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RORSCHACH PERFORMANCE IN ALCOHOLIC INTOXICATION

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Problem

In daily life, one's behaviors are, more or less, noticed and controlled by one's subjective self or the I. When the function of control is weakened by drugs and other means, those aspects of behavior, which can not be observed in daily life may emerge. From the view point of "Schichtentheorie" (Stratigraphic theory), when the control function of the higher stratum is weakened, the needs, motives and readiesses in the lower sphere will come to the surface to some degree and the deep strata of the person can betray themselves, and moreover the control mechanism in a normal state can be also understood.

The present study is concerned with the effect of alcohol intoxication upon the Rorschach performance. It seems adequate to think that the alcohol is psychologically a depressant and not a stimulant.⁽³⁾ The effect of alcohol as a depressant weakens the functions of higher sphere and, accordingly, reduces the control function of consciousness. Therefore, what has been controlled and repressed in normal condition can be expected to emerge relatively more freely under alcohol intoxication.

With regard to the appearance of the activities of the function which was controlled and repressed, alcohol seems to have stimulant effect. Generally speaking, control mechanism in the experimental situation in which verbal reports are employed, is twofold; one is in the level of consciousness-experience, that is the level of perceptual defense, and the other is in the level of verbal behavior expressing contents of experiences. It is true also with the Rorschach test. Therefore, it is expected that repressed and controlled responses in alcoholic intoxication will increase, while responses resulting from control and repression will decrease. Sometimes also the primitive, and undifferentiated responses may increase. The Rorschach responses are generally thought to be projective. But this does not mean that the Ss report all the experiences freely without any repression and control, at least in the routine procedure. The aim of this study is to test the effect of alcohol on Rorschach

Table 1. The individual difference of *sake* intake, subjective Symptoms and other Observations.

	Before the testing		During the testing Intake in cc.	After the testing		Resistance to Intoxi- cation	Behavior changes and subjects' references to their intoxication	Comment on personality traits
	Intake in cc.	Kita- kawa Index		Intake in cc.	Kita- kawa Index			
Ss								
St	400	5	100	60	3	No	"It is the first time I drank so much".	Normal, rather dependent upon others.
Ok	400	5	140	0	2	No	Drank very speedily, dropped cards and his grass.	Rather self-exhibition, normal
Ht	350	5	0	0	3	No	"Very good. If I were in a bar, I could sing."	Normal
Ws	300	5	60	100	3	No	Drank very speedily, and said "OK isn't it? May I drink so much?"	Normal, rather constricted.
My	300	3	160	60	2	No	Dropped cards, and his glass frequently.	Rather pedantic, normal
Nt	400	5	0	0	2	Some	"It is healthy in my head as usual. But my body is floating."	Normal, a little aggressive
Sz	230	2	0	0	0	No	"I don't know what and how I am now, as I know few experience of drinking."	Normal
It	200	4	200	0	2	Some	As his partner drank very little, he stopped drinking before he became happy and euphoric.	Normal, slightly neurotic
Mt	100	3	0	0	0	Great	"I cannot drink so much, as I have very little experience."	Normal
Sk	260	3	40	40	1	Some	My drinking manner and amount depend on the relation of the partner and me. Today I am drinking an amount of middle class.	Normal, rather over-controlled

performance and also to examine to what extent control function is weakened regarding the categories of Rorschach responses.

It is a question, however, to follow the routine procedure in analyzing and interpretation of the scores. We survey the whole performance of responses carefully, since not only formal analysis but also content analysis is necessary for our purpose. It is also a question whether under our experimental condition the reduction of control is seen in the level of cognitive experiences or in the level of verbal behavior expressing them.

Procedure

Ss were 18 male university students who had no experience of Rorschach administration. The first testing was administered individually in a normal condition. In two months they were divided into two groups; control group (8) and experimental group (10). The former were given the retest under the same condition as the first, while the latter after drinking. The result of one S out of 8 in the experimental group is omitted, because of his too much R. Moderate drinkers were selected as experimental Ss. In order to facilitate intoxication, Ss drank *Sake*, a familiar liquor to them, at about one p.m. without lunch, in a small comfortable room in the laboratory. Classmates in pairs as Ss drank, in the natural friendly atmosphere, about 360cc warmed (about 60°C) Japanese *sake* (first class 16% proof *sake*). Hors d'oeuvre also was served. Immediately after drinking for about 30 to 50 minutes, the degree of intoxication was measured by using the Kitagawa detector for intoxication. Then two testers gave the Rorschach test to two Ss. Ss took some amount of sake during and after Rorschach test. All responses and inquiries were recorded by taperecorder. In order to minimize the after effect of the first administration the second testing was done after an interval of two months.

The experiment was carried out from September to December in 1960. All the Ss remained in a mild intoxication degree except three Ss. Under such condition, we could not expect to reduce the control extremely, and, therefore, the data obtained here were limited. Although there have been many studies on the consciousness and behavior effected by alcohol, only a few studies deal with the effect of alcohol on Rorschach performance. Among them the study of D. McG. Kelley, S. E. Barrera⁽⁴⁾ and that of A. Rabin, N. Papania and A. M. McMichael are especially worthy of notice. First, these studies, however, lacked the control groups which we can check effects of the first test upon the retest, and employed simply the same subjects before and after drinking. Secondly, in these studies the interval between the test and the retest was too short to see the effect of alcoholic intoxication, for example, the former 40 minutes and the latter 3 hours and a half. A third defect is that although each response was checked, response performance as a whole was not fully investigated. The present experiment was intended for correcting these shortcomings.

In the present experiment, we confined ourselves to the study of the mild

(medium) intoxication, and so we had excepted heavy and very weak drinkers from the Ss. The alcohol intake varies according to different individuals, the bodily conditions or the weather. By observing behavior in drinking, it was possible to see the considerable individual differences of intoxicated state. The individual difference was an important view point for us, when the result was analyzed. These individual differences of intake, scores on the test of Kitagawa's alcohol detector in expiratory breath, Ss's subjective symptoms and observation of their behavior by experimenters were shown in Table 1. In this table we arranged Ss in the order of their intake. We can regard the upper 5 Ss in this order as typical Ss mildly and naturally intoxicated. Other Ss showed more or less resistance to intoxicating. The alcohol levels in breath were measured by using Kitagawa's alcohol detector before and after the Rorschach test administration and kept Ss in a certain bodily condition. When necessary, Ss were given some *sake* in the midst of administration of Rorschach test. We wanted to test them in as naturally intoxicated state as possible. All test responses were not only recorded with the taperecorders in another room, but also written as fully as possible.

Results

In order to make all Ss equal in the intoxicated state, alcohol experimental group consisted of medium student drinkers. Therefore it was necessary to make sure that control group and experimental group are equal in the productivity of responses under control condition. We tested statistically the differences between the groups regarding all categories, and the result was not significant, so we thought that both groups were comparable. The result of the present study with regard to the following will be reported.

- a. The whole changes of test performances on the basis of the differences of condition.
- b. The individual differences of the result of retesting under alcohol condition.

The scoring system was based nearly on Klopfer's method.

(1) The reaction time (T/1R) and the time of responses (T/R)

The T/1R of both groups tended to decrease at the second testing (see Tabel 2). Two out of ten Ss indicated the opposite change for this tendency, as well as three out of seven in the routine retesting group. The tendency that the T/1R in the second testing under alcohol condition of experimental group (AL-2R) decreased as compared with that in the first testing under non-alcohol condition of experimental group (AL-1R) were $\chi^2 = 3.70$, $df = 1$, the 10 % level of confidence. But the differences of mean T/1R between the first Rorschach administration of control group under routine condition (R-1R) and

Table 2. The Number of Response and Response Time per single Response and average Response Time of the first Response on each Plate.

Groups	S	R			T/R			T/R ₁		
		1	2	Δ	1	2	Δ	1	2	Δ
Experimental Group	1	30	34	+ 2	49	26	-23	39	7	-32
	2	12	26	+14	87	87	0	25	25	0
	3	22	32	+10	38	42	+ 4	17	13	- 4
	4	34	44	+10	35	12	-23	6	5	- 1
	5	40	44	+ 4	90	45	-45	17	19	+ 2
	6	20	21	+ 1	31	20	-11	11	4	- 7
	7	32	42	+10	11	13	+ 2	7	4	- 3
	8	24	23	- 1	49	31	- 8	21	4	-17
	9	32	28	- 4	45	34	-11	9	12	+ 3
	10	16	15	- 1	73	45	-28	26	14	-12
	\bar{X}		26.2	30.9	+ 4.5	50.8	36.5	-14.3	17.8	10.7
Control Group	1	27	23	- 4	47	33	-14	14	27	+13
	2	17	21	+ 4	36	32	-14	22	8	-14
	3	25	24	- 1	45	27	-18	17	8	- 9
	4	18	17	- 1	36	25	-11	18	9	- 9
	5	31	31	0	49	29	-20	11	7	- 4
	6	20	25	+ 5	36	38	+ 2	35	21	-14
	7	21	19	- 2	50	54	+ 4	22	23	+ 1
	\bar{X}		22.7	22.8	+ 0.1	42.7	32.6	-10.1	19.8	14.7

the retesting of control group (R-2R), (AL-1R), and (AL-2R) were not significant. Delta Δ , the differences between the first T/1R and the second T/1R, was 6.2 sec. for experimental group, 4.9 sec for control group. It seems the degree of decreasing is greater in experimental group. But this difference is not significant (by U test). The experimental group showed no conspicuous tendency in average time per single response. seven Ss decreased, two increased and one showed no change. On the other hand, in the control group, five Ss decreased and two showed an increasing tendency. The T/R of R-2R decreased, as compared with that of R-1R, at the level of 10 % ($\chi^2 = 3.70$, $df = 1$).

Rabin, Papania, and McMichael⁽¹⁰⁾ gave Ss 100 % proof bourbon whisky after the Rorschach administration, gave the retest three hours after the first testing. The T/1R tended to decrease. On the other hand, when Kelley and Barrera tested in form of absolute 100 % U. S. P. alcohol diluted with an equal amount of grape juice, the T/1R was essentially within a normal range. Their results were consistent with ours, Kelley and Barrera⁽¹¹⁾ described, the T/R was, rather, slightly faster on the average. They pointed out this fact as follows: The interval between control administration and that under alcohol condition

were too short.

George, and Bonny⁽²⁾ thought, the adaptation level, in Helsonian term, of Ss in the second administration would be faster. There remains, however, a much-discussed question whether the difference is due to retesting or to alcoholic effect.

According to the present knowledge and our data, the repetition of Rorschach administration under sobar condition has no effect on changing T/1R, but an effect on decreasing T/R. We could observe the tendency in our Ss that their responding performances became more briefly and simpler for the R-2R, and were sometimes expressed in the form of a simple concept. The decreasing tendency of reaction time which the control group showed will justify this phenomenon. On the other hand, in the second administration of drinking, the T/1R was shorter than that of the first and normal testing, and T/R was not reduced. This will be accounted for as follows: in alcoholic intoxication, the Ss became more and more talkative and indifferent to their circumstances, and in general they could not wait until maturing of association. Thus, after giving some response, they usually added many explanations or other comments to it. Therefore the response itself become longer. Those features of alcoholic performance lengthened the time per single response, although they spoke more readily and faster. If the tendency of decreasing T/R in AL-1R can be expected not to change T/R in the readministration, those results will be a reflection of alcohol's weakening the conscious control. But it is dangerous to generalize this because heavy drinking brings a state of narcosis, when too much alcohol intake decreases general level of psychological and physiological functions. In such state, reaction time will become longer on one card, and at the same time, shorter on the other card. So the average of T/1R will be meaningless in such a condition of prenarcosis. Our result of the study on word-association in the Ravonal (Sterile Thiopental Sodium) injection also supported the above-mentioned hypothesis.

(2) Total number of responses (R)

Our results are represented in Table 2. The distributions, means of R between AL-1R, R-1R, were not statistically significant. But the difference of distribution of R between AL-2R and R-2R was significant at 5 % level, that is, the distribution of R was significantly greater in AL-2R than in R-2R (by F test).

The mean of R tend to be greater in AL-2R (with *t* test at 10 % level). The mean of R of AL-2R was dominant significantly over that of AL-1R. The difference of the R between AL-1R and AL-2R was tested with sign test

(one tail), and proved to be significant at 5 % level. Accordingly, it may be safe to think that the R under alcohol condition tends to increase significantly.

Jellinek⁽³⁾ and Rabin et al.⁽¹⁰⁾, regarding the *depressant* effect of alcohol, expected a decrease in the total productivity R in the Rorschach profil under the influence of alcohol. The result showed inversive tendency, we may suppose that R does not represent "productivity" in the case of alcoholic intoxication.

Kelley and Barrera observed the R increased in alcohol intoxication for eight out of ten Ss. But they did not give special meaning to the increasing of R under alcohol condition because the score range of the R itself was rather wide and the degrees of increasing in his experiment were all within the normal range. Their consideration as the clinical diagnosis may be adequate, but the significant increase of the R must be a question from the psychological point of view, even if the increase of R remained within the normal range. We tested statistically the data of Kelly and Barrera and found that the increase of the R under alcohol condition was significant (by means of sign test).

We can not think that alcohol has the same effect at the several steps of the intoxication, but it may be concluded that alcohol brought some stimulating effect on our Ss under the mild intoxication and that such state produced a large R. This finding never means that alcohol has no depressant effect and therefore it may bring about an increase of the R.

(3) Alcoholic change of the Rorschach performance reflected in the scoring categories.

A. Location

Our experimental group consisting of ten Ss and the control group of seven Ss gave respectively 263 total R, 159 total R in the first administration (see Table 3).

Almost all responses were W and D. The total number of responses in the control group remained almost the same in the test and the retest. It was the case with the ratio of the W:D. In the experimental group, the number of W somewhat decreased and D increased a little. (Fig. 1) Table 3 represented the result for each S. In this Table, there was almost no change except the D in the experimental group. The differences between the groups were not significant, but the differences of mean of W in AL-1R and those in AL-2R were slightly significant at 0.10 level. On the other hand, we could not find any significant difference between mean of D in AL-1R and that in AL-2R. The number of Ss who got greater D in alcohol condition than that in routine condition was significant at 0.2 level (by χ^2 test).

Next, we examined whether each S's ratio of responses classified under each category to the total responses would increase in the retest or not, compared with the first testing.

Table 3. The Number of Responses Classified into the Location-categories of W, D, Dd, and S.

Group	S	W			D			Dd			S		
		1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ
Experimental Group	1	22	30	+ 8	5	0	- 5	0	1	+ 1	3	3	0
	2	11	26	+15	0	0	0	0	0	0	1	0	- 1
	3	13	14	+ 1	9	16	+ 7	0	2	+ 2	0	0	0
	4	12	14	+ 2	18	28	+10	2	2	0	2	0	- 2
	5	28	22	- 6	8	18	+10	0	2	+ 2	5	1	- 4
	6	13	10	- 3	7	11	+ 4	0	0	0	0	0	0
	7	13	14	+ 1	19	25	+ 6	0	2	+ 2	0	2	+ 2
	8	16	15	- 1	5	6	+ 1	0	0	0	3	2	- 1
	9	24	19	- 5	8	8	0	0	0	0	0	1	+ 1
	10	14	12	- 2	2	3	+ 1	0	0	0	0	0	0
	\bar{X}	16.6	17.6	+ 1.0	8.1	11.5	+ 3.4	0.2	0.9	0.7	1.4	0.9	- 0.5
Control Group	1	13	9	- 4	12	11	- 1	2	2	0	0	1	+ 1
	2	12	19	+ 7	5	2	- 3	0	0	0	0	0	0
	3	7	9	+ 2	15	13	- 2	2	0	+ 2	1	2	+ 1
	4	12	10	- 2	6	5	- 1	0	1	+ 1	0	1	+ 1
	5	16	17	+ 1	12	13	+ 1	3	1	- 2	1	0	- 1
	6	4	6	+ 2	14	18	+ 4	2	0	- 2	0	1	+ 1
	7	16	17	+ 1	5	1	- 4	0	0	0	0	1	+ 1
		\bar{X}	11.4	12.4	+ 1.0	9.9	9.0	- 0.9	1.3	0.4	- 0.9	0.3	0.9

Table 4. The Ratio of W : D + Dd + S for each S.

	W : D + Dd + S	
	1	2
Experimental Group	22 : 8	30 : 4
	11 : 1	26 : 0
	13 : 9	10 : 11
	12 : 22	14 : 30
	28 : 13	25 : 21
	13 : 7	15 : 8
	13 : 19	14 : 29
	16 : 8	12 : 6
	24 : 8	14 : 18
	14 : 2	19 : 9
Control Group	13 : 14	17 : 14
	12 : 5	6 : 19
	7 : 18	17 : 2
	12 : 6	9 : 14
	16 : 15	19 : 2
	4 : 16	9 : 15
	16 : 5	10 : 7

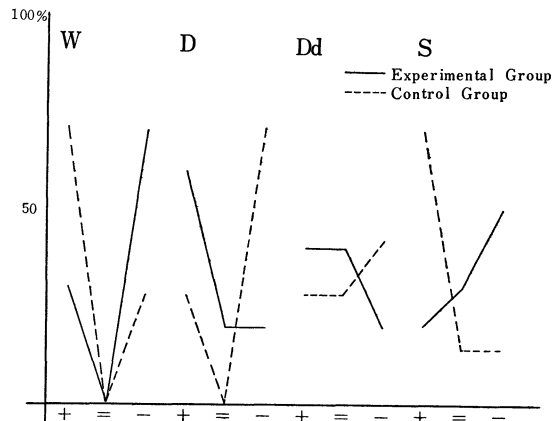


Fig. 1. The Change of Percentage in Score of Retest for each Group.

Figure 1 represents the percentage of the number of individuals belonging to each group whose ratio increased, became equal or decreased in the readministration. From Figure 1 we could see the W tends to decrease and that the D is apt to increase in the experimental group. There is an opposite tendency in the control group.

Table 4 shows the ratio of W to D+Dd+S for each S. Four Ss out of seven had a ratio of W: D+Dd+S reversed in its value in the retest. And only two out of ten in the experimental group had such a ratio and these two exceptions change in value of ratio from W to D. Eight out of ten in our experimental group showed the preponderance of W in first testing. The data will allow several interpretations, but will be referred to in our next paper.

B. Determinants

(i) Movement Responses

Table 5 indicated that human movement responses M increased under alcohol condition. It is interesting that this phenomenon was reported also by the previous studies utilizing alcohol.

Our experimental group gave 5.4 M on an average in the routine performance. But under alcohol testing administered after 2 months, the mean of M was 8.3. On the contrary, the control group gave 4.0 M on an average in the first testing, which did not differ statistically from the experimental group's first testing value, and gave almost the same average score of 3.6 in the second testing. The tendency to give more M in alcohol condition will be justified by the value of $\chi^2 = 6.3$ in tricholomic table. The reliability range of χ^2 of increase group and of decrease group, however, overlapped one another. Therefore, we may say that the increase of M under alcohol condition may prove true by a larger population of Ss. The means of the experimental and

Table 5. The Number of Responses classified into M and FM.

Group	S	M			FM		
		1	2	Δ	1	2	Δ
Experimental Group	1	9	15	+6	4	7	+3
	2	3	10	+7	1	2	+1
	3	5	13	+8	2	0	-2
	4	0	0	0	0	0	0
	5	14	19	+5	4	2	-2
	6	4	7	+3	0	0	0
	7	4	3	-1	0	0	0
	8	5	6	+1	4	2	-2
	9	7	6	-1	7	5	-2
	10	3	4	+1	0	0	0
	\bar{X}	5.4	8.3	+2.9	2.2	1.8	-0.4
Control Group	1	2	1	-1	3	9	+6
	2	2	1	-1	1	4	+3
	3	3	2	-1	2	3	+1
	4	2	1	-1	0	2	+2
	5	8	10	+2	2	1	-1
	6	3	2	-1	3	5	+2
	7	8	8	0	2	4	+2
	\bar{X}	4.0	3.6	-0.4	1.7	4.0	+2.1

Table 6. The M% and FM%.

Group	S	M%			FM%		
		1	2	4	1	2	4
Experimental Group	1	30	44	+14	13	21	+ 8
	2	25	38	+13	8	8	0
	3	23	41	+18	9	0	- 9
	4	0	0	0	0	0	0
	5	37	43	+ 6	10	4	- 6
	6	20	33	+13	0	0	0
	7	12	7	- 5	0	0	0
	8	21	26	+ 5	17	9	- 8
	9	22	22	0	22	18	- 4
	10	18	27	+ 9	0	0	0
	\bar{X}	20.8	28.1	+ 7.3	7.9	6.0	- 1.9
Control Group	1	7	4	- 3	11	39	+24
	2	12	6	- 6	5	19	+14
	3	12	8	- 4	8	13	+ 5
	4	11	6	- 5	0	12	+12
	5	26	32	+ 6	6	3	- 3
	6	15	8	- 7	15	20	+ 5
	7	38	42	+ 4	10	21	+11
		\bar{X}	17.2	15.1	- 2.1	7.8	18.1

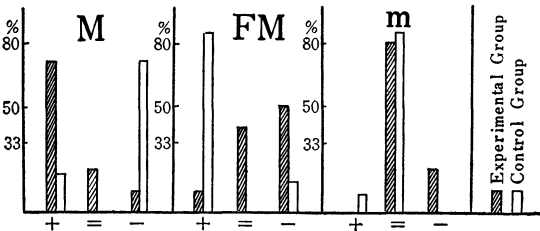


Fig. 2. The Percentage of Ss in each Group whose M, FM, or m increased, decreased, or was equal comparing to Those in the 1st Testing.

more M than the normal condition without inhibition. As we described in the former part of this paper, we arranged Ss from top to the bottom in our tables in the order of naturality of drinking behavior. Therefore, in the upper part of the Table 5 we can see the data of Ss who drank in a comfortable atmosphere and at the lower part of it the data of Ss who drank with resistance to their intoxication. Thus, according to Werner's theory, M may decrease in alcohol intoxication where the tonus must be less than in a normal condition. At least, the data of the upper part of the table must indicate decrease of M and that of

control group differed on the level of confidence of 10 % by *t* test. The scores of Rorschach categories depends on the total R. Therefore, the given scores of one S will be comparable with those of another S when they are transformed into the ratio to one's R. Then we tabulated M % and FM % in Table 6. The increase of M % under alcohol condition was almost indisputable, too.

Protocols for inanimate movement responses Fm, mF, or m, neither increased nor decreased by the difference of conditions. The animal movement responses FM did not increase in the alcohol performance of experimental group, but increased in the second testing of control group (χ^2 , 10 % level of confidence; *t*, 5 % level of confidence). Thus, by a simple repetition of performance M did not increase, but FM increased. How should we interpretate such a result ?

a. In the theory and studies of Werner⁽⁶⁾⁽¹⁵⁾ and his cooperators, (6)(7)(8)(9)(10)(12)(13)(14) the inhibition of motor activity, affectivity, or of cognition influences Ss to produce

the lower part may indicate increase of M. But the the data indicated just a contrary tendency.

b. It is Siipola & Taylor⁽¹¹⁾ who contrived a well-controlled experiment under a condition similar to ours.

Their Ss gave more M under free condition in which they had only to give one response, with no restriction of time, to each of 20 blots from original Rorschach plates, than under the pressure condition, in which Ss were made to make haste and be irritated by the sound of an electric time counter, and were asked to give a response as fast as they could. They thought the increase of M under free condition resulted from the delay of response time. In Siipola's data, Ss under free condition spent much longer time in organization of M than in organization of non-M. Thus, they thought, M became self-accepted and self-reflected response. In order to make it possible to compare our results with Siipola's, we confined ourselves to discuss about the first response given to each plate by Ss belonging to each group.

Table 7. The Number & Percentage of the First Responses fallen into M & Non-M Class.

		Definite Response				Indefinite Response			
		The 1st Administ.		The 2nd Administ.		The 1st Administ.		The 2nd Administ.	
		M	Non-M	M	Non-M	M	Non-M	M	Non-M
No.	Cont.	15	44	16	48	1	10	0	6
	Exp.	23	59	33	49	2	16	1	17
%	Cont.	21	63	23	68	1	14	0	9
	Exp.	23	59	33	49	2	16	1	17

Table 7 showed the number and percentage of the first responses given by experimental and control group. In this table the responses were classified roughly according to Siipola. Here the definite response means the response having a good form leve, the indefinite response is the response without any form or on a bad form level. Very few responses fell into the class of indefinite response, esp. indefinite M, and they had too slight numerical values to deal with. This table shows rather clearly that the composition of initial responses of control group did not change through the two administrations, and that under the alcohol condition Ss gave more M than under sober condition. Does the increase of M in alcohol condition result from the time delay, then? The answer to this question seems to be given by Table 8.

It seems that in the experimental group the median of each S's mean response time of M is longer than that of non M in the first and sober condition. And the control group shows a reverse tendency. But, this difference turned out

Table 8. The Medians of the Means of the First Response Time per single Subject Classified into M and Non-M Class.

	Deffinit Response				Indefinit Response			
	The 1st Administ.		The 2nd Administ.		The 1st Administ.		The 2nd Administ.	
	M	Non-M	M	Non-M	M	Non-M	M	Non-M
Control Group	13.3	17.4	8.0	9.1	26.0	19.0	—	11.0
Experimental Group	19.3	10.5	8.0	8.9	27.0	23.7	22.0	14.0

insignificant, for about 50 % of Ss had longer mean response time of M than that of non M.

In the second testing performance, however, the medians of average response time per single S approached to each other and showed a tendency to be shortened. This reduction of response time may also an effect of practice, (cf. Rabin et al.). But mere practice effect did not increase M. At least, we found no positive data which indicated that M in alcoholic performance needed longer response time than that of non M response. Therefore, however indifferent our Ss were to events and objects in their circumstances because of intoxication, yet we cannot conclude that, our intoxicated Ss organized and selected concepts which spent much more time than in the normal conditions and thus produced more M. Besides, under alcohol condition, Ss gave more M also in succeeding responses after the first response. These succeeding M, for the most part, which appeared in a continuum (Table 9).

Table 9. The Number of M's among the 1st and the succeeding Responses.

Testing	Categories of Response	Group	N	No. of Plates										Σ	\bar{X}
				I	II	III	IV	V	VI	VII	VIII	IX	X		
The First	The 1st Response	Exp.	10	1	4	6	1	1	0	6	1	0	3	23	0.2
		Cont.	7	1	2	6	0	0	0	4	0	1	2	16	0.2
	The 2nd & Succeeding Resp.	Exp.	10	5	3	2	3	1	2	5	1	3	6	31	0.3
		Cont.	7	1	3	3	1	2	0	3	0	0	1	14	0.2
The Second	The 1st Response	Exp.	10	3	6	6	1	1	2	5	0	3	4	31	0.3
		Cont.	7	1	2	5	0	1	0	2	1	1	2	15	0.2
	The 2nd & Succeeding Resp.	Exp.	10	6	7	5	5	3	6	7	3	5	5	52	0.5
		Cont.	7	1	0	2	1	2	1	2	0	1	0	10	0.1

This phenomenon bore upon the stimulus attributes of the blots themselves which are assumed to have a tendency to let Ss give M easily, for example as in card 2, 3 or 7. But it also indicates the existence of inner set which will give M easily in our intoxicated Ss. Therefore we will be able to assume a readiness for M as an effect of drinking.

In short, the interpretation of Siipola & Taylor will be appreciated as an explanation of increase of M in sober condition, but it is inadequate for the explanation of increase of M under intoxication.

c. A tentative integration: We have been discussing about human movement responses regarded as an important Rorschach performance change under alcohol condition.

Experimental variable upon which this change of M depended was not only the pharmacological effect of alcohol on organism but also changes of whole personality produced by intoxication. Therefore, we look upon the phenomenon as an reflection of whole personality changes in intoxication, and from this point of view we must consider the increase of M alcohol condition.

Though some of our Ss were defensive in normal condition, they did not show any tendency to avoid the present situation when they were intoxicated. In this sense, between blots and intoxicated Ss, there did not exist any psychological barriers or if they did exist, they must be very weak than in the normal condition.

Further, the intoxicated Ss, did have only a very weak "problem consciousness" for this task. They spoke comparatively more freely. The intoxicated Ss were apt to lack an exact insight into the present situation or they had their responses reflected by any insight of their behavior. In this sense, it was considered that the intoxicated Ss were psychologically in a state of weakened function of their subjective self.

A typical intoxicated performance is as follow: Ss were producing successively several M which are slightly different in the contents. In the step of inquiry, it is clarified that these different M were the changes of expression, enlargement, development, or correction of the first M. That is to say, these responses are not reports of completely finished experience but of experience in progress. It may safely be assumed that It may safely be assumed that the conscious or intentional control which acts in the verbal expression of experience will act more loosely in the intoxication than the sober condition. And such control is surely a function of our subjective self.

As one of the traits observed in intoxicated Ss, we referred to the facts that they took no notice of the experimental situation and became less adaptive. Not only to temporal situation, but also to the cultural and social frame of reference were they apt to be indifferent. In consequence, P % decreased in alcohol condition, such adaptational function will be one of activities of subjective self. Thus, the functional level-down of subjective self was a main characteristics of intrapersonality dynamics of our intoxicated Ss. As the result of this personality change it became more difficult for them to perceive or think objectively and their inner world was enlarged and expended, their perception being more subjective, thinking more fantastic and more retrospective, and responses more projective.

d. It seems strange that animal movement responses FM did not increase in alcohol condition, while human movement responses M increased. On the contrary,

in control group, M did not increase in the second test, whereas FM tend to increase (10 % level of confidence by χ^2 test).

Alcohol seems to increase M, while practice (retest) seems to increase FM (see Table 6). Sometimes, both M and FM were classed under the same category of movement response, sometimes implied a psychological implication common to M and FM. Kelley and Barrera found that in the ratio of Σc : FM+m for the Ss who were not resistant to intoxication more weight was given to FM+m. If intoxication were to render the psychological state of Ss more primitive, FM might to a reflection of this state. But our data did not show such a tendency.

Some authors regard FM as a primitive form of M from a developmental viewpoint. In facts, in the ratio FM:M more importance is attached to FM in children and to M in adults. Has the FM of child, however, the same psychological implication to that of the FM of an adult? Or, has the FM of an infant the same background of psychological function to aged youth? In the level of mentality of child, there is surely not so clear a differentiation of animal and man, as in the adults. For children, animals are human beings, rather their companions to talk with. In such case, FM is very close to M. But in a normal adult, FM is completely different from M. With the exception of the clinical implication of FM in pathological Ss, the FM of a normal adult is similar in its nature to FC or Fc. As we shall discuss later, in the second test of control group, F decreased, while FC, FM, and Fc increased, as compared with the first testing. Considering such tendency, FC and FM seem to be responses regarding the attribute of perceived object, as such, while F response does not refer to such an attribute. Although the M is also a response referring to an attribute of the object seen as a human being, a more important aspect of M is that it occurs when an subject sees a human being is surely a most important feature of human movement response. Strictly speaking, both of a walking animal and a standing pot are the same objective being for an adult while for a child they are totally different. These perceptions or associations have the same psychological value for a normal adult.

e. As above mentioned, FM tends to increase in the retest of the control group and to decrease under alcohol condition. It seems M hardly increases by practice in the retest, and sometimes decreases by repetition, whereas FM increases by simple repetition of the test.

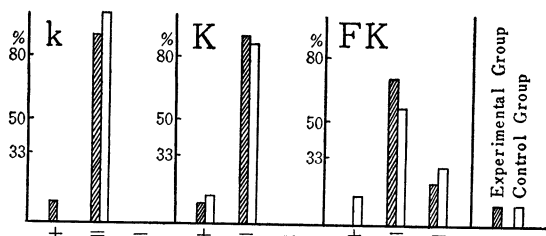


Fig. 3. The Percentage of Ss in each Group whose k, K, or FK increased, decreased, or was equal comparing to those in the 1st Testing.

(ii) Depth, Vista and Shading Responses.

We got only a few depth and vista responses. It seems that the FK %, KF + K %, Fk + kF + k% remained unchanged by practice effect as well as by alcohol (Figure 3). But it appears that the sum of shading and achromatic

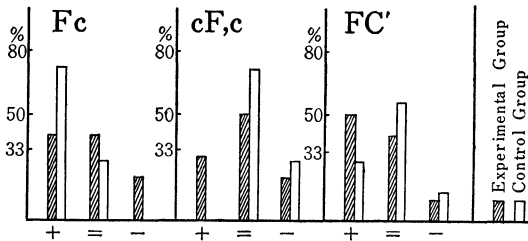


Fig. 4. The Percentage of Ss in each group whose Fc, cF+c, or FC' increased, decreased, or was equal comparing to those in the 1st Testing.

responses (ΣFc , cF , c , FC' , $C'F$, C') slightly increased (Table 10). In Figure 4, we can examine each component of this summation. That is, Fc increases in control group and FC' and $CF+C$ in experimental group.

(iii) Form Responses and Responses determined by color more or less.

Under alcohol condition, we found much more cases where numbers of F , FC , and CF did not change or rather decreased. On the contrary, in the second performance of control group, FC tended to increase

(10 % level of confidence by χ^2 test) and F to decrease (10 % level, by χ^2 test). The number of responses and the percentage of the score to R of these scoring categories were shown in Table 11 and Figure 5 respectively.

a. The increase in FC of control group probably means the same tendency which this group showed in Fc and cF . As Fortier⁽¹⁾ showed in his excellent review, FC represents a certain function of the ego which is concerned with his control of affective charges, his capacity to interpret and integrate the affective behavior of others (p. 59). Thus, the increase in the second performance of control group will be ascribable to the reinforced function of the ego by practice pertaining to Rorschach performance.

On the other hand, in the intoxicated Ss, FC did not increase nor decrease. CF showed much less than FC . Thus ΣC showed a decreasing tendency in general (Table 12). Therefore, under alcohol condition, it may be interpreted the psychological state of Ss became less sensitive to the outer stimulus and, as reflected in the increase of M , more sensitive to the inner stimulus. Therefore, a mild alcoholic intoxication does not mean a simple relaxation or

Table 10. The Value of $\Sigma Fc, c$, FC etc.

Group	S	1	2	Δ
Experimental Group	1	0	2	+2
	2	2	4	+2
	3	2	3	+1
	4	2	7	+5
	5	1	2	+1
	6	1	1	0
	7	0	4	+4
	8	1	0	-1
	9	2	1	-1
	10	1	1	0
	\bar{X}	1.2	2.5	+1.3
Control Group	1	2	3	+1
	2	0	3	+3
	3	1	1	0
	4	0	2	+2
	5	0	1	+1
	6	3	4	+1
	7	1	1	0
	\bar{X}	1.0	2.1	+1.1

Table 11. The Number of Response classified into F, FC, CF, \neq C.

Group	S	F			FC			CF			C		
		1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ
Experimental Group	1	15	9	-6	1	0	-1	0	0	0	0	0	0
	2	2	4	+2	2	2	0	1	3	+2	0	1	+1
	3	5	13	+8	2	2	0	1	0	-1	4	0	-4
	4	24	29	+5	6	5	-1	2	1	-1	0	2	+2
	5	13	15	+2	3	3	0	2	0	-2	0	0	0
	6	7	8	+1	2	1	-1	3	1	-2	3	2	-1
	7	22	22	0	6	8	+2	0	2	+2	0	3	+3
	8	13	12	-1	1	2	+1	0	0	0	0	0	0
	9	7	9	+2	1	0	-1	1	0	-1	5	4	-1
	10	11	8	-3	1	2	+1	0	0	0	0	0	0
	\bar{X}	11.9	12.9	+1.0	2.5	2.5	0	1.0	0.7	-0.3	1.2	1.2	0
Control Group	1	14	2	-12	1	3	+2	1	1	0	2	0	-2
	2	10	8	-2	2	3	+1	1	1	0	0	0	0
	3	15	13	-2	4	4	0	0	0	0	0	1	+1
	4	15	10	-5	1	2	+1	0	0	0	0	0	0
	5	18	15	-3	2	4	+2	0	0	0	0	0	0
	6	9	10	+1	2	4	+2	0	0	0	0	0	0
	7	6	4	-2	1	2	+1	3	0	-3	0	0	0
	\bar{X}	12.4	8.9	-3.5	1.8	3.1	+1.3	0.7	0.3	-0.4	0.3	0.1	-0.1

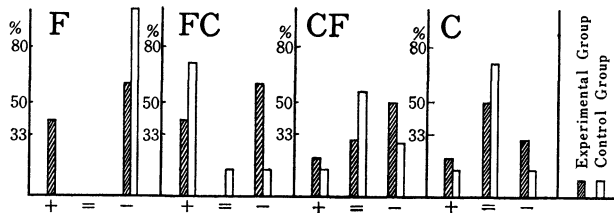


Fig. 5. The Percentage of Ss in each Group whose F, FC, CF, or C increased, decreased or was equal comparing to those in the 1st Testing.

simple diminution of high dimensional control function of consciousness. It brings about more complex change of personality dynamics.

b. In the frame of above mentioned schema, also the decrease in F (10 % by χ^2 test) and F % (5 % by χ^2 test) in control group will be explained.

Indeed, the simple repetition of test rendered the “repressing affective experience” weak and reinforced the function controlling affective charges. Therefore, and at the same time, the integrative function of these Ss being normal, the

Table 12. The Values of Sum C, $\Sigma C : M$, and $\Sigma c : FM+m$.

Group	S	Sum C			$\Sigma C : M$		$\Sigma c : FM+m$	
		1	2	4	1	2	1	2
Experimental Group	1	1	1.2	+0.2	1 : 9	1.2:15	1 : 5	2 : 7
	2	5	8.5	+3.5	5 : 3	8.5:10	2.5: 1	4.5: 2.5
	3	2	1.5	-0.5	2 : 5	1.5: 2	1 : 13	7 : 0
	4	5	6.5	+1.5	5 : 0	6.5: 0	2.5: 0	6 : 0.5
	5	4	2.5	-1.5	4 : 14	2.5:19	1.5: 8.5	3.5: 4
	6	8.7	5	-3.7	8.7: 4	5 : 7	1.5: 1	1.5: 1.5
	7	3.2	10.5	+7.3	3.2: 4	10.5: 3	0.5: 0.5	5 : 0.5
	8	1	1.5	+0.5	1 : 5	1.5: 4	1 : 6	0 : 2
	9	9.2	10.5	+1.3	9.2: 7	10.5: 6	3 : 9.5	3.5: 6
	10	0.5	1	+0.5	0.5: 3	1 : 4	1 : 0	0 : 0
	\bar{X}	3.9	4.9	+1.0				
Control Group	1	5	4	-1	5 : 2	4 : 1	2.5: 4.5	2.5:11.5
	2	2	1	-1	2 : 2	1 : 1	1.5: 1	3.5: 4
	3	2	6.7	+4.7	2 : 3	6.7: 2	1 : 2	2 : 3
	4	0.5	1.1	+0.6	0.5: 2	1.1: 1	0 : 0.5	1.5: 2.5
	5	1	2.7	+1.7	1 : 8	2.7:10	1.5: 2	0.5: 1
	6	1	2.5	+1.5	1 : 3	2.5: 2	3 : 3	7.5: 6
	7	4.2	1	-3.2	4.2: 8	1 : 8	1 : 2.5	2.5: 4
	\bar{X}	2.2	2.7	+0.4				

Rorschach performances based on the integration of affective experience increased and were in general in good quality, that is FC increased in the retest of the control group. But only the reinforced ego function does not make FC occur easily, in the same way as it does not decrease F and F %. Ss' relaxed attitude is a more important determinant of the performance in the second administration. The familiarity of the test in the retest situation made Ss less constricted. Therefore, we may assume that the decreased part of F removed to FM, FC or Fc etc., since the R of this group was not changed in the retest performance.

Under alcohol condition, the number of F of experimental group did not show a clear and distinct change (Table 11). The R of this group increased in alcohol condition. Therefore relative decrease of F % will be expected.

But the average F % of this group changed to 40.6 % in alcohol condition from 44.3 % in routine condition. This change is very slight, compared to the change to 38.4 % from 54.8 % in control group. In the first performance there was no significant difference between the mean score of F of control group and that of experimental group, but in the second performance we found

a significant difference at 5 % level of confidence between the average scores of each group (by *t* test). Therefore we can safely consider that the F and F % of experimental group did not decrease in particular in alcohol condition.

(iv) The other composed Scores

When we discussed about shading response, we referred to the general decrease of integrating or controlling function under the alcohol condition. In this connection, it must be interesting to examine the scores, F+, FC-(CF+C), $\frac{\text{VIII} + \text{IX} + \text{X}}{\text{R}} \times 100$, experience balance and P % in Table 13, and 14.

Table 13. The Value of F+%, $\frac{\text{VIII} + \text{IX} + \text{X}}{\text{R}} \times 100$, and FC-(CF+C).

Group	S	F+%			$\frac{\text{VIII} + \text{IX} + \text{X}}{\text{R}} \times 100$			FC-(CF+C)		
		1	2	Δ	1	2	Δ	1	2	Δ
Experimental Group	1	87	100	+13	31	27	+ 4	+ 2	- 1.5	- 3.5
	2	50	62	+12	44	29	-15	- 1	-12	-13
	3	60	69	+ 9	26	30	+ 4	-12	+ 2	+14
	4	73	42	-31	34	33	- 1	+ 2	- 3	- 5
	5	92	82	-10	40	43	+ 3	- 1	+ 2	+ 3
	6	86	70	-16	33	29	- 4	-12.5	- 6	+ 6.5
	7	98	81	-17	38	34	- 4	+ 6.5	- 4.5	-11
	8	92	83	- 9	41	31	-10	0	+ 2	+ 2
	9	71	79	+ 8	32	35	+ 3	-10.5	-14	- 3.5
	10	91	88	- 3	23	26	+ 3	+ 1	+ 2	+ 1
	\bar{X}	80.0	75.6	- 4.4	34.2	31.7	- 1.7	- 2.6	- 3.3	- 0.9
Control Group	1	57	0	-57	26	30	+ 4	- 8	- 2	+ 6
	2	80	63	-17	41	33	- 8	0	+ 1	+ 1
	3	100	92	- 8	32	33	+ 1	+ 4	0	- 4
	4	93	100	+ 7	34	35	+ 1	+ 1	+ 2.5	+ 1.5
	5	89	80	- 9	32	35	+ 3	+ 2	+ 5.5	+ 3.5
	6	100	90	-10	45	44	- 1	+ 2	+ 5.0	+ 3
	7	83	75	- 8	29	33	+ 4	- 5.5	+ 2.0	+ 7.5
		\bar{X}	86.0	71.4	-14.3	34.1	34.7	+ 0.6	- 0.6	+ 2.0

Contrary to our expectation, F + % did not decrease significantly in the intoxicated Ss, but the control group showed a decreasing tendency in their second performance (χ^2 , 10 %). We did not get an adequate explanation of these tendencies yet.

We found the increasing tendency of the composed score deduced from FC - (CF + C) weighted and suggested by Rorschach in the second performance

Table 14. The P% and A%.

Group	S	P%			A%		
		1	2	Δ	1	2	Δ
Experimental Group	1	17	9	- 8	33	33	0
	2	32	15	-17	25	31	+ 6
	3	27	16	-11	31	24	- 7
	4	15	7	- 8	26	30	+ 4
	5	10	7	- 3	23	20	- 3
	6	15	33	+18	15	28	+13
	7	28	10	-18	31	29	- 2
	8	21	21	0	25	26	+ 1
	9	28	28	0	31	33	+ 4
	10	27	27	0	31	33	+ 2
	\bar{X}	22.0	17.3	- 4.7	27.1	28.9	+ 1.8
Control Group	1	19	20	+ 1	37	39	+ 2
	2	29	33	+ 4	60	47	-13
	3	24	16	- 8	40	40	0
	4	11	24	+13	39	47	+ 8
	5	19	29	+10	39	36	- 3
	6	10	20	+10	35	64	+29
	7	29	33	+ 4	50	37	-13
	\bar{X}	20.1	25.0	+ 4.9	42.9	44.3	+ 1.4

of control group (10 % level, by χ^2 test). This resulted, it will be assumed, from the reinforcement of control function of affective charges as the result of heightened readiness for Rorschach performance. On the contrary, in the experimental group this value tends to decrease or remove to minus value. This seems for us to mean that alcohol has a effect reverse to practice in regard to this point.

Kelley and Barrera stated that $\frac{VIII+XI+X}{R} \times 100$ increased in alcoholic intoxication. But our data did not show that this value changed significantly in control group as in experimental group.

Experience balance and the ratio $\Sigma c : FM + m$ changed almost all at random (Table 12).

In summarizing the results above mentioned, it may be considered that our data had a reflexion, in their implication, of a state of intoxicated Ss in which they were sensitive to endogenic stimulus and could not control inner change caused by outer stimulus. Such an S probably will give only a few

popular responses. The data in Table 14 supported this hypothesis (5 % level of confidence by χ^2 test). That is to say, a relatively good deal of unique contents was found in the Rorschach performance of the intoxicated Ss.

C. Contents

The responses given by the Ss were sorted into the "content categories", and the number of responses of each Ss in each category is shown in The scores did neither significantly increase nor decrease in them. The ratio of number of responses classified into each category to the total number of responses R did not also significantly change. Counting the increases or decreases in a given response with regard to content category of each S, we got Figure 6, which represents the percentages of Ss of both experimental and control groups whose content scores decreased, increased or were equal. We did not find any significant tendency in Figure 6.

In alcohol condition the routine treatment to classify responses into the content categories seems to be too rough. Let us examine Table 15, consider-

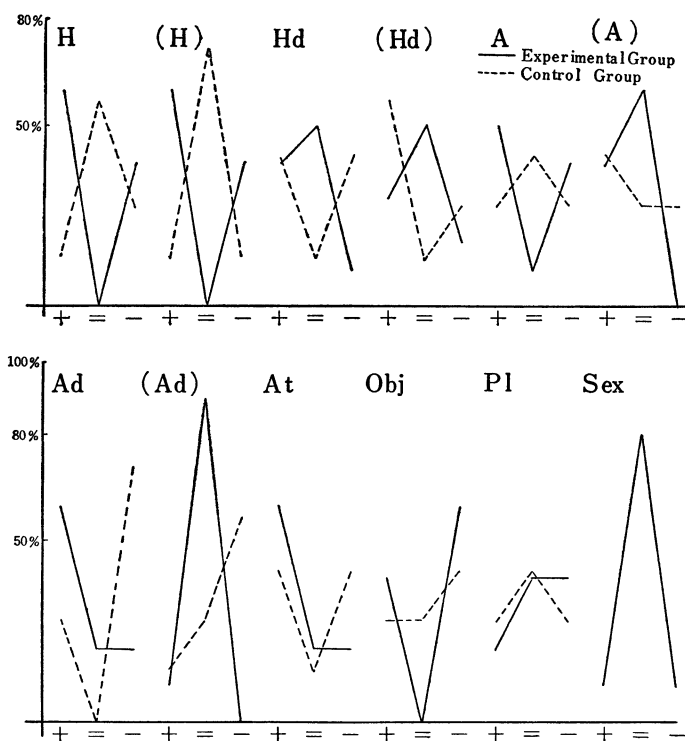


Fig. 6. The Change of Percentage in Score of Retest for each Group.

Table 15. The Number of Responses of each S in each Category.

Experimental Group																																																		
Ss	H			(H)			Hd			(Hd)			A			(A)			Ad			(Ad)			At			Obj			Pl			Sex			Fire			Cloud			Lds			Others				
	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ					
1	11	11	0	3	6	+3	0	0	0	0	0	0	8	9	+1	0	0	0	2	2	0	0	0	0	1	2	+1	3	2	-1	0	0	0	0	0	0	0	0	0	0	1	0	-1	1	1	0				
2	2	5	+3	0	1	+1	0	0	0	0	0	0	3	8	+5	0	0	0	0	0	0	0	0	0	0	1	+1	0	1	+1	1	0	-1	0	1	+1	1	0	-1	0	0	0	0	1	+1	5	8	+3		
3	2	5	+3	3	6	+3	1	3	+2	0	2	+2	5	7	+2	2	0	-2	2	4	+2	0	0	0	2	2	0	0	0	0	1	0	-1	0	0	0	0	0	0	0	0	0	0	0	0	4	1	-3		
4	1	1	0	1	4	+3	1	2	+1	1	0	-1	7	9	+2	1	2	+1	2	4	+2	0	1	+1	4	6	+2	5	2	-3	0	2	+2	0	0	0	2	1	-1	0	0	0	0	1	+1	9	11	+2		
5	9	13	+4	9	5	-4	1	6	+5	1	0	-1	7	8	+1	0	0	0	2	1	-1	0	0	0	0	0	0	3	1	-2	1	0	-1	0	0	0	0	0	0	0	0	0	0	0	8	9	+1			
6	4	2	-2	1	2	+1	1	1	0	0	1	+1	3	3	0	0	3	+3	0	3	+3	0	0	0	2	2	0	5	1	-4	0	0	0	0	0	0	1	0	-1	0	0	0	0	0	0	3	3	0		
7	10	7	-3	2	1	-1	0	1	+1	0	0	0	13	12	-1	0	0	0	0	0	0	0	0	0	0	0	1	2	+1	3	2	-1	0	2	+2	0	0	0	2	3	+1	0	0	0	0	0	0	1	9	+8
8	4	5	+1	2	1	-1	1	0	-1	0	0	0	5	4	-1	0	1	+1	1	2	+1	0	2	+2	2	1	-1	4	6	+2	2	1	-1	0	0	0	0	0	0	0	0	0	0	0	3	2	-1			
9	4	7	+3	2	2	0	0	0	0	0	0	0	10	8	-2	0	0	0	1	2	+1	0	0	0	1	0	-1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	+1	1	1	0	11	5	-6
10	3	3	0	1	1	0	0	0	0	2	2	0	2	2	0	0	0	0	2	3	+1	0	0	0	0	1	+1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	-2			
\bar{X}	4.8	5.9	0.9	2.4	2.9	0.5	0.5	1.3	0.8	0.4	0.5	0.1	6.3	7.0	0.7	0.3	0.6	0.3	1.2	2.1	0.9	0	0.3	0.3	1.3	1.7	0.4	2.8	2.0	-0.8	0.5	0.5	0	0	0.1	0.1	0.6	0.5	-0.1	0	0.2	0.2	0.2	0.3	0.1	4.7	4.9	0.2		

Control Group																																																							
Ss	1			2			Δ			1			2			Δ			1			2			Δ			1			2			Δ			1			2			Δ			1			2			Δ			
	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	1	2	Δ	
1	0	0	0	1	1	0	0	0	0	0	0	0	8	9	+1	1	1	0	2	0	-2	0	0	0	4	3	-1	0	1	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	7	10	+3
2	1	0	-1	1	3	+2	0	1	+1	0	1	+1	8	8	0	0	0	0	2	2	0	0	0	0	1	1	0	1	1	0	0	1	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0		
3	3	2	-1	0	1	+1	0	0	0	0	0	0	9	8	-1	1	0	-1	1	2	+1	0	0	0	0	1	+1	7	5	-2	3	2	-1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	+1			
4	2	1	-1	0	0	0	0	1	+1	2	0	-2	5	6	+1	3	0	-3	2	2	0	0	0	0	1	0	-1	1	2	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	+3				
5	8	10	+2	3	3	0	0	0	0	0	1	+1	9	7	-2	0	0	0	3	4	+1	1	0	+1	0	1	+1	5	3	-2	1	2	+1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
6	2	3	+1	2	0	-2	0	1	+1	0	1	+1	12	14	+2	0	0	0	1	2	+1	0	0	0	1	0	-1	1	3	+2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7	4	4	0	2	2	0	1	0	-1	1	0	-1	9	7	-2	0	0	0	1	0	-1	0	1	+1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	+1				
\bar{X}	2.8	2.8	0	1.3	1.4	0.1	0.1	0.4	0.3	0.4	0.4	0	8.8	8.4	-0.7	0.7	0.1	-0.6	1.8	1.8	0	0.1	0.1	0	1.1	1.0	-0.1	2.1	2.1	0	0.7	0.8	0.1	0	0	0	0	0.3	0.3	0.1	0.1	0	0.3	0.1	-0.1	2.0	3.1	1.1							

ing the grade of cheerful intoxication of Ss. It will be noticed that H, with a few exception, tends to increase under alcohol condition. A's change till more clearly; A's decrease in the Ss that showed the resistance to intoxication, while they increase in the Ss who were comfortably drunk. It is more interesting when this group is compared with the control group who tends to decrease in the A. The increase in A corresponds to the reduction of psychological functions of the comfortably intoxicated group.

The index of $\frac{\text{VIII}+\text{IX}+\text{X}}{\text{R}} \times 100$ denotes emotionality in the psychological sense, and besides it represents the ratio of productivity on color cards to that of all responses given by the S. Here we recall that the index decreased rather under alcohol condition. When we examined the changes of the FC and the CF under alcohol condition, we supposed in the state of alcohol intoxication that, in spite of their practice in Rorschach performance, their ego could control the affective charges only poorly. Such Ss might not be able to give more responses to the color cards than those in control situation. It can be accounted for as an influence of their primitive responding attitude, that the Ss under alcohol condition gave more A. We found an evidence which supports our previous interpretation, — that the increase of R does not mean always that of productivity. Provided that each response mode had their proper process respectively, Rorschach response process would have several different aspects. Productivity under alcohol condition should be considered not as a similar figural transposition of profile of that in normal condition, but as an enlargement in its variated figures. From this view point, personality understood from Rorschach performance under alcohol intoxication cannot be said to be a personality as it is. Provided that the personality viewed from the performance under alcohol condition suggests roughly his real and proper personality, but it concerns with a few aspects of the personality, only from the results under alcohol condition. The integrative approach, which contains both sober and alcohol conditions can lead us to understanding the real personality.

D. Exchange of response between the first and second administrations.

Another question in our examination of response contents was whether in alcohol condition the inner aspects of personality can be expressed and whether the expression can be caught by means of response content analysis. Following criteria were used to classify the responses.

1. Po: Popular-responses or the like. The responses whose organization mainly are based on figural constitution of stimulus. One of them, for example, is the Popular response.
2. Or: Original-responses or the like. The responses are based mainly on

specific personal interest and experience or feeling, regardless of cultural norms or environmental situations. One of them, for example, is the response of FL—.

- 3. In: The medium responses which are between the above 1 and 2 and cannot be defined as either of them. One of them, for example, is the plus original response.

Although all these three types of response are reflections of inner personality dynamics, it can be supposed that Or expresses it more directly than Po. Because Or is often accompanied with a failure in organizing of response, and from this crevasse we may be able to understand the inner world of personality.

Let us see the changes in three types in control group. We tested at sufficient intervals of time in order to lessen the practice effect. But such changes as were considered to be a practice effect were brought about. In the control group, responses under such condition would hardly seem to change except a part of Or or In. Many responses which occurred for the first time but disappeared for the second, and most of those which were inverse to them, we thought, would be Or. Most of those which remain unchanged would be Po.

In the alcohol group, on the other hand, Or would increase under the second time "alcohol condition". Po also would hardly remain as it was, and would be accompanied with the change in the response content and expression. We previously saw the decrease of P % under alcohol condition. This supports the supposition above mentioned in part. Our data, however, do not completely support the supposition. This is due to the difficulty of classifying Po, Or and In. This problem is still to be investigated as our next task. However, Figure 7 suggests that the half of supposition above mentioned, tested with many Ss, may be supported.

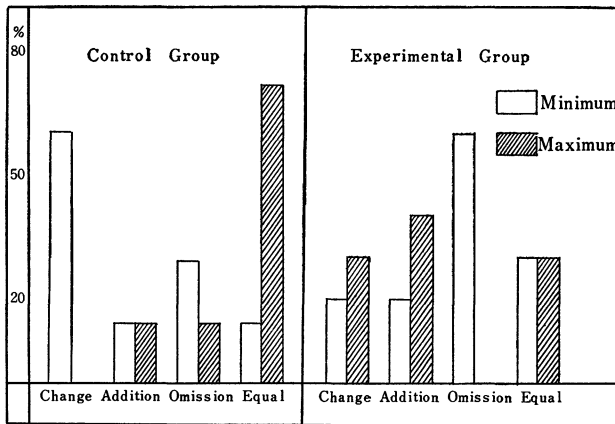


Fig. 7

In this figure, the "maximum" means the percentage of the number of individuals belonging to the group, whose type of response, — for example, the type of response which showed some "changes" in expressions and contents on second time — occupied the largest ratio in four types of responses described in the figure. It is noteworthy that an overwhelming majority of control group gave no change in responses of the first and the second administrations ("equal"), that is, in the majority of control group, the percentage of "change" type become reduced to is "minimum". On the other hand, the result is contrary in alcohol condition. Under this condition, "omission", i.e., disappearance of responses given in the first administration is the type which became most seldom as a main one among four types above mentioned, while "addition" type is the most usual one for them. In this group, there were Ss who gave "equal" as their main type, too. But their percentage is much smaller than that of the control group, and there were as many Ss who gave "change" as their main type (this type is not a main type in the control group) as those who gave "equal". In short, under the alcohol condition, many responses, given in the first administration were somewhat modified in expression in the second, as compared with the control group. Further, in the second administration, there are many new responses which did not exist in the first, "addition", and the responses which existed in the first, "addition", and the responses which existed in the first seldomly disappeared in the second.

E. Typical alcoholic change of Rorschach performance process

As means of analysing characteristics of Rorschach performance in intoxication, we adopted so-called formal analysis, and by it, we have so far studied the aspects of Rorschach performance which are considered to be a representation of S's psychological functions and conditions.

Now, categorizing technique in the formal analysis of Rorschach test contains some dangers of cutting the Rorschach performance, which is essentially continuous, into parts, and of identifying responses which may have been given different meaning by several Ss in the term of each category. Therefore, the analysis along the time process was carried out and the following differences of Rorschach between the control group and experimental group were recognized.

1. The chains between response words were observed more clearly under alcohol condition than under control condition. In control group, there were many responses that were in isolation in the first test and the retest.
2. Accordingly, the replacements of response words of both groups (experimental, control) in the first testing and the retesting have a different meaning. In control group, there are the replacements rather in same level, whereas, in experimental group, new response words appear which will be

a clue to understanding dynamics of personality (at least, dynamics of personality in the situation) in deeper sphere and isolated responses reduce.

3. In control group, expression of response in the first test is abbreviated or simplified in the retest. On the other hand, additional explanations, stories of personal experiences about the content of response, and their spontaneous associations were told by Ss under alcohol condition. DW was represented by few Ss, and confabulative tendency was shown by many Ss.

4. Ss who represented the tendencies of aggression, pedantry or self-exhibition in routine condition, showed more remarkably respective characteristics under alcohol condition. But such a tendency as observed in slightly constricted, overcontrolling Ss was weakened in rather contradictory manner.

5. In the subjects mildly intoxicated by alcoholic liquid, we have been able to know more distinctly thereason why responses appeared in a given test situation, because intxication promotes spontaneous association. Moreover, it is considered that verbal control in expressing it was taken off in acute alcoholic intoxication.

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Summary

The change of performance in mild alcoholic intoxication was examined by means of Rorschach test.

Ss were 17 undergraduate students: 10 out of them served in experimental group, 7 in control group. Both groups were administered with routine testing and, after two months, were retested. In the retesting, the Ss in experimental group took freely about 360 cc *sake* (16 % pure alcohol proof), warmed at about 60°C.

Comparing and examining the results of both groups, we reached a conclusion as follows:

1. In such a grade of intoxication, M tends to increase. It was interpreted that this phenomenon resulted from the facts that Ss were more sensitive to their endogenic stimulus, that they came into contact with the outer objects which they regarded with sympathy as human beings or the like and that they became more liable to stimuli of the outer world.

2. In intoxicated Ss, the value, FC and $\frac{VIII+IX+X}{R} \times 100$ did not increase, and P % decreased.

3. The association of intoxicated Ss came nearer the "free association" and in proper response of the test the process of response organization was frequently verbalized.

4. It was considered that the deeper understanding of a personality would be possible when the Rorschach performance in alcoholic intoxication was used as complementary data of routine testing or when the knowledge of personality obtained from these two sorts of data was integrated.

5. By alcoholic intoxication as well as by simple repetition of the test, T/R and T/1R decreased. R increased in the alcoholic intoxication.

6. FM and FC increased and F and F % decreased by simple repetition of the test.

7. The value of FC--(CF+C) increased or removed towards the plus value by the repetition.

8. In both groups, the experience balance and $\Sigma c: FM + m$ changed at random.

9. In F+%, both groups showed a general tendency to decrease.

The authors indebted to Mr. Yoshio Hayasaka (早坂芳雄) of director of Hayasaka *Sake* Company for his kind assistance in the execution of the experiment.

Résumé

Au moyen de Rorschach-test, nous avons examiné le changement du comportement de l'homme à moitié ivre.

Les sujets de notre expérience ont été 17 étudiants: dont dix ont servi comme le groupe expérimental, et sept comme le groupe à contraster. Après avoir été donnés le test ordinairement pendant deux mois, tout les deux groupes ont été re-testés. En re-test, les sujets du groupe expérimental ont pris librement environ 360 cc *sake* (16 % d'alcool pur prouvé), étant échauffés à l'environ 60°C.

En comparant et examinant les résultats de deux fois des deux groupes, nous sommes arrivés à la conclusion telle que la suivante :

1. Dans l'intoxication alcoolique aiguë et expérimentale au tel niveau, M a eu une tendance de s'augmenter. Il a été s'interprété que ce phénomène a résulté du fait que des sujets ont été plus sensibles à leurs stimulants endogènes, qu'ils sont devenus plus "adient" au monde extérieur, et qu'ils sont devenus à prendre contact des objets extérieurs systématiquement, ou avec une tendance à regarder les objets comme êtres humains.

2. Dans le cas de l'homme à moitié ivre, la valeur de $FC - (CF + C)$ a eu une tendance à diminuer ou se remuer à moins, FC et $\frac{VIII + IX + X}{R} = 100$ n'a pas augmenté et $P\%$ a diminué. Il a été interprété que ce phénomène a résulté du changement de dynamique de personnalité des sujets tel qu'ils ont montré une tendance à diminuer en recevant des stimulants extérieurs en valeurs objectifs de ces stimulants et en unifier à un concept dans des cadres extérieurs de référence.

3. L'association des sujets ivres s'est approchée de "l'association libre" et dans leurs réponses propres du test le processus de l'organisation de la réponse a été exposé fréquemment.

4. Il a été considéré qu'une compréhension plus profonde d'une personnalité a été peut-être possible quand le comportement en Rorschach-test dans l'intoxication aiguë et expérimentale par alcool a été adopté comme des matières complémentaires pour résultat du test ordinaire ou quand la connaissance de personnalité obtenue de ces deux genres de matières a été unifiée.

5. Part l'intoxication alcoolique aiguë et expérimentale et par la répétition simple de test, T/R et $T/1R$ a diminué. R a augmenté dans l'intoxication alcoolique.

6. FM et FC ont augmenté et F et $F\%$ a diminué par la répétition simple du test.

7. La valeur de $FC - (CF + C)$ a augmenté ou s'est remuée plus par la répétition.

8. Dans deux groupes, la balance de l'expérience (Erlebnistypus) et des proportions de Σc : $FM + m$ ont changé au hasard.

9. Quant à $F + \%$, deux groupes ont montré une tendance générale de diminution.

Zusammenfassung

Die Veränderung der Ausführung in der mild-alkoholischen Betrunkenheit wurde mittelst des Rorschachsversuches untersucht.

Die Versuchspersonen waren 17 Studenten, welche keine Erfahrung des Rorschachversuchs hatten. Die experimentelle Gruppe I bestand aus 10, während die Kontrolle aus 7.

Die beiden Gruppen wurden in den gewöhnlichen Bedingungen versucht, und nach zwei Monaten wurde der zweite Versuch getan. In der zweiten Untersuchung tranken die Versuchspersonen von der experimentellen Gruppe frei und ungeniert etwa 360 cc *sake*. Wir verglichen und untersuchten die Daten der beiden Gruppen, und dann kamen wir zu folgenden Schlüssen.

1. In der Betrunkenheit solches Grades, zeigte M die Neigung zum Vermehren. Es stellt sich heraus, dass dieses Phänomen von den Tatsachen herührte, dass der Versuchspersonen zu dem endogenen Reiz empfindlicher wurden, dass sie in Kontakt mit den äusseren Gegenständen kamen, die sie mit Anteilnahme als Menschen oder solche Seiende ansahen, und dass sie leicht durch die äussere Welt gereizt wurden.

2. In den Versuchspersonen der Trunkenheit, zeigte $FC - (CF + C)$ die Neigung zum Vermindern oder ging zum negativen Wert über. FC und $\frac{VIII + IX + X}{R} \times 100$ vermehrte sich nicht, und $P\%$ verminderte sich.

3. Die Antwortweise in der Trunkenheit schien sich zu "der Frei-Assoziation" zu nähern.

4. Man kann die Wahrnehmung machen, dass die tiefere Persönlichkeit-dynamik verstanden werden kann, wenn die Rorschach-ausführung im Rausch als ergänzende Data in der gewöhnlichen Ausführung gebraucht wird, oder wenn die Erkenntnisse der Persönlichkeit aus diesen beiden Verfahren integriert werden.

5. Sowohl in der einfachen Wiederholung des Rorschachversuchs als auch im zweiten Versuch in der alkoholischen Trunkenheit verminderte sich T/R und $T/1R$, während R sich in der alkoholischen Trunkenheit vermehrte.

6. FM und FC vermehrte sich, und F und $F\%$ verminderte sich in der einfachen Wiederholung des Rorschachversuchs.

7. $FC - (CF + C)$ vermehrte sich oder ging zum Plus in der einfachen Repetition über.

8. In den beiden Versuchen in beiden Gruppen, änderten der Erlebnistyp und Σc : $FM + m$ unordentlich.

9. In den beiden Gruppen zeigte $F + \%$, im allgemeinen, den Tendenz zur Verminderung.

Die Auswertung aller Zeichen richtet sich nach Klopfers Verfahren.