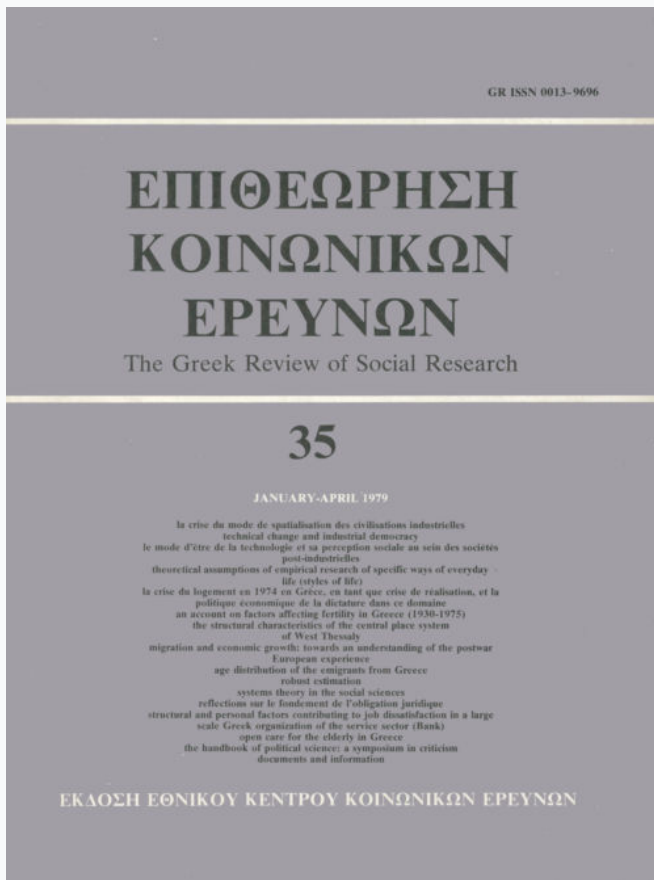


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**Structural and personal factors contributing to job dissatisfaction in a large scale Greek organization of the service sector (Bank): A nationwide study of the attitudes and motivation of bank employees in Greece for the job of teller**

*Litsa Nicolaou-Smokovitis*

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# structural and personal factors contributing to job dissatisfaction in a large scale Greek organization of the service sector (Bank)

*A nationwide study of the attitudes and motivation of bank employees in Greece for the job of teller*

by

**L. Nicolaou-Smokovitis**

*Ph.D., Boston College, School of Management*

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## ABSTRACT

This is an exploratory study of a main issue in a large commercial bank in Greece. The research has been undertaken with the initiative of the Administration of a Greek Bank, in an effort to define the reasons for reluctance or unwillingness of the Bank's employees to accept the job of teller. The study also examines the impact of new technology, the kind and degree of adjustment imposed on tellers, i.e. their new work roles, the existing problems related to job satisfaction or dissatisfaction, and the weaknesses of the system.

Thirty five Branches of the national network participated in the study with a sample of 427 employees of both sexes representing various geographical regions of Greece, various age groups of different educational, social and economic backgrounds, and various grades within the Bank. Data were collected through questionnaires, which were supplemented by intensive personal interviewing.

Combining the material from the questionnaires and the insights obtained by the personal interviews, we reached certain conclusions as to the response of bank employees to technical innovation and change in their traditional work roles. An analysis of the nature of the requirements of change introduced, the content and context of the new work roles, the individual characteristics, attitudes and perceptions of bank tellers, and various organizational dimensions, made clear that certain structural and personal factors contribute to Job Dissatisfaction, as a result of a new division of labor and new work roles which are required of a new technology. The findings of this study show that such factors must be taken into consideration in designing sociotechnical systems.

Due to the scarcity of similar studies in Greece, we have no way to compare our findings. This work is therefore exploratory and constitutes an original sociological study of a large Greek organization. It is an attempt (a) to test, in the Greek setting, theoretical hypotheses developed by similar studies in foreign organizational settings; (b) to connect the Greek findings with the findings of the latter and to suggest cross-cultural comparisons; (c) to develop better understanding of some organizational and human problems of large Greek organizations in the process of technological change; (d) to suggest similar research in industry and other service sectors or branches.

## I. introduction

In an effort for reorganization and modernization of its operations and services, a Greek Bank, one of the leading commercial banks in Greece («The Greek Bank» ever since), introduced a new system of service to clients, i.e. the system of tellers. The new system implied a new technology (new machinery-equipment and methods), new organizational structures to fit the new technology, and a new division of labor. Technical innovation introduced change in the traditional social roles of the guichetier-clerk and the cashier, and implied a new work role that of a bank teller,<sup>1</sup> with different job/man specifications and re-

1. The new role of bank teller was a combination of clerical and cashier tasks: the same employee who was making the accounting part of the job, was simultaneously operating the machine or terminal, and making payments and collections. This combination of traditionally separate tasks performed in the past by the guichetier and the cashier now entrusted to one person, created much confusion around the new social role and the status of teller within the bank.

quirements. The drastically changed content and context of the traditional job of guichetier-clerk and cashier, required organizational-structural adjustments of the bank, as well as individual-psychological ones of its members.

At the time of this study, the new system of tellers was operating in a number of branches and was expanding rapidly so as to include, if possible, the whole national network of branches of the Greek Bank. Modern machinery, automation, sophisticated methods of organization and management, constituted major areas of investment for the Bank in money, time, and effort. The new system started operating in 1972 in a spirit of general optimism, which was shared by most of the organizational members and the clients. Yet, very soon a most acute problem occurred, that is, reluctance or unwillingness of bank employees to serve as tellers, which impeded the process of automation within the bank. Due to the difficulties to find the right people among the employees who would wish to serve as tellers, major difficulties occurred in the implementation and operation of the new system which were translated into dissatisfied clients, dissatisfied employees, and inefficient operation of the system.

The present study, undertaken with the initiative of the Administration of the Greek Bank, was designed to define the reasons for the reluctance or unwillingness of the bank employees to accept the job of teller. A second objective was to define the impact of new technology (automation of banking operations), the kind and the degree of adjustment imposed on employees by technical innovation and change of their traditional work roles and patterns of social interaction, as well as problems related to job satisfaction or dissatisfaction of people (tellers, employees, clients) and possible weaknesses of the new system.

The research attempted to answer two questions:

- (1) Why bank employees are reluctant or unwilling to serve as tellers.
- (2) What theoretical conceptualizations of the study problem, as well as what theoretical implications could be made on the basis of the findings.

The study was actually exploratory on a specific problem. The research followed a cognitive process rather than a validating one, which means that the researcher developed conceptual grasp as the research progressed, and was integrally involved in the conceptualization process itself.

## **II. methodology**

### *A. General Procedure*

In order to answer the research questions, a survey of employees in the national network of Branches of

the Greek Bank was conducted. The principal data source was a questionnaire with 32 open-ended questions which was supplemented by intensive personal interviewing. Thirty five Branches participated in the study, with a sample of 427 employees (of which approximately 55 per cent tellers and 45 per cent non-tellers) of both sexes, representing various geographical regions of Greece, various age groups and of different educational, social and economic backgrounds, and various grades within the Bank.

The data, both of quantitative and qualitative nature, were analyzed and cross-checked. Thirty eight variables were combined into the data pool which was used for the analysis. These variables were created from information collected through the structured interviews (questionnaires and in-depth personal interviewing) and other secondary sources. Problems of validity and reliability were of major concern to the researcher and seriously considered.

The study was concentrated on the Dependent Variable, «Level of Job Satisfaction», an index of two variables, i.e. «Job Satisfaction» and «Reasons for Job Satisfaction» with a 3-point classification (high, medium, low), while «Technological Change» (the new system of tellers) served as the main Independent Variable. The ordinal level categories in the Dependent Variable represented the rating of the extent to which the individual employees could attain satisfaction in the job of teller, or, putting it differently, the extent to which the Bank, as an organization, was capable of transmitting to its individual members (tellers-employees) satisfaction in the job of teller. It was assumed that an employee (teller) rating high in the Dependent Variable would have high personal satisfaction in the job and would wish to serve as teller, while an employee rating low in the Dependent Variable would have low personal satisfaction in the job of teller and would be reluctant or unwilling to serve as teller.

On the basis of 36 Independent Variables, a number of dimensions were checked (technological, organizational, attitudinal) as they affect the main Dependent Variable, i.e. Level of Job Satisfaction, and each other.

### *B. The Profile of the Sample*

A schematic information on the number of Branches and their employees which took part in the study by area, age, sex, education, place of origin, father's occupation of the respondents, year of their hiring in the Bank, status in the Bank and tasks performed, is given below (see Table 1) in order to allow the reader a limited at least level of perception on the population of the sample, its demographic characteristics and the employee status of respondents.

TABLE 1. *The Population of the Sample*

Sample Profile		Number of Respondents	%	Missing Data	Total
<b>A. Population</b>					
1. Branches by area:					
— Athens - Piraeus Metropolitan	16	223			
— Thessaloniki Metropolitan	4	36			
— Provinces <sup>1</sup>	15	168			
<b>B. Demographic Characteristics</b>					
1. Sex:					
— Male		296	69.3		
— Female		99	23.2	7.5	100.0
— Missing Data					
2. Place of Origin:					
— Rural		50	11.7		
— Semi-Urban		49	11.5		
— Urban		153	35.8		
— Metropolitan		147	34.4	6.6	100.0
— Missing Data					
3. Age Groups:					
— 19-30		160	37.6		
— 31-40		156	36.6		
— 41-50		57	13.4		
— 51 and over		26	6.1	6.3	100.0
— Missing Data					
4. Education:					
— Less than High School		10	2.5		
— High School graduate		250	58.5		
— Some College		80	18.7		
— College graduate		56	13.1		
— Post graduate		1	0.2		
— Missing Data				7.0	100.0
5. Father's Occupation:					
— Peasant		43	11.0		
— Unskilled-Semi Skilled-Manual and Clerical		31	8.0		
— Skilled-Manual and Clerical		151	38.5		
— Bank Employees		54	13.8		
— Intermediate Bus. Management-Low Professional		13	3.3		
— Executive-Professional		13	3.3		
— Missing Data				22.1	100.0
1. <i>Northern Greece:</i>					
Ioannina	4				
Kavala	15				
Skydra	2	21			
<i>Crete:</i>					
Chania			12		
Herakleion			10		
Sitia			10	32	
<i>Central Greece:</i>					
Istiaia	7				
Larissa	12				
Volos	22	41			
<i>Aegean Islands:</i>					
Chios			12		
Kardamyla			1		
Rodos			25	38	
<i>Peloponnese:</i>					
Kalamata	11				
Patrai	10	21			
<i>Ionian Islands:</i>					
Kerkyra			15	15	

(continued)

TABLE 1. *The Population of the Sample*

Sample Profile	Number of Respondents	%	Missing Data	Total
<b>C. Employee Status</b>				
1. Year of Hiring:				
— 1941-54	39	9.1		
— 1955-64	111	26.0		
— 1965-74	186	43.6		
— 1975-77	58	13.6		
— Missing Data			7.7	100.0
2. Employee Categories:				
— Messenger	2	0.5		
— Collector	11	2.6		
— Cashier	36	8.4		
— Accountant	354	82.9		
— Other	1	0.2		
— Missing Data			5.4	100.0
3. Tasks:				
— Simple operations:				
Various Departments	105	24.5		
— Tellers:				
. Savings	63	14.8		
. On-line	32	7.5		
. Uni	99	23.2		
. Foreign Currency	31	7.3		
— Complex Operations:				
. Foreign Transactions	33	7.7		
. Loans	41	9.6		
— Administrative/Managerial:				
. Various levels	13	3.0		
— Missing Data			2.4	100.0

### **III. statistical elaboration of the data**

#### **A. Outstanding Responses**

On the basis of the answers received, we present the more outstanding responses which may have potential usefulness for the analysis of our issue (for details see Appendix). The responses have been grouped into the following categories which represent specific areas of interest of the research.

##### **1. Need Structure and Job Satisfaction**

Poor rating of Job Satisfaction was revealed as expected. The 85.2 per cent of the respondents faced insecurity or ambivalence as to their future as tellers or as employees. The 69.7 per cent reported that they definitely do not wish to become tellers, and only 25.1 per cent that they wished to. The 91.4 per cent find the existing incentives non-existent or insufficient. When asked for their suggestions as to how to improve the job in order to increase Job Satisfaction, the answers were, by order of importance, better working conditions, more opportunities for tellers for career advancement and personal growth, improvements in the system, better economic rewards for tellers, technical and organizational improvements, upgrading of the status of the job of teller, multiple context and content factors' improvement, and some kind of participation of tellers in problem-solving.

##### **2. Perceptions of Job**

The scores as to the importance of the job, its positive and negative aspects and of improvements required have as follows:

Ninety seven and five per cent of the respondents reported that they considered the job of teller as important, very important, or of maximum importance. Only 2.5 per cent considered it as unimportant or of minor importance. As positive aspects of the job, the respondents considered fast service to clients and simplification of work (55.2 per cent), satisfaction of higher needs of employees (like opportunities for advancement, self-improvement, more responsibility, independence and autonomy, interesting work, 32.4 per cent). As negative aspects of the job they considered mainly the inadequate staffing and overwork (32.9 per cent), too much responsibility in handling money (19.5 per cent), psychological pressures on the job and anxiety (10.2 per cent). Among their suggestions as to how to improve the job situation, were reduction of work overload (28.9 per cent), multiple content-context improvements (13.2 per cent), better training of tellers (12 per cent), multiple contextual improvements (10.4 per cent) and need

for selection of tellers by the Board of Personnel Selection of the Bank (9.2 per cent). Improvements of working conditions were reported by 10.4 per cent of the respondents, while more economic incentives, more job security, job rotation, opportunity for advancement, improvement of the status of teller, and participation of tellers in decision-making and problem-solving ranged between 1.4 - 6.0 per cent.

##### **3. Technological and Organizational Change**

The scores as concerns prestige of the job, professional qualifications, knowledge and observance of rules and regulations, opinions on the system, problems created by the new system as well as possible solutions, and the training for the job of teller have as follows:

The 64.4 per cent of the employees attributed a certain prestige to the job of teller and thought that the job had certain professional requirements for the holder, while 17.9 per cent reported that the job involved customer service and, therefore, required certain social skills and status on the part of the teller since he represented the Bank in the eyes of the customers. The proportion of the respondents who looked down on the job of teller was 8.2 per cent. It is interesting to note the variety of responses to the question about the required qualifications for tellers, which indicates the general confusion among the employees, not only about what the job involves, but also about what a teller should be like. Only the 52 per cent of the respondents reported a thorough or a fairly good knowledge of the rules and regulations and a good acquaintance with the relevant Circulars of the Administration and the Organization Department. Asked about the observance of new rules in their Branch, 63.3 per cent reported that the new rules were generally followed in their Branch, 15.8 per cent reported that the new rules were not followed, and 21 per cent reported various deviations; among the reasons for such deviations from the rules were work overload (35.2 per cent), fear of competition and wish to provide better service (13.1 per cent), organizational problems in the Branch (11.2 per cent), while inappropriate tellers, inefficient operation of the system, working conditions and multiple other reasons, scored up to 6 per cent.

Among the problems that the new system created in the Branch, were space and organizational problems (30 per cent), dissatisfied clients due to bad or slow service (28.3 per cent), unmotivated tellers (11.7 per cent), wrong or inadequate application of the system (11.3 per cent), and general working conditions (11.3 per cent), or multiple organizational-systemic-human problems (7.4 per cent). Only 5.6

per cent of the respondents did not see any problems created by the new system, while the rest proposed different solutions to the problems created by the new system in their Branch, i.e. reduce work overload, make organizational, system or multiple improvements, make better selection of tellers and others. The 62.5 per cent of the respondents were absolutely positive about the new system and the kind of service it provided to clients, and only 8.6 per cent were negative. Also, 34 per cent stated that the opinion of clients was positive as to the new system and the kind of service it provided; i.e. they thought it as being more or less successful, while 27 per cent

reported that the clients were negative about the new system (either completely discontent or displeased with the slow service), and another 39 per cent reported that clients were ambivalent depending on the Branch and the kind of transactions they had with the Bank.

As concerns training for the job of teller, only 60 per cent of the respondents reported that they had special training provided by the Organization Department; the rest had been informed about the system and its operation by different people; as a result, there is no common theoretical and practical background among tellers.

TABLE 2. Level of Job Satisfaction by Different Variables

Different Variables	Level of Job Satisfaction			Statistical Significance
	Low%	Medium %	High%	
1. <i>Year of Hiring:</i>				$\chi^2 = 29.95$
— Before 1969	21	60	19	df = 6
— After 1969	17	69	14	p < .01
				C = .26
2. <i>Sex:</i>				$\chi^2 = 25.6$
— Male	23	58	19	df = 2
— Female	5	84	11	p < .01
				C = .24
3. <i>Status in the Bank:</i>				$\chi^2 = 29.95$
— Collector	18	27	55	df = 6
— Cashier	25	36	39	p < .01
— Accountant	18	68	14	C = .26
4. <i>Problems of Tellers: Subjective:</i>				$\chi^2 = 36.8$
— Psychological Pressure	25	56	19	df = 20
— Lack of Opportunity for Advancement	30	57	13	p < .01
— Low Status of the Job	67	0	33	C = .30
— Work Overload	23	60	17	
— Low Economic Rewards	33	67	0	
5. <i>Rating of New System-Service:</i>				$\chi^2 = 36.4$
— Older System Was Better	57	29	14	df = 18
— New System Good in Theory, Not in Practice	75	25	0	p < .01
— New System is Better in Some Areas Only	22	78	0	C = .29
— New System is Better	10	60	30	
6. <i>Opinion of Clients Toward New System:</i>				$\chi^2 = 24.7$
— Negative: Better Before	29	54	17	df = 12
— Negative: Slower Service	25	58	17	p < .01
— Positive and Negative	30	55	15	C = .26
— New System Fairly Successful	11	60	29	
— New System Better and Faster	9	64	27	
7. <i>Perceived Reasons for Deviance from Rules and Regulations:</i>				$\chi^2 = 27.3$
— No Deviance	3	72	25	df = 16
— Minor Deviance	25	50	25	p < .04
— Deviance due to Work Overload	32	44	24	C = .30
— Deviance due to Org'l Problems	47	37	16	

### B. Tabular Analysis of Responses: Findings

To elaborate the findings, Tabular Analysis was used, in search of relationships between variables, meaningful on theoretical grounds. The main findings of the tabular analysis are:

#### 1. As to Job Satisfaction

According to the scores above or below the mean of Job Satisfaction, we distinguish the following two categories, which should be perceived as a continuum to either end (see also Table 2).

##### More Satisfied

- Tellers hired before 1969
- Female Tellers
- Lower status employees (Collectors)
- Those who perceive problems related to working conditions (physical layout, little distribution of tasks, unhealthy work, no vacation), unpleasant clients, etc.
- Those who feel new system is generally better
- Those who feel (or know) that clients favor new system
- Those who feel there is little or no deviance from the rules and regulations, or who see it as due to other factors.

##### Less Satisfied

- Tellers hired after 1969
- Male Tellers
- Higher status employees (Accountants, Cashiers)
- Those who perceive specific problems of psychological pressure, lack of opportunity for career development and growth, low status on the job, work overload, and low economic rewards
- Those who feel older system was better, or that the newer system is better only in limited areas
- Those who feel (or know) that clients favor old system, or are ambivalent about new system
- Those who perceive deviance as due to work overload and organizational problems.

#### 2. As to the Level of Job Satisfaction

The level of job satisfaction, by year of hiring, by sex, by status in the Bank, by problems of tellers, by rating of new system, by opinion of clients toward new system, by perceived reasons for deviance from rules and regulations, have as Table 2 shows.

#### 3. As to Other Dimensions

It was further found that:

a) The most important positive aspect of the job, for all tellers, is fast service to clients. Also, for male tellers, opportunity for advancement and self-improvement are the next important aspects of the job, while for women «independence» is of particular importance (see Table 3).

TABLE 3. Positive Aspects of Teller's Job by Sex

Positive Aspects of Teller's Job	Female	Male	Total	
No positive aspects	1.7	2.9	4.6	$\chi^2=36.031$ $df=7$ $p< .001$ $C=.315$
Economic rewards	0.6	0.6	1.2	
Job security	0.0	2.3	2.3	
Interpersonal relations	0.6	3.7	4.3	
Fast service	12.4	42.4	54.8	
Opportunity for advancement	1.7	10.1	11.8	
Independence	3.5	3.5	6.9	
Interesting work	2.3	1.7	4.0	
Self-improvement	0.6	9.5	10.1	
Total	23.3	76.7	100.0	

b) The most negative aspects of the job, for all tellers, are too much responsibility on the job in handling money, and lack of opportunity for advancement. Also, women are concerned with job pressure, and men with overwork (see Table 4).

TABLE 4. Negative Aspects of Teller's Job by Sex

Negative Aspects of Teller's Job	Female	Male	Total	
Monotonous work	0.6	3.4	4.0	$\chi^2= 36.031$ $df= 7$ $p< .001$ $C=.315$
Lack of opportunity	2.7	11.6	14.3	
Too much responsibility	4.9	15.5	20.4	
Psychological pressures	7.9	7.9	15.8	
Overwork	4.0	28.4	32.4	
Poor economic rewards	0.6	0.3	0.9	
Unpleasant clients	2.1	3.7	5.8	
No one	0.6	5.8	6.4	
Total	23.4	76.6	100.0	

c) Stated reasons for job satisfaction are significantly related to sex. Women state interpersonal satisfaction, pride in work and a feeling of competence. Men cite competence and pride in work, as well as satisfaction of carrying out their duty (see Table 5).

TABLE 5. Reasons for Being Satisfied by Sex

Reasons for Being Satisfied	Female	Male	Total	
Total dissatisfaction	2.8	31.5	34.3	$\chi^2= 16.675$ $df= 6$ $p< .010$ $C=.290$
Work is a necessity	0.6	9.9	10.5	
Fringe benefits	2.2	5.0	7.2	
Interpersonal relations	3.9	6.6	10.5	
Pride in work	3.3	10.5	13.8	
Feeling of competence	2.8	14.4	17.1	
Self-fulfillment	0.0	6.6	6.6	
Total	15.5	84.5	100.0	



d) Stated reasons for job satisfaction are also significantly related to Status in the Bank. The great majority of Accountants declared total dissatisfaction with the job; interpersonal relations, personal pride and competence are among the reasons that could make them happy on the job (economic rewards come low among the reasons of satisfaction, while self-fulfillment ranks the lowest). The job of teller seems to give a feeling of competence and pride to Cashiers, who see the job as a necessity and a duty. Also, being involved in the new system and carrying out the duties of a teller, gives to Collectors pride and a feeling of self-fulfillment (see Table 6).

e) The majority of tellers whose father had skilled clerical or higher professional status, find the existing incentives of the job insufficient or non-existent. They express low or medium level of satisfaction (see Table 7).

f) Medium levels of job satisfaction were most frequently reported by tellers-college graduates, who perceive that the new system provides better service, has many more possibilities or is better. Generally, college graduates reported medium level of job satisfaction as tellers (see Table 8).

TABLE 6. *Reasons for Being Satisfied by Status in Bank*

Reasons for Being Satisfied	Collectors	Cashiers	Accountants	Total	
Total dissatisfaction	1.1	2.1	30.5	33.7	
Work is a necessity	0.5	3.7	6.4	10.7	$x^2= 29.446$
Fringe benefits	0.0	0.5	7.0	7.5	df= 12
Interpersonal relations	0.0	0.5	10.2	10.7	$p< .01$
Pride in work	1.1	2.1	10.7	13.9	$C=.37$
Feeling of competence	0.5	4.3	12.3	17.1	
Self-fulfillment	1.6	1.1	3.7	6.4	
Total	4.8	14.3	80.9	100.0	

TABLE 7. *Level of Job Satisfaction by Opinion of Incentives (controlling for Father's Occupation)*

Opinion of Incentives	Level of Job Satisfaction			Total	
	Low	Medium	High		
<i>Skilled Clerical:</i>					
— Non-existent	7.6	17.4	0.0	25.0	
— Insufficient	10.9	44.5	15.2	70.6	
— Satisfactory	0.0	0.0	2.2	2.2	
— Important	0.0	2.2	0.0	2.2	$x^2= 17.495$
Total	18.5	64.1	17.4	100.0	df= 6 $p< .008$
<i>Upper Professional:</i>					
— Non-existent	0.0	0.0	22.2	22.2	$C=.40$
— Insufficient	22.2	55.6	0.0	77.8	
Total	22.2	55.6	22.2	100.0	

TABLE 8. *Level of Job Satisfaction by Rating of New System: Service (controlling for Education)*

Rating of New System: Service	Level of Job Satisfaction			Total	
	Low	Medium	High		
<i>College Graduates:</i>					
— No, older system definitely best	0.0	5.6	0.0	5.5	$\chi^2 = 30.112$ df = 14 p < .007 C = .598
— No, older system better	0.0	1.9	0.0	1.8	
— Yes, better in some areas	0.0	1.9	0.0	1.9	
— It depends	0.0	5.6	1.9	7.4	
— In theory. Yes (better) in Practice. No	1.9	0.0	0.0	1.9	
— Yes, better under conditions	1.9	16.7	1.9	20.4	
— Yes, better and faster	0.0	35.2	5.6	40.7	
— Yes, better; has many more possibilities	0.0	18.5	1.9	20.4	
Total	3.7	85.2	11.1	100.0	

TABLE 9. *Level of Job Satisfaction by Rating of New System: Service (controlling for Knowledge of Circulars)*

Rating of New System: Service	Level of Job Satisfaction			Total	
	Low	Medium	High		
<i>Knowledge of All Circulars re: the New System:</i>					
— No.	1.9	6.5	0.0	8.4	$\chi^2 = 36.163$ df = 18 p < .007 C = .501
— No, older system better	2.8	0.9	0.9	4.6	
— Yes, in simple operations	0.9	0.9	0.0	1.8	
— Yes, better in some areas	0.0	2.8	0.0	2.8	
— Yes, technical-organizational problems	0.9	0.0	0.9	1.8	
— It depends	3.7	0.9	1.0	5.6	
— In theory. Yes (better) in Practice. No	0.9	0.0	0.0	0.9	
— Yes, better under conditions	2.8	12.0	2.8	17.6	
— Yes, better and faster	1.9	22.2	8.3	32.4	
— Yes, better; has many more possibilities	3.7	11.1	9.3	24.1	
Total	19.5	57.3	23.2	100.0	

g) The highest percentage of tellers who speak favorably about the system are also satisfied with the system. These are employees who have a good knowledge of the relevant Circulars, and therefore know fairly well the rules and regulations re: the job of teller (see Table 9).

#### 4. Factors not Affecting Job Satisfaction

On the basis of Tabular Analysis, it was also found

that the Level of Job Satisfaction of tellers is not affected by:

- a) Age of Tellers,
- b) Opinion of Incentives,
- c) Desired Job Changes, and
- d) Perceptions of Observance of New Rules and Regulations.

The level of statistical significance of the above, is higher than .05.

C. Factor Analysis of Responses: Findings

A further step of elaboration of the data, factor analysis, was taken in an attempt to discover clusters of variables or theoretically meaningful dimensions

(factors) upon which a theoretical conceptualization of our main research problem could be based.<sup>2</sup> The

2. Despite the fact that nominal data have been used, the fact that the findings support previous theoretical assumptions on sociotechnical systems validate our approach.

TABLE 10. Varimax Orthogonal Rotation

Variable Name	F.1 Environ- mental	F.2 Attitud'l Cognitive: Job Ex- pectations	F.3 Attitud'l Rewards: Consumma- tory	F.4 Job Satis- faction	F.5 Attitud'l Cognitive: Orient'n Towards Social Technology	F.6 Organiza- tional	F.7 Status in Bank (Tasks- Respon- sibility	F.8 Career Planning	F.9 Motivation for the Job: Reasons
Age (Year)	.93	.02	-.03	.02	.04	-.07	.06	.07	.02
Grade in Bank	.91	.02	-.02	.04	.05	-.01	.09	.04	.01
Status in Bank (Category)	.89	.02	.02	-.01	.05	.01	.06	-.03	.01
Age	.86	.04	-.01	-.03	.04	.14	-.26	-.14	.07
Place of Origin	.85	-.04	.06	-.01	.10	.03	-.02	.02	.05
Education	.85	.03	.08	.03	.07	.07	.01	.03	-.02
Sex	.78	.02	-.13	.05	-.04	-.13	.17	.13	-.03
Date of Hiring (Year)	.74	.07	-.03	-.01	.02	.21	-.29	-.24	.05
Knowledge of Banking	.62	-.00	.03	.02	.29	.07	.42	.08	-.01
Father's Occupation	.47	.03	-.02	-.06	-.04	-.09	.17	.25	.02
Marital Status	.47	.11	-.12	.11	.06	-.26	.13	.40	-.23
Opinion of Incentives	.01	.79	.14	.03	.04	.12	.05	-.03	-.01
Desired Changes	.01	.74	.08	.06	.03	.24	.07	.01	-.01
Positive Aspects of Job	.06	.70	.07	-.02	.21	.02	-.09	-.00	.20
Proposed Improvements	.01	.60	.05	-.04	.15	.25	.14	.04	-.02
Problems of Tellers	.08	.58	.06	-.05	.34	.19	-.01	-.00	.00
Negative Aspects of Job	.03	.54	.01	.04	.18	.01	-.26	.05	-.07
Problems of Colleagues	-.02	.46	-.15	.11	.17	.32	.12	-.13	-.09
Job Satisfaction (Tellers)	-.01	.20	.89	.13	.12	.11	.10	.03	-.13
Wish to become Teller (NT)	.04	-.06	-.86	.09	.17	-.13	.04	.03	-.06
Job Satisfaction: Reasons	.00	.17	.82	.41	.12	.13	.09	.06	-.11
Job Satisfaction Index	.01	.01	.15	.96	-.01	.09	-.01	.05	.00
Job Satisfaction Index (revised)	.01	-.00	.08	.96	-.01	.10	-.01	.05	.01
Job Duties	.04	.23	.03	-.07	.70	.01	.07	.16	-.02
Importance of Job (Subj'ive)	.08	.17	-.03	.08	.68	.05	.04	-.18	.13
Knowledge of Circulars	.01	.11	-.17	.00	.65	.16	.03	.29	-.19
Required Qualif's for Job	.10	.39	.03	-.00	.56	.01	.16	-.04	.11
Rating of New System: Service	.16	.25	.07	.00	.52	.24	.07	-.18	.05
Branch	-.23	.26	-.12	.12	-.33	-.14	.27	-.12	-.37
Observance of New Rules	.05	.21	.10	.01	-.02	.65	.01	.22	-.08
Deviat's from Rules: Reasons	-.03	.34	.14	-.04	.02	.61	.05	.13	-.05
Problems of New System	.01	.13	.09	.11	.15	.58	-.04	-.04	.13
Clients' Opinion re: System	-.01	.17	.05	.14	.15	.56	.08	-.10	-.14
Responsibility/Authority	.24	-.02	.11	.02	.22	-.06	.75	.10	-.05
Present Tasks	.04	.03	.03	-.02	.03	.13	.71	-.06	.13
Career Expectations	.15	-.02	.00	.15	.01	.19	-.03	.63	.18
Wish to Be Teller: Reasons	.03	.09	-.16	.04	.01	-.13	.19	.09	.78

TABLE 11. *Correlations of Individual Variables with the Factor*

Factor	Number	Variable name	Correlation with the Factor
F.1 Environmental	3A	Age (recoded)	.93
	9	Grade in Bank	.91
	10	Status in Bank (Category)	.89
	3	Age	.86
	4	Place of Origin	.85
	7	Education	.85
	2	Sex	.78
	8Y	Date of Hiring (year recoded)	.74
	14	Knowledge of Banking	.62
	5	Father's Occupation	.47
	6	Marital Status	.47
F.2 Attitudinal-Cognitive: Job Expectations	30	Opinion of Incentives	.79
	31	Desired Changes	.74
	20	Positive Aspects of Job	.70
	23	Proposed Improvements	.60
	29	Problems of Tellers: Subjective	.58
	21	Negative Aspects of Job	.54
	22	Problems of Colleagues	.46
F.3 Attitudinal-Rewards: Consummatory	24	Job Satisfaction (Tellers)	.89
	26	Wish to Become a Teller (Non-tellers)	-.86
	25	Reasons of Being Satisfied (Tellers)	.82
F.4 Job Satisfaction	38	Job Satisfaction Index	.96
	38A	Job Satisfaction Index (revised)	.96
F.5 Attitudinal-Cognitive: Orientation Towards Social Technology	16	Job Duties	.70
	19	Importance of Job: Subjective	.68
	17	Knowledge of Circulars	.65
	28	Required Qualifications for the Job	.56
	32	Rating of New System: Service	.52
	11	Branch	-.33
F.6 Organizational	34	Observance of New Rules	.65
	35	Deviations from Rules: Reasons	.61
	36	Problems of New System	.58
	33	Opinion of Clients re: System	.56
F.7 Status in Bank (Taks-Responsibilities)	13	Responsibility-Authority	.75
	12	Present Tasks	.71
F.8 Career Planning	15	Career Planning:Expectations	.63
F.9 Motivation for the Job: Reasons	27	Wish to become Teller: Reasons	.78

factor analysis<sup>3</sup> carried out indicated the presence of nine specific factors or meaningful theoretical dimen-

3. Thirty seven variables were used in the factor analysis; of these eleven were combined to form the first factor «Environmental». The basic structure of this factor is focused around a great amount of emphasis on the human inputs (resources) to the Bank as a social system. Seven of the eleven variables reflect the characteristics and the physical, intellectual

sions, i.e. «Environmental», «Attitudinal Cognitive: Job Expectations», «Attitudinal-Re-

and social equipment of the people before entering the system. On the other hand, four variables reflect the status of the people after they entered the system. The variables of the first category and their loadings are: Age, recoded (.93), Age (.86), Place of Origin (.85), Education (.85), Sex (.78), Father's Occupation (.47), and Marital Status (.47). The variables of the second category and their

wards: «Consummatory», «Job Satisfaction», «Attitudinal-Cognitive: Orientation Towards Social Technology», «Organizational», «Status in Bank: Tasks, Responsibilities», and «Motivation for the Job: Reasons». The findings of the factor analysis are given in Tables 10 and 11.

Six of these nine factors seem to fit various analytic levels, i.e. the individual, the organization and the social environment. According to the theory of the «psychosocial contract» (Nicolau-Smokovitis, 1976; Nicolaou-Smokovitis and Bruyn, 1978),<sup>4</sup> which supports the notion of the «social system», we assume that there exist various interrelations and interdependencies between these three analytic levels. A tentative conceptual scheme of the systemic relationships within the organization (Bank), between the individual, the organization and the social environment, elaborated on the basis of the factor

loadings are: Grade in Bank (.91), Status in Bank, Category (.89), Date of Hiring (.74) and Knowledge of Banking (.62).

The second factor is a clear-cut «Attitudinal-Cognitive» factor, and is labelled as such. It comprises seven variables of the job expectations dimension. They are: Opinion of Incentives (.79), Desired Changes (.74), Positive Aspects of Job (.70), Proposed Improvements (.60), Problems of Tellers: Subjective (.58), Negative Aspects of Job (.54) and Problems of Colleagues (.46).

The third factor is labelled «Attitudinal-Rewards: Consummatory». It includes three variables which refer to the area of job satisfaction and the attitudes towards the job of tellers and non-tellers. The variables and their loadings are: Job Satisfaction (tellers) (.89), Wish to Become a Teller (non-tellers) (-.86), and Reasons of Being Satisfied (tellers) (.82).

The fourth factor, labelled «Job Satisfaction», actually comprises the same variable in its first and its revised form. Job Satisfaction Index is a scale of two of the variables which were included in the third factor, i.e. Job Satisfaction and Reasons of Being Satisfied; its loading in this factor is .96. It has served as our main Dependent Variable in the tabular analysis.

The fifth factor is also a clear-cut «Attitudinal-Cognitive» one, and includes six variables which refer to the Social Technology dimension. These are: Job Duties (.70), Importance of Job: Subjective (.68), Knowledge of Circulars (.65), Required Qualifications for the Job (.56), Rating of New System: Service (.52), and Branch (-.33). Two of these variables (Importance of Job, and Rating of New System), are subjective, and reflect personal attitudes of the employees towards the job itself and the new technology.

The sixth factor is labelled «Organizational». The basic structure of this factor is focused around a great amount of emphasis on organizational problems and a relatively smaller amount of emphasis on attitudes of clients towards the new system. These variables and their loadings are: Observance of New Rules (.65), Deviations from Rules: Reasons (.61), Problems of New System (.58), and Opinion of Clients re: New System (.56).

The seventh factor is a clear-cut Status in Bank factor, and is labelled as such. It comprises two variables of the Responsibility-Authority dimension. These are: Responsibility-Authority (.75) and Present Tasks (.71).

The eighth factor, labelled «Career Planning» includes the Career Planning: Expectations variable, itself loading high enough (.63).

The ninth factor, labelled «Motivation for the Job: Reasons» includes the variable Wish to Become Teller: Reasons, itself loading very high (.78).

analysis, which is very basic for the conceptualization of individual and structural factors influencing job satisfaction, is given in Table 12. It is within this conceptual scheme that the impact of technology, as an input to the social system of the organization (the Greek Bank), as well as structural arrangements required and individual perceptions and attitudes of employees could be better understood and explained.

Within the framework of the psychosocial contract, multiple inter- and intra-relations and influences are expected. The substantiation of the above relations is shown in Table 12 so as to point to a possible interpretation of the problem of the study. It could be supported, therefore, that the new technology in the way introduced into the system of the organization has created unanticipated reactions on the part of the employees and the formal structure and threatened the equilibrium of the system.

In Greece today, modern organizations face the problem of technological change. With the development of new technology (equipment, methods, techniques), organizations, sooner or later, will have to introduce technological change, which will require certain adjustments of the various parts of the organization, or social subsystems. Any innovation and change introduced will threaten the system and will require adjustments to a new situation (organizational, structural, human, psychological, etc.).

#### IV. discussion of important findings

On the basis of important findings derived from the quantitative analysis of the data and the information obtained through in-depth personal interviewing, we can reach the following conclusions.

##### A. As to Perceptions of Job of the Respondents:

1. There are differences in perceptions among employees as to the nature, the importance and the status of the job of teller. These differences in perceptions can be attributed to such factors as socioeconomic background of employees, personality characteristics, life and work experiences, level of aspiration, life and professional goals, etc.

2. Previous work experience and status in the

4. The «psychosocial contract» implies that any input from the environment (technology, human inputs) has an impact upon the organization once introduced into it. The same can be expected on the part of the organization on the inputs processed or transformed within it. In turn the organization has an effect upon the social environment with its products and the utilization of the human resources.

TABLE 12. Tentative Conceptual Scheme in Studying Systemic Relationships within an Organization\*

Environmental	Factors					Organizational	
	F.1	F.2	F.3	F.5	F.7		F.6
		Attitudinal-Cognitive: Job Expectations	Attitudinal-Rewards: Consummatory	Attitudinal-Cognitive Orientation towards Social Technology		Status in the Bank	
Age (.93)							Observance of Rules (.65)
Grade in Bank (.91)							Deviations from Rules: Reasons (.61)
Status in Bank (.89)							Problems of New System (.58)
Place of Origin (.85)	Incentives (.79)	Job Satisfaction (.89)	Duties Importance of Job (.68)	Responsibility/ Authority (.75)			Opinion of Clients (.58)
Education (.85)	Positive Aspects (.70)	Be Teller (.86)	Knowledge of Circulars (.65)	Present Tasks (.71)			
Sex (.78)	Job Improvements (.60)	Job Satisfaction: Reasons (.82)	Qualifications (.56)				
Year of Hiring (.74)	Problems (.58)		Rating of New System: Service Branch (-.33)				
Knowledge of Banking (.62)	Negative Aspects (.54)						
Father's Occupation (.47)	Problems of Colleagues (.46)						
Marital Status (.47)							

\* based on the findings of the Greek Study of Bank Tellers.

Bank (Category) seem to influence perceptions of the job of teller: Tellers who belong to the Auxiliary Category (Collectors) tend to emphasize the positive aspects of the job and express greater satisfaction with the job of teller. Tellers who belong to the Category of Accountant (managerial potential) tend to emphasize the negative aspects of the job and express greater dissatisfaction with the job of teller.

3. The term «teller» (in Greek, «tamiologistis», meaning cashier-accountant) seems to have negative effects upon people of the Accounting Branch (managerial potential), and positive effect upon people of the Auxiliary Category. Accountants feel humiliated and degraded not only by performing the job of teller and handling money, but also being called «tamiologistis».

4. Insufficient or incorrect information about the system and lack of appropriate socialization of employees into new work tasks seem to contribute to personal confusion, existential crisis, and loss of professional identity. Tellers-Accountants seem either to have lost their former «self-concept» and identify or seek a new identity in their new social role, or stick to their old identity and react to the new system.

5. Perceptions seem to contribute substantially to the approval or rejection of the new system, to the creation of positive or negative feelings in the employees, and to facing reality from a highly subjective and often colored point of view.

6. The perceptual dimension is very important for attitude formation, which, in turn, explains behavior of employees and tellers.

B. As to the Implications of Technological Change:

1. Technological change (new machinery, more automation, new methods) influences the traditional division of labor and structural arrangements of the organization. It creates new jobs, a new division of labor, and new requirements for job holders.

2. Younger people see technological change as modern, while older people tend to stick to old ways of doing things.

3. It seems that the use of the computer (On-Line) or other modern machines introduces more efficiency if it is matched with the organizational climate, the people, the prevailing values, customs and traditional practices. While it is difficult to change the people to fit the new machines (although training, proper selection and the right kind of socialization may help), the introduction of new technology needs study, planning and consideration of the human factor of the organization.

4. New technology, if not properly introduced, creates resistance among people and breaking down of traditional patterns of social relations. In some organizational environments (Branches of the Greek Bank), new technology impedes efficiency; in others, it accelerates efficiency and progress.

5. Yet, a new consideration, and probably a new definition of progress should be sought. Is the Western definition of the term applicable in Greece? Probably, in the case of Greece, a definition of progress should include human happiness, growth and autonomy.

C. *As to the Need Structure and Satisfaction of the Respondents:*

1. Studying the present system of incentives for the job of teller in the Greek Bank, it was found that the economic incentives seem minimum and unable to satisfy the needs of tellers, in view of existing dangers and risks on the job (robberies, deficits, mistakes). Most important, economic incentives do not seem to correspond to the increased responsibilities of the job.

2. Although the economic incentive seems a very important and indispensable one, other incentives seem desirable by the employees, analogous to the need structure of each. Security, better relations with clients, better working conditions, rotation, opportunities for personal growth and career development and advancement, constitute very serious incentives, as well.

3. Generally, factors referring to job context may seem important to tellers or prospective tellers, but do not necessarily lead to job satisfaction. Factors referring to the content of the job, seem to contribute positively to job satisfaction—if they are lacking, employees are dissatisfied. These findings support previous findings of the motivational theory (Maslow, 1954; Herzberg, 1957; Vroom, 1964; Alderfer, 1969).

D. *As to Structural Characteristics in the Position of Teller in Greece:*

1. Part of the general pattern is that some Branches of the Greek Bank do not follow all rules strictly. This blurs the picture of Tellers. Disregard of formal rules is mainly due to work overload or to a wish to provide faster service to clients, and it may be functional for the specific Branch.

2. The line of authority in banking in Greece is not really too different from that in other Western countries. Young people start their banking career from the bottom as tellers, although a teller in Greece is an Accountant, i.e. a managerial potential, and is hired as such (contrary to other Western countries, where bank tellers may be a lower category of employees with minor qualifications). The position of teller in Greece is a first step in being trained in banking—has a functional role provided by the Constitution of the Bank.

3. Bank employees in Greece seem to come mainly from the middle or lower strata, and the urban areas. The synthesis of the group of tellers and the qualifications required in Greece to perform the job of teller, indicate that bank tellers in Greece constitute a dynamic and ambitious group of young employees, who have the qualifications and the pre-

conditions for personal and career growth, as well as advancement to managerial positions.

V. **theoretical implications of findings**

A. *The Model*

From the point of view of systems theory of organization, dealing with organizational problems and aiming at problem-solving, it would not be pragmatic to look for a single cause and ignore the interrelatedness and interdependency of the various subsystems within the organization. Social organizations can be described and examined as a series of interrelated and interdependent subsystems, so that a change in one subsystem does create strains and stresses in the other subsystems. The conceptual scheme supported by the Greek data could suggest inter- and intra-levels of organizational analysis of systemic relationships and interdependencies. A schematic presentation of the systemic inter- and intra- relationships and interdependencies that may develop between various systems and subsystems, as a consequence of the introduction of new technology, is given below (see Figure 1).

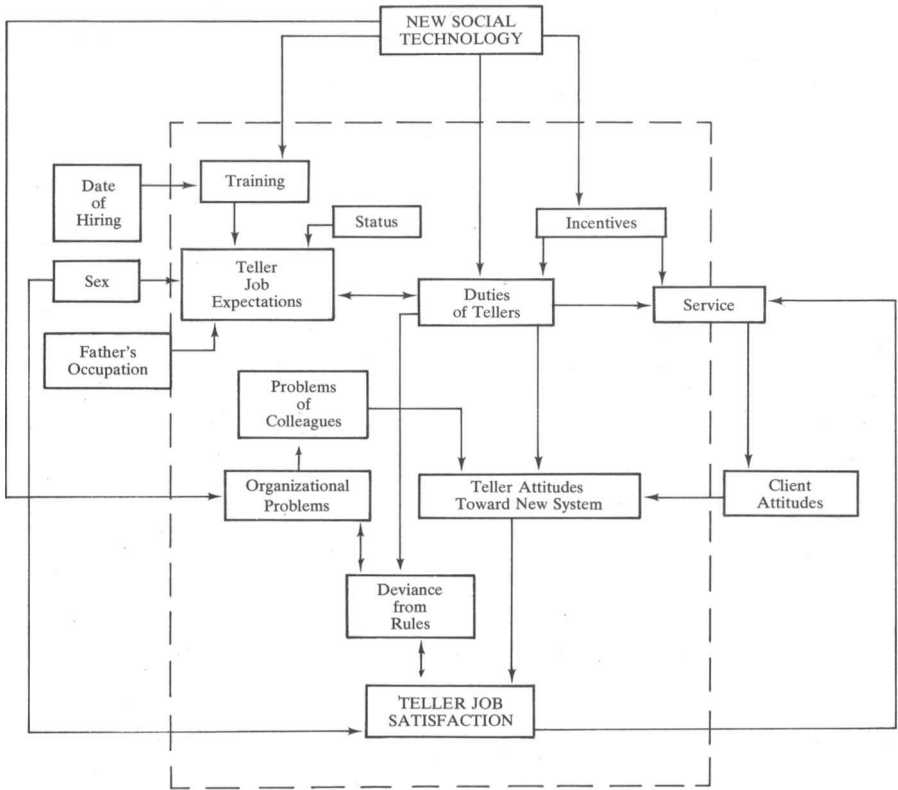
Such a conceptual scheme is based on the theory of «sociotechnical systems» which has contributed an analytical basis for the examination of the implications of the new technology introduced in an organization, and the influence on human behavior and vice versa.<sup>5</sup> The introduction of new technology in the Greek Bank, can be considered as a process within the general attempt of the Administration for Organizational Development (OD). It is to be noted that the use of the concept of «system» and the explanation of organizational problems as systemic problems, render difficult the quantification of the variables to be studied at the level of complexity needed. Yet, it allows an awareness of the complexity of the variables and the formation of a cognitive «map» of the differing characteristics of social systems and their interdependence, within which, the problem of the study can be better perceived.

The concept of «system» in the bank case is a very valuable and important tool, in helping us understand the successes and the failures of the new technology: it points out the necessity to see problems and solutions not in isolation, but in relation to the total organization as a total system composed of interrelated and interdependent parts (subsystems).

It is to be noted that the study and the model (Figure 1) does not lead to causal relationships.

5. See Trist and Bamforth, 1951; Trist et al., 1963; Trist, 1969; Rice, 1958; Woodward, 1958, 1965; Seiler, 1967; Davis and Trist, 1973; Nicolaou-Smokovitis, 1976, 1977.

FIGURE 1. Conceptual Scheme in Studying the Impact of New Technology within an Organization



Causal inferences are so complex that further evidence should be sought as to the kind, consistency and reason of relationships.

**B. Implications:**

Viewing the organization as an open social system, with a variety of inputs from the environment existing outside the boundaries of the organization (technological, human, organizational inputs) and a number of internal parts or subsystems, in interaction

between themselves, the external environment and the organization as a whole, it is possible to understand the interplay of forces which operate within the organization and between the organization and the environment (Seiler, 1967).

Any technological input from the environment (new technology, equipment, knowledge, techniques) brings about change to the whole organization and to its various subsystems. Many examples of attempts to change which failed are traced in the literature on organizations, because they failed to



foresee the possible impact of change in one area upon the other subsystems.

Technology, as a system itself, has a multiplicity of functions, purposes and goals, many of which are in conflict with one another and with the organization as a whole. In the literature on «sociotechnical systems», the lack of proper «fit» between technology and the individuals within the organization, may have very disfunctional results (Huse, 1975, pp. 46-8). The findings of the study of Tellers performed within the Greek Bank substantiate the implications of the theory as concerns technological change introduced to the organizational environment, and the impact it had upon all the other subsystems.

Problems occurring within the Bank (employees' complaints about the physical working conditions, insecurity, psychological pressures and other negative aspects of the job, organizational and systemic deficiencies, etc.) as well as outside the Bank (clients' complaints, tense relations between tellers and customers, better service from other Banks in the area, etc.), should be considered from a broader perspective.

Theoretical studies have also supported that in order to perform new work roles created by a new division of labor as a result of new technology, a unique set of characteristics is needed on the part of the individual, in order to fill the new roles (Katz and Kahn, 1966, p. 179), and link psychologically the individuals to the organization (Huse, 1975, p. 37). In our bank setting the new work roles constitute sets of activities expected by the individual employees (tellers, chief tellers, etc.). It is further supported that role behavior, nevertheless, is not only caused by the characteristics of the individual (teller) but also by the expectations of the organization and others within the total system (supervisors, peers, subordinates, vendors, customers, etc.) in a complex system of obligations and expectations, referring to the particular job.

It is obvious that Bank tellers in our study face problems of role conflict and role ambiguity, in terms of organizational stress (Kahn et al., 1964; Huse, 1975, p. 37). Role conflict occurs because individuals (tellers, chief tellers), knowing what is expected of them, cannot comply with all the expectations, due to external conditions (lack of sufficient machinery, work overload, organizational deficiencies, inappropriate application of the system, etc.); also, role ambiguity occurs to a large extent because a big number of tellers have insufficient knowledge of the expectations of others, due to lack of sufficient information on the new system (retaining of Circulars by the Supervisors in the various Branches, insufficient training or unsuccessful selection of tellers, etc.). Role conflict and ambiguity have proved to be strong

determinants of organizational behavior (House and Rizzo, 1972), influencing behavior, perceptions, and attitudes of people. According to the findings of House and Rizzo, role ambiguity is highly linked with such factors as employee anxiety, job dissatisfaction, organizational diseffectiveness, and tendency to quit. From the systems point of view, therefore, reducing role ambiguity should enhance organizational effectiveness and increase personal satisfaction (Huse, 1975, p. 37).

New technology in our Greek study seems to have a great impact on the informal organization also. With the old system, employees, clerks, cashiers, and supervisors worked as a team which was usually cohesive with a great deal of personal interaction. When the work was much or difficult, or when a problem occurred, people helped each other. The same can be said for the clients. They were accustomed to having direct and personal interaction with the cashier, the clerk and the Manager—relations were personal and often this was a very strong factor for the attachment of the client to the Bank. He used to have individualized service. With the development of new equipment (machines, terminals, counters), the old system was replaced by the impersonal interaction in front of a counter and in the presence of a machine, while the client was considered as a number in the long queue.

Among the organizational and space arrangements required for the new system was the spatial separation of the old team of colleagues, tellers now being installed in separate booths, while work overload created by inefficient application of the system (mostly due to the special conditions prevailing in each Branch) prevented every interaction between tellers or tellers and clients.

In the Greek Bank, the basic structural design, the flow process, the prevailing value system as well as the human system, were ignored to a large extent in planning technological change. Yet, as suggested by previous studies (Trist and Bamforth, 1951; Trist, 1969; Rice, 1958), initiating technological change involves a process of various steps and various forces effecting the equilibrium of the total system, which have to be taken into consideration (see Huse and Bowditch, 1973, p. 391). The results of our Greek study point to the fact that it is important to consider organizations as sociotechnical systems, since there is a high degree of relationship between the technological system, human system, and other systems (structural, environmental, etc.). Many attempts to improve organizations in the past, have failed because Organization Development practitioners (inside or outside the system) began with a technique which was inappropriate from a systems point of view (Huse, 1975, pp. 56-7).

The impact of borrowed technology upon organizational structures, patterns of social relations and individual perceptions and attitudes, which are largely culturally defined, constitutes a basic problem that developing countries must face. Implementation of new technology and change constitute a basic problem for Greece, as a developing country, which emphasizes rapid industrialization and modernization as a means to economic and social development. Specifying the kind and degree of impact of technical innovation and change upon organizations and individuals in them, is probably the most crucial and important step in the study of organization and the process of industrialization and modernization. The «implications» of understanding and predicting the impact of new technology upon organizations and people, are to be found both at the micro-and the macro-level. On the micro-level prediction of the impact of new technology implies forecasting of organizational efforts and management action; on the macro-level, it is fundamental for development and planning along more rational lines, as well as for investment choices, intervention strategies, etc. From the broader point of view, it seems that the study of the impact of new technology is closely related to the developmental efforts of Greece and the attainment of her ultimate goals for economic, social and national progress. Yet, relatively little is known about the impact of technology upon systems of various levels, i.e. organizations, individuals, the community, the larger national society.

## VI. summary

The new system of tellers in the Greek Bank has been a success in one sense, since it provided better and faster service to clients and satisfied some organizational requirements for efficiency and effectiveness, while providing job satisfaction and need fulfilment to a number of employees. On the other hand, the new system created various organizational and human problems, since in its inception and design it did not take into account the anticipated negative responses of other subsystems, namely the organizational structure, the human system, the social environment, and their mutual interdependence.

Empirical evidence in the Greek study of tellers points to the need to approach any organizational problem from the systems point of view. The exploratory study of a real issue within the Greek Bank, that is, the reluctance or unwillingness of employees to serve as tellers, led to the discovery of a complex set of relationships and interdependencies which are related to that issue. A major consideration was the system of tellers as such which, as a new technology, was recently introduced to the organizational envi-

ronment of the Greek Bank. The new technology, as a system, had an important impact upon the other subsystems of the Bank, influencing and being influenced by them; among the aforesaid subsystems were the structural and the human. Between New Social Technology, as the main independent variable, and Teller Job Satisfaction, as the main dependent variable, we can find a number of intervening variables in a variety of systemic interrelations and interdependencies. In trying to explain reluctance or unwillingness of employees to serve as tellers, as an indication of dissatisfaction with the job, we have to hypothesize and test a number of systemic relationships which would lead to the solution of the problem.

There is also some empirical support for the suggested theoretical conceptualization. Factor analysis yields a set of environmental variables, a set of organizational variables, and four sets of variables dealing with the individual in the organization (see Table 12); the form and degree of relationship between them could be further explored and specified.

Finally, on the basis of the exploratory study, a tentative Model of inter-and intra-relationships and interdependencies between variables is suggested that presents a cognitive map of the multiple dimensions that relate to the issue.

The results of this exploratory study of the above issue in the Greek Bank are presented with the honest belief that research is a never-ending search for multiple interrelationships in a complex work environment.

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APPENDIX:

QUESTIONS, RESPONSES AND THEIR FREQUENCIES\*

Variable Number	QUESTIONS ON:	Number of Responses	RESPONSES			FREQUENCIES			
			T+NT	T	NT	% of Responses on Population	% of T+NT on Responses	% of T	% of NT
1	ID								
2	Sex	395	0. Female 1. Male			92.5	25.1 74.9		
3A	Age (recoded)	399	1. 19-25 2. 26-30 3. 31-35 4. 36-40 5. 41-45 6. 46-50 7. 51-55 8. Over 55			93.4	17.0 23.1 23.6 15.5 7.0 7.3 4.5 2.0		
4	Place of Origin	399	0. Rural 1. Semi-Urban 2. Urban 3. Capital			93.4	12.5 12.3 38.3 36.8		
5	Father's Occupation	340	0. Peasants 1. Unskilled Manual 2. Semi-Skilled 3. Semi-Clerical 4. Skilled Manual 5. Skilled Clerical 6. Dept Head-Small Bus's 7. Highly Skilled-Technl 8. Intermediate Management of Business 9. Low Level Professional 10. Executive 11. Upper Professional 55. Bank Employee			79.6	12.6 0.9 0.9 1.5 6.8 14.1 30.3 10.3		
6	Marital Status	364	0. Single 1. Divorced 2. Separated 3. Widowed 4. Married			85.2	0.3 3.5 0.9 2.9 15.9	38.2 0.5 0.3	— — — 61.0

SYMBOLS: P=Population, T=Teller, NT=Non-Teller  
 \* Summary of Computer Printouts  
 \*\* Adjusted Percentages (missing data are not included)

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Variable Number	QUESTIONS ON:	Number of Responses	RESPONSES			FREQUENCIES	
			T+NT	T	NT	% of Responses on Population	% of T+NT on Responses**
7	Education	397	0. Less than High School 1. High School 2. Some College 3. College Graduate 4. Post-graduate			93.0	2.5 63.0 20.2 14.1 0.3
8	Year of Hiring by the Bank	394	0. 1941-49 1. 1950-54 2. 1955-59 3. 1960-64 4. 1965-69 5. 1970-74 6. 1975-77			92.3	4.1 5.8 6.1 22.1 11.4 35.8 14.7
9	Grade in the Bank	401	0. Messenger 1. Collector B 2. Collector A 3. Collector-Chief 4. Novice 5. Sub-Accountant B 6. Sub-Accountant A 7. Accountant B 8. Accountant A 9. Sub-Chief of Section 10. Chief of Section B 11. Chief of Section A 12. Higher			94.1	0.5 0.7 1.7 1.0 18.9 28.6 22.2 17.7 7.2 4.2 4.0 2.7 0.2
10	Status in the Bank	404	0. Messenger 1. Collector 2. Cashier 3. Accountant			94.6	0.5 2.7 8.9 87.9
11	Branch	427	Code Number				
12	Present Tasks in the Branch	417	0. Other Departments 1. Teller Savings 2. Teller On-Line 3. Uni-teller 4. Teller Foreign Exchange 5. Foreign Transactions Dpt 6. Loans Department 7. Administrative/Managerial Functions			98.1	25.2 15.1 7.7 23.7 7.4 7.9 9.8 3.1
13	Responsibility-Authority	413	0. No Official Status-Simple 1. employee				61.3

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Vari- able Num- ber	QUESTIONS ON: Number of Responses	RESPONSES			% of Responses on Popula- tion	FREQUENCIES							
		T+NT	T	NT		% of T+NT on Responses **	% of T **	% of NT **					
14	Knowledge of Banking Operations (Expertise)	403	1. No Official Status- Author. 2nd Signature			96.7	19.4						
			2. Chief Teller				8.5						
			3. Supervisor of Dpt				6.8						
			4. Branch Supervisor				2.4						
			5. Ass't Branch Manager				0.7						
			6. Branch Manager				0.7						
			7. Higher Administr. Staff				—						
			0. None				1.7						
			1. Minor			94.3	6.7						
			2. Cashier				5.5						
			3. Teller				7.4						
			4. Simple Operations				47.9						
			5. Foreign Transactions				6.2						
			6. Loans				15.1						
			7. Loans+Foreign Trans's				6.5						
			8. Thorough Knowledge of Banking				3.0						
15	Promotion, Job Expectancy	152	0. Don't Know			35.6	52.6						
			1. No Prospect				7.2						
			3. Cashier				0.7						
			4. Employee, Other Dpt				2.0						
			5. Internal Service				0.7						
			6. Foreign Transactions				2.6						
			7. Loans Department				2.0						
			8. Teller On-Line				2.6						
			9. Uni-Teller				6.6						
			11. Internal Service Dept				2.6						
			13. Chief Teller				10.5						
			14. Department Head				0.7						
			15. Branch Supervisor				4.6						
			16. Branch Manager, or Assistant Manager				4.6						
			16	Specific Duties of Teller	390		0. Very Minor, Unimportant			91.3	4.6		
							1. Cashier's, Very Simple				0.8		
2. Handle Money, Machines						5.9							
3. Customer Service						1.5							
4. Money, Machines, Custom- er Service						17.9							
5. Accountant						9.5							
6. General Operations						14.4							
7. All Operations						10.5							
8. Complex, Important Duties			3.8										
			5.6										



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Variable Number	QUESTIONS ON:	Number of Responses	RESPONSES			NT	% of Responses on Population	FREQUENCIES	
			T+NT	T	T			% of T+NT on Responses	% of T
17	Knowledge of Circulars (rules and regulations) re: New System of Tellers	394	0. No Circulars «Don't Reach Me» 1. No Opportunity-Very Busy 2. No. Only General Instructions 3. Yes, Read them frequently 4. Yes, Read them occasionally 5. Yes, Circulars re: Specific Tasks of Teller 6. Yes, All Circulars of the Organization Dpt 7. Yes, All Circulars of the Bank 8. Only by Experience				92.3	30.5	4.1
18	Training in the New System of Tellers	367	1. Trained by Unspecified Colleague 2. By Job Incumbent 3. By Special Colleague of Organization Dpt 4. By the Chief-Teller 5. By the Supervisor 6. Special Training in the New System 7. Minimum 8. Fairly Important 9. Important 10. Very or of Maximum Importance			86.2	16.6	6.3	9.1
19	Importance of Teller's Job: Subjective	408	0. Minimum 1. Minor 2. Fairly Important 3. Important 4. Very or of Maximum Importance			95.1	3.8	2.7	1.4
20	Positive Aspects of a Teller's Job	375	0. No Positive Aspects 1. Pay/Economic Rewards 2. Job Security 3. Interpersonal Interaction/Dealing with Clients 4. Faster Service / Simplification of Work 5. Opportunity for Advancement 6. Independence/Autonomy			87.8	32.5	4.3	1.1
								2.4	4.3
								55.5	12.2
								6.4	6.4

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Vari- able Num- ber	QUESTIONS ON:	Number of Responses	RESPONSES		NT	% of Responses on Popula- tion	FREQUENCIES		
			T+NT	T			T+NT on Responses **	% of T **	% of NT **
21	Negative Aspects of a Teller's Job	353	7. Interesting Work 8. Self-improvement/Fulfill- ment/Responsibility 0. Monotonous Work/Routine 1. Lack of Opportunity and Advancement 2. Too Much Responsibility 3. Pressure of Job/Anxiety/ Deficits 4. Inadequate Staffing/ Overwork 5. Poor Economic Rewards 6. Unpleasant Clients 7. No Negative Aspects			82.7	4.0	9.9	4.5
22	Problems of Colleague- Tellers	364	0. Multiple 1. Isolation 2. Psychological Pressure 3. Lack of Opportunity 4. Low Status of Job 5. Work Overload 6. Lack of Job Security/ Deficits 7. Low Economic Rewards 8. Poor Working Condit's 9. Unpleasant Clients 10. No Problems			85.2	25.3	1.9	10.2
23	Required Job Improvements: Subjective	357	0. Economic Incentives 1. Job Security 2. Reduce Work Overload 3. Improve Working Cond's 4. Multiple Contextual 5. Better Selection of Tellers 6. Better Training of Tellers 7. Job Rotation of Teller 8. Improve Status of the Job 9. More Opportunities for Advancement to Tellers 10. Multiple Content + Context 11. Participation of Tellers in Problem Solving			83.6	2.2	2.0	28.9
							15.1	1.9	5.5
							23.4	1.6	7.7
							9.2	2.0	8.7
							10.4	7.2	10.4
							2.8	2.0	2.0
							13.2	1.4	1.4

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Variable Number	QUESTIONS ON:	Number of Responses	RESPONSES		NT	% of Responses on Population	FREQUENCIES	
			T+NT	T			% of T+NT on Responses**	% of NT
24	Job Satisfaction (Tellers Only)	204	0. Not Satisfied 1. Indifferent 2. Satisfied			47.8	33.3 5.9 60.8	
25	Job Satisfaction: Reasons (Tellers Only)	119	0. Total Dissatisfaction 1. Work is a Necessity 2. Fringe Benefits/Conditions 3. Interpersonal Conflicts 4. Pride in Responsibility 5. Competence/Mastery 6. Self-Fulfillment			27.9	33.2 10.5 8.0 10.1 13.1 19.1 6.0	
26	Desire to Become a Teller (Non-Tellers)	183				42.9		69.7 2.2 2.7 25.1 0.3
27	Desire to Become a Teller: Reasons (Non-Tellers)	53				12.4		3.7 1.9 1.9 9.4 34.0 13.2 20.8 9.4 3.3 1.9



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Variable Number	QUESTIONS ON:	Number of Responses	RESPONSES		T	NT	% of Responses on Population	FREQUENCIES.	
			T+NT	% of Responses				T+NT on Responses**	% of T NT **
30	Opinion of Incentives	371	0. Non-Existent 1. Insufficient 2. Satisfactory 3. Good 4. Very Good/Important				86.9	29.9 61.5 2.2 3.8 2.7	
31	Proposed Changes to Increase Job Satisfaction	343	0. None 1. Technical, Organizational 2. System Improvements 3. Economic Rewards 4. Better Working Cond's 5. More Job Security 6. Client-Teller Relations (Improve Service) 7. Upgrade Status of Job 8. Career Advancement/Personal Growth 9. Multiple Context and Content Factors 10. Participation of Teller in Problem Solving			80.3		3.7 7.6 12.0 35.0 7.3	
32	Does the New System Provide Better Service to Clients?	408	0. Absolutely No. Many Complaints 1. No. Older System Better 2. Rather Yes, in Simple Operations 3. Yes, in Some Areas 4. Yes, but Technical and Organizational Problems 5. It Depends 6. Theoretically Yes; in Practice No 7. Yes, Under Correct Conditions 8. Yes, Better and Faster Service/Simplification of Work 9. Yes. It has Many More Possibilities			95.6		6.9 1.7 1.2 2.2	
33	Opinion of Clients About the	346	0. Negative. Discontent 1. Negative Mostly/Slow Service					2.2 4.9 1.0 17.4	
								41.2 21.3 10.1 17.3	

APPENDIX:

QUESTIONS, RESPONSES AND THEIR FREQUENCIES\*

Variable Number	QUESTIONS ON:	Number of Responses	T+NT	T	NT	FREQUENCIES % of Responses on Population	% of T+NT on Responses**	% of T**	% of NT**	
34	New System of Tellers	291	2. Positive and Negative Operations			81.0	30.3			
			3. Positive re: Simple Operations				2.0			
			4. Positive re: System/Negative re: Its Applications					6.7		
			5. Fairly Successful					13.6		
			6. Positive: Better and Faster Service					20.0		
			0. Definitely No					12.4		
35	Observance of New Rules in Branch	291	1. Dont Think So				3.4			
			2. Not Always				6.5			
			3. Yes and No/It Depends				2.4			
			4. Too Many Circulars			68.1	1.4			
			5. Often Not Possible				10.7			
			6. Yes. Only Minor Deviations				25.8			
			7. Generally Yes				37.4			
36	Deviation From Rules:Reasons	267	0. No Deviations				14.6			
			1. Minor Deviations				4.5			
			2. Fear of Competition				13.1			
			3. Work Overload				35.3			
			4. Working Conditions				4.5			
			5. Organizational Problems			62.5	11.2			
			6. Inappropriate Tellers				5.2			
			7. Inefficient Operation of the System				4.9			
36	Problems Created by the New System in Branch	250	8. Multiple Reasons				6.7			
			0. General Working Conditions				11.3			
			1. Spatial and Organizational				30.0			
			2. System (Wrong or Inadequate Application)				53.4			
			3. Dissatisfied Clients				11.3			
36	Unmotivated Tellers	250	4. Unmotivated Tellers				11.7			
			5. Multiple Problems				7.4			

APPENDIX:  
QUESTIONS, RESPONSES AND THEIR FREQUENCIES\*

Vari- able Num- ber	QUESTIONS ON:	Number of Responses	RESPONSES			NT	T	NT	% of Responses on Popula- tion	FREQUENCIES	
			T+NT	T	NT					% of T+NT on Responses **	% of T NT **
37	Problems of the New System of Tellers: Solutions	303	0. None						5.6		
			1. Define Problems Locally and Seek Solutions/Participa- tion of Employees in Decision-Making					71.0	5.9 24.1		
			2. Reduce Work Overload						3.6		
			3. Improve Working Conditions						6.9		
			4. Increase Motivation/ Incentives						15.5		
			5. Organizational Improvements						7.7		
			6. Better Selection of Tellers						17.5		
			7. System Improvements						13.2		
			8. Multiple Improvements						18.5		
38A	Level of Job Satisfaction (Index)	427	1. Low					100.0	65.7		
			2. Medium						17.8		
			3. High								