

Sociometric Choice in School as a Prediction of Officer Success *

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Introduction

Officership in the Armed Forces is an occupation primarily managerial and supervisory in nature; in fact, the profession has been referred to as the "management of violence." (6) In a review of the use of aptitude tests for the prediction of occupational success Chisselli and Brown have pointed to the difficulties of evaluating tests for selecting persons for managerial and supervisory jobs, not only in the lack of adequate indices for success but also in the ineffectiveness of personality inventories. (4)

While Cattell (1) cites the conclusion of Carter about the poor agreement in general between ratings dealing with popularity or sociometric criteria when made by different kinds of observers, a system of rating used in the United States Military Academy employs a sociometric method "designed to determine how cadets in any one class compare with each other in leadership ability and potential." (7) A similar method has been adopted in the Philippine Military Academy. This paper describes the Aptitude for the Ser-

vice System in the Philippine Military Academy (as it is called), and the procedures undertaken to estimate the validity of the measure.

THE APTITUDE FOR THE SERVICE SYSTEM, PHILIPPINE MILITARY ACADEMY (8). This system is essentially the rating of individual cadets by arranging them in order of merit according to the following criterion:

"The criterion for my appraisal is each cadet's ability (if or when placed in command of a group) to elicit the group's maximum cooperation; maintain the highest possible standards of administration and discipline; and at the same time, develop and preserve high morale and group spirit."

The entire Cadet Corps is divided into four companies, each company composed of freshmen, sophomores, juniors, and seniors. Only those in the same class in the same company are placed on the same scale for rating (ranking) by their Tactical Officer and all cadets in the company, Except freshmen who rate only their classmates in the company, every cadet is rated by every other cadet in the same company. For example, if there are 20 cadets of each class in a company, the number of raters per cadet would be as in Figure 1. The procedure of rating is the "peeling" process as described by Chiselli and Brown. (4)

* A sociometric method in use in the Philippine Military Academy to measure aptitude for the military service is validated against a criterion consisting of evaluation of actual commissioned service for ten years. Using six judges, a low but significant correlation was found between the Aptitude for the Service Rating and the Commissioned Service Rating. The former can therefore be used as a predictor of officer success.

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FIGURE 1. WHO RATES WHOM

Rated	Raters					
	Freshmen	Sophomores	Juniors	Seniors	Tactical Officer	Total Raters
Freshman	19	20	20	20	1	80
Sophomore	0	19	20	20	1	60
Junior	0	20	19	20	1	60
Senior	0	20	20	19	1	60

So that comparison is possible for an entire class even when rated in four different groups the ranking scale is expanded by approximately one-third as large as the group which are rated together. Thus, if there are twenty in a group to be ranked, each rater is given an expanded work sheet scale with twenty-eight places on which to rate twenty cadets. These twenty eight places are separated into upper quarter, middle half, and lower quarter. Considering the established criterion, each rater determines the most outstanding cadet in the company in the class under consideration and places him in the upper quarter of the expanded scale. If this cadet is the most outstanding cadet in his class known to the rater, his name is written in the No. 1 space on the expanded scale. On the other hand, if this cadet is the most outstanding cadet in his class in the company, *but not in his class as a whole*, the rater places his name in the No. 2 or No. 3 space to indicate that fact. The rater then selects the least outstanding cadet in the same manner and places him in the bottom quarter of the scale in an appropriate space. This is continued until all names in the group are placed in the expanded work sheet scale.

The median ranking (excluding the Tactical Officer's rating) of each cadet is determined and transmuted to values on a continuous scale. The Tactical Officer's rating is considered as a median

ranking and is converted directly into a standard rating (as the transformed values are called). These two standard ratings are combined such that the Tactical Officer's rating is given a weight of one-third.

Two ratings are made during the year, one during each semester. Another rating during summer made for all upper classes (Sophomores, Juniors, Seniors) is combined and averaged with the first semester rating. At the end of the school year, proportional parts (or weights) are awarded for the ratings as follows:

Seniors	— 90
Juniors	— 70
Sophomores	— 50
Freshmen	— 20

These proportional parts are considered like weighted grades earned in any subject like English, History, Sociology, etc., and are counted in the determination of the academic ranking of the cadet when he graduates. Thus, an aptitude rating becomes a scholastic grade. Since a cadet's grades when he graduates determines his position on the lineal roster, which in turn determines his potentiality for promotion, the validity of the aptitude rating takes on considerable pragmatic significance.

Method

According to a summary by Chiselli and Brown, average validity coefficients of various aptitude tests in the prediction

of proficiency in supervisory jobs (managerial personnel) are .37 for intelligence tests and .36 for cancellation. Since scholastic achievement correlates highly with intelligence, then the scholastic achievement of cadets as shown in the graduation merit roll minus the Aptitude Rating and Conduct can also be used as a predictor. Both scholastic achievement and the Aptitude for the Service Rating were correlated with an external criterion.

The External Criterion. Several alternatives in the development of indices of officer success are open. First is rank attained. It can be argued that the higher the rank of an officer, the more successful he is as an officer. The difficulty of this approach is that too many variables enter when considering officers over a wide range of rank differentials. Thus, it would be different to compare a general with a captain, as one must do if a range of rank differentials is to be obtained.

One other alternative is to take a certain homogeneous group in the officer corps and ask judges to rank them in order of success as officers. The principal difficulty here would be to find judges who have observed the entire group either as a whole or individually.

The final alternative, which is adopted here, is to select a particular Philippine Military Academy class, gather all the available data about them which are

relevant to success as officers, then select judges to rank these members of the class, basing the ranking on the records alone. This will take care of the above objections.

From an examination of available records, the following categories of data are arbitrarily considered as relevant to success as officers:

a. Individual Awards and Citations—The Armed Forces of the Philippines gives medal and citations for behavior beyond the ordinary. These awards are arranged in hierarchical order, depending on the value accorded the behavior cited. Thus the Medal of Valor, the highest in the hierarchy is awarded for extraordinary heroism. The Military Commendation Ribbon is for “demonstrated exemplary efficiency, devotion and loyalty to duty assignments.”

b. Efficiency Reports—These are periodic appraisals by supraordinate officers judged on “over-all value to the service” while holding a certain position. In the old system A is the highest rating while D is the lowest. In the new system, 6 is the highest while 1 is the lowest.

c. Commendatory Reports—These are written reports expressing approval towards a behavior, but not warranting an award.

d. Derogatory Reports—Written reports of crimes, misdemeanors, neglects, mistakes in judgments.

FIGURE 2. SAMPLE OF RECORDS SUMMARY

SUBJECT	INDIVIDUAL AWARDS, CITATIONS	EFFICIENCY REPORTS	COMMENDATORY REPORTS	DEROGATORY REPORTS
AK	2-MMM Combat	Co Exec — A Adjutant — A Sup O — B Dy CI Unit — 4 Co Comdr — A, B, B, 4, 4	1-Commendation, Combat 1-Municipal resolution job well done	Enjoined to exercise prudence in relations with civil officials

The names of the subjects were coded and the information typed on a Records Summary illustrated in Figure 2. The numbers before each award or report shows the frequency of awards. The abbreviations before the efficiency rating are positions held. Thus "Co. Exec" means "Company Executive Officer," and "Dy. CI," means "Duty with Counterintelligence Unit." Based on these information, the judge arranges the Records Summaries, according to rank. This ranking is the external criterion.

The Sample. One Philippine Military Academy class was selected according to the following criteria:

- a. Homogeneity of assignment for at least one year, i.e., everybody in the class had practically the same type of job for at least one year. This will insure comparability in some respects.
- b. Records in the Aptitude for the Service Rating were complete for the class.
- c. The class numbered at least forty-seven to set the tolerance limits at a 95% chance for covering 90 of the sample (2).
- d. They have had enough commissioned service such that individual records would

have diversified. This was taken arbitrarily at ten years.

e. They have not gone high enough to have passed the "compulsory-promotion" stage in their military careers. This insures their being of the same rank. Of the classes which satisfy criterion d, only one satisfied all the others.

The Judges and the Ranking Procedure. Six judges were selected based on the following criteria:

- a. Three judges of field grade (Lieutenant Colonels and up) and three judges of company grade (captains and down). This dichotomization is necessary since it was shown by Halpin that superiors had different criteria for selecting leaders than juniors (5).
- b. They were of diverse experiences and backgrounds. Thus, Judge A had mostly staff and a little combat experience. Judge B had mostly combat and a little staff and training experience, while Judge C has almost wholly a training and instructional experience. Judge D had combat as well as administrative experience, Judge E had mostly technical staff and instructional duty while Judge F had mostly administrative staff. Differences are summarized below (Figure 3):

FIGURE 3. COMPARISON OF SIX JUDGES

Judge	Field Grade	Company Grade	EXPERIENCE*				
			Combat	STAFF			* INSTRUCTIONAL
				Gen	Adm	Tech	
A	X		XX	XX		X	
B	X		XXX			X	
C						XXX	
D		X	XX		X	X	
E		X				X	
F		X	X		X	XX	

* Number of X's indicates comparative length of experience.

c. They were not sufficiently acquainted with the classes which have graduated from the Philippine Military Academy so that they could not recognize any of the subjects from the records alone. After they ranked the members of the group, they were asked if they recognized any of the officers ranked. If they had answered in the affirmative, their ranking would have been set aside as possibly biased.

The fifty-four records arranged in coded order (alphabetically by company when they were cadets) were presented to each judge separately with the following instructions: "I have here a group of officers with a summary of all available records

of their service. Please arrange them in order of merit according to your judgment as to how well they have performed as officers."

Judges A, B, and C were not given any instruction as to how they should rank order the batch of records. They kept these on the average, for one week. When the researcher got them back, each one was asked how he did the ranking. A said that he just read each record and arranged them after each reading "based on a general impression of each one." B said that he arranged the records considering principally the derogatory reports and the efficiency reports. C showed his worksheet where he assigned weights to certain categories. (See Figure 4.)

FIGURE 4. POINT SYSTEM USED BY JUDGE C

<u>AWARDS</u>	<u>POINTS</u>
Gold Cross	10
Military Merit Medal	5
Military Commendation Ribbon	3
EFFICIENCY REPORTS	
A	5
B	4
C	3
COMMENDATORY REPORTS	
Combat	3
Staff	2
Aide and others	1
DEROGATORY REPORTS (Negative)	
Grave Threats, Maltreatment	5
Immorality, extortion	4
Admonition and reprimand	3
Others	2

Aside from the instructions given above, Judges *D*, *E*, and *F* were also told: "The usual way to arrange a large batch in order of merit is to read each record first and put each one into three separate files of good, bad, and in-between. Then go through each pile and read the record again, arranging them in order of merit." These judges were not asked how they did the ranking. Rankings by the field grade judges are given in Table 1 while those of the company grade judges are given in Table 2. Intercorrelations between all six judges are in Table 3.

The Sociometric Rating. The proportional parts in Aptitude for the Service of these same fifty-four officers when they were cadets were then taken from the records of the Secretary, Academic Board of the Philippine Military Academy by year and the 4-year total. These proportional parts were then ranked in order of size, the biggest proportional part ranked as 1 and the smallest is ranked 54. These rankings are shown in Table 4. Table 5 gives the intercorrelations between these rankings.

The Scholastic Rating. The scholastic achievement of each subject is represented by the total of proportional parts he earned during the four years he was in the Academy, not taking into account those proportional parts awarded for Aptitude and Conduct. This total represents only subjects for which classroom instruction had been given, thus it is an almost pure measure of scholastic achievement. The subjects are then ranked according to their totals (Table 6).

Correlations then were run between the judges' rankings with the yearly and total aptitude rankings and the horizontal average taken. (See Table 7.) These averages represent the computed validity coefficient of the Aptitude for the Service System at each year it is made. Correlations between judges' rankings and the scholastic achievement are shown in Table 8. The mean of these correlations is taken as the validity coefficient of scholastic achievement. The average correlation has been used as an index throughout this study since it has been asserted that it is more conservative than multiple correlations (3). In all cases, the Spearman rank-correlation coefficient (r_s) was used.

RESULTS

Mean r_s of the Aptitude for the Service Ratings is .846. This can be taken as an index of its reliability. Interjudge reliability among the three field grade judges is .465; among the three company grade judges, this is .612. For all six judges, mean r_s is .578. All these are significant beyond the .0005 level.

Of the five validity coefficients for the Aptitude Rating (averaged r_s per year and total, Table 7), only that for the total is significant at the .05 level. While the rest do not reach an appreciable degree of significance, that for the third year almost reaches significance. The correlations with the second, fourth, and first years follow in that order.

Of the correlations of the judges' rankings with scholastic achievement, only that of A is significant. The mean r_s of .181 is not significant.

TABLE 1. RANKING ON OCCUPATIONAL SUCCESS OF FIFTY-FOUR COMMISSIONED OFFICERS BY THREE FIELD GRADE JUDGES

SUBJECT	J U D G E			SUBJECT	J U D G E		
	A	B	C		A	B	C
AA	21	19	22	CB	1	7	1
AB	43	13	27	CC	49	28	34
AC	47	53	54	CD	52	54	51
AD	39	31	11	CE	41	18	16
AE	40	33	28	CF	17	40	29
AG	31	2	20	CH	48	32	31
AH	30	47	49	CI	15	12	41
AI	14	14	36	CJ	16	34	37
AJ	29	24	47	CK	10	51	23
AL	4	5	4	CL	35	15	45
AM	19	11	39	CM	9	37	10
AN	50	39	46	CN	6	8	5
BA	50	39	46	DA	28	38	18
BB	13	21	28	DB	27	25	35
BC	23	4	12	DC	11	30	7
BD	42	10	42	DD	44	46	40
BE	33	1	13	DE	34	16	30
BF	53	45	50	DF	45	43	26
BG	22	9	19	DG	25	42	25
BH	38	20	17	DH	20	27	38
BI	5	52	6	DI	46	49	52
BJ	2	6	3	DJ	24	26	44
BK	8	44	15	DK	7	29	9
BL	26	35	24	DL	51	36	32
BM	12	48	14	DM	32	17	21
CA	54	50	53	DN	36	22	43

TABLE 2. RANKING ON OCCUPATIONAL SUCCESS OF FIFTY-FOUR COMMISSIONED OFFICERS BY THREE COMPANY GRADE JUDGES

SUBJECT	J U D G E			SUBJECT	J U D G E		
	D	E	F		D	E	F
AA	21	22	18	CB	15	1	1
AB	27	25	17	CC	29	35	34
AC	54	54	54	CD	50	53	50
AD	35	9	13	CE	40	19	22
AE	26	29	29	CF	31	27	20
AF	3	14	30	CG	47	45	47
AG	1	2	6	CH	38	26	21
AH	44	47	53	CI	10	32	33
AI	11	33	37	CJ	34	31	40
AJ	13	46	46	CK	53	52	45
AK	46	4	5	CL	32	41	41
AL	9	43	36	CM	33	13	10
AM	12	34	35	CN	7	5	2
BA	43	40	39	DA	37	20	25
BB	36	8	11	DB	49	42	42
BC	2	10	15	DC	28	6	8
BD	30	44	43	DD	45	50	49
BE	5	12	14	DE	4	24	24
BF	52	49	52	DF	41	30	23
BG	16	15	16	DG	39	23	26
BH	20	16	28	DH	17	39	44
BI	42	3	4	DI	48	51	48
BJ	25	7	3	DJ	8	38	38
BK	6	18	19	DK	18	21	9
BL	24	28	27	DL	22	37	32
BM	14	17	7	DM	23	11	12
CA	51	48	51	DN	19	36	15

TABLE 3. CORRELATION TABLE OF RANKINGS ON OCCUPATIONAL SUCCESS OF FIFTY-FOUR COMMISSIONED OFFICERS BY SIX JUDGES

	rA	rB	rC	rD	rE	rF
rA		.325	.654	.419	.592	.595
rB	.325		.417	.656	.520	.447
rC	.654	.417		.391	.911	.917
rD	.419	.656	.391		.449	.439
rE	.592	.520	.911	.449		.948
rF	.595	.447	.917	.439	.948	Mean a = .578

TABLE 4. SOCIOMETRIC RANKING AS CADETS OF FIFTY-FOUR COMMISSIONED OFFICERS BY YEAR AND FOR THE 4-YEAR TOTAL

SUBJECT	TOTAL					SUBJECT	TOTAL				
	YEAR			FOUR YEARS			YEAR			FOUR YEARS	
	1	2	3	4	YEARS		1	2	3	4	YEARS
AA	3	3	7	8	6	CB	29	22	42	41	38
AB	36.5	43	45	45	45	CC	30	11	17	11	14
AC	50	47	39	32	43	CD	20	32	46	38	39
AD	14	12	33	44	30	CE	53	51	53	46	52
AE	2	2	6	5	4	CF	21	17	15	21	17
AF	41	42	48	47	46	CG	52	54	52	49	53
AG	5	10	2	1	2	CH	12.5	25	30	31	29
AH	48	49	54	54	54	CI	25	18	14	24	21
AI	34	41	31	26	33	CJ	12.5	8	8	3	5
AJ	18	9	11	12	10	CK	46	38	41	43	43
AK	6	26	21	17	16	CL	38	31	29	23	27
AL	23	16	19	15	15	CM	54	48	44	48	47
AM	9	13	18	28	18	CN	39	20	26	13	20
BA	45	34	34	42	36	DA	19	21	9	7	11
BB	11	1	1	2	1	DB	10	53	47	53	49
BC	44	52	51	52	51	DC	15	7	13	14	13
BD	47	50	50	51	50	DD	27	39	35	27	34
BE	49	29	22	30	28	DE	51	45	49	50	48
BF	40	36	43	33	40	DF	7	44	37	34	35
BG	31	30	25	20	25	DG	33	35	16	18	23
BH	36.5	37	36	35	35	DH	35	19	20	19	22
BI	8	14	12	10	9	DI	42	46	40	40	44
BJ	24	22	32	39	32	DJ	22	28	27	36	31
BK	28	27	28	29	26	DK	32	24	23	16	19
BL	26	23	24	25	24	DL	43	40	38	37	41
BM	17	6	5	22	12	DM	1	15	3	4	7
CA	4	4	4	6	3	DN	16	5	10	9	8

TABLE 5. CORRELATION TABLE OF RANKING BY SOCIOMETRIC CHOICE AS CADETS OF FIFTY-FOUR COMMISSIONED OFFICERS

	r1	r2	r3	r4	rt
r1		.733	.721	.666	.763
r2	.733		.910	.862	.969
r3	.721	.910		.934	.973
r4	.666	.862	.934		.958
rt	.763	.939	.973	.958	mean r = .846

TABLE 6. RANKING BY SCHOLASTIC ACHIEVEMENT AS CADETS OF FIFTY-FOUR COMMISSIONED OFFICERS

SUBJECT	RANKING	SUBJECT	RANKING	SUBJECT	RANKING
AA	8	BF	36	CL	20
AB	47	BG	28	CM	53
AC	31	BH	21	CN	13
AD	9	BI	38	DA	4
AE	32	BJ	50	DB	54
AF	35	BK	30	DC	7
AG	12	BL	17	DD	42
AH	16	BM	34	DE	18
AI	25	CA	14	DG	3
AJ	6	CB	19	DH	39
AK	10	CC	41	DI	52
AL	1	CD	45	DJ	51
AM	46	CE	49	DK	15
BA	40	CF	37	DL	27
BB	2	CG	29	DM	24
BC	23	CH	26	DN	33
BD	11	CI	5		
BE	44	CK	22		

TABLE 7. CORRELATION OF RANKING OF OCCUPATIONAL SUCCESS BY SIX JUDGES WITH SOCIOMETRIC CHOICE AS CADETS OF 54 COMMISSIONED OFFICERS

SOCIOMETRIC RANKING	JUDGE RANKING						AVERAGE
	A	B	C	D	E	F	
First Year	.196	-.023	.117	-.032	.234	.260	.125
Second Year	.284	.040	.187	.234	.285	.221	.209
Third Year	.320	.022	.168	.215	.318	.285	.221
Fourth Year	.256	.002	.133	.242	.210	.218	.176
FOUR-YEAR TOTAL	.323	.036	.180	.218	.307	.306	.228*

* Significant $r_{.95} (N = 54) = .227$ from Table A-30a, Dixon, W.J. and Massey, F.S.: *Introduction to Statistical Analysis*. New York: McGraw-Hill Book Co., 1957

TABLE 8. CORRELATIONS OF SCHOLASTIC RANKING WITH OCCUPATIONAL SUCCESS

JUDGE	r_s	SIGNIFICANCE
A	.234	Significant at $p = .05$
B	.135	Not significant
C	.169	Not significant
D	.179	Not significant
E	.197	Not significant
F	.172	Not significant
Mean $r_s =$.181	Not significant

DISCUSSION

Because of the difficulty of constructing an index of job proficiency in such an occupation as "Armed Forces Officer," a more detailed consideration of the external criterion merits attention. When considering only a record (as the judges were made to do), the distinction of subordinate and superordinate points of view as given by Halpin seems to be less important than the previous experience of the judge in the shaping of his own criterion for officer success. Table 3 shows a definite cluster consisting of Judges C, E, and F. These three have had more experience in the instructional area than any of the others. On the other hand, Judge B, the most deviant of the raters, correlates highest with Judge D whose pattern of experiences approximates more closely his own. Even with these diverging experiences and the consequent shifts of frame of reference, external criterion is reliable as shown by the high level of significance of r_s .578.

The criterion statement for the Aptitude Rating is ostensibly based on performance as a leader. "Leadership" in this case is taken to mean "having responsibility for the direction of the efforts of a group towards a designated goal." In the Cadet Corps, there are 129 possibilities for leadership within the organizational

framework. There are 350 cadets at the most. It is possible for a cadet therefore, to go through four years of study without occupying a leader position within the organizational framework. The criterion, in actuality, is not so much leadership as being able to get along with other cadets.

Now, getting along with other cadets involves behavior appropriate to a given institutional role. There is role differentiation between the classes but especially between freshmen and upper classes (sophomore, junior, and senior). The freshman is supposed to obey all orders given by any upperclassman, regardless of whether he is in a formal situation or not. He performs tasks usually not done by upperclassmen and he reacts to upperclassmen's orders or even their mere presence in certain prescribed ways. The dominant feature of his behavior that is most valued by the raters is conformity.

The sophomore, on the other hand, have the least status among the upper class. While they are not expected to behave like the freshmen insofar as institutionalized roles are concerned, they are still expected to follow orders (official or otherwise) from the juniors and seniors. At the same time, they are charged with the supervision of the freshmen. The behavior expected of them is of compounded obedience and respect together with a

display of manipulatory skill in dealing with the freshmen.

The juniors are the "junior executives" of the cadet corps. They help supervise the sophomores in their dealings with the freshmen and at the same time help the seniors in the management of the affairs of the cadet corps. Three groups rate them—their subordinates (the sophomores), their peers (classmates) and their superordinates (seniors and tactical officers). Three points of view are therefore involved in their ratings.

The seniors run all affairs of the cadet corps. They manage and supervise all activities, official or recreational. Tactical Officers who have direct supervisory powers over them give them as much leeway in "initiating interaction" in the performance of these duties. Their superordinate rater is only one tactical officer.

From the foregoing analysis of the roles and expectation of each class, the rating made during the senior year should be the one closest to the commissioned service rating because the Efficiency Report of each officer is made by a superordinate. Yet this is not so. The junior year rating is the closest. A possible explanation is that the more different points of view represented in a sociometric rating, the closer is its approximation to an officer's performance rating. The same explanation will not hold for the sophomore rating since the raters are either peers or superordinates; no subordinates rate them.

The expectation originally made that scholastic achievement (which correlates highly with intelligence) should approximate the .37 validity coefficient found by Chiselli and Brown is not born out since the correlation found actually was .181 (Table 8). It is possible that for a military educational institution, the X factor cited by Vernon plays an important part

which may mask the effect of "g" (9). Alternatively, the commissioned service rating may have placed undue emphasis on combat leadership (exemplified by the awards) which would not necessarily correlate with intelligence.

The assumption that the military profession is managerial and supervisory in nature should be investigated. It is possible that it is not purely so or that the managerial and supervisory aspect is more marked at higher rank levels.

Conclusion

The Aptitude for the Service Rating (1957) of the Philippine Military Academy is valid as predictor of officer success at the company grade level. However, the validity coefficient of .228 while significant at the 5% level, is still less than the average of .37 reported by Chiselli and Brown when using intelligence tests as predictors of managerial success; but the validity coefficient of .181 for scholastic rating is much less and not significant.

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Human Relations on the Waterfront: The Cabo System*

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A few years ago, a weekly magazine featured an article on stevedores and the *cabo* system. The magazine article which was based on a report by the Bureau of Labor Standards described the cabo system as a pernicious system that was responsible for the depletion of the wages of stevedores. The cabo system was more specifically referred to in the same report as a manner of payment of wages wherein a *cabo* or gang leader collects the wages of all his men and does the paying himself. In the process, he gives less than what is due to the worker.

The purpose of this paper is to describe some fundamental structures and functions of the cabo system. The data used in this preliminary report were collected in the course of a year of field-work on the waterfront.¹

* Excerpts from a paper read by the author before the Philippine Sociological Society at its September 17, 1967 meeting.

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¹ I do not know if it is accurate to call the technique used participant observation. For one thing, while I was allowed to join the stevedoring work gang as an unskilled stevedore, they never treated me like one. I helped move cargo in the *bodega* (warehouse) when I wanted to, and they never insisted that I work as they did. I was considered more as a *salang-pusa* (a "hanger-on") than a regular stevedore. For this, I got my meals free and they would say I deserved a compensation of five or six pesos, but I never did accept my wages.

The study of an entire system, like the cabo system, is a study of a complex situation. Dr. Robert Weiss defines a complex situation ". . . as one in which as many of the interrelated phenomena as possible are studied simultaneously, i.e., the situation as a whole is studied rather than a particular element within the situation."²

Weiss delineates two general directions that studies of complex situations usually take: one, toward analysis and the other, toward the identification of system relations. One is analytic, the other holistic.

The debate in scientific circles over the question of which approach is better is a protracted one. The controversy, if we may call it that, has sometimes been expressed in a choice between quantitative and qualitative work; between the formulation of preliminary hypotheses and the adoption of a more exploratory stance; between "reliability, precision, the possibility of prediction and control" on one hand, and "validity, evocativeness, the possibility of sympathetic understanding" on the other.

The task of the investigator employing the analytic approach is to isolate

² Robert Weiss, "Alternative Approaches in the study of Complex Situations," *Human Organization*, 25: 3 (Fall 1966) 198-205.