SOCIOMETRIC METHODS OF GROUPING AND REGROUPING
WITH REFERENCE TO AUTHORITATIVE AND DEMOCRATIC METHODS OF GROUPING

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INTRODUCTION

The problem of regrouping on the basis of sociometric findings has been one of the chief themes of Who Shall Survive? Groups are in constant process of regrouping unless hindered in this process by coercion—interference by authoritative agents, or by the unbridled, spontaneous dynamics between the members themselves. This study, the first longitudinal sociometric follow up of a community, was completed by the authors in 1935 and first published under the title "Advances in Sociometric Technique" in February 1936 in the *Sociometric Review*, a publication which was superseded by the journal SOCIOMETRY. The material was gathered by Helen Jennings,* the paper was written by J. L. Moreno. The stimulation which it has given to the study of autocratic and democratic atmospheres and the value it might have for problems of resettlement and reorganization of communities in the post war world makes its republication and availability for students of sociometry opportune at this time.

AUTHORITATIVE AND DEMOCRATIC METHODS OF GROUPING

A simple illustration of sociometric technique is the grouping of children in a dining room.

In a particular cottage of our training school live 28 girls. In their dining room are seven tables. The technique of placing them around these tables can take different forms. We may let them place themselves as they wish, and watch the result. A girl "A" seats herself at table 1; eight girls who are drawn to her try to place themselves at the same table. But table 1 can hold only three more. The result is a struggle and somebody has to interfere and arrange them in some arbitrary manner. A girl "B" runs to table 2, but nobody attempts to join her; thus three places at that table remain unused. We find that the technique of letting the girls place themselves works out to be impracticable. It brings forth difficulties which enforce arbitrary, authoritative interference with their wishes, the opposite princi-

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ciple from the one which was intended, a free, democratic, individualistic process.

Another technique of placement is one applied strictly from the point of view of the authoritative supervisor of the dining room. She places them in such a fashion that they produce the least trouble to her without regard to the way in which the girls themselves feel about the placements. Or she picks for each of the seven tables a leader around whom she groups the rest without regard to the leader's feelings about them and without consideration of whether the "leader" is regarded by the girls as a leader.

Sociometric Method of Grouping

A more satisfactory technique of placement is to ask the girls with whom they want to sit at the same table, and, if every table seats at least four, to give every girl three choices; to tell them that every effort will be made that each may have at her table at least one of her choices, and, if possible, her first choice. Every girl writes down first whom she wants as a first choice; next, whom she wants as a second choice if she cannot receive her first choice; and last, whom she wants as a third choice if she cannot have her first or second choice. The slips are collected and analyzed. The structure of affinities one for another is charted. The best possible relationship available within the structure of interrelations defines the *optimum of placement*. This is the highest reciprocated choice from the point of view of the girl. The order is as follows: a subject's first choice is reciprocated by a first choice, 1:1; a subjects' first choice is reciprocated by a second choice, 1:2; a subject's first choice is reciprocated by a third choice, 1:3; a subject's second choice is reciprocated by a first choice, 2:1; 2:2; 2:3; 3:1; 3:2; 3:3. Where there is no choice that meets with a mutual response, the first choice of the girl (1:0) becomes her optimum, that is, from her point of view, the best placement for her available within the structure.

TABLE A
Sociometric Study of Seating Arrangement in a Dining Room
Section 1. Previous Seating Arrangement

TABLE 1	TABLE 2	TABLE 3
Belle	Beth	Flora
Dorothy	Rose	Pearl
Angeline	May	Ida
		Evelyn

TABLE 4	TABLE 5	TABLE 6
Clarissa	Anna	Kathryn
Helen	Harriet	Lena
Gladys	Grace	Ellen
	Edith	Mary

TABLE A—Section 2
Choice Analysis*

	Individual Analysis of Reciprocated Choices									Individual Analysis of Unreciprocated Choices																	
										Outgoing			Incoming**														
													Firsts					Seconds					Thirds				
	1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3	1:0	2:0	3:0	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Belle	1											1	1											1			
May	1											1			1								1			1	
Mary					1					1		1	1												1		
Flora		1								1	1	1						1									
Lena								1		1		1											1				
Dorothy					1					1	1	1											1				
Kathryn				1			1			1		1			1												
Ida										1	1	1	1										1				
Edith										1	1	1											1				
Beth										1	1	1															
Ellen				1	1					1		1				1							1				
Anna	1	1		1									1					1					1				
Helen			1			1					1	1	1												1		
Evelyn										1	1	1															
Angeline						1		1				1															
Rose	1				1					1						1											
Harriet		1									1	1			1								1				
Pearl											1	1							1					1			
Gladys											1	1															
Clarissa											1	1															
Grace					1							1								1							
Total	4	3	1	3	6	2	1	2	0	13	10	18	4	2	3	4	0	2	2	6	0	0	6	2	6	4	0
Total	—	8	—	—	11	—	—	3	—	—	41	—	—	13	—	—		—	10	—			—	18	—		

Note: The darker "1's" are used to indicate that these choices were satisfied in the placement.

*This is the analysis of the second testing of Cottage 2. See Table C, Section 2.

**1, 2, 3, 4, 5, indicate the number of incoming choices, firsts, seconds, or thirds, which are unreciprocated by the person chosen.

TABLE A—Section 3

SOCIOMETRIC FINDINGS

	No. of girls	Pct. of girls
Population 21		
Number of girls receiving in the test:		
3 reciprocated choices	3 or	14.3%
2 reciprocated choices	3 or	14.3%
1 reciprocated choice	7 or	33.3%
No mutual choice but chosen	1 or	4.8%
Isolated (unchosen)	7 or	33.3%
	21	100. %

TABLE A—Section 4

PLACEMENT ANALYSIS

Population 21.		
Number of girls receiving in the placement (at her table):		
One reciprocated choice (or more)	11* or	52%
Unreciprocated first choice (or more):		
No mutual choice but chosen in the test	1 or	5%
Isolated (unchosen in the test)	6 or	29%
Number of girls who receive "optimum"	18 or	86%
Of the remaining three girls,		
Number who received 2nd from optimum	1 or	5%
Number who received 3rd from optimum	2 or	9%
	21	100%

*Twelve reciprocated choices were satisfied in the placement but one of these (Helen's) was not the girl's optimum choice.

TABLE A—Section 5

NEW SEATING ARRANGEMENT

TABLE 1	TABLE 2	TABLE 3
Belle*	Helen***	Kathryn*
Anna*	Angeline*	Pearl*
Edith*	Gladys*	Grace**
Harriet*		Ida*

TABLE 4	TABLE 5	TABLE 6
Flora*	Dorothy*	May*
Ellen*	Mary*	Rose*
Lena*	Beth*	Clarissa***
Evelyn*		

*Denotes the individual is receiving optimum placement.
**Denotes the individual is receiving 2nd choice from optimum.
***Denotes the individual is receiving 3rd choice from optimum.
Note—Of the isolated girls all but one receives optimum placement.

TABLE B
Efficiency of Placement Attained Through Sociometric Technique
FIRST TEST

Cottage	Population	No. who could receive optimum placement without sociometric aid*	No. receiving optimum placement through sociometric aid**	Efficiency in placement	No. receiving no choice in placement
1	21	4	16	76%	0
2	24	4	17	71%	0
3	19	4	14	74%	1
4	21	6	18	86%	0
5	31	4	23	74%	1
6	29	10	24	83%	1
7	30	3	26	87%	0
8	26	4	23	88%	1
9	28	10	23	82%	0
10	38	4	38	100%	0
11	29	4	24	83%	2
12	27	6	24	88%	0
13	29	8	24	83%	0
14	25	8	21	84%	1
A	20	4	15	75%	0
B	17	6	13	77%	0
First Test	414	89	343	82%	7
Summary of Second Test	404	96	340	84%	7
Summary of Third Test	397	122	338	85%	4

*Number who receive optimum spontaneously, a mutual first choice (1:1). They could be placed without sociometric aid.

**The girls who receive second or third from optimum placement are not included in calculating efficiency, only those who receive optimum. See page 26-29.

These two simple rules guide each placement. As table A illustrates for a specific group, they can be called into effect with a high degree of efficiency. Even in instances in which a number of girls do not receive their optimum, they can receive their second very often.

This procedure has two phases: analysis of the choices and analysis of

placement. The analysis of choices discloses the structure of the group and the position of every girl within it. It discloses how many girls are wanted spontaneously by all three partners whom they want at their table, how many are wanted by two of the three partners whom they want at their table, how many are wanted by one of the three only, and how many by none of the three. It discloses the high percentage of girls who have to make some adjustment to the group because they cannot get what they want.

A technique of placement has been worked out to help the girls as far as possible where their spontaneous position in the group stops them in a blind alley. Their criss-cross affinities as charted in a sociogram are simple, direct guides which a technique of placement can intelligently use. The attempt is made to give every girl of the group an optimum of satisfaction. We consider as the optimum of satisfaction the duplication for a girl of such a position in the placement as is revealed to be the most desired by her in accordance with the actual structure presented in the sociogram. (See Table A for details of application to a specific group.)

The tabulation of placement is figured out. It indicates the seating which has been calculated for every cottage. (See Table B.)

We find that sometimes it is possible to be efficient up to 100%; on the average we are able to give an optimum of satisfaction to more than 80% of the girls. Considering that the percentage of girls who would reach this optimum if left to their own devices is on the average not higher than 25 to 30%, the help coming from sociometric technique of placement is substantial.

It is a matter of principle with us to give every girl the best possible placement regardless of what her record may be or what experience the housemother may have had in regard to any two girls who want to sit at the same table. We do not begin with prejudice but wait to see how their conduct turns out.*

We have noted that the girls' own spontaneous choices may deadlock them in a certain position, and we can well visualize that they may be forced in actual life to make an adjustment which is very arbitrary and deeply against their wishes. These "deadlocks" are not something which every individual outgrows spontaneously, but are something which works like a social destiny

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*Occasionally we see that two or more girls who have affinities for each other do not behave to advantage for themselves or for others. Then a different placement may be more desirable for them and this is based on findings as presented elsewhere. See *Who Shall Survive?*, chapters on Racial Quotient, Sex, and Psychological Home.

for the majority of individuals. It was therefore of great interest not only from a practical but also from a theoretical point of view to study whether the technique of placement would have for the girls a significance beyond the temporary aid it gives them. If, through our intermediation, they can mix during their meal times with girls who appeal to them and learn to choose better the next time, if the technique helps them to facilitate and train and improve their social spontaneity and to break the deadlock more rapidly than if left to their own devices, then the service of such a procedure may find many applications.

The sociometric test in regard to table choices is repeated every eight weeks. To estimate accurately the progress, or regression, or standstill of social interrelations, we have calculated the findings and made a comparative study. See Table C.

Table C presents the outcome of the test in three successive testings eight weeks apart, a period of twenty-four weeks. In the first test, of the 327 girls who participated, 23.9% succeeded in having their first choice reciprocated by a first choice (1:1); 11.9% succeeded in having their first choice reciprocated by a second choice (1:2); 10.4% succeeded in having their first choice reciprocated by a third choice (1:3). In the second test, of the 317 girls who participated, 27.1% succeeded in having their first choice reciprocated by a first choice; 15.1% succeeded in having their first choice reciprocated by a second choice; and 11.4% succeeded in having their first choice reciprocated by a third choice. The total success in the first test in getting a mutual choice of any sort in response to the first choice was for that population 46.2 per cent. The success in the second test, was for that population 53.6 per cent. The difference of 7.4% is the *increase* in the efficiency of the girls from the first to the second test in finding their first choices reciprocated *without* outside aid. The increase in efficiency from the first to the second test in regard to 1:1 mutual choices is 3.2%; in regard to 1:2 mutual choices it is also 3.2%; and in regard to 1.3 mutual choices it is 1 per cent. In other words, the increase in efficiency shows up most in the 1:1 and 1:2 choices but is less noticeable in the 1:3 choices. In regard to second choices, the increase in efficiency is 10.6%, and for the third choices, 1.4 per cent. The total increase in mutual choices is 19.4% from the first test to the second test.

In consequence of this increase in responses to first choices, there is a corresponding decrease from the first to the second test in outgoing choices which remain unreciprocated, a decrease of 19.4 per cent.

TABLE C—Section 1
Analysis of Table Choices of the Cottage Populations
First Test—8 Weeks Later

Cottage***	Popu-lation	Reciprocated Choices*										Unreciprocated Choices**			
		First			Second			Thirds				Firsts	Seconds	Thirds	
		1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3	Total	1:0	2:0	3:0	Total
1	21	4	4	4	4	4	3	4	3	4	34	9	10	10	29
2	24	4	3	3	3	2	1	3	1	4	24	14	18	16	48
4	21	6	2	0	2	2	2	0	2	4	20	13	15	15	43
5	31	4	3	3	3	4	0	3	0	4	24	21	24	24	69
6	29	10	3	5	3	2	5	5	5	0	38	11	19	19	49
8	26	4	2	2	2	2	3	2	3	4	24	18	19	17	54
9	28	10	2	1	2	8	2	1	2	6	34	15	16	19	50
11	29	4	3	5	3	4	2	5	2	4	32	17	20	18	55
12	27	6	3	6	5	4	1	2	1	2	30	12	19	20	51
13	29	8	5	1	3	4	3	4	5	5	38	15	17	17	49
14	25	8	3	1	4	2	5	2	3	4	32	13	15	15	43
A	20	4	4	2	3	4	3	2	3	3	28	10	9	13	32
B	17	6	2	1	2	4	2	1	2	2	22	8	9	12	29
Total	327	78	39	34	39	46	32	34	32	46	380	176	210	215	601
Average		.239	.119	.104	.119	.141	.098	.104	.098	.141	1.16	.538	.642	.657	1.84
Sum of Averages		.462			.358			.343			1.16	1.837			1.84

*1:1, indicates a subject's first choice is reciprocated by a first choice; 1:2, indicates a subject's first choice is reciprocated by a second choice; 1:3, indicates a subject's first choice is reciprocated by a third choice; 2:1, indicates a subject's second choice is reciprocated by a first choice; etc.

**1:0, 2:0, 3:0, indicate first, second or third choices, respectively, which were not reciprocated.

***Cottages 7 and 10 are omitted because they are not comparable, being larger in population and of a different race. Cottage 3 is omitted because many vocational assignments are such that few members are in the cottage for meals together.

TABLE C—SECTION 2
Second Test—16 Weeks Later

| Cottage | Population | RECIPROCATED CHOICES | | | | | | | | | | UNRECIPROCATED CHOICES | | | |
| | | First | | | Second | | | | | Thirds | Total | Firsts | Seconds | Thirds | Total |
		1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3		1:0	2:0	3:0	
1	20	4	7	4	7	2	1	4	1	2	32	5	10	13	28
2	21	4	3	1	3	6	2	1	2	0	22	13	10	18	41
4	18	4	4	0	4	2	3	0	3	0	20	10	9	15	34
5	31	6	6	3	6	2	4	3	4	6	40	16	19	18	53
6	30	10	3	1	3	4	4	1	4	2	32	16	19	23	58
8	25	6	2	5	3	4	3	5	3	0	32	11	15	17	43
9	28	14	3	2	2	8	4	2	4	6	44	10	14	16	40
11	28	4	3	6	3	4	3	6	3	0	32	15	18	19	52
12	26	4	6	2	6	6	1	2	1	4	26	17	16	19	52
13	27	8	3	1	3	4	6	1	6	6	44	12	11	14	37
14	26	8	3	5	3	6	4	5	4	2	40	10	13	15	38
A	19	10	3	3	3	6	5	3	5	6	44	3	5	5	13
B	18	4	2	3	2	2	3	3	3	0	22	9	11	12	32
Total	317	86	48	36	48	56	43	36	43	34	430	147	170	204	521
Average		.271	.151	.114	.151	.177	.136	.114	.136	.107	1.36	.464	.536	.643	1.64
Sum of Averages			.536			.464			.357		1.36		1.643		1.64

TABLE C—Section 3
Third Test—24 Weeks Later

		RECIPROCATED CHOICES										UNRECIPROCATED CHOICES			
		First			Second			Thirds				Firsts	Seconds	Thirds	
Cottage	Popu-lation	1:1	1:2	1:3	2:1	2:2	2:3	3:1	3:2	3:3	Total	1:0	2:0	3:0	Total
1	16	6	4	2	4	2	1	2	1	0	22	4	9	13	26
2	24	8	2	0	2	0	1	0	1	4	18	14	21	19	54
4	22	10	4	1	4	4	0	1	0	2	26	7	14	19	40
5	28	8	4	3	4	2	2	3	2	4	32	13	20	19	52
6	31	14	5	1	4	8	2	1	1	4	40	12	17	24	53
8	25	4	3	4	5	0	1	4	3	0	24	12	19	20	51
9	23	8	1	4	3	2	4	4	6	6	38	8	14	9	31
11	29	2	1	2	1	2	6	2	6	0	22	24	20	21	65
12	23	12	1	1	1	4	2	1	2	2	26	9	16	18	43
13	28	8	5	1	1	2	5	1	1	4	28	18	20	18	56
14	25	8	4	0	5	2	4	0	5	0	28	12	14	21	47
A	19	10	4	4	4	8	1	4	1	4	40	1	6	10	17
B	19	8	4	4	4	2	2	4	2	2	32	3	11	11	25
Total	312	106	42	27	42	38	31	27	31	32	376	137	201	222	560
Average		.340	.135	.087	.135	.122	.099	.087	.099	.103	1.21	.438	.644	.711	1.79
Sum of Averages			.562			.356			.289		1.21		1.793		1.79

TABLE D

Comparative study of table choices with average difference between the findings of successive tests when the tests are given at intervals of eight weeks, with choices put into operation immediately after each choosing.*

	Popu-lation	Reciprocated Choices									To-tal	Unreciprocated			To-tal
		1-1	1-2	1-3	2:1	2:2	2:3	3:1	3:2	3:3		1:0	2:0	3:0	
1st Test:															
Sum	327	78	39	34	39	46	32	34	32	46	380	176	210	215	601
Average		.239	.119	.104	.119	.141	.098	.104	.098	.141	1.16	.538	.642	.657	1.84
Sum of Averages			.462			.358			.343		1.16		1.84		1.84
2nd Test:															
Sum	317	86	48	36	48	56	43	36	43	34	430	147	170	204	521
Average		.271	.151	.114	.151	.177	.136	.114	.136	.107	1.36	.464	.536	.643	1.64
Sum of Averages			.536			.464			.357		1.36		1.64		1.64
3rd Test:															
Sum	312	106	42	27	42	38	31	27	31	32	376	137	201	222	560
Average		.340	.135	.087	.135	.122	.099	.087	.099	.103	1.21	.438	.644	.711	1.79
Sum of Averages			.562			.356			.289		1.21		1.79		1.79
Difference Between Averages in 1st and 2nd Tests		.032	.032	.010	.032	.036	.038	.010	.038	-.034	.194	-.074	-.106	-.014	-.194
			.074			.106			.014		.194		-.194		-.194
Difference Between Averages in 2nd and 3rd Tests		.069	-.016	-.027	.016	.055	.037	-.027	-.037	-.004	-.150	-.026	.108	.068	.150
			.026			-.108			-.068		-.150		.150		.150
Difference Between Averages in 1st and 3rd Tests		.101	.016	-.017	.016	-.019	.001	-.017	.001	-.038	.044	-.100	.002	.054	-.044
			.100			-.002			-.054		.044		-.044		-.044

*For routine purposes we have carried totals to the 3rd decimal place, but it was not considered wise at this time to apply the more complex statistical methods such as the computation of critical ratios.

When we examine the findings of the third testing, we see the amount of mutuality of first choices still increasing, 2.6% more than in the second test, but a falling off for second and third choices. What this means is the accumulation of benefit going to the first choices, as we see when we examine the number of unreciprocated first choices in the first testing, 53.8%, and number in the third testing, 43.8%, a difference of 10 per cent. See Table D.

To see whether these choices are being more broadly spread throughout the various cottage groups we calculated the percentage of isolated girls in each group for each period. For the first period the isolated girls are 17.6% of the total number, and for the third period, 14.8%, a decrease of 2.8 per cent.

The question is whether the findings in this period of twenty-four weeks presents a significant trend. This question cannot be answered except through further testing. It appears reasonable to assume that the placement technique should increase the spontaneous efficiency of choosing. The procedure brings a number of isolated girls into contact with popular girls who under normal circumstances may not pay any attention to them. The unchosen girl sitting beside her favorite has an opportunity to show herself to better advantage and to win the person she wants as a friend. Similar relationships of all sorts develop through our "shuffle", which lays the ground open for potential clickings to take place. Without the use of this placement technique the girls who know each other well get to know each other still better and the newcomers tend to be excluded.

A *control series* of tests given at intervals of six weeks over a period of eighteen weeks to one cottage, with a population of 22 girls at the time of the first testing and 23 at the time of the third testing, is reported in Table E.

The placement procedure was not allowed to go into effect during this period. The findings indicate a continuous fall in the mutuality of choices—for first choices a decrease of 10.3%; for second choices, 14.2%; and for third choices, 31.9%—together with a continuous rise in unreciprocated choices amounting to 56.4 per cent. While this is a very small group, it suggests the needs for sociometric placement technique and supports the trends mentioned above.

A problem which often recurs is that sometimes girls remain over to whom no satisfaction can be given in the placement. In placing a population of 412 girls on the basis of the first testing reported here, only seven girls (or 1.7% of the population) received none of their three choices.

TABLE E

Sociometric Control study with average difference between the findings of successive tests when the tests are given at intervals of eight weeks, with choices not put into operation.*

	Population	Reciprocated Choices										Unreciprocated Choices			
		Firsts				Seconds			Thirds			Firsts	Seconds	Thirds	
		1-1	1-2	1-3	2-1	2-2	2-3	3-1	3-2	3-3	Total	1-0	2-0	3-0	Total
Sum	22	6	1	1	1	2	3	1	3	4	22	14	16	14	44
Average		.273	.0454	.0454	.045	.091	.136	.045	.136	.182	1.000	.636	.727	.636	2.000
Sum of Averages			.364			.273			.363		1.000		2.000		
Sum	23	6	0	2	0	4	0	2	0	2	16	15	19	19	53
Average		.261	0	.087	0	.174	0	.087	0	.087	.696	.652	.826	.826	2.304
Sum of Averages			.348			.174			.174		.696		2.304		
Sum	23	5	0	1	2	1	0	1	0	0	10	17	20	22	59
Average		.217	0	.044	.087	.044	0	.044	0	0	.436	.739	.869	.956	2.564
Sum of Averages			.261			.131			.044		.436		2.564		
Difference Between Averages of:															
First and Second Tests			-.016			-.099			-.189		-.304		.304		
Second and Third Tests			-.087			-.043			-.130		-.260		.260		
First and Third Tests			-.103			-.142			-.319		-.564		.564		

*For routine purposes we have carried totals to the 3rd decimal place, but it was not considered wise at this time to apply the more complex statistical methods such as the computation of critical ratios.

(In the second testing, 1.7%, and in the third testing, 1% of the population received none of their three choices.) To these seven girls individually an explanation is given that to give them any one of their choices would block the choices of a great many other girls in the cottage; they are asked to accept the situation with the understanding that at the next choosing (8 weeks later) if it is necessary that any girl go without her choices for the sake of the majority of the girls, other girls than they will be asked to do so. The girls are told who these girls are who want to sit with them but whom they did not choose. They are glad to find themselves thus chosen, and take with a good spirit the placement they are asked to accept. They render a service to less well adjusted and little chosen or isolated girls who choose them.

The argument may be raised that it matters very little with whom a girl sits at the table. The question whom one has at his table during meal time may rightly seem so very insignificant to a person who lives in a great city and has the opportunity to mix freely with everyone and has plenty of time at his disposal. But in an institutional community where the number of acquaintances one can make is strictly limited, and where a certain amount of routine is necessary, free association during meal time with the person you desire to be with is of great social value. We have made similar observations in the dining rooms and dormitories of colleges.

Another argument may be raised that for most people what they eat is more important than with whom they eat. This is partial truth which is valueless as long as it remains unqualified by quantitative analysis. Our social atom studies showed that there are people in whom the preferential feelings toward other *persons* are especially articulate and that there are people in whom the preferential feelings toward *things* are especially articulate. This we have observed frequently also in our placement studies. We found here and there girls who craved to sit at a table where they know the waitress is in the habit of giving special favors.

Another argument may be raised that a popular and perhaps superior girl, although she may have received one or two of her choices, may have to tolerate as a third partner an isolated girl whose chose her but whom she violently rejects. In reply to this it can be said that the popular girl, exposed to chance, may not have received even the two friends whom she wanted; also it may be an important part of her training to expand her emotional experience also toward people who do not appeal to her so much

as others. An increase in emotional flexibility should not decrease her preferential sensibility.

Sociometric techniques of placement overcome the lack of system which is seen in the picking of roommates generally, especially in colleges. A haphazard procedure appears satisfactory to the individuals who associate themselves readily, but it is totally inefficient for the majority of those who have a hard time to find the partner they want. The following explains the technique as applied to colleges.

Let us suppose that the whole student population is 240, and that their dormitory arrangements are such that to each bedroom are assigned two students. Each student is given three choices. The choices are analyzed and charted. Sixty students, let us say, form first choice mutual pairs. They are eliminated from the contest. The remainder of one hundred and eighty are called to a second meeting. They go through the same process. This time, let us say, one hundred and twenty students form first choice mutual pairs. They are then eliminated. The remainder of sixty students are called to a further meeting. They go through the process again. Should still some of the students remain unchosen, these are called to a further meeting, and so forth, until everybody has found a partner.

In this variation of our placement procedure, the "adjuster" is eliminated. He doesn't interfere; he does not make any suggestion beyond stating the actual findings. He states the positive findings, the pairs formed. He does not state the negative findings. The adjuster here is merely a charter. He gives information beyond stating the pairs only when he is asked to do so. One or another student who did not succeed in receiving his partner may want to know what his position is in the group. He may find, for instance, that although his first and second choice remain unreciprocated, he is chosen first by two and second by three students to whom he had paid little attention. This may urge him to think more clearly about his relation to his co-students and also prepare him better for the next shuffle. The charting is repeated, of course, after each meeting.

This variation of sociometric technique seems a happy combination of complete *laissez-faire* and of placement aid. Information or aid is only given if a student asks for it. Otherwise it is withheld. The same procedure can be used in every type of group.

REGROUPING AND RETRAINING OF KEY INDIVIDUALS*

The spontaneity of the choice process can become deteriorated to a degree that the natural process of regrouping takes a pathological turn or comes to an apparently incorrigible, dead end. Sociometric tests executed in prisons and reformatories** revealed that the highest number of choices were regularly given to individuals who had made an outstanding record in anti-social activities (as sexual delinquents, thieves, burglars, etc.) and that individuals who had reformed or wished to reform remained unchosen or were rejected by the majority. It became clear to sociometrists that unless this process could be reversed, the introduction of the values cherished in the outside community would be an impossible task. As a solution to this dilemma, as demonstrated in *Who Shall Survive?*, regrouping and retraining of individuals have to go hand in hand. Regrouping and retraining of key individuals became a *conditio sine qua non*, especially in communities where the process of regrouping had come to a comparative standstill. Dr. Bruno Solby reported that "the leaders selected in the cottages are usually the serious 'problem cases.' As leaders of the cottages, these girls have a bad influence upon the other inmates. . . . The problem is this: Will we be able to develop new leaders? Will we be able to change the sociometric configuration of the cottages?*** As these key individuals already in a position of power were non-cooperative and deceitful, efforts made with their retraining had to be abandoned in many cases. It was the retraining of the *non* leader, the sociometric isolate, or the potential leader who is found sociometrically rejected, which offered a methodical alternative. The individual to be retrained was first placed in a series of situations and roles in which he portrayed on the psychodrama stage the experiences which ultimately landed him in prison, and second a series of situations and roles which brought about a craving for reorientation of values and a desire to reform. As soon as the diagnostic facts about him were established a program of retraining could be formulated. The situations and the roles for retraining were selected from the community in which he lived at the time, situations which were crucial in the reformatory and which determined the influence he could exercise upon others. The retraining was carried out in a group, all the individuals who appeared to be sensitive, potential material, forming

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*This concluding chapter and the general discussion have been added here; they did not appear in the original article.

**The Westfield Farms, Department of Correction, N. Y.

***See *Sociometry*, Volume 2, Number 2, April 1939, page 108.

it. Parallel with their retraining sociometric tests were given at regular intervals. It was possible to discover changes in structure, the isolates and rejected ones ascending gradually to better sociometric positions, the former key individuals losing in status and moving towards the periphery positions in the sociogram.

GENERAL DISCUSSION

We sociometrists have frequently pointed out that sociometric principles have been used intuitively by practical statesmen and political leaders without any knowledge of sociometry as a method for social investigation. A topical example is the phenomenon of the *quisling*. The quisling fulfills a function in the group which is of sociometric significance. On the surface it seems that the quislings are merely individuals who are in sympathy with the nazi system of values. It seems logical therefore that they would be chosen as nazi representatives. However, in the communities into which the nazis entered in their victorious march were many more individuals than the chosen ones who sympathized with the nazi system. The question is: what made the individuals actually selected for the role of quisling particularly fit for the task? It is interesting to note that the nazis, as if endowed with a keen sense for sociometric verities, chose individuals who were often comparatively political nonentities, disliked and rejected by the regular members of the community. The choice of the quisling is therefore justified from the point of view of sociometric effects. The regular burghers in Norway, the Netherlands or Belgium would have been unwilling to cooperate with the nazi rulers and therefore were unsafe associates. In the reformatories above we had a similar problem to face, although in reverse. The psychological power was in the hands of the irregulars, the persistent deviates and chronic delinquents. It is among the isolated and rejected ones that we occasionally found an individual who wanted to reform. Just as the nazis, although for opposite reasons, we turned to the powerless and rejected idealists in the group. What the quislings and they have in common is the *same sociometric status*.

There is another current problem which sociometric studies as presented in this article can elucidate. Allied Armies are now entering German communities which are entirely or largely indoctrinated by nazi principles and sentiments. Is there any sociometric or psycho-dramatic instrument available which could be used in an effort to change their attitude? Every effort is faced with an iron set of roles cast to order. Every sociogram of these communities would probably show a persistency of psychosocial

structure from retest to retest. But the quisling technique can be reversed. There may be in every German community a number of individuals, Germans who crave for a style of living in total contrast with that of the nazis. Men who have lived in hiding, in contact with underground groups, but who might appear in a sociogram as non-leaders, isolated and rejected. It is with the aid of such men that a rejuvenation of the German community could begin.

Sociometric Methods of Grouping and Regrouping With Reference to Authoritative and Democratic Methods of Grouping

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