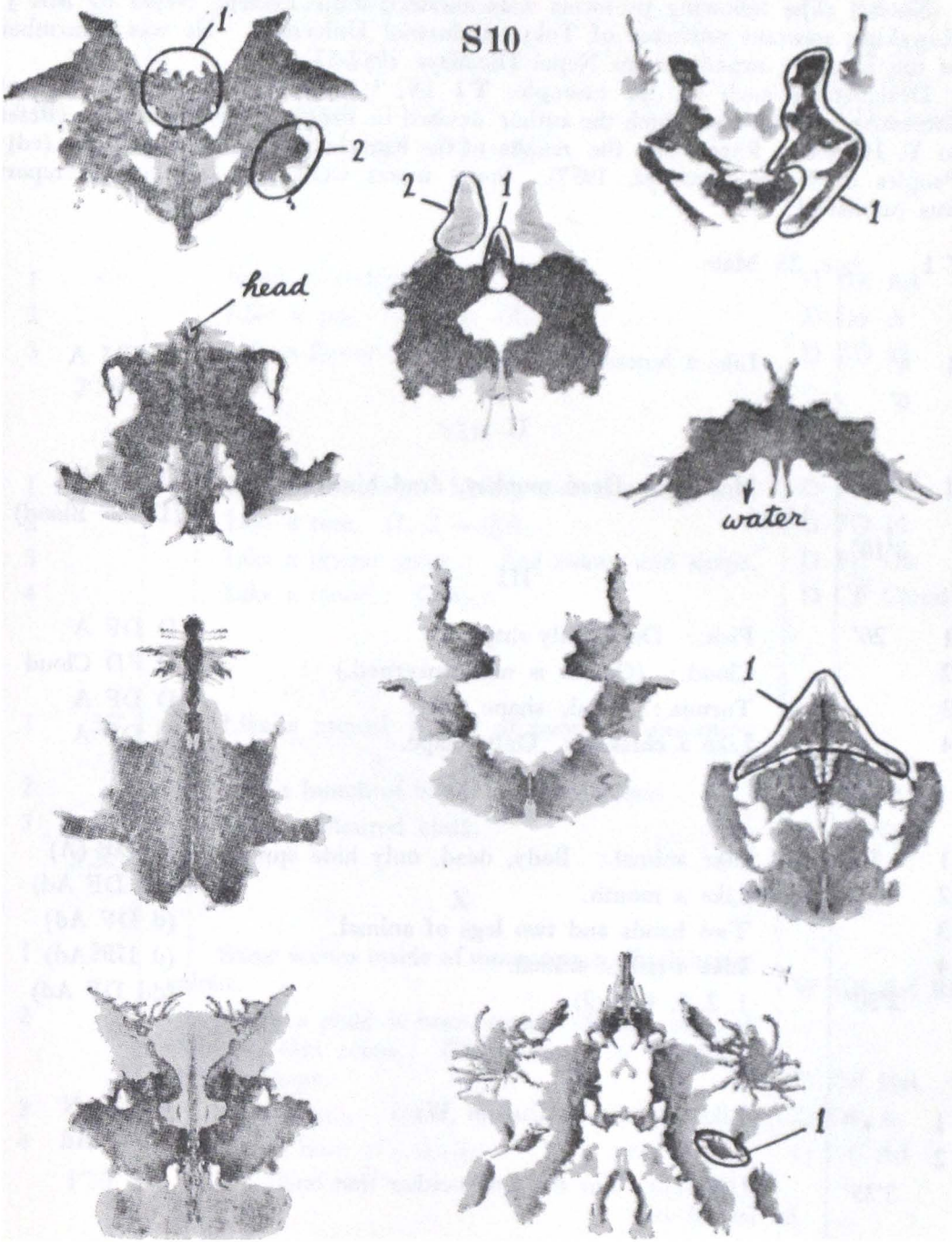
S9



S 10 Age. 44

I		
1√ 2'45"	Temple.	d DF Arch RI
2√ 3'42"	Mountain.	d FD N
4'		
II		
1 30"	<i>Chorten.</i>	d DF Arch RI
2 51"	The painted dog in the monastery.: Sitting.	D FC (A) RI
2'09"		
III		
1 27"	Giant.: Only looking at each other.	D M (H)
1'35"		
IV		
1 2'37"	Mountain god.: Good god.	W DF (H) RI
2'58"		
V		
1 37"	Rock at river side.	W FD N
2'27"		
VI		
1 14"	Mountain named Orkenlin, opposite Manaslu.	W FD N
1'56"		
VII		
1√ 20"	Chotana, mountain to the left of Larkya pass.	W FD N
2'07"		
VIII		
1 2'30"	Mountain, at the right side of Larkya pass	
	named Mahual.	D FD N
3'40"		
IX		
2'41"	No response. (He is not colour-blind.)	
X		
1 1'44"	Himalayan goat.: Same colour, sitting.	D FC A
3'17"		

S10



Notes: The following protocols were obtained from Tsumje, Nepal by Mr. J. Kawakita, assistant professor of Tokyo Industrial University. He was a member of the Japanese expedition to Nepal Himalaya 1952-53.

Designations such as, for example, T 1 IV, 1, 2, 3, 4 → ③, show a type of succession of responses which the author devised in handling the protocols. (Refer to Y. Huzioka: Report on the results of the Rorschach test, in K. Kihara (ed): Peoples of Nepal Himalaya, 1957). Some scores were revised after the report was published.

T 1 Age. 28 Male.

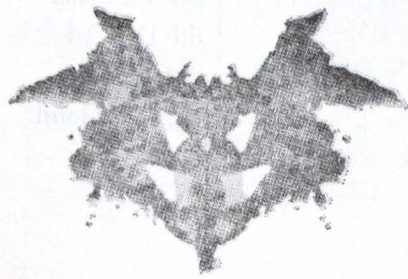
I			
1	4' 6'	Like a butterfly.: Flying.	W FM A
II			
1	1'35" 3'10"	Monkey.: Dead monkey, dead himself, from blood.	D DF A (D CF Blood)
III			
1	20"	Fish.: Dead, only shape.	D DF A
2		Cloud.: (Colour is not concerned.)	D FD Cloud
3		Tortois.: Dead, shape only.	D DF A
4		Like a chicken.: Only shape.	D DF A
IV			
1	30"	Like animal.: Body, dead, only hide spread.	W DF (A)
2		Like a mouth.	(dd DF Ad)
3		Two hands and two legs of animal.	(d DF Ad)
4	2'50"	Like a tail of animal. 1, 2, 3, 4 → ③	(d DF Ad) (dd DF Ad)
V			
1	*	Like a stone.: (Cut-off W)	W FD N
2		Leg of cow.	d DF Ad
	3'35"	(He says, "nor this one neither that one". Is he fastidious?)	
VI			
1	20"	<i>Chorten.</i>	D DF Arch Rl
2		Head of <i>chorten.</i>	(d DF Arch Rl)
3		Female part.	D DF Sex



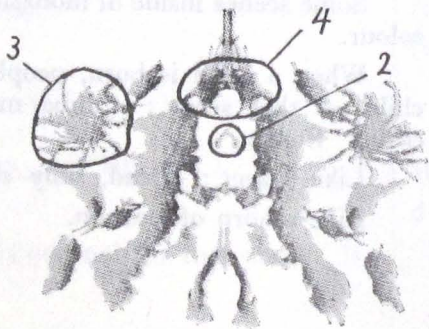
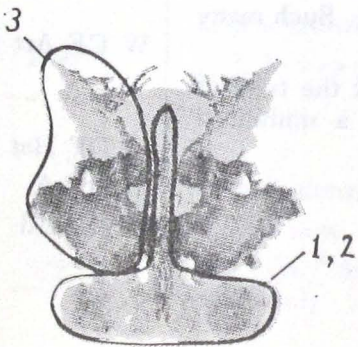
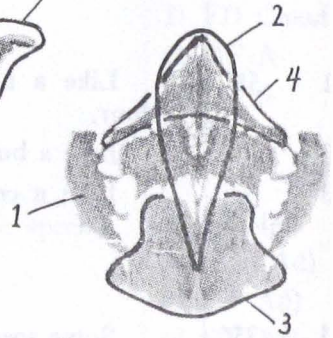
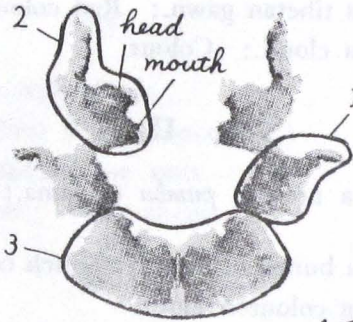
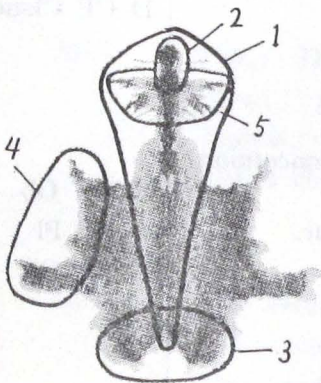
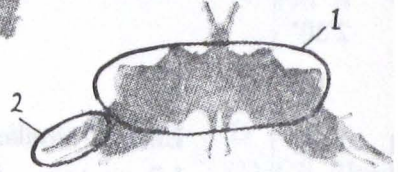
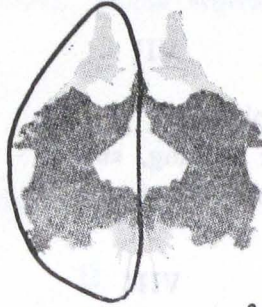
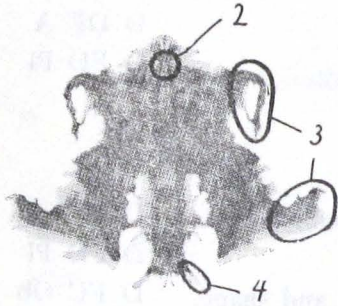
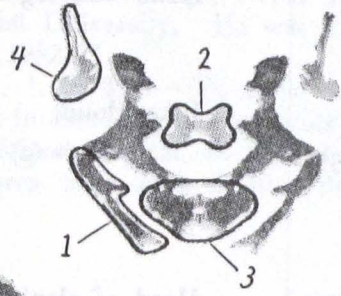
4		Hand and leg of animal.	(dr DF Ad) dd DF Ad d DF Ad
5		Like cloud.	D FD Cloud
	3'35"	1, 2 → ③      4 → ④	
VII			
1	50"	Head of elephant.	D DF Ad
2		Like a pig.: Living, sitting.	D DF A
3		Like a flower.: By shape.	D FD Pl
	2'30"		
VIII			
1	18"	Like a monkey.: Living and climbing tree.	D FM A
2		Like a tree. (1, 2 → ⑧)	D FD Pl
3		Like a tibetan gawn.: Red colour and shape.	D FC Ob
4		Like a cloud.: Colour.	D CF Cloud
IX			
1	55"	Like a utensil, <i>pumba</i> of lama.: Concerning colour.	D DF Ob
2		Like a bunch of flower.: Such colour.	D CF Pl
3		Like a coloured cloth.	D CF Ob
	3'20"		
X			
1	35"	Some scenes inside of monastery.: Such many colour.	W CF Art Rl
2		When a child is born, people cut the tube of child — that scene.: (Tube means a umbillical cord.) Shape.	D DF Hat
3		Like insect.: Dead, only shape.	D DF A
4		Like a horn of a sheep.	D DF Ad
	3'20"		

T 2      Age. 36 Male.

I			
1	20"	Man's head.	d DF Hd
2		Like a dog.: Only head.	d DF Ad



T1

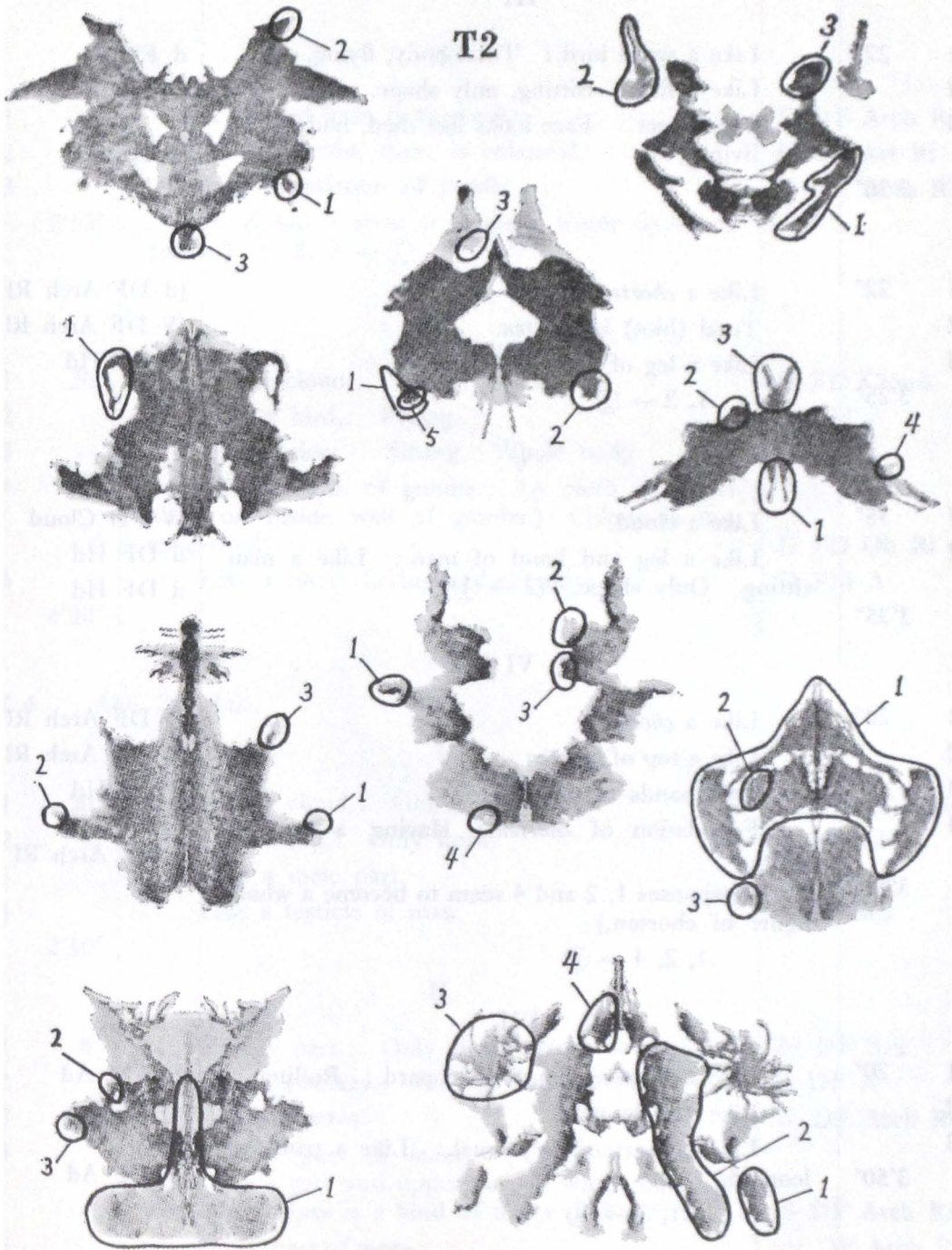


3		Mouth of a cow.	d DF Ad
	2'50"		
II			
1	40"	Like a crow.: Only part of it.	d DF Ad
2		Like a head of sheep.	d DF Ad
3		Like a snake.: Only part, living.	dd DF Ad
4		Like a sheep.: (The same of 2.)	
5		Like a face of tiger.: Part.	dd DF Ad
	3'45"	(As transrater Hlakpa left here at the time, the inquiry was not sure.) 2, 4 → ①	
III			
1	25"	Like a fish.: Sitting.	D DF A
2		Like a chicken.: Living, such colour.	D DF A
3		Like a head of monkey.	d DF Ad
	2'50"		
IV			
1	10"	Like a head of elephant.: Sitting. Part.	d DF Ad
2		Like a frog of water.: Going and Living.	W DF A
V			
1	35"	Leg of elephant.	d DF Ad
2		face of elephant.	dd DF Ad
3		Like a female part.	d DF Sex
4		Like a horn of deer.	dd DF Ad
VI			
1	20"	Sheep is sleeping.: Part.	dd FM Ad
2		Cat.: Only head, living.	dd DF Ad
3		A man is sitting.	dd M H
4		A script in the monastery.	W FD Art RI
VII			
1	20"	Like a trunk of elephant.	dd DF Ad
2		A head of chicken.	d DF Ad
3		Like a head of pig.	dd DF Ad

4	3'10"	Head of a house.	dd DF Arch
VIII			
1	15"	A tree and two monkeys are climbing.	D FM A
2		Between above (preceding tree and monkey) A man is sitting.	dd DF H
3	2'30"	Head of monkey.: Sitting. (The subject tends to make a whole figure step by step.)	d DF Ad
IX			
1	14"	A flower base in the monastery.: Only shape.	D DF Ob Rl
2		A head of horse.	dd DF Ad
3	3'15"	Like a bird.: Only shape.	dd DF A
X			
1	1'	A rat.: Total body, it's shape.	D DF A
2		Red cloud.: Not moving.	D CF Cloud
3		Insect which can fly.: Living, sitting.	D DF A
4	4'30"	Insect which has two horns.: Entering in a tree. (Very disturbing circumstances for the test.)	D FM A

**T 3** Age. 58 Male.

I			
1	2'	Like deer's mouth.	d DF Ad
2		Opening mouth of the man.	dd DF Hd
3		Like female part.	d DF Sex
4	5'40"	Like two monkeys.: Above waist. Talking each other.	d FM A
II			
1	20"	Like two monkeys.: Total body, living.	D DF A
2		Like three flags of the monastery.	d DF Ob Rl
3	3'50"	Like root of tree.	D FD Pl



## III

- |   |     |   |        |
|---|-----|---|--------|
| 1 | 27" | Like a small bird.: Total body, flying.                     | d FM A |
| 2 |     | Like a fish.: Sitting, only shape.                          | D DF A |
| 3 |     | Like insect.: Face looks like died, body looks like living. | D DF A |

3'30"

## IV

- |   |     |                                  |                |
|---|-----|----------------------------------|----------------|
| 1 | 22" | Like a <i>chorten</i> .          | (d DF Arch Rl) |
| 2 |     | Total (blot) is <i>chorten</i> . | W DF Arch Rl   |
| 3 |     | Like a leg of man.               | D DF Hd        |
- 1, 2 → ③

3'25"

## V

- |   |     |  |                    |
|---|-----|--|--------------------|
| 1 | 35" | Like a cloud.  | W FD Cloud         |
| 2 |     | Like a leg and hand of man.: Like a man sitting. Only shape. (2 → ④) | d DF Hd<br>d DF Hd |

3'35"

## VI

- |   |     |   |                |
|---|-----|---|----------------|
| 1 | 28" | Like a <i>chorten</i> .                                 | D DF Arch Rl   |
| 2 |     | Like a top of <i>chorten</i> .                          | (d DF Arch Rl) |
| 3 |     | Two hands of man.                                       | d DF Hd        |
| 4 |     | Foundation of <i>chorten</i> .: Having a opening space. | d DF Arch Rl   |
- (Responses 1, 2 and 4 seem to become a whole figure of *chorten*.)
- 1, 2, 4 → ⑥

3'40"

## VII

- |   |     |  |          |
|---|-----|--|----------|
| 1 | 20" | Like a opening mouth of leopard.: Rolling.           | D FM Ad  |
| 2 |     | Like female part.                                    | d DF Sex |
| 3 |     | Like a heart of an animal.: Like a trunk of leopard. | D DF Ad  |
- 1, 3 → ④

3'50"

## VIII

- |   |     |   |         |
|---|-----|---|---------|
| 1 | 10" | Like foliage of a tree.   | D FD Pl |
| 2 |     | Foliage and monkey is eating it.: Putting his legs on the stone, and climbing the tree. | D FM A  |

2'30" 1, 2 → ⑧

IX

- |       |     |  |              |
|-------|-----|--|--------------|
| 1     | 20" | A kind of form is on <i>gomba</i> .                                    | D DF Arch RI |
| 2     |     | In the <i>gomba</i> , there is coloured.                               | D CF Art RI  |
| 3     |     | Like foundation of <i>gomba</i> .                                      | D DF Arch RI |
| 2'55" |     | (1, 2 and 3 seem to make a whole figure of <i>gomba</i> .) 1, 2, 3 → ⑤ |              |

X

- |       |     |   |             |
|-------|-----|---|-------------|
| 1     | 20" | Like a cloud.   | D FD Cloud. |
| 2     |     | Like a bird.: Flying.   | D FM A      |
| 3     |     | Like a deer.: Sitting. Whole body.  | D DF A      |
| 4     |     | Like a cloth of <i>gomba</i> .: (A cloth which is hung on inside wall of <i>gomba</i> .) Colour is not concerned. | D FD Ob RI  |
| 5     |     | Like a cat.: Living and running.  | D FM A      |
| 4'30" |     |   |             |

T 4 Age. 21 Male.

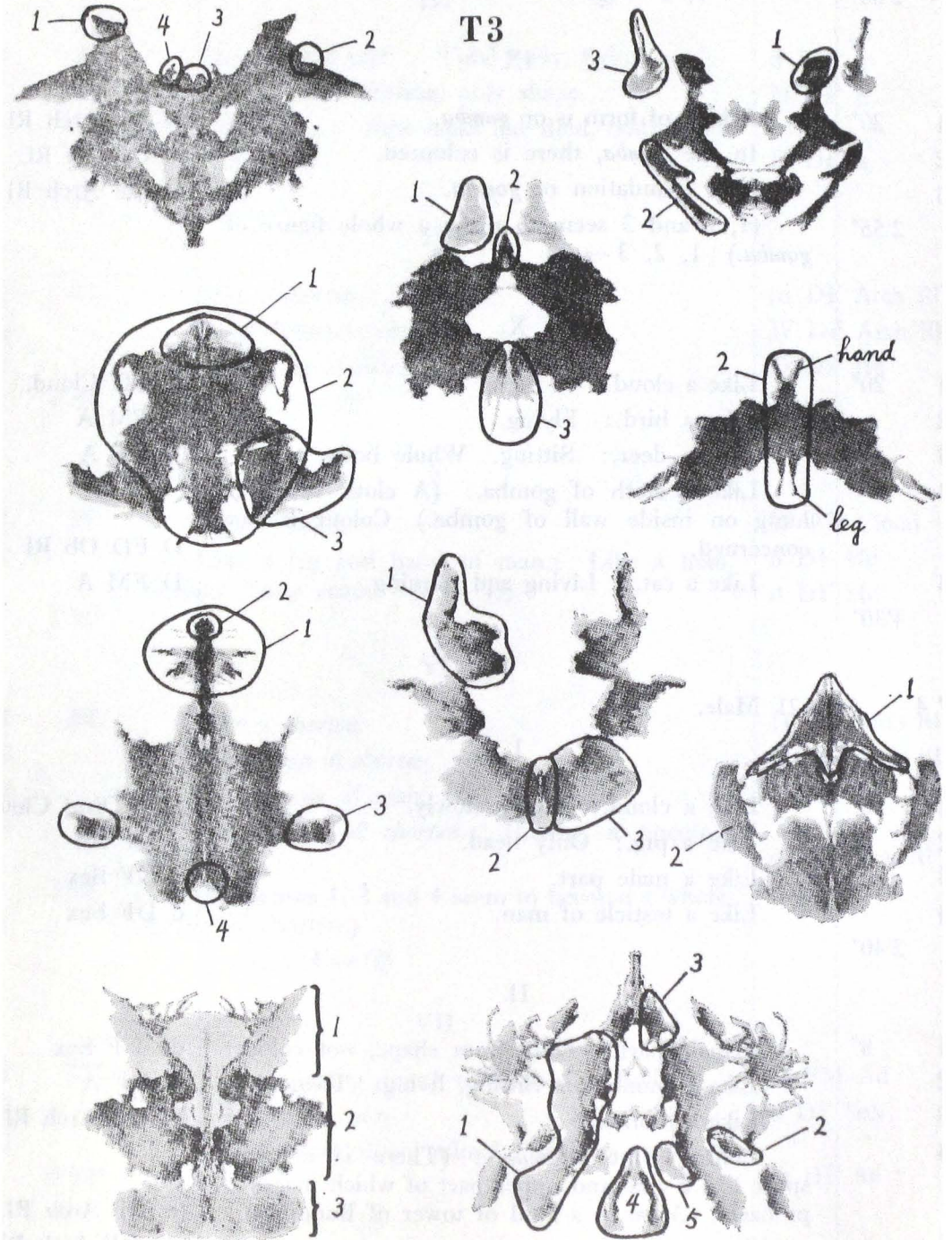
I

- |       |     |                              |                |
|-------|-----|------------------------------|----------------|
| 1     | 20" | Like a cloud.: Going slowly. | Dr FD(m) Cloud |
| 2     |     | Like a pig.: Only head.      | d DF Ad        |
| 3     |     | Like a male part.            | d DF Sex       |
| 4     |     | Like a testicle of man.      | d DF Sex       |
| 2'40" |     |                              |                |

II

- |       |    |  |                 |
|-------|----|--|-----------------|
| 1     | 8" | Female part.: Only from shape, not colour.   | dd DF Sex       |
| 2     |    | Like a monkey.: Sitting, living. Two.  | D DF A          |
| 3     |    | Like a <i>chorten</i> .  | W DF Arch RI    |
| 4     |    | Central part of <i>mane</i> .: (There is a open space like a gate and upper part of which makes a pinnacle. <i>Mane</i> is a kind of tower of Buddhism.) | (S DF Arch RI)  |
| 5     |    | Down part of <i>mane</i> .<br>(3, 4 and 5 make a whole figure.)  | (dr DF Arch RI) |
| 6     |    | Face of female part.: Not by colour, shape only. (the same as 1)   |                 |
| 2'10" |    | 3, 4, 5 → ③  |                 |







III

1^	5"	Like a bird.: Sitting. Whole figure.	D DF A
2		Like crocodile.: Dead, shape, whole figure.	D DF A
3		Like egg.: Colour is not concerned.	D DF-A
4		Like trunk of a tree.	D FD Pl
5		Female part.	D DF Sex
	2'20"		

IV

1	10"	Duck.	d DF A
2		Two legs of animal.	D DF Ad
3√		Pillar of <i>gomba</i> .	D DF Arch RI
4√		Iron-made part of pillar. 3, 4 → ③	(dd DF Ob RI)

V

1^	13"	Insect in water.: Moving.	D FM A
2		Stones on the bank of river.	D FD N
3		Two trees on the bank of river.: Fallen on the ground. 2, 3 → ⑤	d FD Pl

VI

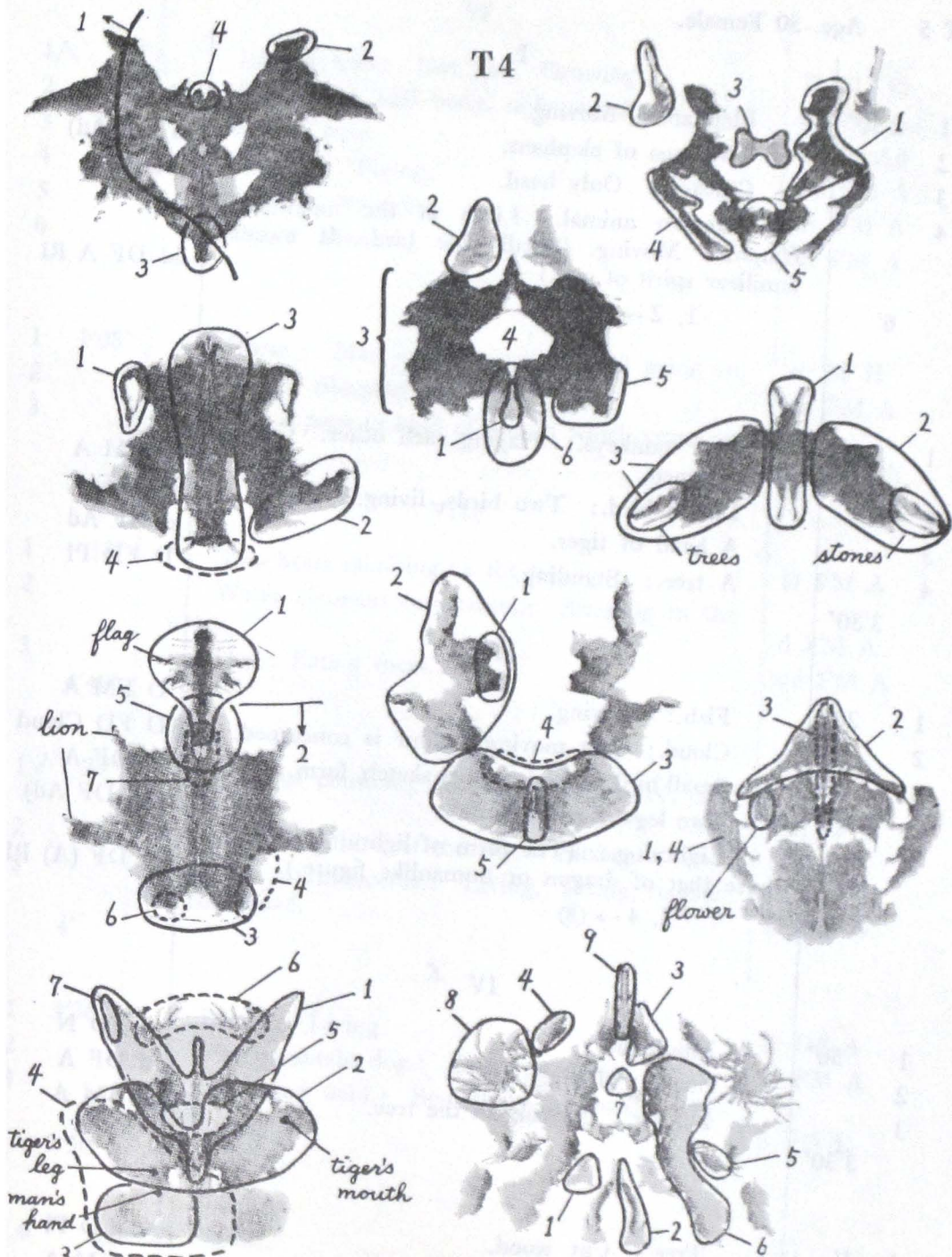
1	12"	Flag of <i>tharcho</i> (Buddhistic banner).	D DF Ob RI
2		Four lions sitting in front of <i>gomba</i> .	dd DF Ob RI
3		Like door of <i>gomba</i> .	D DF Ob RI
4		Like wall of <i>gomba</i> .	dd DF Ob RI
5		A spot on the wall.: Such shading of colour.	Dr cF Art RI
6		Frame of door in <i>gomba</i> .	dd DF Ob RI
7		Writing inside the <i>gomba</i> .: Script. 1~7 → ⑥	d FD Art RI
	3'30"		

VII

1	6"	Open mouth of a tiger.	(dd DF Ad)
2		Tiger is sitting on the mountain.	D DF A
3		There is river between two mountains.	d FD N
4		There are some grass also on the mountain.	D FD N

5		When river comes down side, the river bed is divided into two by land-slide. 1, 2 → ③ 3, 4, 5 → ⑤ ③, ⑤ → ⑧	dd FD Pl dd FD N
VIII			
1	15"	Monkey is climbing on the tree.: Red part is root of tree.	D FM A (D FD Pl)
2		Branch of a tree.	
3		The top of the tree is dried.: Colour. Part of blighted needle-leaf tree.	(dd FD Pl)
4		The monkeys are catching flower in their hands and catching the tree in the other hands.: Colour is related to flower.	(dd CF Pl)
	3'30"	1~4 → ③	
IX			
1^	25"	<i>Purwa</i> (name of a tree) and tree with branches.: Colour is related.	D FD Pl
2		Two tigers.: living.	D FM A
3<		Upper part of man.: Only shape.	D DF Hd
4		Tigers catching the hand of man.	
5		Two stones.	D FD N
6		In the tree there is flower.: Colour is related.	(d FD Pl)
7		In the tree some parts is swelling.: Buldge, it is on top of tree.	(dd FD Pl)
	3'20"	1, 5, 6, 7 → ③ 2, 3, 4 → ⑧	
X			
1	10"	Two cats.: Sitting, living.	D DF A
2		Insect.: Only shape.	D DF A
3		Two horses.: Moving. Tail is not exist.	D FM A
4		Two rats.: Sleeping.	D FM A
5		Two small birds.: Living, flying.	D FM A
6		Two lakes.	D FD N
7		Skull.: Three skulls.	D DF Hat
8		Two flowers.: Colour is concerned.	D FD Pl
9		Like road.	D FD Geo
	4'		

T4



T 5 Age. 50 Female.

## I

1	2'30"	Elephant.: Moving.	W DF A
2		Two legs of elephant.	(d DF Ad)
3		Chicken.: Only head.	d DF Ad
4		Like an animal.: Lives in the mountain, <i>Hlapcha</i> . Moving. (Small blue bird. It means familiar spirit of god.)	dd DF A Rl
	6'	1, 2 → ③	

## II

1	40"	Two monkeys.: Playing each other. Colour is concerned.	D FM A
2		Like a bird.: Two birds, living.	dd DF A
3		A head of tiger.	d DF Ad
4		A tree.: Standing.	D FD Pl
	3'30"		

## III

1	20"	Fish.: Moving.	D FM A
2		Cloud.: Not moving, colour is concerned.	D FD Cloud
3		Small bird.: Living, only sketch, form.	D DF A
4		Two legs of small bird.	(dd DF Ad)
5		Lightning.: (The form of lightning probably have that of dragon or humanlike figure.)	D DF (A) Rl
	3'40"	3, 4 → ③	

## IV

1	50"	Mountain.	d FD N
2		Snake.: Living.	d DF A
3		Langur.: Moving in the tree.	d FM A
	3'30"		

## V

1	1'	Tree.: Cut wood.	d FD Pl
2		Cat.: Eating meat.	d FM A
3		Scissor made of iron.	d DF Ob
4		Like a bird.: Sleeping.	d FM A
	4'05"		

VI

1^	15"	Like a tree.: Not cut. Growing.	D FD PI
2		Horse.: A half body, only sketch.	dd DF Ad
3		Leg of bear.	d DF Ad
4		A bird.: Flying.	dd FM A
5		Sheep.: Sleeping.	dr FM A
6		Dog.: Sleeping.	dr FM A

VII

1	1'05"	Horse.: Man is riding a horse and going on.	dr M H
2		Cow.: Sleeping.	dr FM A
3		Like a <i>paga</i> (a kind of box in which crops are stored.)	D DF Ob

VIII

1	13"	Two bears climbing on the tree.	D FM A
2		Water elephant (crocodile): Sleeping in the water.	d FM A
3		Dog.: Eating meat.	dd FM A
	4'40"		

IX

1√	28"	Head of chicken.: Colour is concerned, living, sitting.	Dr DF A
2		Like a big bird of the sky.: Sitting.	D DF A
3		Like a rhinoceros.: Living, sitting, colour is concerned.	D DF A
	4'		

X

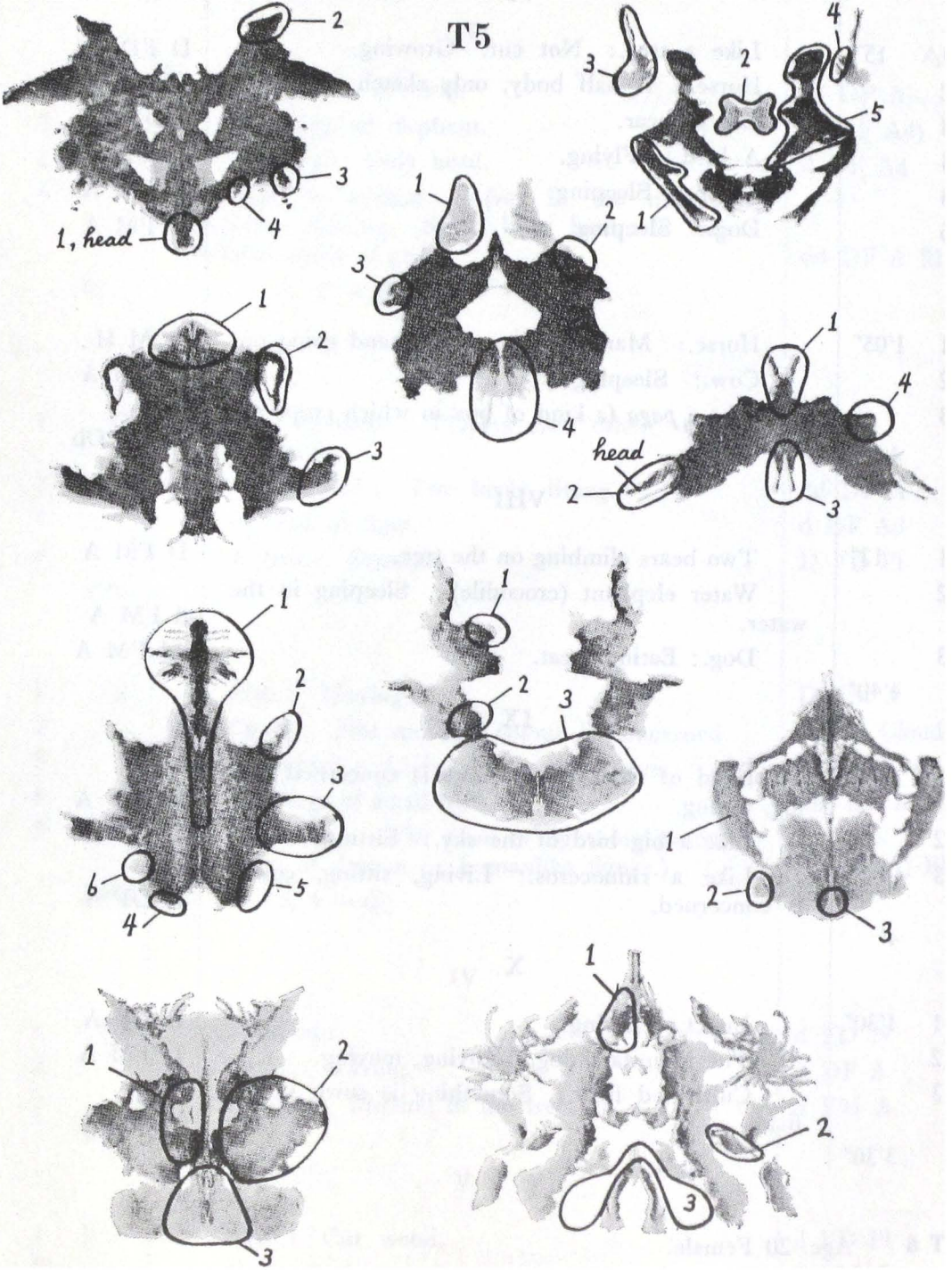
1	1'30"	Insect.: Living.	D DF A
2		The mountain dog.: Living, moving.	D FM A
3		Cultivated field.: Something is sown in the field.	S FD L
	3'30"		

T 6 Age. 20 Female.

I

1	1'	Elephant.: Only head.	d DF Ad
2		Rhinoceros.: Only head.	dd DF Ad

T5



3		Bird with long neck, <i>thungdrung</i> .: Whole figure, living.	d DF A
4		<i>Bendru</i> (a chicken without feather).: A kind of bird, a half body.	dd DF Ad
5		Small bird.: Living, a half body.	dd DF Ad
	3'30"		
II			
1	20"	Goat.: Whole figure, dead, only shape.	d DF A
2		A small black bird.: Whole figure, only sketch.	dd DF A
3		A small bird which lives in the room.: Dead, only shape. (This bird lives in the house not merely in a room.)	dd DF A
4		Cow.: Whole figure, living.	d DF A
	2'50"	1, 4 → ②	
III			
1	17"	Bird with red mouth.: Whole figure, colour is concerned. It is ill.	D DF A
2		Black bird.: Only head.	d DF Ad
3		A plough, <i>tongba</i> .: Only it's top.	dd DF Ob
4		<i>Tru</i> , like snake.: Whole figure, living.	D DF A
	3'10"		
IV			
1	4"	Tiger.: Whole figure, living.	d DF A
2		A cow.: Upper half.	dd DF Ad
3		Like a man, tall man.: Living. Whole body.	
4		Great Lama.: (The same with 3.)	D DF H RI
	3'25"	3, 4 → ①	
V			
1	25"	A leg.	d DF Hd
2		Like a hand.	dd DF Hd
3		Face of a man.	dd DF Hd
4		Waist of a man.	dd DF Hd
	2'30"	1~4 → ④	
VI			
1^	5"	<i>Chorten</i> .	D DF Arch RI



2	A man.: Whole figure, working.	dd DF H
3	A wall of a <i>gomba</i> . 1, 3 → ④	dr DF Arch Rl

## VII

1	20"	Log of wood.	d FD Pl
2		A monkey.: Half body, shouting.	dd FM Ad
3		Like a tree.: Growing.	d FD Pl
4		Leg of man.	dd DF Hd
5		Like a mask.: (Mask of human face which is in temple.)	d DF (Hd) Rl
6		<i>Tango</i> (cloth printed pictures of Buddhas, <i>mandara</i> .)	dd FD Art Rl

4'

## VIII

1	27"	Like a tent.: Only shape.	D DF Ob
2		Like a horse.: Living.	D DF A
3		Like snow.	D FD N
4		Like goat or sheep.: Whole figure, living.	d DF A
5		Like a tree.: Not cut, living.	dd FD Pl

3'50"

## IX

1	33"	A room.	dd FD Arch
2		<i>Panga</i> (a kind of box in which crops are stored).	dr DF- Ob
3		<i>Yurma</i> (weed on dry field).	dd FD Pl
4		Like a man making tshamba.	dd M H
5		Tshamba.: Colour is not concerned.	dr DF- Ob
	3'20"	4, 5 → ⑤	

## X

1	25"	Door.	D DF Arch.
2		This is a bird.: Only sketch, colour is not concerned.	D DF A
3		A leg of man.	D DF Hd
4		Like a crow.: Dead, whole figure, colour is concerned.	D DF A
5		Like a <i>zopa</i> .: Carrying load.	D FM A
6		A stone <i>donga</i> (big stone).	dd DF N



7	3'40"	<i>Pipyu</i> (small chicken).: (A small black bird which goes in and out the house.) whole figure, living.	D DF A
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T 7 Age. 23 Female.

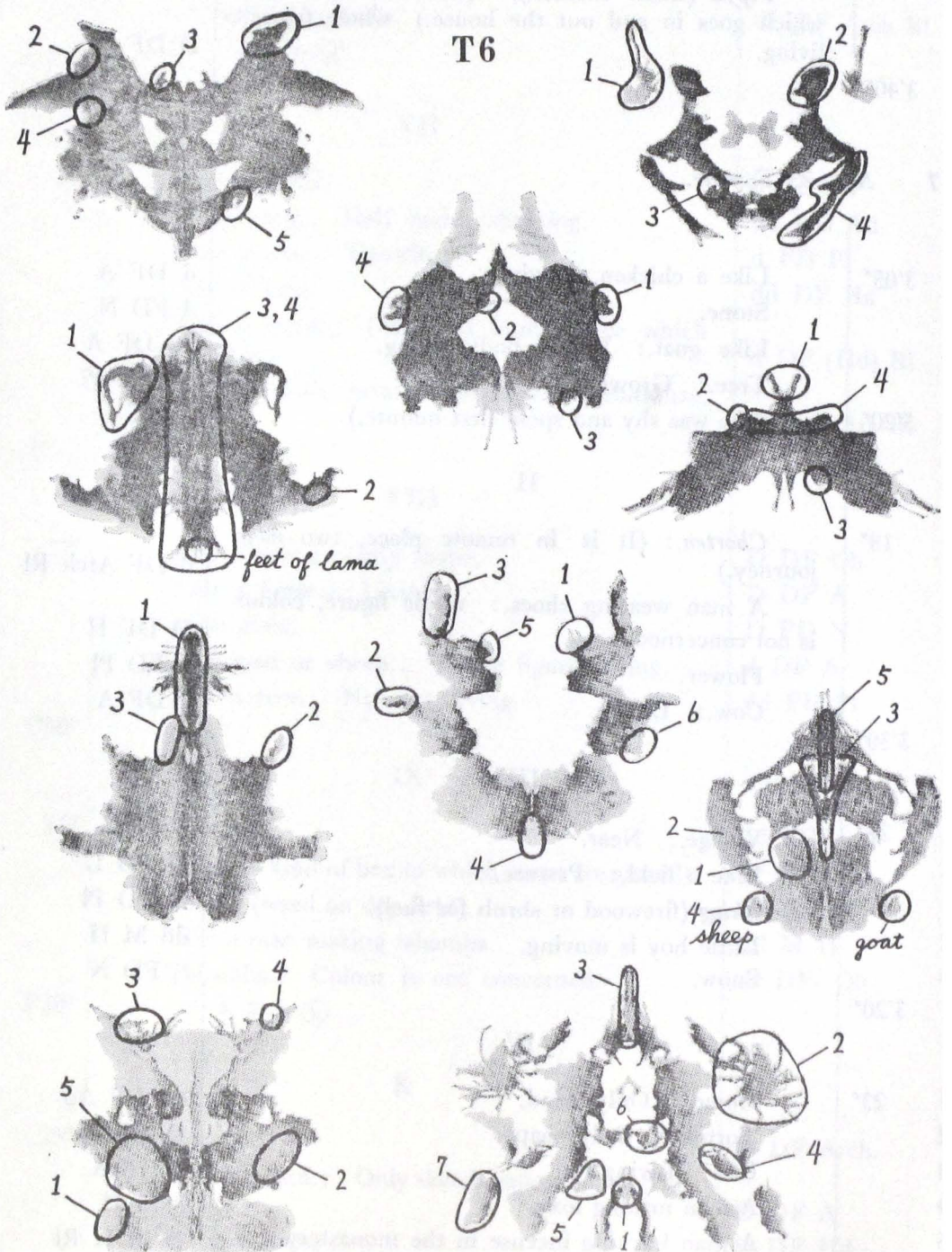
I			
1	3'05"	Like a chicken.: living.	d DF A
2		Stone.	d FD N
3		Like goat.: Whole body, living.	dd DF A
4	5'20"	Tree.: Growing. (She was shy and spent first minute.)	dd FD Pl

II			
1	18"	<i>Chorten</i> .: (It is in remote place, two days journey.)	d DF Arch RI
2		A man wearing shoes.: whole figure, colour is not concerned.	D DF H
3		Flower.	d FD Pl
4	3'30"	Cow.: Living.	d DF A

III			
1	25"	Village.: Near.	d FD L
2		Like a field,: Pasture.	D FD L
3		<i>Shing</i> (firewood or shrub for fuel).	D FD Pl
4		Little boy is moving.	dd M H
5	3'20"	Snow.	S FD N

IV			
1	23"	Horse.: Only head.	dd DF Ad
2		Tortois.: Only shape.	D DF A
3		Cat.: Living.	d DF A
4		A man making loxy.	d M H
5	4'	A man burning incense in the monastery.	D M H RI

V			
1	12"	A kind of red rat.: Dead, colour is not concerned.	d DF A



2		A banner of Buddhsm.: Standing.	d DF Ob RI
3		Young girl is sitting.	dd DF H
4		Like a male part.	dd DF Sex
5		Like a room.	Dr FD Ob
	3'10"		
VI			
1	5"	Temple.	D DF Arch RI
2		Like a big man.	dd DF H
3		Like a buffaro.: Whole figure, living.	d DF A
4		Female part.	d DF Sex
5		Black bird.: Living.	d DF A
6		Yellow bird.: Living.	dd DF A
	3'30"		
VII			
1	8"	Like a pond.	S FD N
2		Forest.	d FD N
3		A man sitting.	d M H
4		Like a cave.	Dr FD N
5		Bridge.	d DF Arch
	2'30"		
VIII			
1	10"	Village.	D FD- L
2		<i>Gomba</i> .	D DF Arch RI
3		A god inside the <i>gomba</i> .: Whole figure.	D DF Ob
4		Log of wood.: Lying on the ground.	dd FD Pl
5		<i>Peza</i> (like surface of plain for threshing cros). 2, 3 → ⑤	dd FD L
	3'45"		
IX			
1	5"	A crow.: Living, a half body, colour is concerned.	D DF Ad
2		<i>Chakkoi</i> (large bird).: Living a half body, colour is concerned.	D DF Ad
3		Like animal <i>ragge</i> : Living, whole body.	D DF A
4		Like a deer.: Whole body, living.	D DF A
5		A big rat.: Living.	S DF A
	4'	1, 2 → ①	

## X

1	35"	Fish.: Living.	D DF A
2		Like a hare.: Whole body, living.	dd DF A
3		Snake.: Dead.	D DF A
4		Monkey.: Whole body, living.	dd DF A
5		Mountain.	dd FD N
6		Like <i>mane</i> (A tower of lamaism like a <i>chorten</i> ).	D DF Arch Rl

T 8 Age. 41 Male.

## I

1	1'40"	Head of rat.	d DF Ad
	3'40"		

## II

1	20"	<i>Chorten</i> .	d DF Arch Rl
2		Female part.: Only sketch.	D DF Sex
3		Two monkeys.: Whole body, talking, colour is not concerned.	D DF A
4		Mouth of a bird.	d DF Ad
	3'40"		

## III

1	7"	Head of crow.: ("why it must be a crow," "I think so.")	d DF Ad
2		Two calves of leopard.: Living.	D DF A
3		Two fishes.: Moving.	D FM A
4		Two baby elephants.: Whole body, living.	D DF A

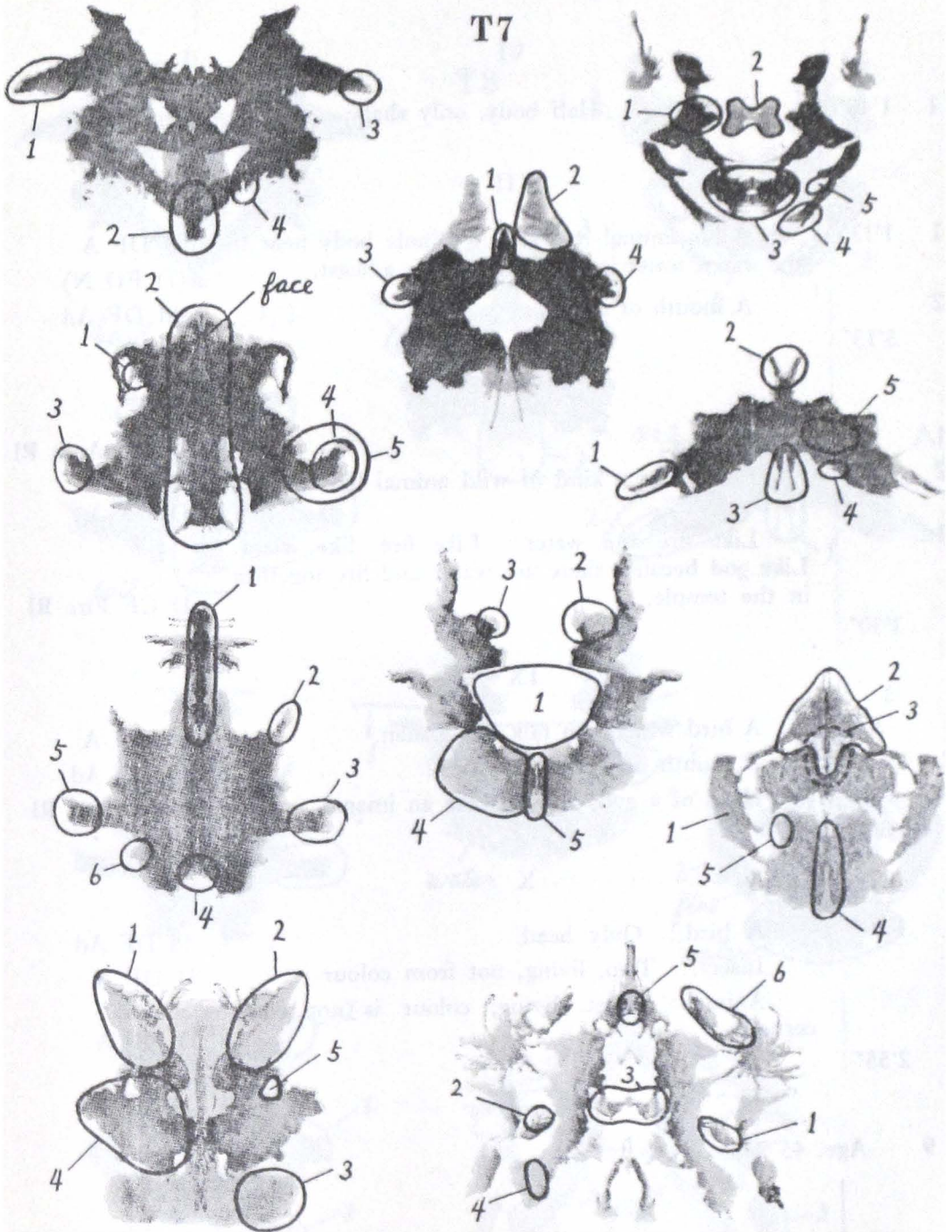
## IV

1	1'05"	Tortois.: Dead, only shape.	D DF A
2		Two legs of man.	D DF Hd
3		Tail of tortois.	(D DF Ad)
	4'	1, 3 → ③	

## V

1	40"	Leg of horse.	d DF Ad
2		Leg of man.	d DF Hd
3		Head of a man.: Man is lying.	dd DF Hd (D M H )

T7

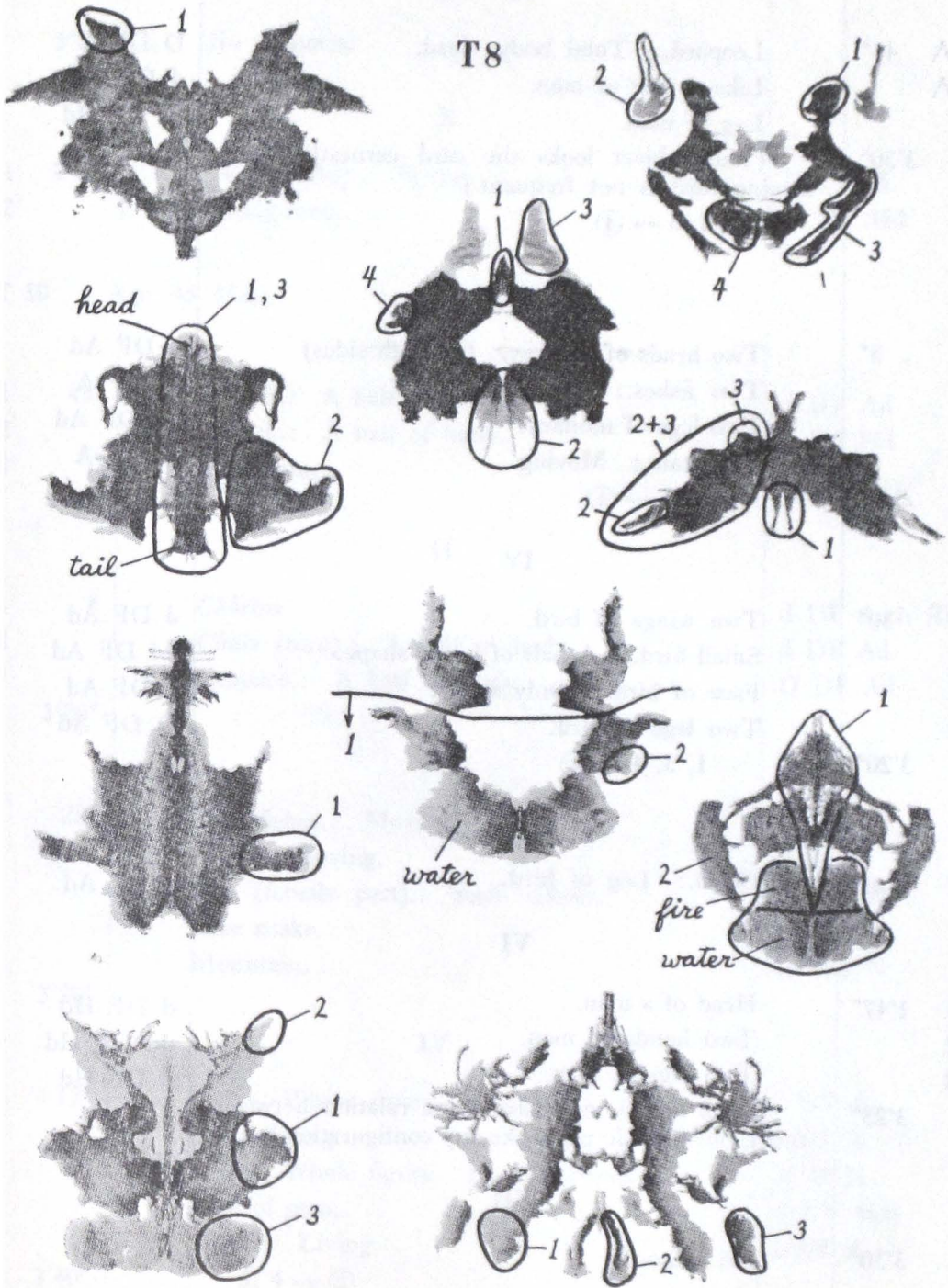


	2'45"	2, 3 → ④	
		VI	
1	1'40"	Baby dog.: Half body, only shape.	d DF Ad
		VII	
1	1'13"	A big animal in water.: Whole body near to the water, water is there, living, it is a beast.	D DF A (D FD N)
2		A mouth of a dog.	dd DF Ad
	3'15"		
		VIII	
1^	20"	<i>Chorten.</i>	D DF Arch RI
2		Looks like a kind of wild animal like a dog.: Living.	D DF A
3		Like fire and water.: Like fire, like water. Like god because there are water and fire together in the temple.	D CF Fire RI
	3'30"		
		IX	
1	35"	A bird which can talk like a man.	dd DF A
2		A mouth of a rat.	dd DF Ad
3		Head of a god, <i>Hla.</i> : Like an image.	D DF(Hd) RI
	3'30"		
		X	
1	1'20"	A bird.: Only head.	dd DF Ad
2		Insect.: Two, living, not from colour.	D DF A
3		Animal.: Beast, living, colour is not concerned.	D DF A
	2'55"		

**T 9** Age. 45 Male.

		I	
1	50"	Mouth of a chicken, <i>chabi.</i>	dd DF Ad
2		Insect.: Dead, only shape.	d DF A
3		Mouth of a fish.: Location is forgotten.	
	3'30"		





## II

1^	44"	Leopard.: Total body, dead.	D DF A
2^		Like a face of man.	d DF Hd
3		Leg of man.	D DF Hd
	3'30"	(The subject looks the card earnestly. His turning card is not frequent.) 2, 3 → ④	

## III

1	5"	Two heads of monkey. (on both sides)	d DF Ad
2		Two fishes.: Living.	D DF A
3		Two legs of monkey.	dd DF Ad
4		Two cats.: Moving.	D DF A
	2'40"	1, 3 → ④	

## IV

1	50"	Two wings of bird.	d DF Ad
2		Small bird.: A half of body, shape.	dd DF Ad
3		Face of bird.: Only shape.	d DF Ad
4		Two legs of bird.	D DF Ad
	3'20"	1, 3, 4 → ④	

## V

1	40"	<i>Chabi.</i> : Leg of bird.	d DF Ad
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## VI

1	1'47"	Head of a man.	d DF Hd
2		Two hands of man.	dd DF Hd
3		Two legs of man.	d DF Hd
	3'25"	(1, 2 and 3 may have some relation between them, but they do not make any configuration.)	

## VII

	3'30"	No response.	
--	-------	--------------	--

## VIII

1	1'20"	Two monkeys.: Moving.	D FM A
	3'30"		



IX

3'10" No response.

X

1 1'15" *Chabi* (bird).: Flying.  
2 Living man.

D FM A  
D DF Hd

T 10 Age. 45 Male.

I

1 45" A bird.: A half of body.  
2 A man.: A half of body.  
3 Mountain.

d DF Ad  
d DF Hd  
d FD N

4'30"

II

1 \* *Chbrten*.  
2 *Chabi* (bird).: A half of body.  
3 Leopard.: A half of body.

d DF Arch RI  
d DF Ad  
D DF Ad

3'20"

III

1 28" Two fishes.: Moving.  
2 Man.: Moving.  
3 *Thu* (female part).: Such colour.  
4 Like snake.  
5 Mountain.

D FM A  
D M H  
D DF Sex  
dd DF A  
dd FD N

3'30"

IV

1 12" Bird.: Whole figure.  
2 Cat.: living.  
3 Man.: Whole figure. In intercourse.  
4 Face of man.  
5 Snake.: Living.

d DF A  
d DF A  
W M H  
(? DF Hd)  
d DF A

3'40"

3, 4 → ③

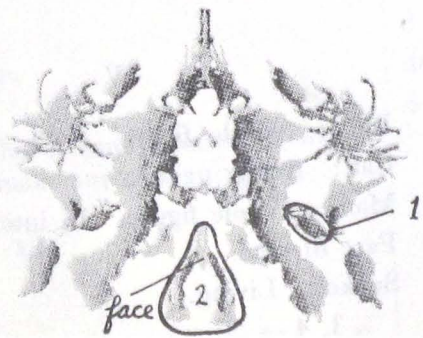
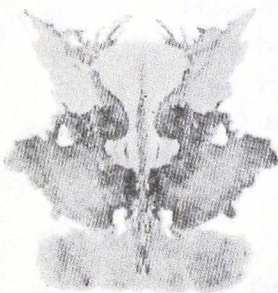
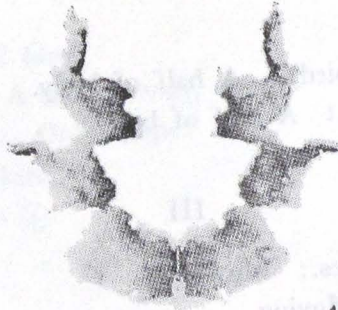
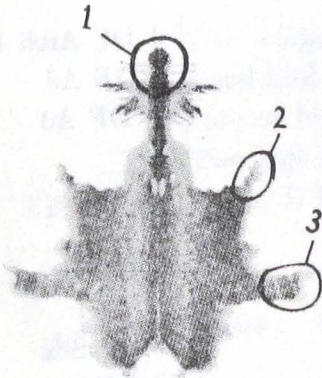
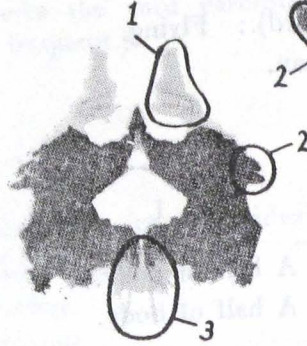
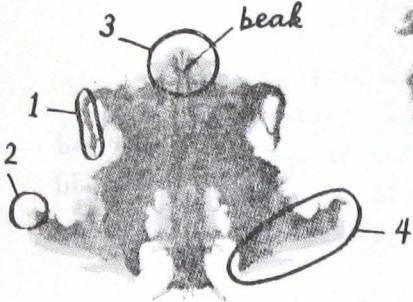
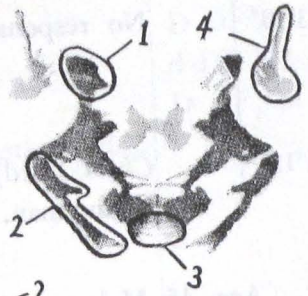
V

1 1'48" *Bu* (insect).: Living. A half of body.

d DF Ad



T9

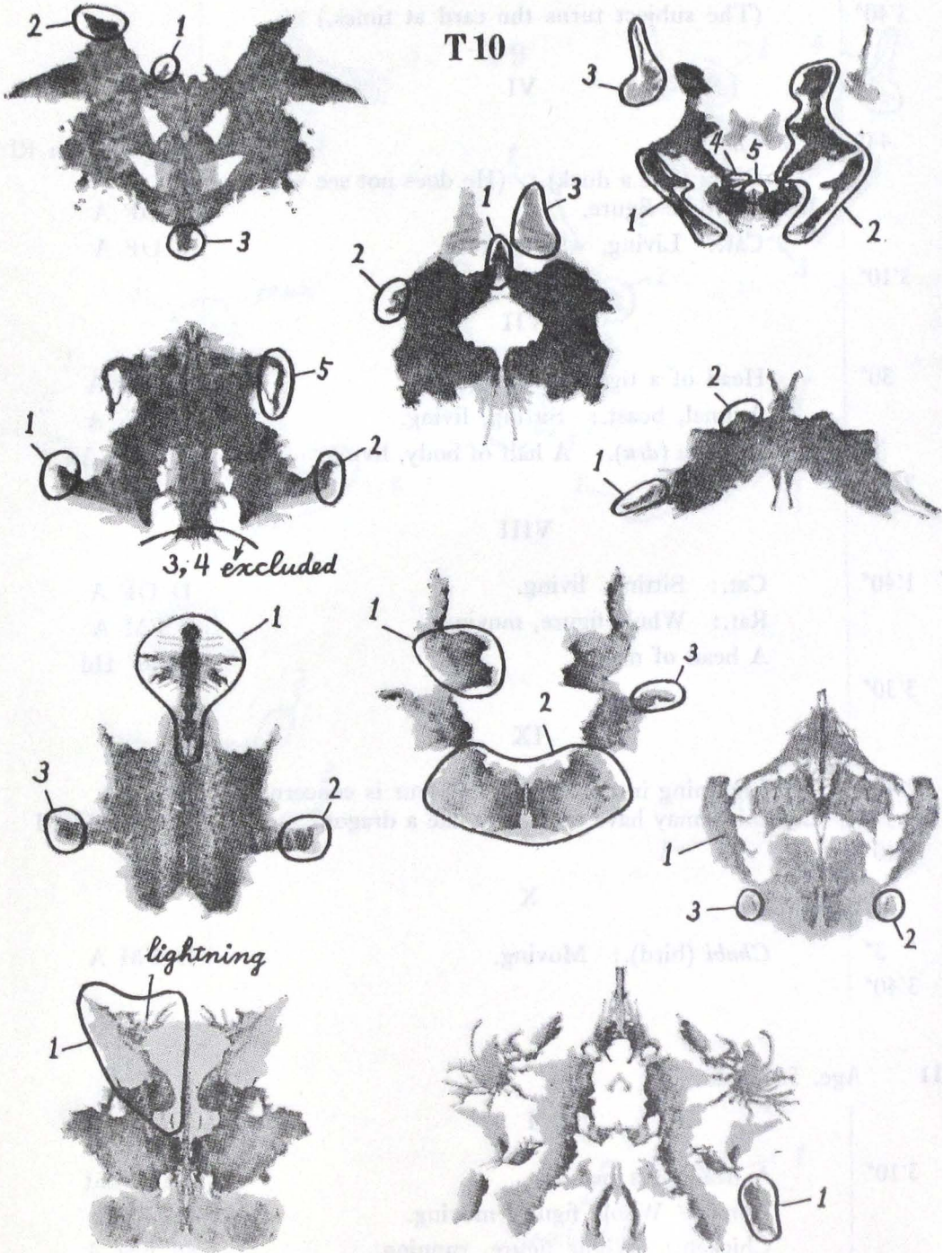


2		Head of a cow.	dd DF Ad
	3'40"	(The subject turns the card at times.)	
VI			
1	44"	<i>Chorten.</i>	D DF Arch Rl
2		<i>Chabi</i> (like a duck).: (He does not see water), living, whole figure.	d DF A
3		Cat.: Living, whole figure.	d DF A
	3'10"		
VII			
1	30"	Head of a tiger.: Living.	D DF A
2		Animal, beast.: Sitting, living.	D DF A
3		A snake ( <i>dru</i> ).: A half of body, living.	dd DF Ad
	2'50"		
VIII			
1	1'40"	Cat.: Sitting, living.	D DF A
2		Rat.: Whole figure, moving.	d FM A
3		A head of man.	d DF Hd
	3'30"		
IX			
1	2'40"	Lightning in the cloud.: Colour is concerned. Lightning may have the figure like a dragon.	D DF (A) Rl
	3'40"		
X			
1	3"	<i>Chabi</i> (bird).: Moving.	D FM A
	3'40"		

T 11 Age. 58 Male.

I			
1	3'10"	A head of a man.	d DF Hd
2		Horse.: Whole figure, moving.	d FM A
3		Chicken.: Whole figure, running.	dd FM A
	4'		
II			
1	42"	<i>Chabi</i> (a small bird).: Whole figure, Flying.	d FM A

T 10



2	Snake.: Only sketch, moving.	dd FM A
3	A head of pig.: Only head.	d DF Ad
4	Lightning.: It is energy upwards.	d DF(m) N RI

3'30"

III

1	25"	Like a langur.: Moving, colour is concerned.	D FM A
2		Two fishes.: Sitting, living.	D DF A
3		Hand gong of lama ( <i>panda, dalu</i> ).	D DF Ob RI
4		Two cows.: Sitting, living.	D DF A

3'30"

IV

1^	40"	<i>Chorten.</i>	d DF Arch RI
2		Two legs of man.	D DF Hd
3		Two hands of man.	d DF Hd
4		Femal part.	dd DF Sex
5		Two eyes of man.	dd DF Hd
	3'30"	2, 3, 5 → ④	

V

1	10"	Head of banner.	d DF Ob RI
2		Two legs of leopard.	d DF Ad
3		Fruit tree.: (Bulding places of the blot is a fruit.)	dr FD Pl
4		Sheep.: Only head.	d DF Ad

4'

VI

1^	7"	Tree.: Standing.	D FD Pl
2		A long tailed flower.: Colour is concerned, black, named <i>kamdong</i> .	dd FD Pl
3		Tiger.: Only skin, only shape.	d DF- Aob
4		A mouth of chicken.	dd DF Ad
5		Male part ( <i>liri</i> , testicle).	d DF Sex

4'30"

VII

1	1'10"	Like pond.	dd FD N
2		Cloud.: Moving.	D mF Cloud

3'30"

## VIII

- |    |       |   |         |
|----|-------|---|---------|
| 1/ | 30"   | Man, like an animal.: ("Is the figure like a man or like an animal?" Like an animal, sitting, living. | D DF A  |
| 2  | 3'20" | Tree.   | D FD PI |

## IX

- |   |       |   |         |
|---|-------|---|---------|
| 1 | 1'23" | Like an animal named <i>para</i> .: Living, whole figure, colour is concerned. ( <i>Para</i> is an animal like tiger which attacks sheeps and goats.) | dd DF A |
| 2 |       | Elephant.: Living, whole figure.  | D DF A  |
| 3 | 3'45" | Cow ( <i>pawo</i> ).: Whole figure, sitting, living.  | D DF A  |

## X

- |   |       |   |         |
|---|-------|---|---------|
| 1 | 1'50" | Like a monkey.: Moving.                               | D FM A  |
| 2 |       | <i>Wa</i> (wild cat).: Like a tiger. Sitting, living. | D DF A  |
| 3 | 3'30" | Tree.: Living.  | D FD PI |

T 12 Age. 29 Male.

## I

- |   |       |   |             |
|---|-------|---|-------------|
| 1 | 22"   | Like a man.: Sitting, living, (cut-off w).  | W H M       |
| 2 | 3'20" | <i>Churu</i> (a kind of necklace).: (This response means the stone which is attached at the end of the necklace. The stone is not only for an accessory but for a charm.) | dd DF Ob RI |

## II

- |    |       |   |              |
|----|-------|---|--------------|
| 1/ | 8"    | Two deer. Only sketch, not from colour. | D DF A       |
| 2  | 2'10" | <i>Chorten</i> .                        | d DF Arch RI |

## III

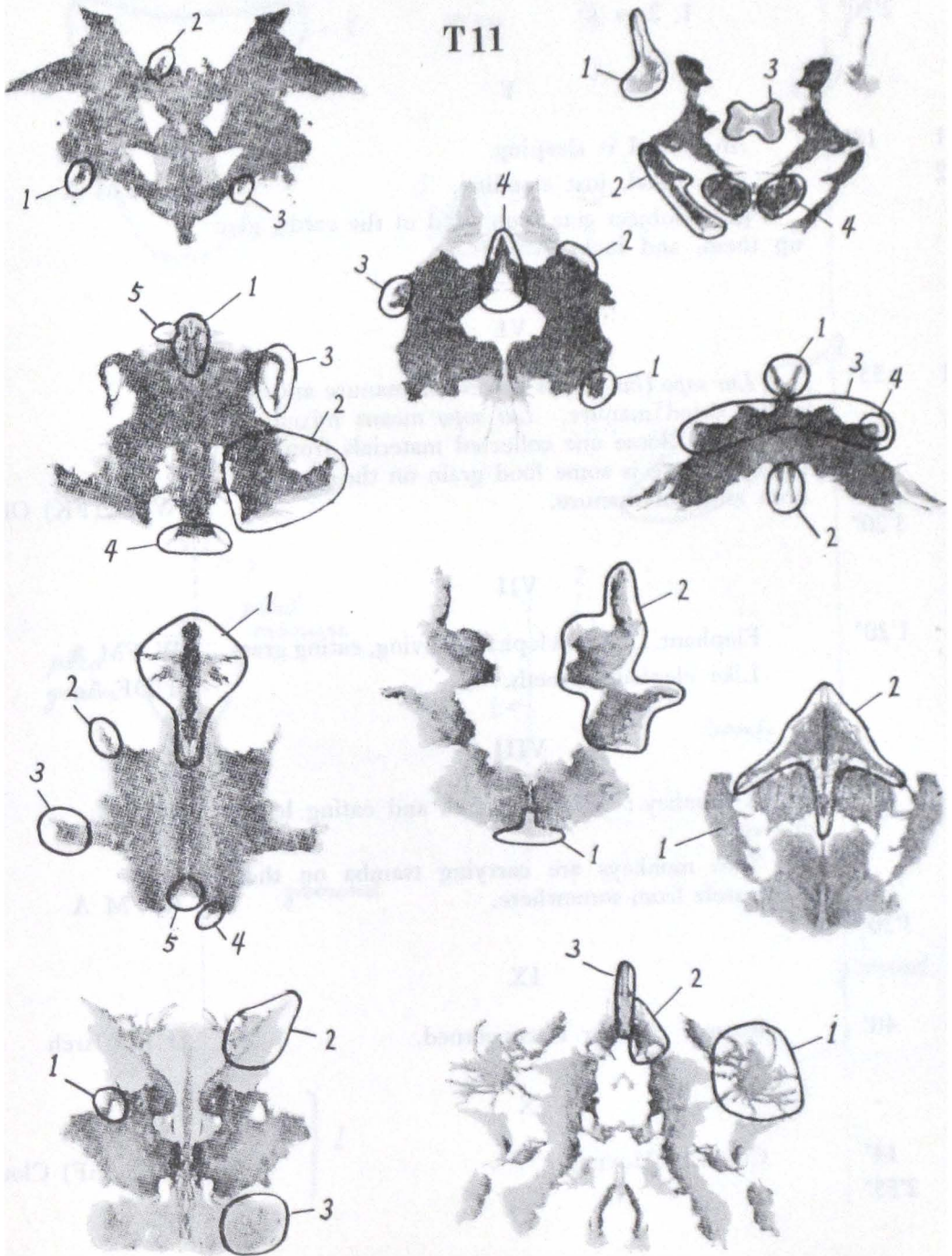
- |   |     |   |          |
|---|-----|---|----------|
| 1 | 40" | Two birds.: Whole figure. Flying.                       | D FM A   |
| 2 |     | Two pieces of sheep's meat.: Cut meat, not from colour. | d FD Aat |

## IV

- |    |     |                  |         |
|----|-----|------------------|---------|
| 1/ | 20" | Tree.: Standing. | W FD PI |
|----|-----|------------------|---------|



T11



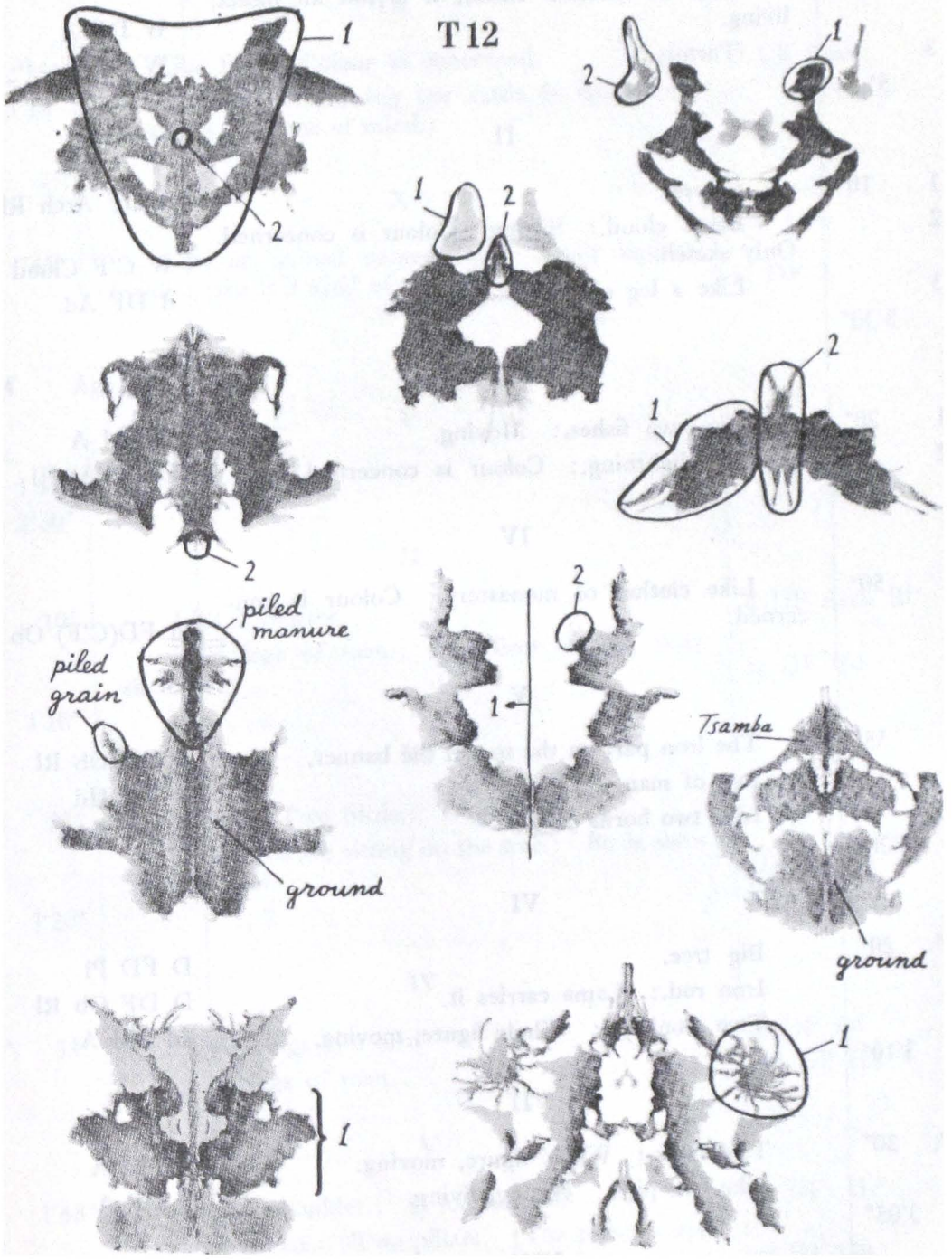
2	2'50"	Two men climbing on the tree. 1, 2 → ⑧	dd M H
V			
1	18"	An animal is sleeping.	D FM A
2		An animal, just standing. (The subject gets soon tired of the cards, give up them, and looks away.)	D FM A
VI			
1	53"	<i>Lui sopo</i> ( <i>lui</i> means leaves for manure and <i>sopo</i> means dried manure. <i>Lui sopo</i> means mixed one of them.) Some one collected materials from jungle, and there is some food grain on the ground at both sides of manure.	W DF(FK) Ob
	3'20"		
VII			
1	1'20"	Elephant.: Two elephants, living, eating grass.	W FM A
2		Like elephant's teeth.	d DF Ad
VIII			
1	40"	A monkey.: Climbing tree and eating leaves of tree.	(D)
2		Two monkeys are carrying tsamba on their heads stole from somewhere.	W FM A
	3'30"		
IX			
1	40"	Room.: Colour is concerned.	D FD Arch
X			
1	14"	Cloud.: Moving.	D FD(mF) Cloud
	2'55"		

**T 13** Age 46 Male.

I			
1	2'40"	Like cloud.: Sitting, only from shape.	d FD Cloud



T12



2		Like an insect.: <i>Lubal</i> , it is not an insect, living.	W DF A
3		Tortois.	W DF A
5'			
		II	
1	10"	<i>Chorten</i> .	d DF Arch RI
2		Black cloud.: Sitting. Colour is concerned. Only sketch.	W C'F Cloud
3		Like a leg of leopard.	d DF Ad
3'30"			
		III	
1	20"	Like two fishes.: Moving.	D FM A
2		Like lightning.: Colour is concerned.	D DF(A) RI
		IV	
1	50"	Like clothes of monastery.: Colour is concerned.	d FD(C'F) Ob RI
		V	
1	55"	The iron part on the top of the banner.	d DF Ob RI
2		Leg of man.	d DF Hd
3		Like two horns of cow.	d DF Ad
3'20"			
		VI	
1^	20"	Big tree.	D FD Pl
2		Iron rod.: Lama carries it.	D DF Ob RI
3		Two monkeys.: Whole figure, moving.	dd FM A
3'10"			
		VII	
1^	30"	Two lions.: Whole figure, moving.	D FM A
2		Like two pigs.: Sitting, living.	D DF A
3'05"			
		VIII	
1	1'	Two monkeys are climbing tree.	D FM A
2		Those monkeys are eating fruits.	
3'10"			

IX

1	2'55"	Like fire.: Colour is concerned. (His way of turning the cards is moderate. He shows presence of mind.)	D CF Fire
	3'10"		

X

1	1'45"	Like an animal named <i>sha</i> .: Whole figure, living. ( <i>sha</i> is a kind of deer.)	D DF A
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T 14 Age. 33 Male.

I

1	1'45"	Two testicles.	d DF Sex
	3'30"		

II

1	10"	Like a <i>chorten</i> .	d DF Arch RI
2		Two legs of man.: Not from colour, only sketch.	D DF Hd
	3'10"		

III

1	23"	Bird — Two birds.: Only head.	D DF Ad
2		The birds are sitting on the tree.: Birds show whole figure. 1, 2	(D FD Pl)
	3'20"		

IV

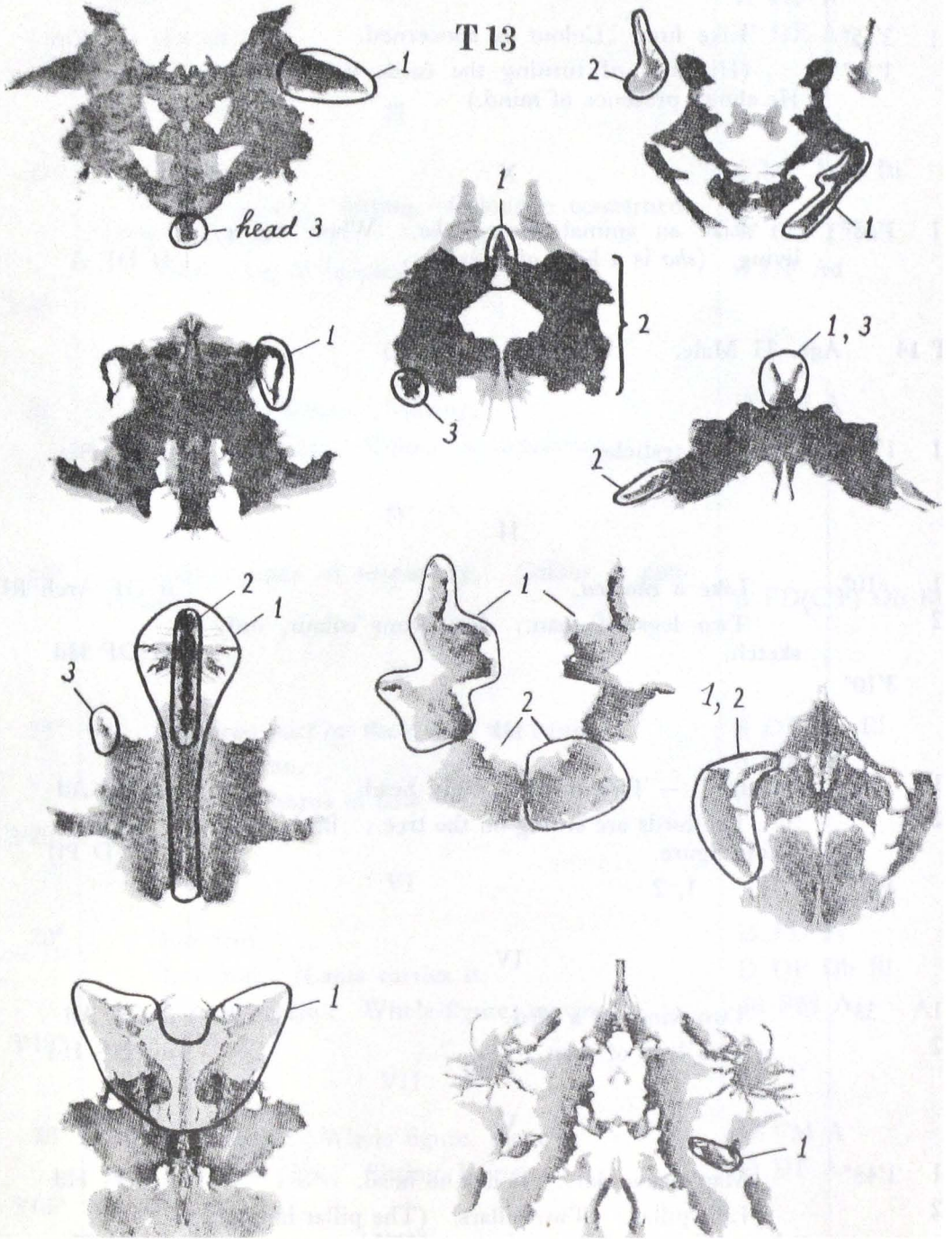
1^	33"	Two wings of a bird.	d DF Ad
2		Two legs of man.	dd DF Hd

V

1	1'48"	Man's shoulder.: It has no head.	d DF- Hd
2		Like pillar.: Two pillars. (The pillar is used when a frame of house is composed.)	d DF Ob
	3'05"		

VI

1	40"	Like feather of chicken.	D DF Ad
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2  
2'50" Leg of elephant. d DF Ad

VII

1 22" Two men are on a sloping place. D DF H  
2 Two men are on the stone. (D FD N)  
3 A man bent front ward, doesn't he? dd M H  
3'20" 1, 2 → ②

VIII

1 6" Two monkeys.: Sitting, living. D FM A  
2 Monkeys are eating fruits. D CF Fire  
3 This is fire, isn't it?

IX

1 33" This looks like a rain bow. D CF N  
2 A man is crossing the river, holding a cane in  
his hand.: The cane is into water. The man  
wears coloured clothes. D M(FC) H  
3'20"

X

1^ 15" Flower — two.: Colour is concerned. (D CF Pl)  
2 Flower tree. Dr FD Pl  
3 The man is sitting, stretching his legs crossing  
each other. D M H  
3'30"

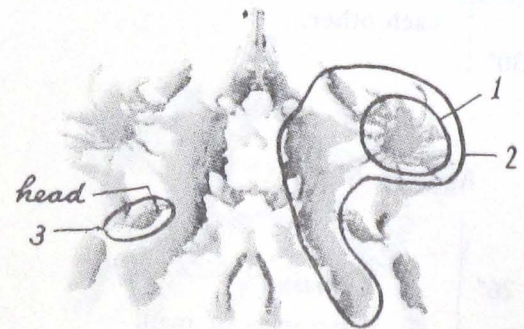
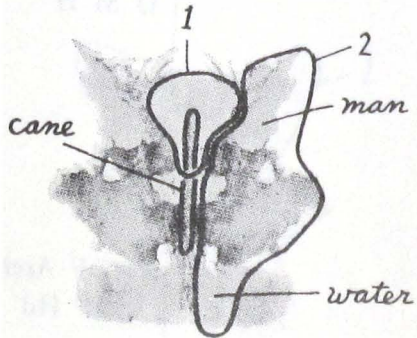
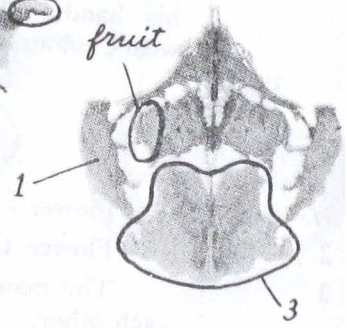
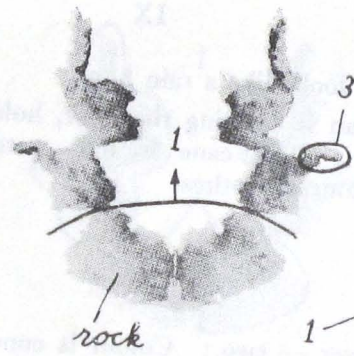
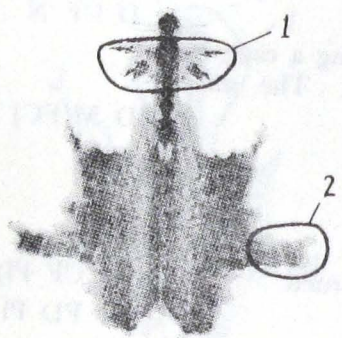
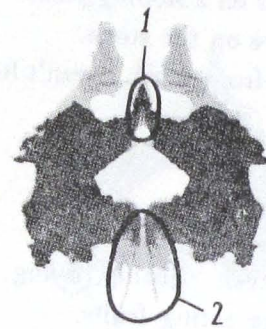
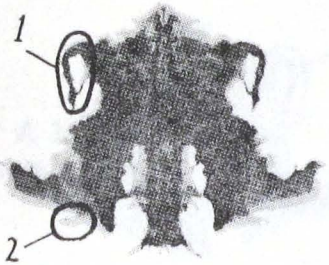
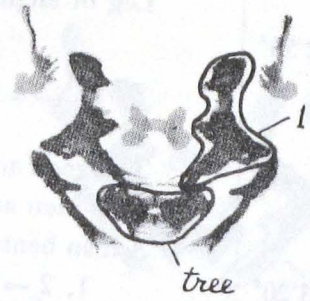
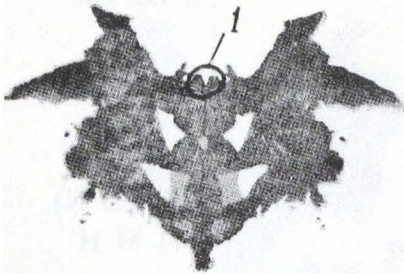
T 15 Age. 28 Male.

I

1V 26" *Chorten.* D DF Arch Rl  
2 Two eyes of man. S DF Hd  
3 Cloud is going down to river.: (River is not  
seen, just imagined.) Dr FD(mF) Cloud  
4 Female part.: Only sketch. d DF Sex  
5 This is the skirts of *kaan* (a peak like himal).:  
Like cloud. (Repetition of 3.)



T14



6√

A head of lama.

d DF Hd RI

(The subject seems to be a cheerful youth and to have good emotionality. He speaks quickly with varieties of adjective and gestures. Sometimes shows childish behavior.)

II

1 13"

Two men touched their hands each other from each side.: (Black part of blot.)

W M H

2

There is man.: Blood flowed from the leg of man.

(D CF Blood)

3

Full body of man.: (The same as 1.)

3'40"

III

1 4"

Like lightning.

2

Male and female lightnings sitting and talking each other.

D FM (A) RI

3

Two fishes.: Moving.

D FM A

4

Blood in four places.

D CD Blood

3'30"

IV

1√ 3'

Tortois.: Moving. (The time went on in explaining "this part is face, this part is leg, this part is tail," and so forth.)

W FM A

V

1 4"

Cloth in monastery.

W FD Ob RI

2

The cloth moving by wing.

(m)

3

The cloth is in the several colours.

4

*Gompa chi* — *Thukshin* —.: (*Chi* means one. *Thukshin* is a stick or a pole of wood on which things are hung. The wood is not suitable for fuels.)

dd DF Ob RI

(Two pillars are on the ground, on the two pillars clothes are hanging.)

1~4 → ⑤

VI

1∧ 25"

Like the bell of lama when he worships.

D DF Ob RI

2	There is a dish on which the bell is kept and bell is on the table.	D DF Ob RI
3	Four legs of table. (1, 2 and 3 tend to make a whole response.) 1~3 → ⑥	(W)
VII		
1^ 20"	A man is climbing on the stone.	W M H
2	A big stone.	D FD N
3	A tibetan gown flapps.: It seems that the man in 1 wear the gown.)	(Fm)
4	Female part.	d DF Sex
3'10"	(The subject responds quickly. He tends to embellish the response one by one at each card.) 1, 2 → ⑧	
VIII		
1^ 13"	This is a tree, isn't it? — Leopard. A leopard, climbing on the tree.	D FM A (D DF Pl)
2	A cloth is hanging on the tree.	D FD Ob
3	Like a red cloth of lama.	D FC Ob RI
4	On that gawn there is also a belt of Tibetan gown.	(dr DF Ob)
1'30"	(The subject looks being tired of the test some-times.) 3, 4 → ③ 1, 2, ③ → ⑧	
IX		
1V 9"	A mask.: (There are many kind of mask in the lama temple.)	D DF (Hd) RI
2V	There is lama dance, going.	W M H RI
3	During the dance the gown spread around.: Colour is concerned.	(D FmDC Ob)
4	Spittle, — the lama is spitting.	(D FD Spittle)
3'10"	(The subject adds gestures to response frequently.) 2, 1, 3, 4 → ⑥	
X		
1 12"	A cloth is hung on the door of monastery.: Colour is concerned.	D CF Ob RI

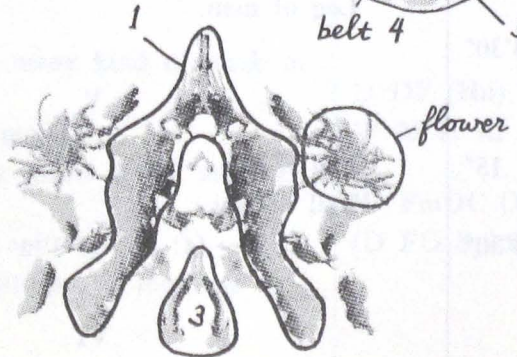
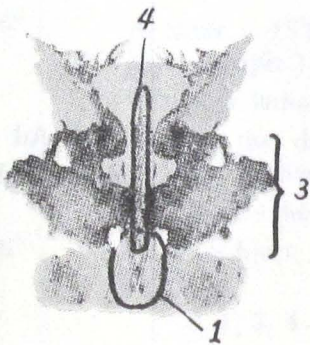
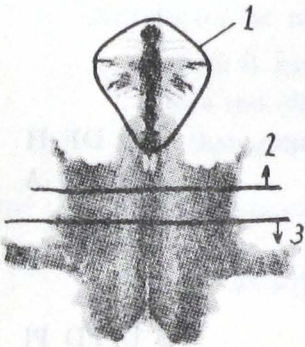
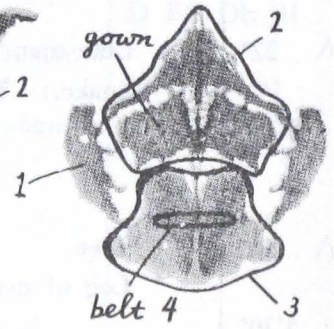
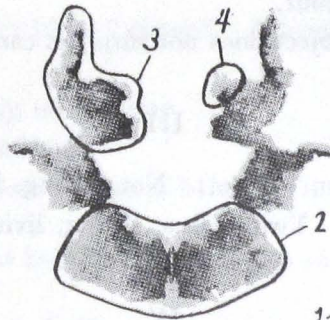
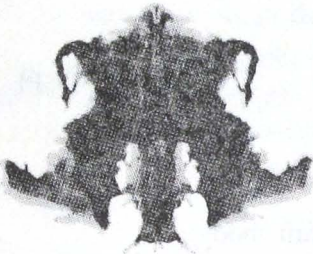
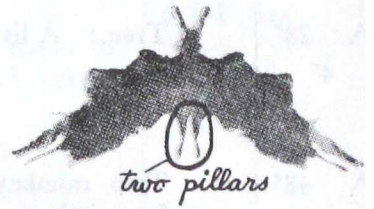
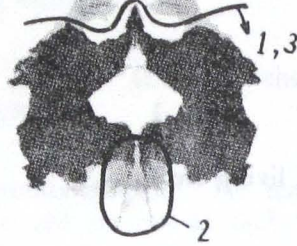
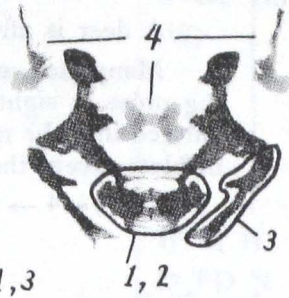
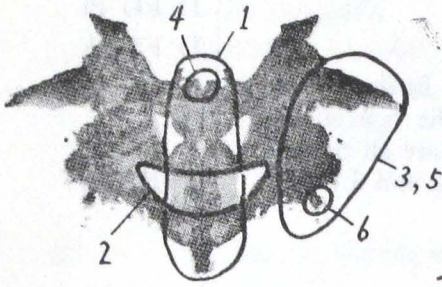


2	By both sides of the door, there are flower trees.: Colour is concerned.	D FD Pl
3	A deer is afraid of the man.	D FM A
4	Many men, many small birds. Birds are making noise at sight of the man.: The man already entered into the monastery. (Birds are all the rests of blots except the blots used on 1, 2 and 3.)	D FM A
	1~4 → ⑤	

T 16 Age. 30 Female.

	I	
1^ 28" 4'	Tree.: A living tree.	W FD Pl
	II	
1^ 48" 3 30"	Two monkeys.: Living, moving, full body, not from colour. (The subject does not turn the card.)	D FM A
	III	
1^ 22" 2 3'30"	Like man. Two.: Not talking, living. Snake.: Two snakes, sitting, living.	D DF H D DF A
	IV	
1^ 20" 2 3'30"	Tree. Leg of man.	D FD Pl dd DF Hd
	V	
1^ 15" 2 3'30"	Leg of cow. Tail of cow. 1, 2 → ④	d DF Ad dd DF Ad
	VI	
1 55" 2V 3'10"	There is a <i>chorten</i> , is there?: The <i>chorten</i> is situated nearby. Face of dog. (The subject turns the card but not frequently.)	D DF Arch Rl d DF Ad

T 15



VII

1	15"	Chicken.: Only face.	d DF Ad
2	3'20"	Dog.: Whole body, moving.	dd FM A

VIII

1^	25"	Tree.	D FD PI
2	3'10"	Leg of man.	dd DF Hd

IX

1	34"	Like a man.: Lying, living. (But it might be from shape.)	D M H
	3'20"	(The subject sometimes looks being tired of the test and sees reverse of the card.)	

X

1	1'05"	Goat.: Two goats on both sides, sitting, living.	D DF A
	3'30"		

T 17 Age. 22 Female.

I

1	28"	Elephant.: Sitting, not dead, only from shape.	W DF- A
	3'30"		

II

1^	8"	<i>Chorten.</i> : In the distance.	d FK Arch Rl
	3'10"		

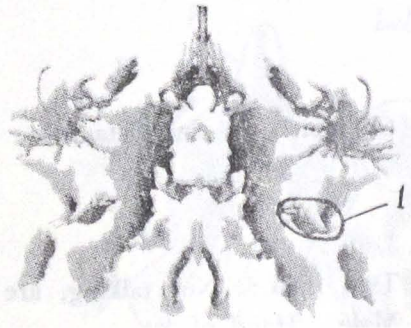
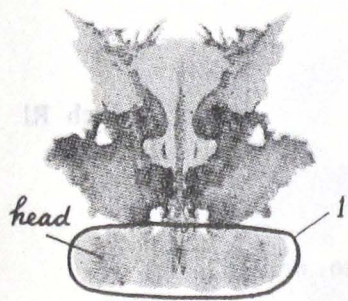
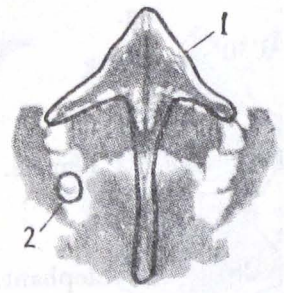
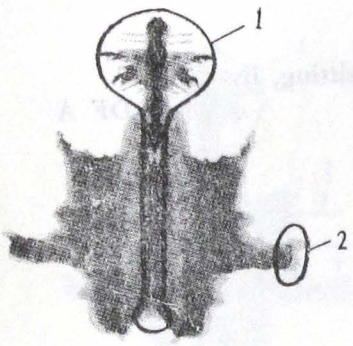
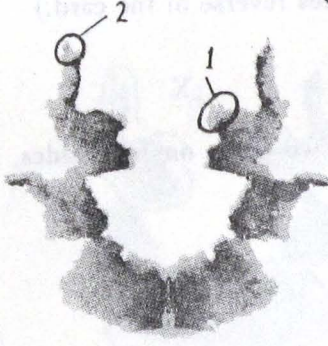
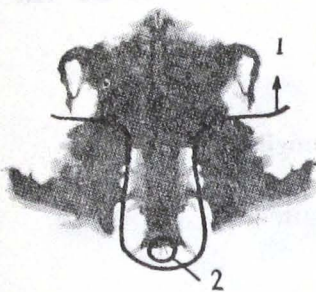
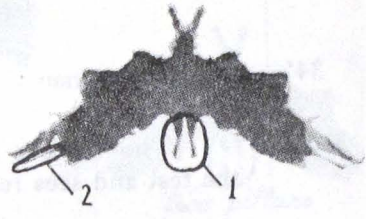
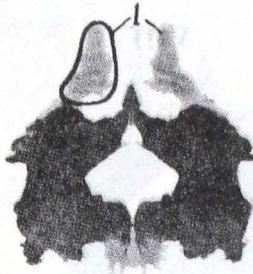
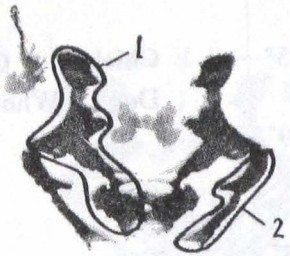
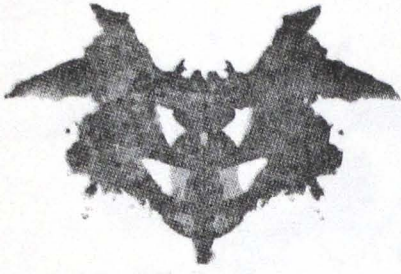
III

1	3"	Two men.: Not talking, are going to die.	D DF H
2	3'30"	Male. Hand of cat.	dd DF Ad

IV

1^	12"	<i>Lumbu</i> (Ganesh-himal).	d FD N
	3'20"		

T 16

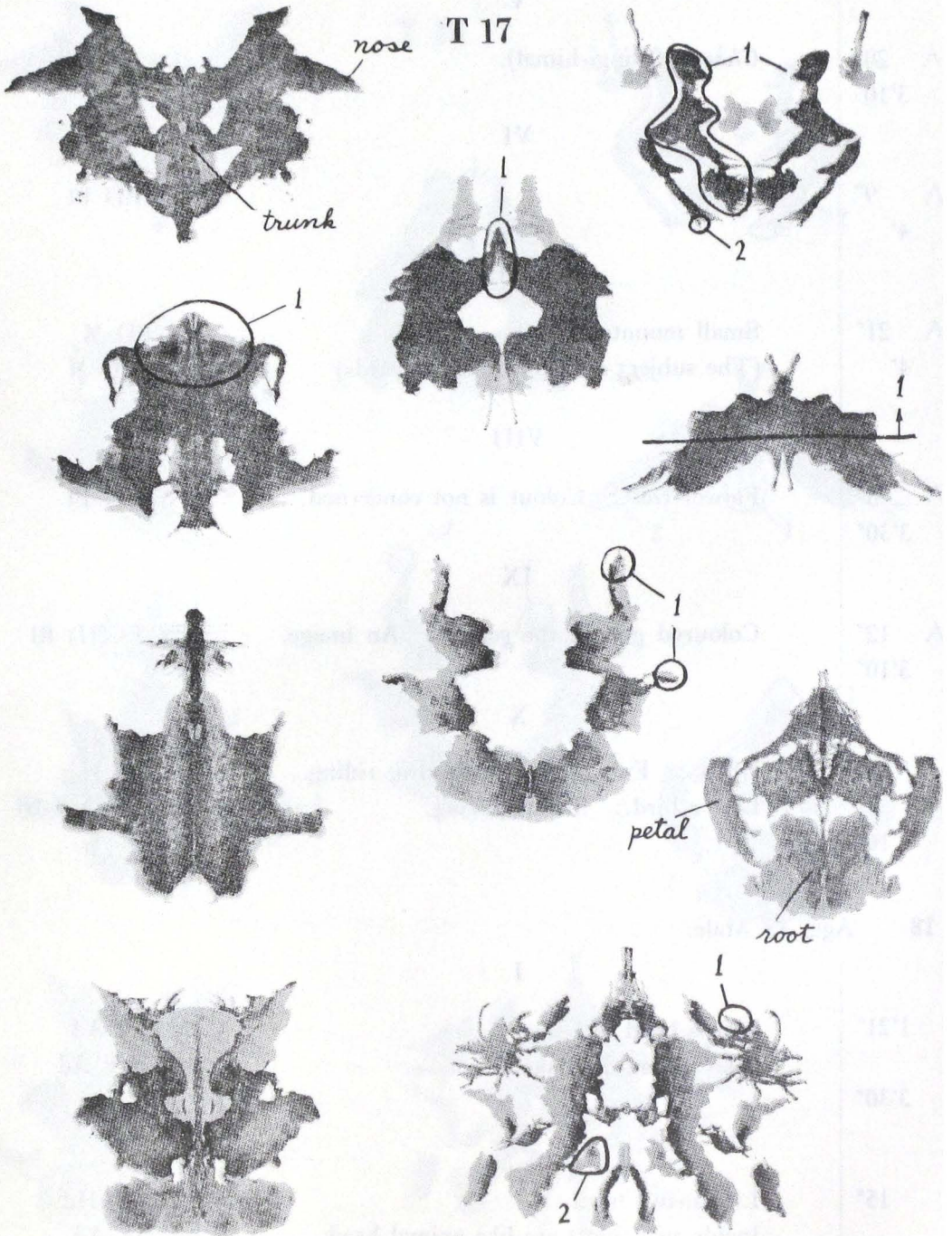


V		
1^ 20" 3'10"	<i>Chamle</i> (Slingi-himal).	Dr FD N
VI		
1^ 9" 4'	Tree.	W FD PI
VII		
1^ 21" 4'	Small mountains. (The subject does not turn the cards)	d FD N dd FD N
VIII		
1^ 3" 3'30"	Flower tree.: Colour is not concerned.	W FD PI
IX		
1^ 12" 3'10"	Coloured god of the <i>gompa</i> .: An image.	W FC(H) RI
X		
1 20" 2 3'10"	Horse.: Full body. Man also, riding. Like a bird.: Sitting, living.	dd M H D DF A

T 18 Age. 33 Male.

I		
1 1'21"	Like a head of horse.	d DF Ad
2 3'30"	Like a head of snake.	dd DF Ad
II		
1 15"	Like man's head.	D DF Hd
2	Inside two (blot) are like animal head.	d DF Ad
3 3'25"	Like two feet of leopard.	dd DF Ad
III		
1 8"	Like two birds.: Sitting, living.	D DF A





- |   |   |          |
|---|---|----------|
| 2 | Like two fishes.: Sitting, colour is concerned, living.           | D DF A   |
| 3 | Tortois.: Sitting, dead. Not only from shape. It is dead.         | D DF A   |
| 4 | Like male part of man.: Colour is not concerned, only from shape. | D DF Sex |

3'30"

IV

- |   |   |            |
|---|---|------------|
| 1 | 7" Frog.: Head.   | (d)<br>(d) |
| 2 | Here is hand of frog.   | (D)        |
| 3 | Here is leg of frog.: (Together with 1, 2, and 3, frog is sitting. Only fro shape). | W DF A     |

3'30"

1~3 → ③

V

- |    |  |         |
|----|--|---------|
| 1^ | 24" Mountain.: Top, projected from skirts.   | Dr FD N |
| 2^ | Land-slide in the mountain. (It seems to the examiner that the response is located at the foot of mountain.)   | Dr FD N |
| 3^ | River runs.: (It seems that the response is located at the lowest margin of the whole blot including lower space and that the subject imagine a valley on the location.) | Dr FD N |

3'40"

1, 2, 3 → ⑤

VI

- |   |  |            |
|---|--|------------|
| 1 | 28" Like a tree.: (It seems to the examiner that the subject was intent on the top part of the blot at first and his attention extended to whole part of blot after that.) | W FD PI    |
| 2 | The upper part (of the blot) is branch of tree.  | (dr FD PI) |
| 3 | Here is soil.: From here, the tree grows up.   | (D FD N)   |
| 4 | Root of the tree spreads.: (Projecting parts of blot are especially look like roots.)  | (dd)       |

3'30"

1~4 → ③

VII

- |    |  |        |
|----|--|--------|
| 1^ | 26" Like snake.: Whole body, moving.   | d FM A |
| 2  | Like tail of snake.: (The location of this response is connected with that of preceding response.) | (D Ad) |

3	Like pond.	D FD N
4	Like all kinds of land.	dr FD I.
3'30"		

## VIII

1^ 11"	Like foliage of tree.: Colour is concerned.	D FD Pl
2	Like two monkeys.: Sitting. Colour is concerned.	D DF A
3	Like pile of stone, small and large.: Colour is concerned.	D FD N
3'30"		

## IX

1^ 45"	Like cloud in the sky.: Colour is concerned. Sitting, not moving.	D CF Cloud.
2	Like short grass-land at the foot of mountain which is not so large as himal.: Colour is not concerned. Only plant, not with flower.	D FD L
3	Like fire.	D CF Fire
3'50"		

## X

1^ 12"	<i>Chorten.</i>	D DF Arch Rl
2	Two mothes.: Sitting. Colour is not concerned. Living.	D DF- A
3	Like two rats.: Sitting, living. Colour is not concerned.	D DF A
4	Like in sect lives in ground.: Living. Colour is not concerned. A kind of worm.	D FC A
5	Like two dogs.: Living. Only sketch, not from colour.	D DF A
3'30"	(The subject hardly turns the cards.)	D DF A

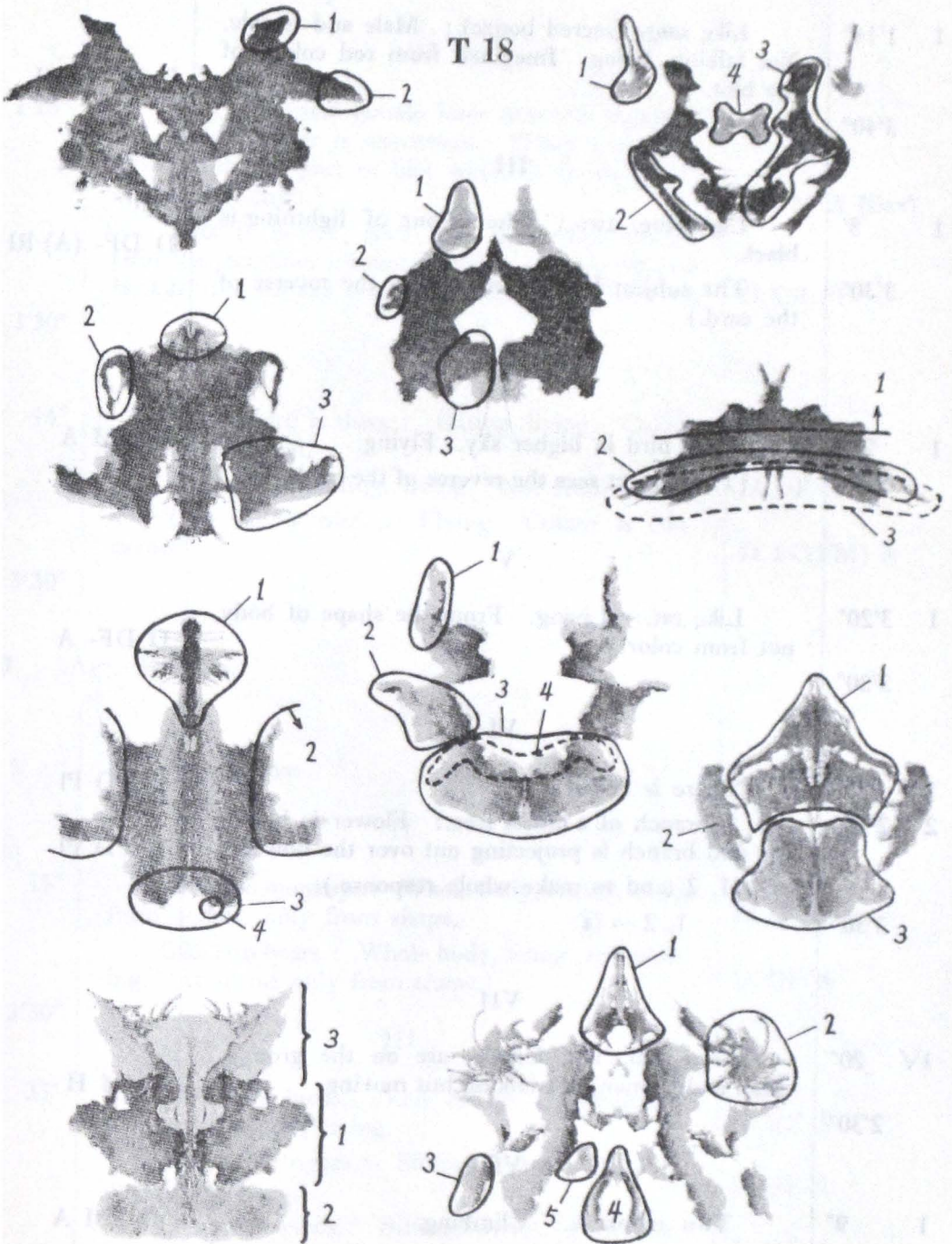
**T 19** Age. 20 Male.

## I

1	33"	Like fish.: Full body. Sitting, living, not moving.	d DF A
2		Like cow.: Full body. Sitting, living.	d DF A
4'		(The subject looks repeatedly at margin and the reverse of the card. He looks a cheerfull youth but somewhat dull,	



T 18



## II

- 1 1'14" Like *sange* (sacred bonze).: Male and female.  
Not talking, living. Imagined from red colour of  
the blot. D FC H R1  
3'40"

## III

- 1 8' Lightning, two.: The colour of lightning is  
black. D DF- (A) R1  
3'30" The subject looks at repeatedly the reverse of  
the card.)

## IV

- 1 25" A big bird in higher sky.: Flying. W FM A  
3'30" (The subject sees the reverse of the card often.)

## V

- 1 3'20" Like rat.: Living. From the shape of body,  
not from color. D DF- A  
3'30"

## VI

- 1 33" There is flower. D FD PI  
2 2'50" A branch of a flower free.: Flower is bloom-  
ing and branch is projecting out over the flower. D FD PI  
(1, 2 tend to make whole response.)  
3'30" 1, 2 → ④

## VII

- 1V 20" Two male and female, are on the ground.: W M H  
Man and woman, not talking but moving.  
2'30"

## VIII

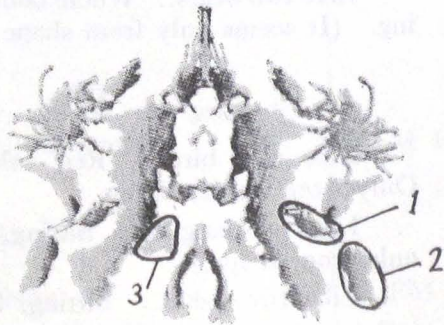
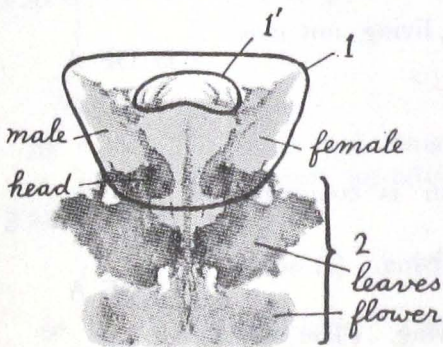
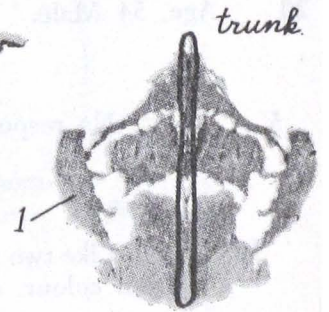
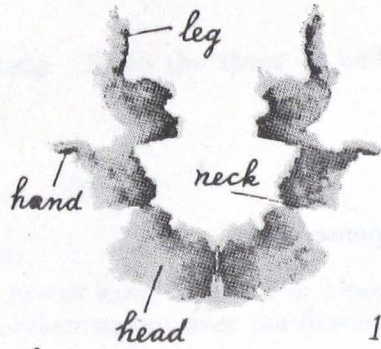
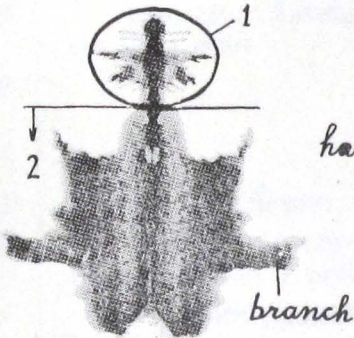
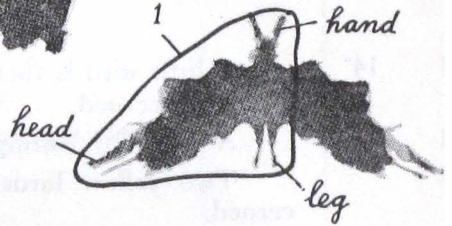
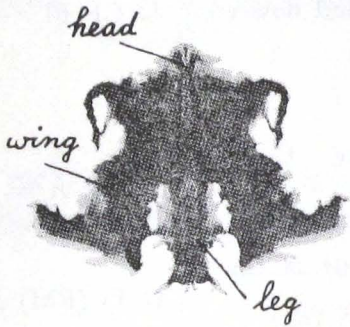
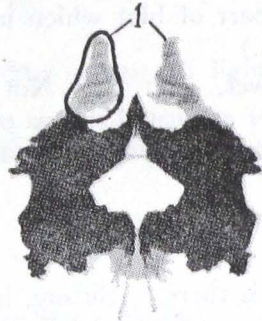
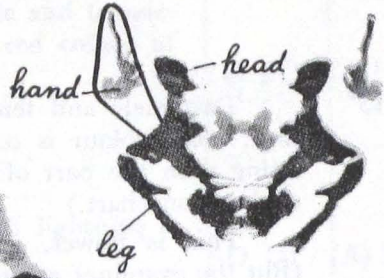
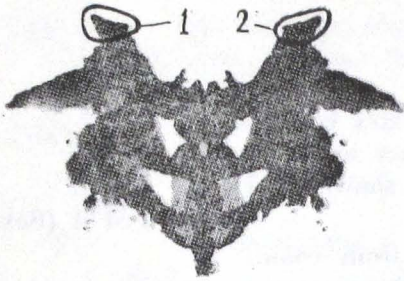
- 1 9" Two monkeys.: Climbing. D FM A  
2 Three kinds of flower trees.: Colour is not  
concerned. (But the examiner estimated this as  
colour response.) Tree. Flowers are over the  
tree. There are three kinds of flower trees. (Mon-  
keys are climbing the flower tree, D CF PI

3'30"	1, 2 → ⑧	
		IX
1V 1'13"	Two male and female lions are now copulating.: Red colour is concerned. (They are copulating with the part of blot which is shown by 1' on location chart.)	D FM A (Sex)
2V	This is flower, isn't it?: Not from colour. (But the examiner estimated this as colour-response because the subject pointed out leaves and flower.)	D CF Pl
3'50"		X
1 14"	A little bird is there.: Sitting, living. Colour is not concerned.	D DF A
2	A parrot.: Sitting, living. Not from colour.	D DF A
3	Two yellow birds.: Flying. Colour is concerned.	D FC(FM) A
3'30"		

**T 20** Age. 54 Male.

		I
5'	No response.	
		II
1 15"	Like two monkeys.: Whole body, sitting. Not from colour, only from shape.	D DF A
2	Like two bears.: Whole body, living, not moving. (It seems only from shape.)	D DF A
3'30"		III
1 33"	Like two birds.: Red colour is concerned. Only from shape, living.	D DF A
2	Like two langurs.: Sitting, living. (It seems only from shape.)	D DF A
3	Like two fishes.: Sitting, living. (The subject sees water.)	D DF A
3'30"		IV
1 50"	Elephant, isn't it?: Sitting, living.	W DF A

T 19



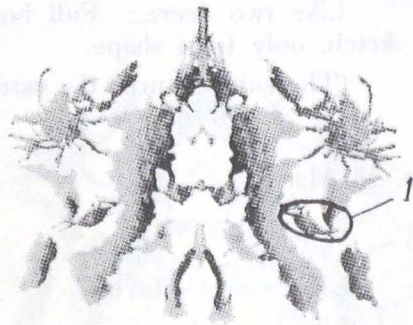
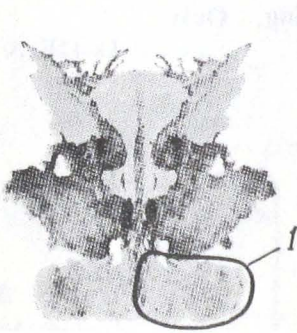
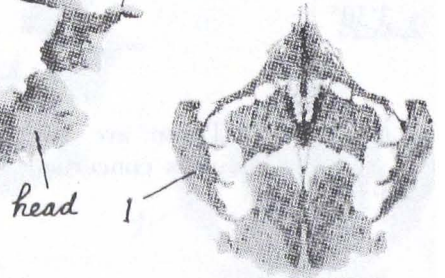
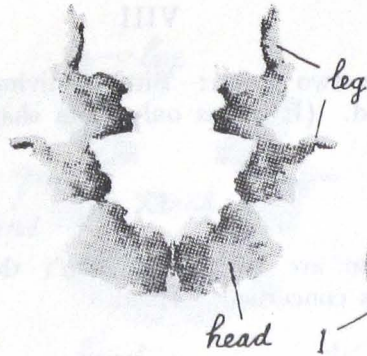
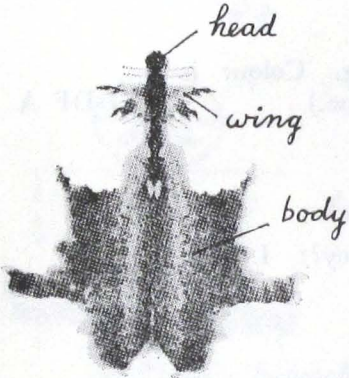
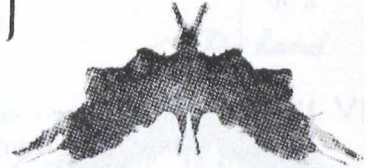
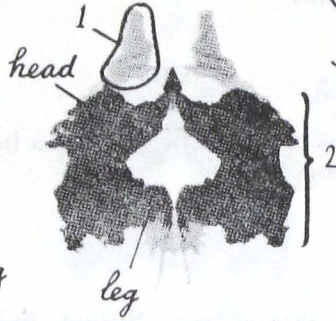
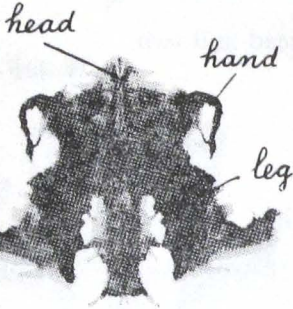
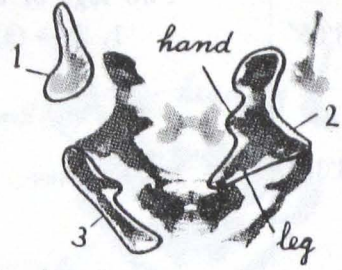
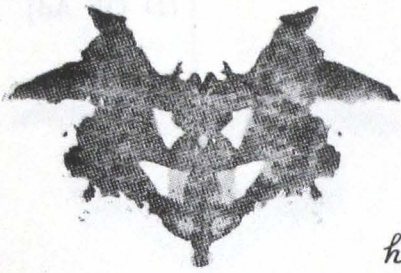
2	Two legs of elephant.	(D DF Ad)
3'05"	1, 2 → ③	
	V	
3'30"	No response.	
	VI	
1 32"	Like a big bird.: The bird has a head and two	W DF- A
2'30"	bodies. Living, sitting.	
	VII	
1V 1'10"	Like two crocodiles.: Sitting, living. (It	D DF A
3'30"	seems only from shape.)	
	VIII	
1 2'23"	Like two dogs.: Sitting, living. Colour is	D DF A
3'30"	concerned. (It seems only from shape.)	
	IX	
1 1'42"	These are two men, aren't they?: Living.	D DF Hd
3'30"	Colour is concerned. Head.	
	X	
1 2'33"	Like two deers.: Full body. Sitting. Only	D DF A
3'30"	sketch, only from shape. (The subject turns the cards often.)	

T 21 Age. 15 Male.

	I	
1 22"	Like bear.: Moving.	W DF- A
2	Like leg of bear.	(d DF Ad)
3	Like <i>kub</i> of bear. ( <i>Kub</i> is an opening of sexual	dd DF Sex
	organ or of urinary duct.)	
4	Like head of bear.	d DF Ad
5	Like two cheeks of bear.	(dd DF- Ad)
6	Like eye of bear.	(dd DF- Ad)



T 20



7		A bear.	
	3'10"	1~7 → ⑥	
II			
1		Like tiger.: Sitting, living. (all the black part makes one body.)	W DF- A
2		Here are legs of tiger.	(d DF Ad)
3		There are two cubs of tiger like this (shape of the blot).: Sitting, living. Colour is not concerned.	D DF A
4		This is the belly of tiger.	(S DF Ad)
	3'10"	1, 2, 4 and 3 → ⑥	

III

1	2"	Like two birds. Two birds are copulating.: (The subject points out such details of bird as eye, beak, leg so on, which responds in performance proper.)	W FM A
2		This looks like vulva.	(D) (Sex)
3		This looks like penis.	(Sex)
4		This looks like eye.	(dr)
5		Like wing.	(dd)
6		The cup which bird feeds like this (form of blot).	D DF Ob
7		Bird has neck.	(dd)
	3'10"	1~7 → ⑥	

IV

1	7"	An utensil of lama ( <i>pumba</i> ).: (This response reminds the subject of the place where <i>pumba</i> is kept.) (The subject seems to remember the inside scene of the <i>gomba</i> unconsciously.)	dr DF Ob RI
2		There is flower.	d FD PI
3		A table on which <i>pumba</i> is kept is hung in this way.	dd DF Ob RI
4		On the <i>pumba</i> , <i>kya</i> is attached this way. ( <i>Kya</i> is handle for (lifting the <i>pumba</i> .)	d DF Ob RI
	3'05"	1~4 → ⑤	

## V

- 1 5" Cloud is like this (blot).: Sitting. It is near  
the water. W FD Cloud  
3'05"

## VI

- 1 5" The lama is like this. This (part of blot) is  
leg (of lama), isn't it? This is sexual organ, isn't  
it? This is hand. This is cap on his head.: Stand-  
ing, showing his back. W DF- H RI  
2 This is the belly and the inside of belly of  
lama, isn't it. dr DF Hat  
1, 2 → ⑤

## VII

- 1 4" This is tiger.: The legs of tiger step into the  
soft ground. W FM A  
2 This is ear of tiger. (d DF Ad)  
3 These are mustache and beard of tiger. (d DF Ad)  
4 This is neck of tiger. (dd)  
5 This is trunk of tiger.: Whole figure.  
3'05" 1~5 → ③

## VIII

- 1 5" This is a cat, isn't this?: In such colour.  
Living. D DF A  
2 The place where the cat sits.: Made of cloth.  
Only sketch. Colour is not concerned. dd FD Ob  
3 This is ear of cat. This is tail of cat. (dd DF Ad)  
3'30" 1, 2 → ⑧ 1, 3 → ③

## IX

- 1^ 10" This is a head, isn't this? W M(FC) H  
2 This is a cap, this is! (dd DF Ob)  
3 This is hand. (d DF Hd)  
4 Two, male and female, is copulating.: Their  
clothes are green. There is coloured bed under  
them. (D FC Ob)  
5 Their eyes.  
6 Their *kup* (see I, 3.).  
3'05" 1~6 → ③ (dd DF Hd)



X

1	2"	This is really a cow.: Sitting, living. (The subject seemed to perceive the head of cow at first.)	D DF A
2		The body of cow, isn't it?	Dr DF- Ad
3		The horn of cow is like this.	dd DF Ad
4		This is really the mouth.	dd DF Ad
5		This is really the ear.	dd DF Ad
6		A calf is like this (shape of blot).: Colour is concerned. Living, drinking milk.	D FM A
	3'10"	1~5 → ④ 1, 6 → ⑤ ④, ⑤ → ⑥	

T 22 Age. 14 Female.

I

1	7'20"	Dog and man.: Living. They are together.	d DF A D DF H
2		Leopard or bear.: Full body. Dead.	D DF A
	9'	(The subject was so shy that she tends to go away sometimes. It took seven minutes (after showing the card))	

II

1	27"	<i>Gompa</i> : The inside of the <i>gompa</i> .	S DF Arch RI
2		Bear.: Full body. Sitting. Colour is not concerned.	D DF A
3		"A kind of animal ( <i>temu</i> ), I wonder.": Full body. Sitting. Colour is no concerned.	D DF A

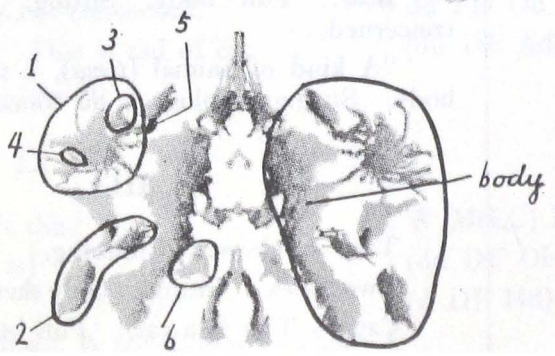
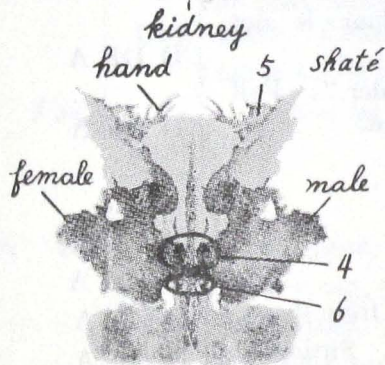
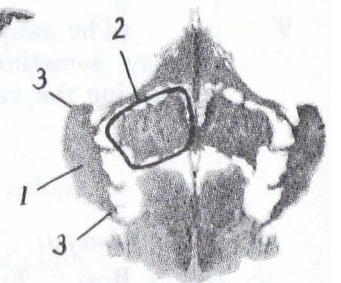
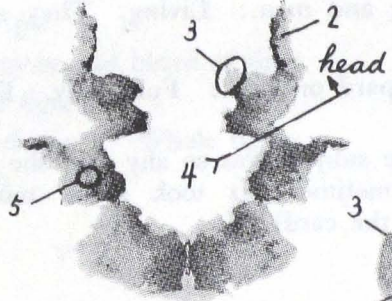
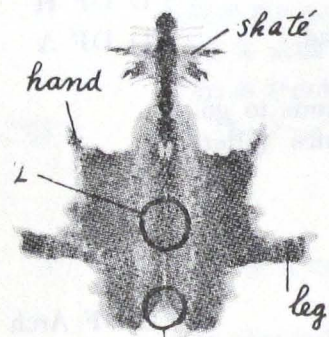
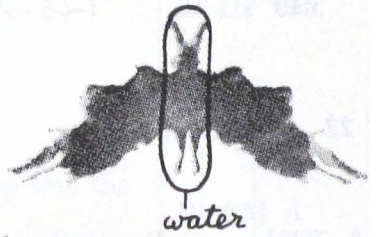
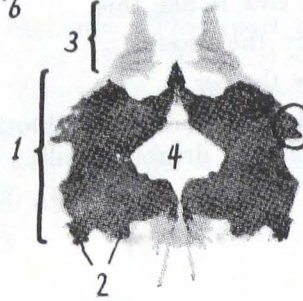
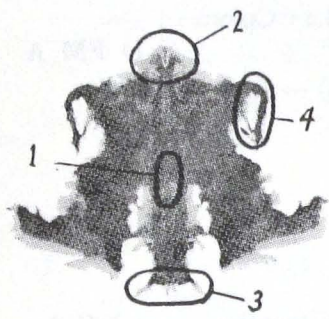
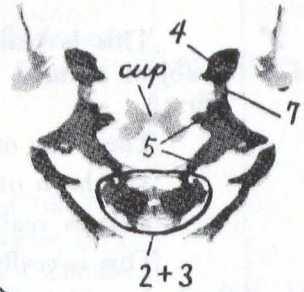
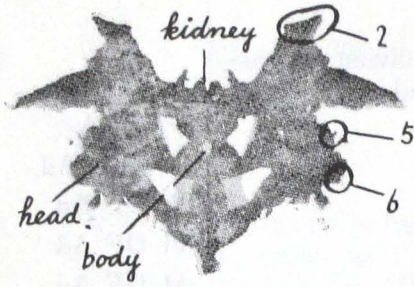
III

1	7"	Two monkeys.: Climbing.	D FM A
2		Two fishes.: Sitting. Only sketch, from shape.	D DF A
3		Cat. — This is a cat.: Full body. Sitting.	D DF A

IV

1	22"	This is <i>pumba</i> . (lama's utensil).: It is kept inside of <i>chorten</i> .	dr DF- Ob RI
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T 21



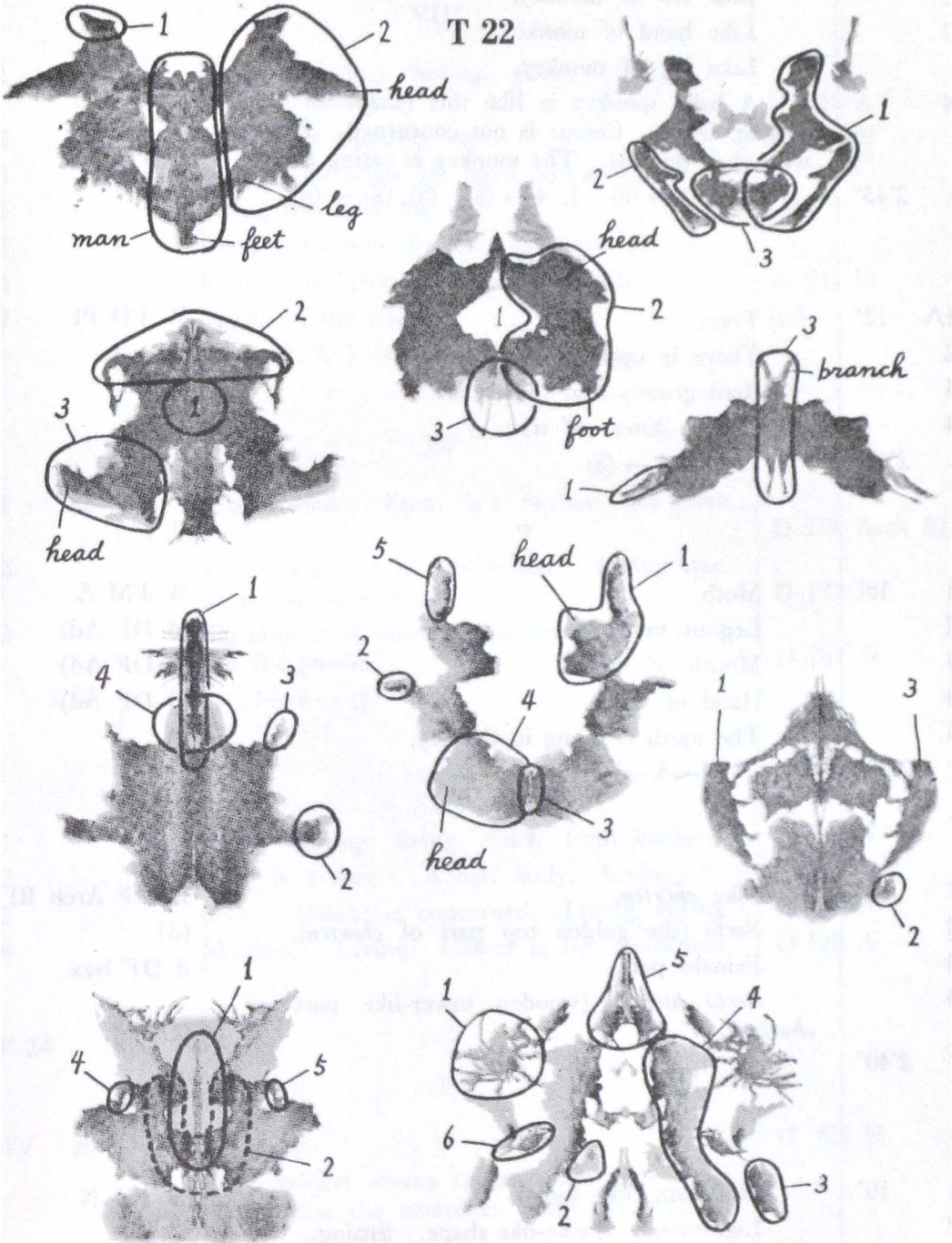
2		Like a top part of <i>chorten</i> .	D DF Arch RI
3		This is a horse, isn't it?: Full body. Moving.	D FM A
2'30"		1, 2 → ⑤	
V			
1	21"	Leg of man.	d DF Hd
2		This is cloud.: Moving.	W FD Cloud
3		This is a creeping juniper.: Branches spread fowards both sides. Top of the tree splits into two parts.	D DF PI
		(The subject smiles sometimes.)	
VI			
1	25"	Like the golden top of monastery.	D DF Arch RI
2		Crow.: Full body. Flying.	d FM A
3		Chicken.: Full body. Flying.	dd FM A
4		Round part, on the top of <i>chorten</i> .	Dr DF Arch RI
		1, 4 → ④	
VII			
1	24"	Crow.: Flying. Full body.	D FM A
2		Insect.: Full body. Sitting. Only sketch. Colour is not concerned.	dd DF A
3		Bird.: Full body. Flying.	d FM A
4		Bear.: Sitting, living.	D DF A
5		Big bird.: Full body. Flying.	d FM A
VIII			
1	48"	Dog.: Moving. Colour is concerned.	D DF A
2		Langur.: Full body. Dead. Not only sketch.	d DF A
3		Monkey.: Sitting. Dead. Colour is concerned.	D DF A
		1, 2 → ②	
IX			
1	10"	<i>Gomba</i> .: The inside of <i>gomba</i> . Colour is concerned.	Dr DF Arch RI
2		Snake.: Sitting, living.	Dr DF (A) RI

3		Horse.: Forgotten.	
4		Crocodile.: Water is seen. Living.. Full body. Colour is concerned.	dd DF A
5		Cat.; Full body Moving. Colour is concerned.	dd DF A
	2'50"	(The 'subject smiles shyly sometimes.)	
X			
1	22"	Insect, in the earth.: Sitting. Dead. Colour is concerned.	D DF A
2		Crow, two crows.: Colour is not concerned. Moving.	D FM A
3		Bird, two birds.: Flying. Colour is concerned.	D FM A
4		Fish.: Moving. Colour is concerned.	D FM A
5		Flower.: It does not come to flower yet. Only sketch. Not from colour.	D FD Pl
6		Leopard.: Moving. Colour is concerned.	D FM A

**T 23** Age. 18 Male.

I			
1/\	8"	There is a tree.	Ws FD Pl
2		Here is a female part.	d DF Sex
3		The top part of tree is like this (shape of blot).: (Upper part of blot, upper part of tree of 1.)	(D)
4		Hollows in the tree.	(S)
	2'30"	1, 3, 4 → ③	
II			
1	2"	This is a male part.	d DF Sex
2		This is a female part.: Colour is concerned. Sketch.	D DF Sex
3		Like a dog.	D DF A
4		Like a leg of dog.: Really dead. Not sketch. Black.	(d DF Ad)
5		Like a head.: Only sketch.	(D DF Ad)
		3, 4, 5 → ③	
III			
1	9"	Like monkey.: Sitting, living.	D DF A

T 22



2	Like tail of monkey.	
3	Like hand of monkey.	
	Like leg of monkey.	
4	A baby monkey is like this (shape of blot). Sitting, living. Colour is not concerned. Playing with their parents. The monkey is eating tsampa.	D FM A
2'45"	1, 2, 3 → ③ 1, 4 → ⑤ ③, ⑤ → ⑥	

## IV

1^ 12"	Tree.	W FD PI
2	There is upper part of tree.	(D)
3	Root grows into the earth.	(dd)
4	Like a flower of tree.	(d)
2'45"	1~4 → ③	

## V

1 15"	Moth.	W FM A
2	Leg of moth.	(d DF Ad)
3	Mouth of moth.	(d DF Ad)
4	Hand of moth.	(d DF Ad)
5	The moth is flying in the sky.	
2'30"	1~5 → ③	

## VI

1 38"	Like <i>chorten</i> .	D DF Arch RI
2	<i>Serto</i> (the golden top part of <i>chorten</i> ).	(d)
3	Female part.	d DF Sex
4	<i>Serto hloksin</i> (wooden tower-like part of <i>chorten</i> ).	(D)
2'40"	1, 2, 4 → ③	

## VII

1 10"	Mountain, like himal.	W FD N
2	Lightning.: Snake-like shape. Sitting. Colour is not concerned.	D DF (A) RI
3	Wing of Lightning.	(D)
4	Mouth of lightning.	(d)
5	Leg of lightning.	(dd)
1'50"	2~5 → ③	

VIII

1	5"	Two monkeys.: Sitting, eating flower. Colour is concerned.	D FM A
2		Monkey is climbing tree.	D FD PI
3		Monkey stretches his hand upwards.	
4		Eating leaves of the tree.	(dd)
5		Two, male and female., monkeys	
6		Roots of the tree grows into the earth.	D FD PI
7		Leaves of the tree	(dd)
		1, 2, 3, 5 → ⑧ 2, 4, 6, 7 → ③	

IX

1	22"	Like <i>gomba</i> .: From it's outline, not from colour.	D DF Arch RI
2		There is a tree by the <i>gomba</i> .: Living tree. Colour is not concerned.	D FD PI
3		Big stone.: Colour is concerned. The stone is under the <i>gomba</i> .	D FD N
	2'30"	1~3 → ⑤	

X

1		Bird.: Sitting, living. Only from shape.	D DF A
2		Here is a man.: A half body. Living.	D DF Hd
3		Cow.: Colour is concerned. Living, sitting.	D DF A
4		Monkey.: Living. Colour is not concerned.	D DF A

T 24 Age. 18 Male.

I

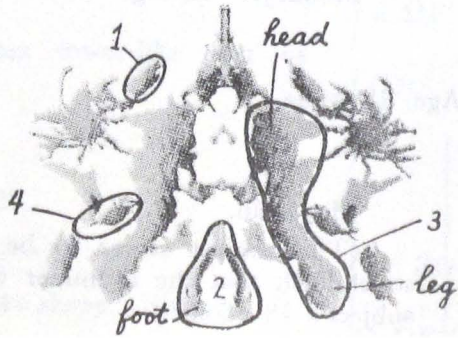
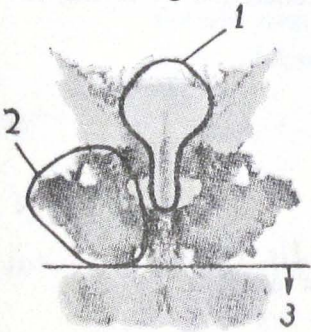
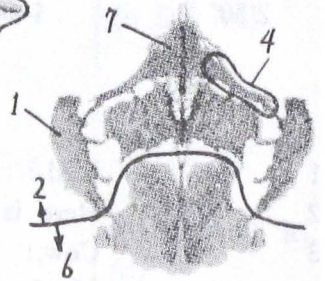
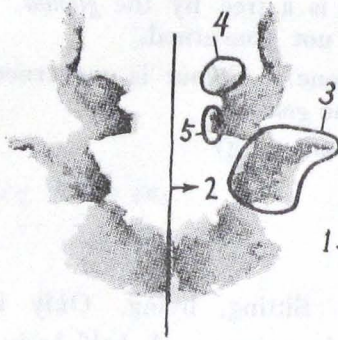
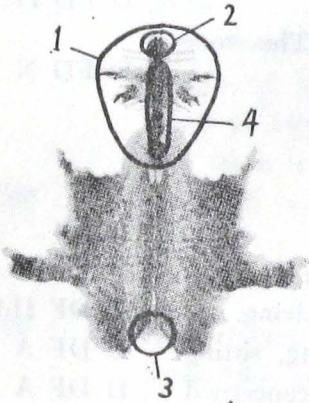
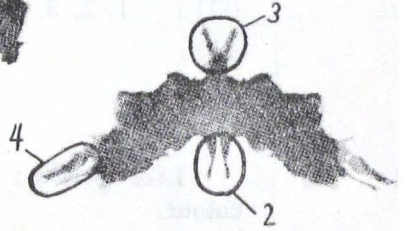
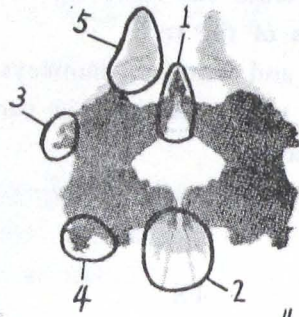
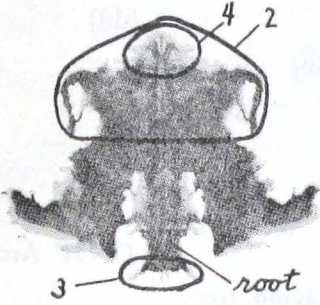
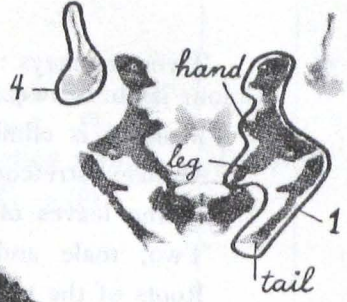
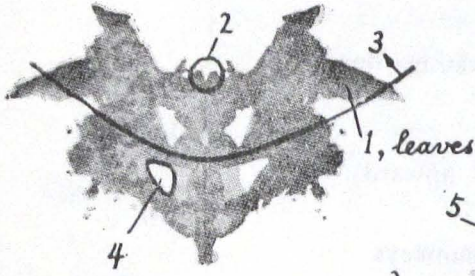
1V	20"	Mountain. (The subject seems to be timid. He looks so childish that the examiner could not estimate subject's 18 of age.)	W FD N
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II

1V	1'30"	An animal like leopard.: Sitting. Colour is concerned.	D DF A
----	-------	--	--------



T 23



III

1 18" Here is a man.: There are two men, but  
they don't talk. Only sketch. D DF H  
2'30"

IV

1 15" Langur.: Sitting, living. W DF A  
2'

V

1 6" Ox.: Dead ox. Really dead. Black colour. W DF- A  
2'30" (The examiner could not understand how the  
subject grasps the figure.)  
(The subject turns the card sometimes.)

VI

1 10" Monkey.: Sitting, living. Colour is not con- W DF A  
cerned. W FM A  
2 Bird is eating grass. dd DF Ob RI  
3 An utensil of lama. (d DF Ad)  
4 Hand of monkey.: (A detail of 1.)  
3'10" 1, 4 → ③

VII

1 10" Lightning.: Two. Living, sitting. It has W DF (A) RI  
no leg.  
2'

VIII

1 5" Monkey.: Red colour. Living. D DF- A  
2 Monkey without head.

IX

1 14" Flower.: (Upper part of blot.) D CF PI  
2 Green flower. D CF PI  
3 Grey flower.: A tree, and three kinds of  
flower.: D CF PI  
(The subject is murmuring something.)  
2'20" 1, 2, 3 → ①

## X

1^	21"	Image of Buddha.: Colour is concerned.	D DF (H) RI
2		Coloured flower.	D CF Pl
3		A kind of bird. Owl.: There are two. Sitting, living. Colour is concerned.	D DF A
	2'		

**T 25** Age. 26 Male.

## I

1V	22"	Mountain (a high mountain which is covered with snow).	W FD N
----	-----	--	--------

## II

1^	24"	<i>Chorten.</i> : (The response includes inside of <i>chorten.</i> )	D DF Arch RI
----	-----	--	--------------

## III

1	35"	Lightning.: Black parts only. Male and female. Living but not talking. From shape and black colour.	W FC' (A) RI
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## IV

1^	34" 2'10"	An utensil which lama uses.	W DF Ob RI
----	--------------	-----------------------------	------------

## V

1V	29" 2'	<i>Jajung</i> (small bird).: It is black. Flying.	W FM (FC') A
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## VI

1V	1'38"	<i>Chorten</i> , isn't it?	W DF Arch RI
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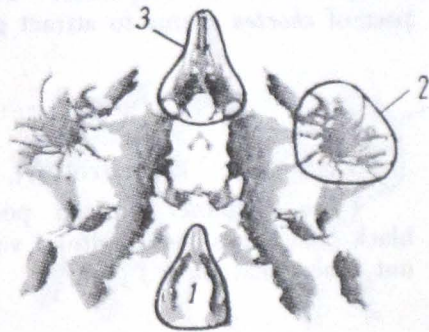
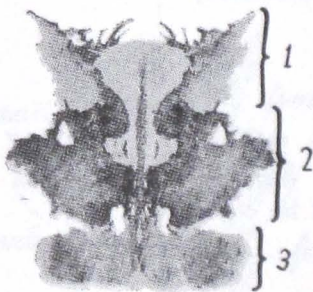
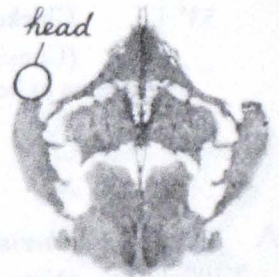
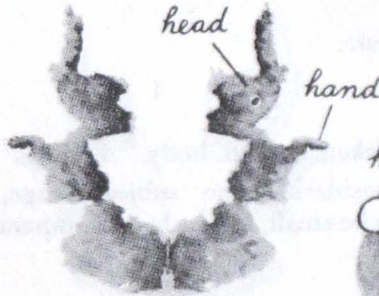
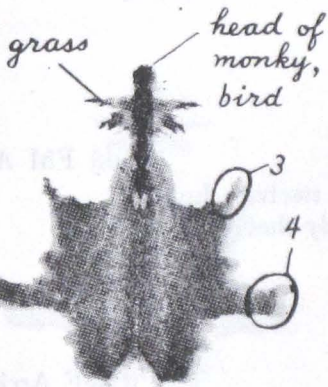
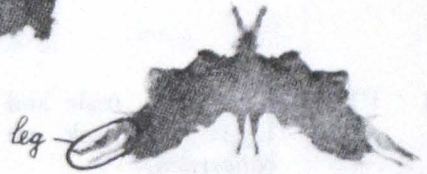
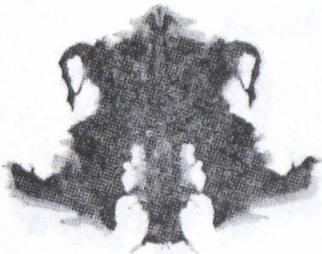
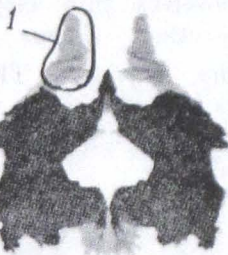
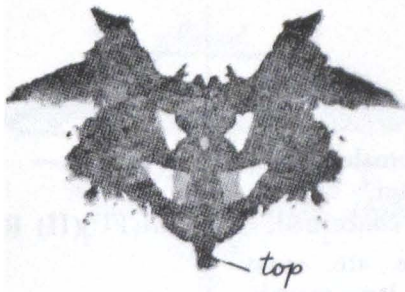
## VII

1	23" 2'	Owl.: Only head. Living. It is black.	D DF Ad
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## VIII

1^	24"	Monkey is climbing tree.: Tree, in three colours,	W FM(FC) A(Pl)
----	-----	---	----------------

T 24



2'30"

## IX

Saints, a couple of male and female. They transformed themselves into elephant.: Living. Looking at each other. Colour is concerned.

DM(FC)(H) RI

(Note to the response: There are many colourfull pictures in Buddhism in the lama temple. The saints in this response seems to be an image of copulating gods.)

## X

1 1'17"

*Diskin*, male and female.: A kind of insect. Legs and trunk are seen. Moving. Colour is concerned.

D FM A

T 26 Age. 12 Male.

## I

1 53"

Chicken.: Full body. Flying.  
(Considering the subject's age, twelve, he seems to be small, but he looks comparably cheerful.)

dd FM A

## II

1^ 13"  
2'30"

*Chorten*.: Upper half of *chorten*.  
(Note to the response.: The upper pointed part of *chorten* seems to attract general attention.)

d DF Arch RI

## III

1^ 1'15"

Lightning.: Black (colour). Living, moving.  
(The examiner noticed possibility that the black colour has some cultural value, but he could not make that clear.)

D DF (A) RI

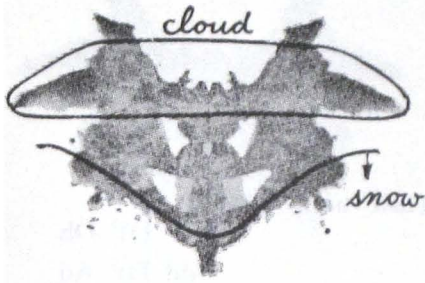
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1^ 7"  
2'40"

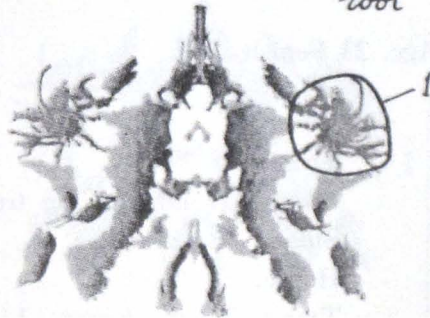
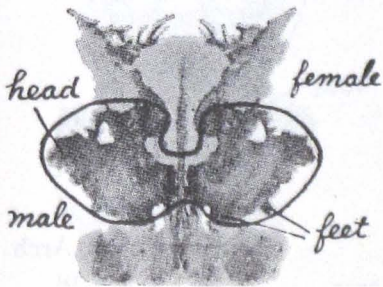
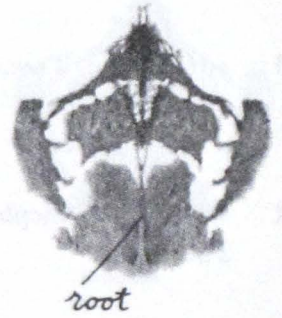
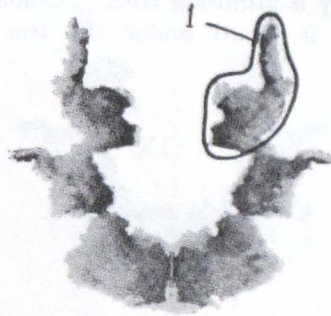
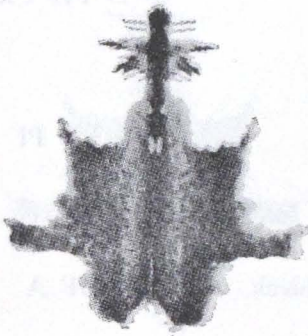
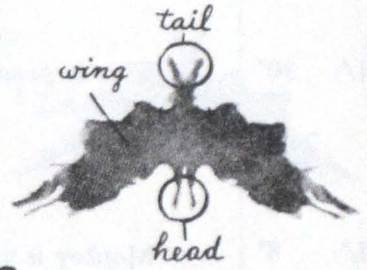
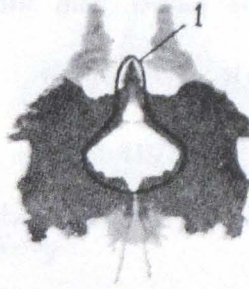
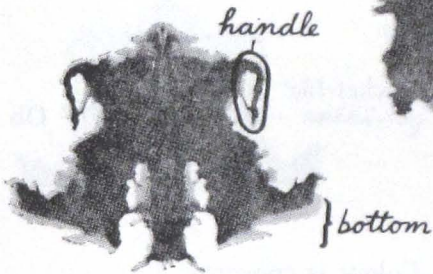
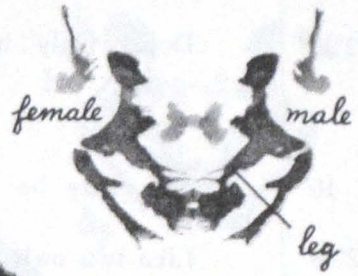
*Khami* (a gate of *chorten*).: It is broken.  
(Note: There are a kind of gate at way in-and-out of villages. The upper part of the gate is shaped like a *chorten*.)

W DF Arch RI





T 25



## V

1^ 2'30" Dog.: Only head. d DF Ad

## VI

1^ 10" This may be *pumba*. (am utensil used by  
lama). W DF Ob  
2V 2'18" Like two owls.: Only heads. dd DF Ad

## VII

1^ 30" This is *pumba*.: (It means bucket-like utensil  
in this case.) D DF Ob Rl  
2'30"

## VIII

1^ 8" Monkey is climbing tree.: Colour is concern-  
ed. There is cloud under the tree. W FM(FC) A (Pl)  
2' (D FD Cloud)

## IX

1 16" Tree.: Colour is concerned. D FD Pl  
2'30"

## X

1 43" Elephant.: Sitting, Living. It is black. D DF A  
2'30"

T 27 Age. 23 Female.

## I

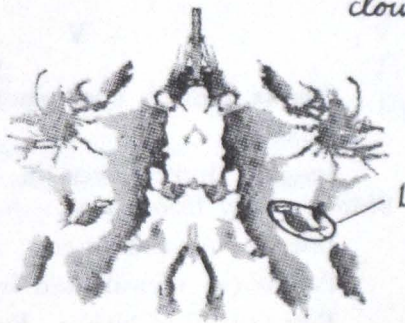
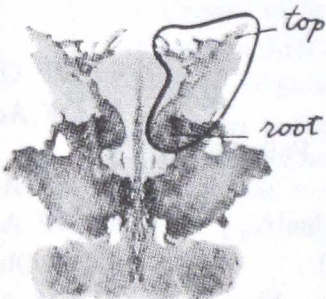
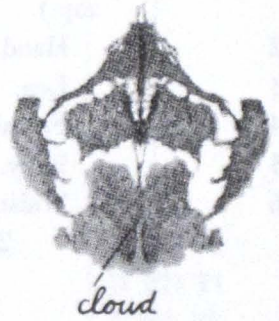
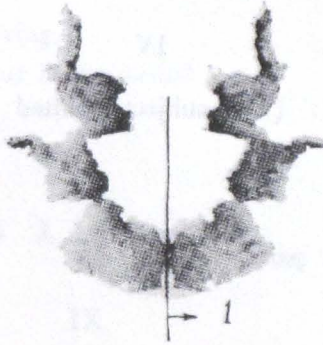
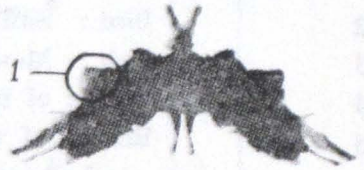
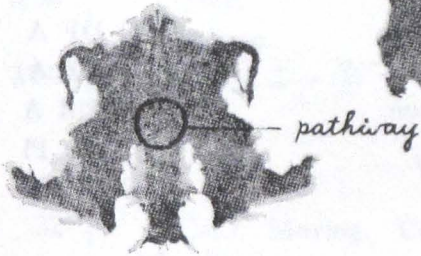
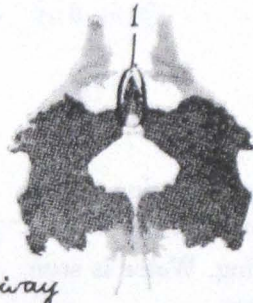
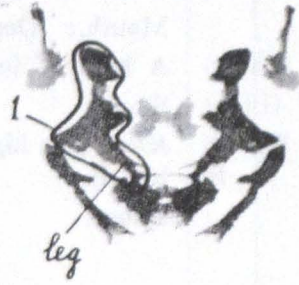
1V 3'45" Tree. d FD Pl  
2 *Kukshin* (a kind of big tree). d FD Pl  
3 Stone.: Small stone. d FD N  
4 House. D DF Arch  
5< Trec.: Whole figure. Living tree. d FD Pl  
6' 1, 2, 5 → ①

## II

1V 14" *Gompa*. D DF Arch Rl



T 26



2	Tree.: Living tree. Colour is concerned.	D CF Pl
3	Mouth.: Dog's mouth.	dd DF Ad
4	A kind of insect.: A half body.	d DF Ad
5	Stone.	d FD N
6	<i>Khan</i> (the high mountain covered with snow, like himal).	d FD N
7	House.	d DF Arch

## III

1	50"	There is dog.: Sitting, living.	D DF A
2		Bird.: Sitting, living.	D DF A
3		Fish.: Moving, Water is seen.	D FM A
4		Foliage of tree.	D FD Pl
5		Branch of tree.	D FD Pl
		1, 2 → ② 4, 5 → ④	

## IV

1	17"	<i>Gompa</i> .: (The subject pointed out only it's top.)	d DF Arch Rl
2		Hand.	d DF Hd
3		Leg.	D DF Hd
4		Female part.	D DF Sex
5		Belly.	dr DF Hd
6		Waist.	dr DF Hd
		2~6 → ④	

## V

1	26"	<i>Thogun</i> (lama's horn-pipe).	dd DF Ob Rl
2		Wing.	D DF Ad
3		Insect.: Insect lives in carth. Full body. Sitting. Only from shape.	dd DF A
4		Insect.: A small insect. A half body.	dd DF Ad
5		Pumba (an utensil used by lama).	d DF Ob Rl
6		<i>Rote</i> (a kind of bird).: Full body. Flying.	dd FM A
	3'10"		

## VI

1^	7"	<i>Chorten</i> .	D DF Arch Rl
2		<i>Serto</i> (the top part of <i>chorten</i> or <i>gompa</i> ).	(d)

3		<i>Pumba</i> (an utensil used by lama).	dd DF Ob RI
4		(No description here).	
5		Foliage of tree.	dd FD PI
6		trunk (of preceding response).	D FD PI
7		Cap.	dd DF Ob
		1, 2 → ③ 5, 6 → ④	

VII

1	2'50"	Tree.	W FD PI
2		Foliage.	(dd)
	3'50"	1, 2 → ③	

VIII

1	32"	Cat.: Moving. Colour is not concerned. Only sketch.	D FM A
2		Langur.: Moving.	D FM A
3		Foliage.: Clour is concerned	D FD PI
4		Head of tree.	(dd)
5		Body of tree.	
6		Hand of tree.	
		1, 2 → ② 3, 4, 5 → ④	

IX

1	50"	This may be flower.	D FD PI
2		This is foliage.	D FD PI
3		Cluster of flowers.	d FD PI
4		Flower, half opened.	D FD PI
5		Body of flower.	Dr FD PI
		(In the last of inquiry the examiner asked the subject about lower pink of the blot. The subject answered that is the earth.)	
		1~5 → ④	

X

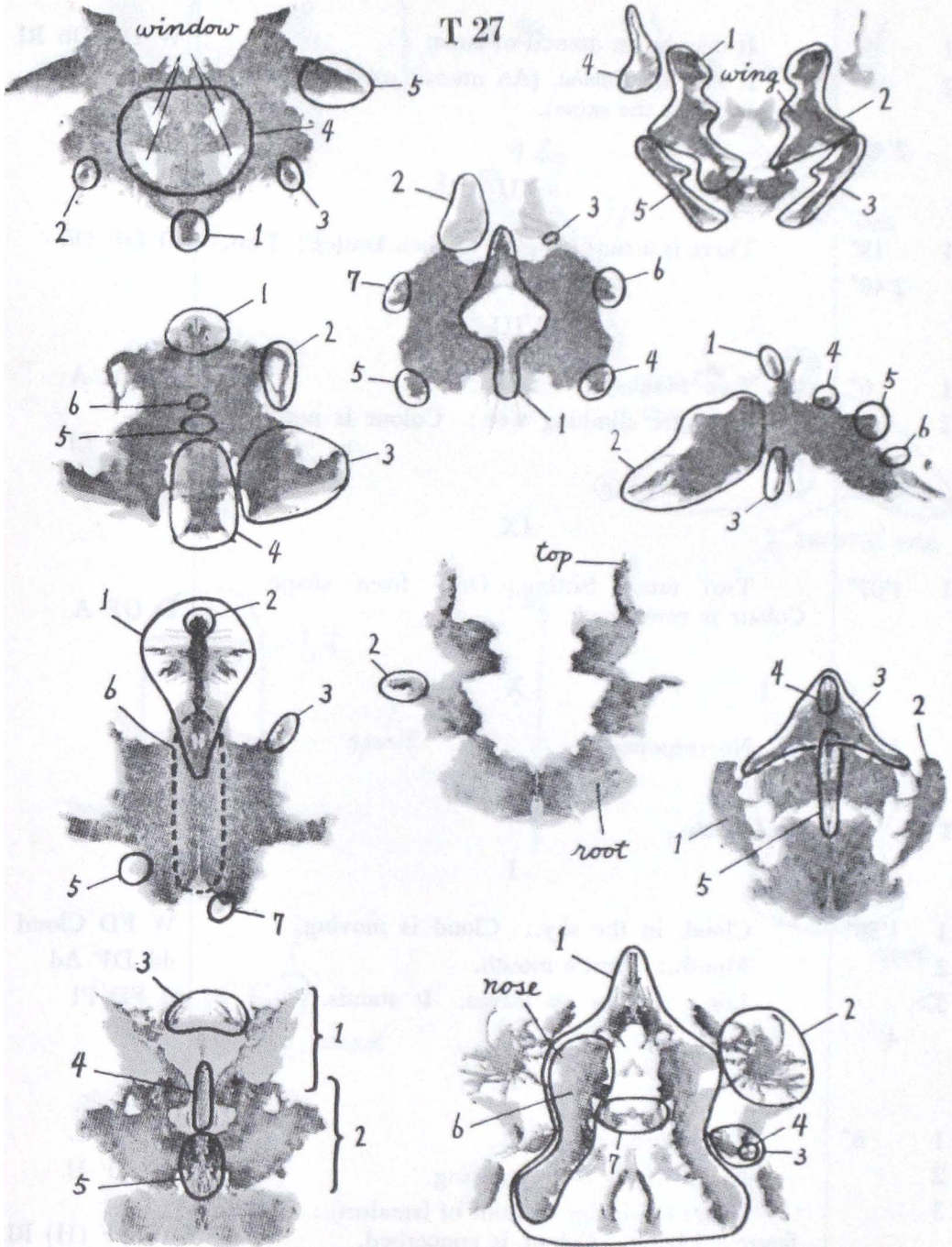
1	10"	<i>Gompa</i> .: The inside scene of <i>gompa</i> .	D DF Arch RI
2		This is flower.: It is by the <i>gompa</i> . Colour is concerned.	D FD PI
3		Bird. Sitting, living. Colour is concerned.	D DF A

4	This is head of the bird (of the preceding response).	(dd DF Ad)
5	(No description here.)	
6	A long face.	D DF- Hd
7	A small chicken is flying.: Colour is concerned.	D FM A
3'10"		

**T 28** Age. 39 Female.

I			
1	2'	Here is cow.: Only it's shoulder.	d DF Ad
2		Here is horse.: Running. Full body. (An individual is projected to the location shown on the location chart.)	D FM A
3'50"			
II			
1^	13"	<i>Chorten.</i>	(d DF Arch Rl)
2		<i>Gompa, chorten.</i>	D DF Arch Rl
3		Here is chicken.: Full body. From shape.	D DF A
4		The chicken is stretching his legs.	(dd)
5		A kind of small insect ( <i>Tok tok</i> ): From shape.	dd DF A
3'10"		1, 2 → ① 3, 4 → ③	
III			
1	1'30"	Here is chicken.: Full body. From shape.	D FM A
		Here is a free, here is a monkey.: Monkey is climbing tree. (the response is projected only on black part.)	(D FD Pl)
IV			
1^	10"	Hrre is a tree. This may be a tree or not.	W FD Pl
V			
1	2"	Here are cows; One is sleeping, the other is standing.	W FM A
2		Here are horns.	(d)
		1, 2 → ③	

T 27



## VI

- |   |       |  |            |
|---|-------|--|------------|
| 1 | 9"    | It may be an utensil of lama.  | W DF Ob RI |
| 2 |       | It may be <i>Pumba</i> . (An utensil used by lama.:<br>(1. and 2. are the same). |            |
|   | 2'45" |  |            |

## VII

- |   |       |   |         |
|---|-------|---|---------|
| 1 | 18"   | There is a <i>tiuri</i> (tibetan earthen kettle).: Two. | D DF Ob |
|   | 2'40" |   |         |

## VIII

- |   |       |   |         |
|---|-------|---|---------|
| 1 | 6"    | Two monkeys.                                      | D FM A  |
| 2 |       | They are climbing tree.: Colour is not concerned. | D FD Pl |
|   | 2'50" | 1, 2 → ⑧  |         |

## IX

- |   |       |  |        |
|---|-------|--|--------|
| 1 | 1'07" | Two rats.: Sitting. Only from shape.<br>Colour is concerned. | D DF A |
|---|-------|--|--------|

## X

- |  |    |              |  |
|--|----|--------------|--|
|  | 3' | No response. |  |
|--|----|--------------|--|

## T 29 Age. 24 Male.

## I

- |    |       |                                      |            |
|----|-------|--------------------------------------|------------|
| 1  | 1'50" | Cloud, in the sky.: Cloud is moving. | W FD Cloud |
| 2  |       | Mouth.: Bear's mouth.                | dd DF Ad   |
| 3> |       | Log.: It has no leaves. It stands.   | d FD Pl    |
|    | 4'    |                                      |            |

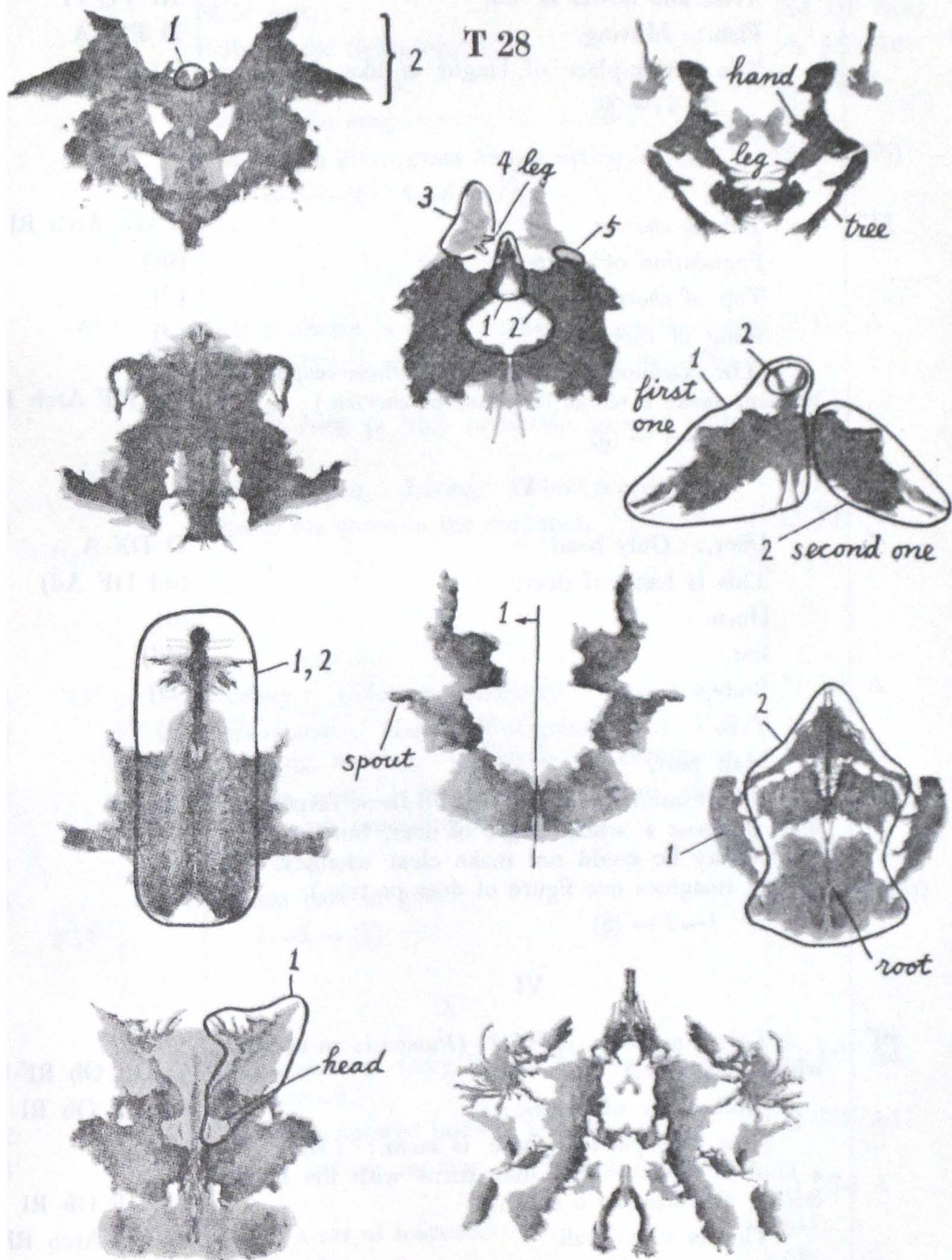
## II

- |    |    |  |             |
|----|----|--|-------------|
| 1  | 8" | Stony ground.  | D FD L      |
| 2  |    | Man.: Full body. Living.   | D DF H      |
| 3  |    | <i>Sunge</i> (an image of saint of lamaism).: Whole figure. Living. Colour is concerned. | D DF (H) RI |
| 4< |    | An elephant.: Moving.  | D FM A      |

## III

- |   |    |                        |        |
|---|----|------------------------|--------|
| 1 | 4" | This langur is eating. | D FM A |
|---|----|------------------------|--------|







2	Tree, and flower is red.	Dr FC Pl
3	Fish.: Moving.	D FM A
4	The sitting-place of langur is like this. 1, 4 → ⑧	(D FD N)

## IV

1	13"	This is <i>chorten</i> .	d DF Arch RI
2		Foundation of <i>chorten</i> .	(dr)
3		Top of <i>chorten</i> .	(d)
4		Wing of <i>chorten</i> .	(d)
		(The examiner estimated that all these responses perhaps make a whole response of <i>chorten</i> .)	(W DF Arch RI)
		1~4 → ③	

## V

1	4"	Deer.: Only head.	D DF A
2		This is hand of deer.	(dd DF Ad)
3		Horn.	(d)
4		Ear.	(dd)
5		Body.	(D)
6		Tail.	(d)
7		Male part.	(dd)
	2'10"	(The examiner noticed that all these responses may compose a whole figure of deer, but through the inquiry he could not make clear whether the subject imagines one figure of deer or two.)	(W)
		1~7 → ③	

## VI

1	40"	This is a <i>pumba</i> , isn't it? ( <i>Pumba</i> is an utensil which lama uses.)	D DF Ob RI
2		Cloth-cover of <i>pumba</i> .	dd DF Ob RI
3		Near the <i>pumba</i> , there is <i>mani</i> .: ( <i>Mani</i> is a kind of wheel which man turns with his hand during his chanting a sutra.)	dd DF Ob RI
4		This is stone wall.	dr FD Arch RI
5		Foundation of <i>chorten</i> .	dd FD Arch RI
	3'20"	1~5 → ⑤	

## VII

1	15"	This is lightning.: Moving in the sky.	D FM (A) RI
---	-----	--	-------------

2	Male part.	(dd DF Sex)
3	Belly of the lightning.	(dr DF Ad)
4	This is small cow.	D FM A
5	Tail. of the cow.	(dd)
6	The cow is given grass and is eating it. 1~3 → ③ 4~6 → ③	(D FD Pl)

VIII

1	6"	This is <i>dhemn</i> (a kind of small rat which give out a bad smell.): Moving. Colour is not concerned.	D DF A
2		This is <i>kang</i> (a high mountain covered with snow).	D FD N
3		This is rat, <i>pea</i> .: Living. Colour is concerned.	D DF A
4		This is big stone in the mountain.	D FD N
	2'40"	1, 3 → ②	

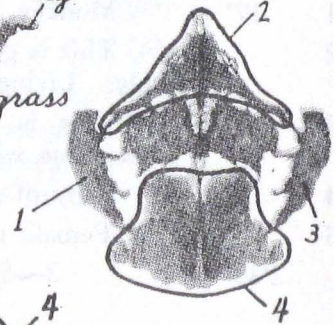
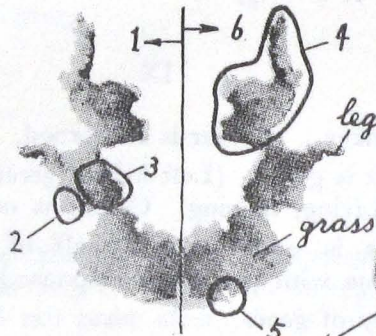
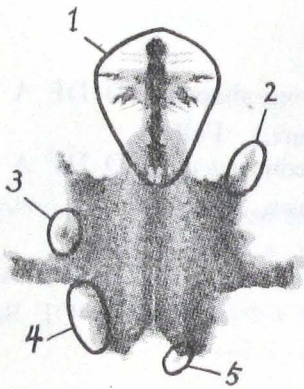
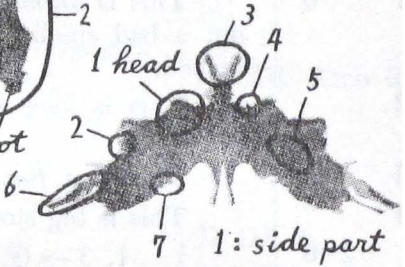
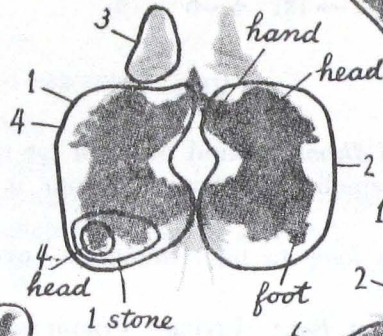
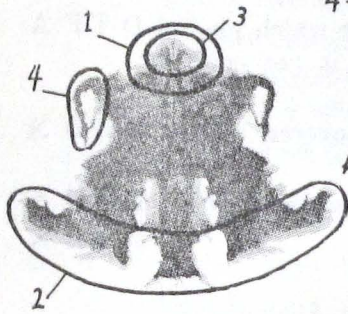
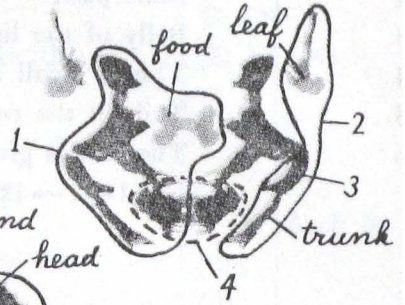
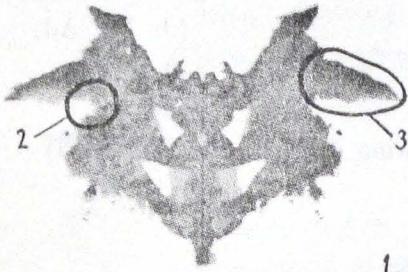
IX

1	17"	Monkey.: Colour is concerned. From shape.	D DF A
2		This is goat.: (Left half of green part.) Full body. Living, moving. Colour is not concerned.	D DF A
3		This is goat.: (Right half of green part.) (The same with preceding response.)	
4		Belly of goat.	(dr DF Ad)
5		Female part of goat.	(dr DF Sex)
	2'35"	2~5 → ③	

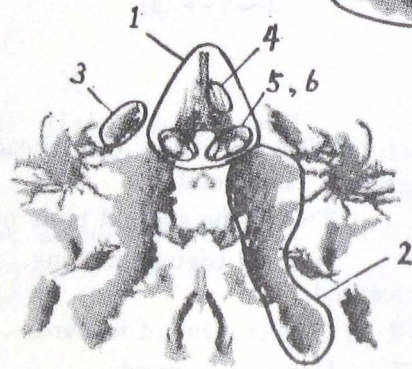
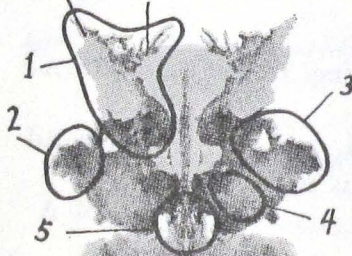
X

1^	42"	Like leopard.; Only head. Moving. Colour is not concerned,	D DF Ad
2		This is the spotted body of leopard.	D DF Ad
3		Hare.: Living, moving. Colour is not concerned.	D FM A
4		This is a ear of leopard.	(dd)
5		Hand of leopard.	(dr)
6		Leg of leopard.	(dr)
		(1, 2→④ 1, 4→③ 5, 6→②)→③	(W)

T 29



head hand.



T 30 Age. 20

I

1V 27"	<i>Dorjhe</i> (a bucket by which one sprinkles water on a occasion.)	D DF Ob RI
2	<i>Dorjhe</i> is on a <i>thorthip</i> (a tripod table on which the <i>dorjhe</i> is kept).	D DF Ob RI
3	A pot for butter-candles which are flaming.	dr DF Ob RI
4	Leg parts of <i>thorthip</i> .	d DF Ob RI
5	Lama's hand bell.: Only being kept there. 1~5 → ⑥	dd DF Ob RI

II

1 8"	This is frog.: (All black part). Living, sitting. An individual.	W DF A DF
2	Leg of frog.	(d DF Ad)
3	Shoulder of frog.	(dr)
4	Tail of frog.	(D)
5	Rat.: It is red. A half body. Dead. It looks a real rat. 1~4 → ③	D DF A
2'20"		

III

1 28"	Langur.: Sitting, living.	(D DF A)
2	This is fish.: Sitting, living.	D DF A
3	The two langurs are climbing tree, and they are eating red fruits.	D FM A (D FC Pl)
4	Small bird.: Sitting living. 1, 3 → ⑧	D DF A
2'20"		

IV

1 24"	Man.	W M H
2	Man's head.	(d DF Hd)
3	Hand.	(d)
4	The man wears tibetan gown.	
5	Sitting on a stool, legs apart like this.	(D)
6	Wearing a belt. 1~6 → ③	(dr)

## V

1	28"	Big stone.: The big stone split into two parts and wind blows through the split.	W FD N RI
2		Leg of stone.	(d)
3		Split.: Wind devided the stone into two parts.	(D)
4		Wind blows.: Wind blows through the split.	(mF)
5		The stone is split by wind.	
	3'10"	(1, 2, 3 → ③ 1, 4, 5 → ⑤) → ⑥	

## VI

1	8"	<i>Chorten.</i>	W DF Arch RI
2		<i>Serto</i> (top part of <i>chorten</i> ).	(d)
3		Golden top of the lama's utensil.	dd DF Ob RI
4		The stone foundation of the <i>chorten</i> .	(dr)
5		A hollow place on wall of the <i>chorten</i> which is given clay as a final coating, <i>kup, shau</i> .	(D)
6		Treasures, are kept inside of <i>chorten</i> .: Inside of <i>chorten</i> some religious materials are kept.	(D)
	2'30"	(1, 2, 4, 5 → ③ 1, 3, 6 → ⑤) → ⑥	Dr DF Ob RI

## VII

1	6"	Big stone were piled one after another. There are two piles.	D FD N
2		A stone is about to fall down from the top of pile.	
3		Mouth of big stone.	(dd)
4		Wind blows through the path.	d mF N
		(1, 2, 3 → ③ ③, 4 → ⑤) → ⑥	

## VIII

1	16"	Red flower.	D CF Pl
2		There are green leaves on red flower	D CF Pl
3		Two birds are on the green leaves with standing posture.	D FM A
4		Flower is out now.	
5		Baby plant grows among the thick foliagees.	D CF Pl
6		Calices are not red.	(dd)
		(1, 2, 5 → ③ ③, 6) → ④ 3, ④ → ⑧	

IX

1	15"	There is a red stone. The red stone is on the top of green tree.: The stone is in fore-ground.	W CF N RI
2		Two birds are on the tree. They hide their heads into foliage.	D FM A
3		A tree grows between two birds.	(D)
4		Legs of each bird are attaching each other.	(d)
5		Tails of two birds spread out like this.	(dd)
	3'30"	1, 2 → ⑧ 2, 3, 4, 5 → ③	

X

1	8"	<i>Gompa</i> , this is red <i>gompa</i> .	D DF Arch RI
2		Inside the <i>gompa</i> , there is an image of god.	D DF (H) RI
3		Inside the <i>gompa</i> , there hangs a kind of religious picture which is coloured on cloth.	D CF Ob RI
4		Incense - burner.	D DF Ob RI
5		There is <i>serto</i> in the upper (part of the blot). Colour is concerned.	(D)
6		On both sides of <i>gompa</i> , four birds are sitting.	D DF A
			D DF A
7		Bird.: Living, sitting.	D DF A
8		Bird.	D DF A
		1~8 → ⑥	

T 31 Age 46. Male.

I

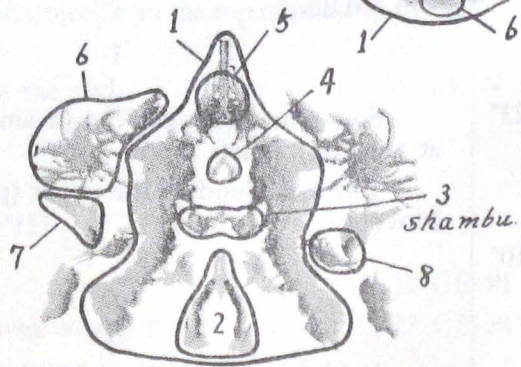
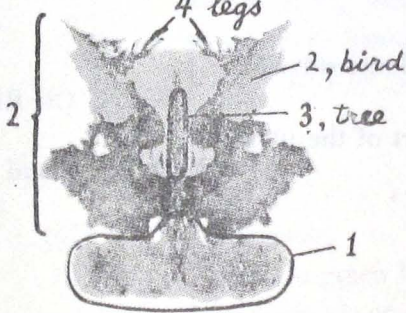
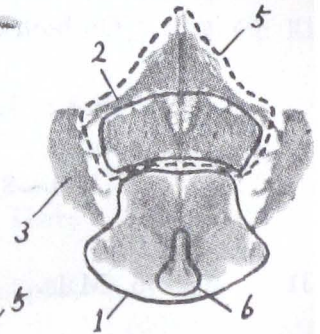
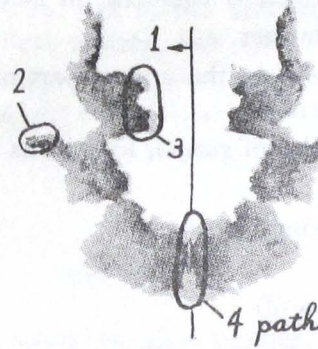
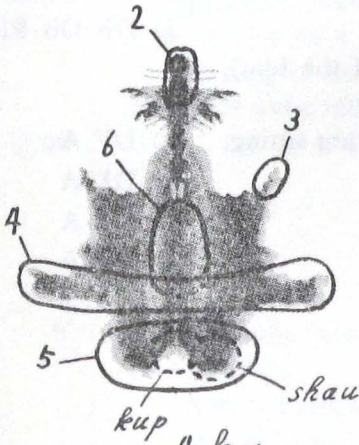
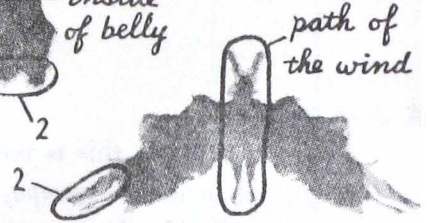
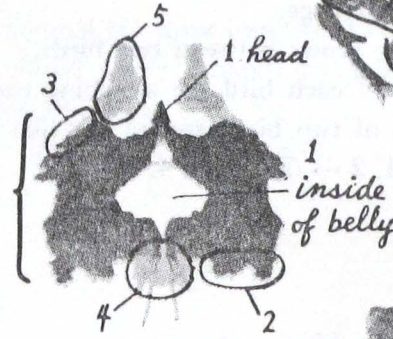
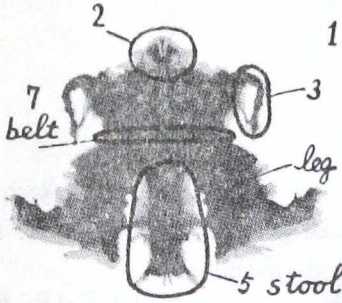
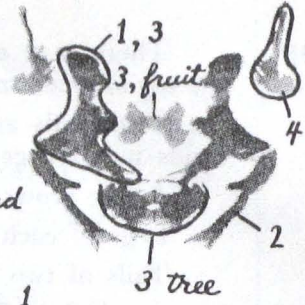
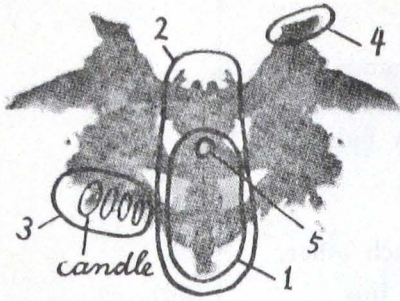
1√	1'23"	Something like <i>dhorche</i> (a small utensil using at worship) is left there.	W DF Ob RI
2∧		There is cloud in the upper (part of the blot): Moving.	D FD Cloud
	3'10"		

II

1	16"	Like <i>chorten</i> .	d DF Arch RI
2		Like pig.: Sitting. Only from shape.	D DF A
3		There is two men.: Not talking. Living. Colour is not concerned.	D DF H
	3'20"		



T30





III

- |          |  |              |
|----------|--|--------------|
| 1^ 1'01" | Mask of human face in <i>gompa</i> . (Note: When someone is about to die, a lama wear the mask and dance.) | d DF (Hd) RI |
| 2^       | Like cloud.: Sitting. Only from shape. Colour is not concerned.  | D FD Cloud   |

IV

- |         |   |            |
|---------|---|------------|
| 1 3"    | This is a tripod table for keeping a god. | W DF Ob RI |
| 2 2'40" | Like a cloth in monastery.                | W FD Ob RI |

V

- |          |  |             |
|----------|--|-------------|
| 1^ 1'35" | Cloud.: Moving. Hanging over the mountain. | W FD Cloud. |
|----------|--|-------------|

VI

- |                |                |        |
|----------------|----------------|--------|
| 1 20"<br>2'05" | Frog.: Moving. | W FM A |
|----------------|----------------|--------|

VII

- |                   |   |                        |
|-------------------|---|------------------------|
| 1^ 1'07"<br>2'40" | Big stone.: (The upper part of the blot is like a cloud.) | D FD N<br>(D FD Cloud) |
|-------------------|---|------------------------|

VIII

- |         |   |            |
|---------|---|------------|
| 1^ 25"  | Like five peices of <i>ombo</i> which are piled up.: ( <i>ombo</i> is a kind of lama's utensil.) Each five pieces of <i>ombo</i> are in five different colours. (But the colours of blot do not correspond to each <i>ombo</i> .) | D DF Ob RI |
| 2 2'10" | This is monkey, isn't this?: The monkey is climbing to eat <i>ombo</i> . Colour is not concerned.   | D FM A     |

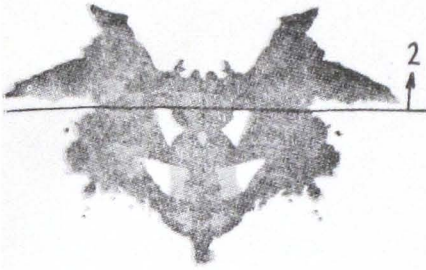
IX

- |                 |  |             |
|-----------------|--|-------------|
| 1^ 18"<br>2'10" | Like lightning.: Two lightning. Colour is not concerned. (The examiner guess that the response must be a colour response, but he could not make it clear.) | D DF (A) RI |
|-----------------|--|-------------|

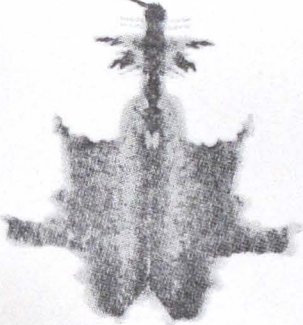
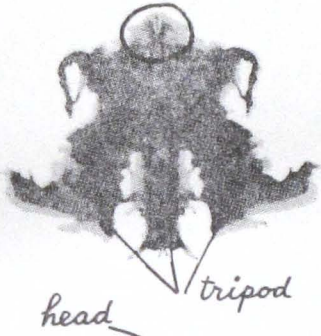
## X

- |   |       |  |   |  |         |
|---|-------|--|---|--|---------|
| 1 | 1'03" |  | This looks like <i>chafong</i> .: ( <i>Chafong</i> means a hard tree like iron.) A half of that tree. The black reminds the subject hardness. |  | D FD P1 |
| 2 | 3'30" |  | Like a mountain animal, goat.: Wild goat. Only from shape. Colour is not concerned.   |  | D DF A' |

T31



1, heart of god



a lightning mouth

