

AD-A137 951

MOBILIZATION AND DEFENSE MANAGEMENT TECHNICAL REPORTS
SERIES APPLICATION O. (U) INDUSTRIAL COLL OF THE ARMED
FORCES WASHINGTON DC D A WORTH ET AL. MAY 83

1/1

UNCLASSIFIED

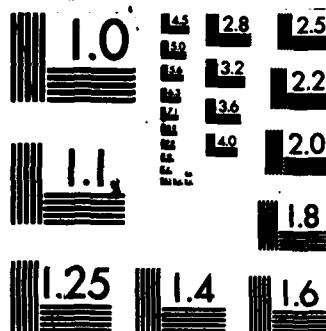
NDU/ICAF-83/026

F/G 5/1

NL

END

FILED
3
DEC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



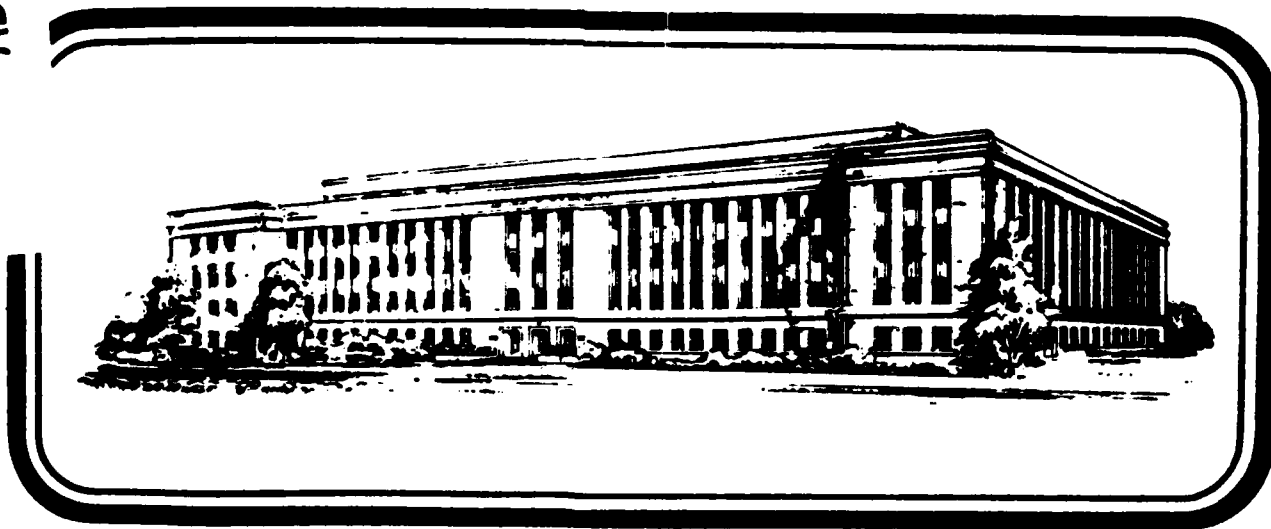
NATIONAL DEFENSE UNIVERSITY

173245
②

**MOBILIZATION AND DEFENSE MANAGEMENT
TECHNICAL REPORTS SERIES**

AD A137951

**APPLICATION OF TIME SPAN BOUNDARIES AND
MANAGERIAL STRATA TO MILITARY
ORGANIZATIONS**



This document has been approved
for public release and sale; its
distribution is unlimited.

REFLECTED
FEB 16 1984
A

INDUSTRIAL COLLEGE OF THE ARMED FORCES

DTIC FILE COPY

84 02 16 018

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM	
1. REPORT NUMBER NDU/ICAF 83/026	2. GOVT ACCESSION NO. AD-A137951	3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle) APPLICATION OF TIME SPAN BOUNDARIES AND MANAGERIAL STRATA TO MILITARY ORGANIZATIONS		5. TYPE OF REPORT & PERIOD COVERED MSP #5, AY 82/83	
		6. PERFORMING ORG. REPORT NUMBER	
7. AUTHOR(s) DAVID A. WORTH, CAPT, USCG LAWRENCE D. BROOKS, LTC, USA		8. CONTRACT OR GRANT NUMBER(s)	
9. PERFORMING ORGANIZATION NAME AND ADDRESS INDUSTRIAL COLLEGE OF THE ARMED FORCES FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS	
11. CONTROLLING OFFICE NAME AND ADDRESS INDUSTRIAL COLLEGE OF THE ARMED FORCES FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		12. REPORT DATE MAY 1983	
		13. NUMBER OF PAGES 26	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) NATIONAL DEFENSE UNIVERSITY FORT LESLEY J. MC NAIR WASHINGTON, DC 20319		15. SECURITY CLASS. (of this report) UNCLASSIFIED	
		15a. DECLASSIFICATION DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) UNLIMITED APPROVAL FOR PUBLIC RELEASE			
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) N/A			
18. SUPPLEMENTARY NOTES N/A			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) N/A			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This paper investigates the applicability of time spans of discretion and managerial strata to the military organization. Commanding officers at three levels of command were interviewed to establish the longest time span over which they gave total discretion to a subordinate commander. These commanders were from the U.S. Army and Coast Guard and occupied the positions of brigade, battalion, and company command (in the Army), or equivalent operational command levels (in the Coast Guard).			

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

NATIONAL DEFENSE UNIVERSITY

MOBILIZATION STUDIES PROGRAM REPORT

APPLICATION OF TIME SPAN BOUNDARIES AND MANAGERIAL STRATA
TO MILITARY ORGANIZATIONS

by

DAVID A. WORTH, CAPT, USCG
LAWRENCE D. BROOKS, LTC, USA

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE RESEARCH

REQUIREMENT

RESEARCH SUPERVISOR: LTC THOMAS S. MEYERCHIN

THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

MAY 1983



A-1

Disclaimer - Abstainer

This research report represents the views of the authors and does not necessarily reflect the official opinion of The Industrial College of the Armed Forces, the National Defense University, or the Department of Defense.

This document is the property of the United States Government and is not to be reproduced in whole or in part without permission of the Commandant, The Industrial College of the Armed Forces, Ft. Lesley J. McNair, Washington, D.C. 20319.

ABSTRACT OF STUDENT RESEARCH REPORT
INDUSTRIAL COLLEGE OF THE ARMED FORCES

NAME OF RESEARCHER (S)

Worth, David A., CAPT, USCG
Brooks, Lawrence., LTC, USA

TITLE OF REPORT

Application of Time Span Boundaries
And Managerial Strata To Military
Organizations

SECURITY CLASSIFICATION OF REPORT

Unclassified

REPORT NUMBER

IR# 5

ABSTRACT

Problem Statement: This paper investigates the applicability of time spans of discretion and managerial strata to the military organization. Commanding officers at three levels of command were interviewed to establish the longest time span over which they gave total discretion to a subordinate commander. These commanders were from the U.S. Army and Coast Guard and occupied the positions of brigade, battalion, and company command (in the Army), or equivalent operational command levels (in the Coast Guard).

Findings: Investigation of the applicability of time-span strata revealed

1. Application to the combat units at the organizational levels surveyed.
2. A compression in time spans due to the intense combat-like nature of the training environment.
3. Variations in the results at given organizational level were due largely to the degree of combat mission training pressure rather than some other variable.

Conclusions:

1. Before extensive utilization of the theory, a more exhaustive survey should be conducted of a wider range of organizational levels.
2. The theory has application to the selection, position identification, and training of personnel.

THIS ABSTRACT IS UNCLASSIFIED

EXECUTIVE SUMMARY

This paper investigates the applicability of Dr. Elliott Jaques' theory of time spans of discretion and managerial strata to the military organization. The time span of discretion is the longest period of time a manager gives a subordinate to work on his own allowing him freedom to balance the pace and quality of his work before the manager intervenes to correct or change the activity. The longer the time spans the higher on the managerial strata the subordinate either works or is capable of working.

A pilot study was conducted to determine if troop commanders working at brigade, battalion and company level for the U.S. Army and applicable positions for the U.S. Coast Guard demonstrated the results found by Dr. Jaques. Systematic interviews utilizing the critical incident method were conducted to determine the longest time spans of discretion. The results of this pilot study are that Dr. Jaques' theory does have application to the organizational levels of the military units surveyed. Further, it was determined that the application is constrained by requirements from various levels of command which tend to move commanders toward a "survival" mode of operation as opposed to forward looking. Dr. Jaques states that the time spans discussed for the various strata are for peacetime application and that wartime operations move much more quickly and a compression of time takes place. This phenomenon was observed in interviews with commanders. Commanders are working in a peacetime environment which is stressed in training to near wartime conditions. Military installations are viewed as a location to prepare for combat which may occur within hours to weeks. This places the commander in a "time warp" pushing his time spans in the direction of combat.

Possible application of the results of Jaques' theory are in personnel selection and job description. Military specialties/jobs which require long range planning, innovation, invention, etc. could be better filled. Training within the officer structure could be streamlined to best fit the needs of individuals vs. the masses. Because instruments already exist which test for time spans of discretion, mobilization could be greatly enhanced by rapidly indentifying qualified personnel to fill key positions which are unique to mobilization and industrial civil expansion.

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE</u>
DISCLAIMER-ABSTAINER.....	ii
ABSTRACT.....	iii
EXECUTIVE SUMMARY.....	iv
I. INTRODUCTION.....	1
II. THEORY OF TIME SPAN MANAGEMENT.....	4
III. STUDY PLAN.....	13
Purpose.....	14
Scope.....	14
Limitations.....	14
Methodology.....	15
Procedures.....	15
IV. FINDINGS.....	17
V. OBSERVATIONS.....	19
VI. CONCLUSIONS.....	21
APPENDIX: INTERVIEW TECHNIQUE.....	25
BIBLIOGRAPHY.....	26

FOR THE

MAINT

ON THE

WALL



SECTION I

I. INTRODUCTION

Ever since Max Weber¹ called attention to the rationality and capability of the bureaucratic model as an instrument of organizational work, managers and social scientists have struggled with the problem of how to make the large organization work better. Volumes have been written on the organization, its structure, and interpersonal relationships. Great contributions have been made toward improving the effectiveness and efficiency of the large organization; however, what has been lacking up to this point has been some definitive measurement of individual work effort, and its relationship to organizational strata. The military as well, has been aware of the need to properly fix the size and command structure of organizations so that clear lines of authority and responsibility are established and economies of scale realized. Failure to identify the needed levels of work within the command structure reduces the effectiveness of the command. Confusion in orders issued curtails the amount of work accomplished which ultimately results in reduced combat readiness of units. The Department of Army is presently looking at systems (organizations) which impede leadership skills and work so that corrective actions can be taken. Among the corrective actions are creating a more favorable command environment and properly identifying work. Currently, the Army has numerous undertakings which support this theme. The concept of "Power Down to Power Up" proposed by the Delta Force is a look at systems with heavy centralization (little flexibility and adaptation by subordinates) which should be decentralized. In general, it is recognized

that leadership requirements vary by skill and organizational level, that self initiative and control are desirable, and that leaders and managers must be able to react to everchanging situations and be prepared to execute Air Land Battle 2000.²

Decentralization cannot be effected without the ability to share information and maintain common records. Presently, the Office of the Chief of Staff (OSCA) is developing a Headquarters Integrated Office System which will use electronic mail, access internal and external data bases and, allow project and program monitoring, among other ideas.³

Bridging the gap between these two ends of the spectrum are numerous activities which will improve the quality of the existing organization, and provide logical steps to move toward the organization that will support Air Land Battle 2000. Dr. Elliott Jaques is working with the Army Research Institute (ARI) on organizational structure and selection of leaders and managers. Dr. Jaques, in his studies of industry, commerce, and public and social administration, over the last 20 years, has concluded that time spans of discretion are the best identifiers of the required levels of work and that these levels of work identify the proper strata of that organization.

FOOTNOTES

SECTION I (Pages 1-2)

¹NOTE: Weber studied the Prussian Army as organized by the Prussian General Staff. He deduced that his model of organization which he called a bureaucracy represented the highest degree of rationality, efficiency, and reliability. Its strength [and some might say its weakness] lay in the formal structure and rules which facilitated analysis of objectives, assignment of responsibility for tasks, and administrative control over task accomplishment.

²U.S. Army Delta Force Army Leadership Development, [Meeting, U.S. Army War College, Carlisle Barracks, Pa.: 8-12 March 1982], p. V, 19-23.

³Memorandum of Understanding, Director of Management, Office of the U.S. Army Chief of Staff, and Commander, U.S. Army Research Institute, Subject: "Establishment of the Headquarters Intergrated Office System," undated.

SECTION II

II. The Theory of Time Span Management

Dr. Elliott Jaques has postulated that there is, in fact, a measurable dimension of work in a bureaucracy, and that there is some ideal stratum relationship of that level of work and the number of supervisory levels most efficient in a particular organization.

A bureaucracy, with its hierarchal structure provides a means for the control and deployment of peoples' talents and energies for the accomplishment of the organizational goals. This structure supplies the mechanism for translating the more global goals into discrete items of work output which contribute to that larger organizational goal accomplishment. Jaques says that:

Work, [in the sense of human work and not the $\text{Work} = \text{Force} \times \text{Distance}$ formula of physics] is defined as that plane of human activity in which the individual exercises discretion, makes decisions, and acts, in seeking to transform the external, physical, or social world in accord with a predetermined goal....Work is a goal directed activity...the achievement of the goal must have a time limit, a target completion time. The problem in work is never simply to achieve an object never mind when; it is to achieve an object in a limited period of time. If no time target is set, then, in fact, there is no felt need.¹

Further, Jaques states that the hierarchal levels of work are characterized by increasing scope of responsibility as one goes higher up in the organizational structure, and that these greater responsibilities are of progressively longer time frames of accomplishment.² Thus, the result of work is achievement of a goal in a set period of time, and, the adequacy of that work is in the balance of its pace and quality.

Jaques' research has shown that the time span within which people work is associated with the perceived magnitude of the task they are carrying out; and that the "...maximum time-span within which a person is required to act with respect to all of his tasks in a bureaucratic role does appear to give a measure of the level of his work."³ This time-span is a discoverable quantity largely because managers tend to give direction to their subordinates with assigned deadlines. "Time-span of discretion is the longest period of time a manager gives a subordinate to work on his own allowing him freedom to balance the pace and quality of his work before the manager intervenes to correct or change the activity."⁴ This period is the maximum time a subordinate may rely upon his own discretion in the accomplishment of a task. To determine these time spans of discretion both the superior and the subordinate are interviewed concerning the work and time intervals involved. Details of the process are given in the Appendix.

Not only are there identifiable time spans of discretion in the fixed organizational structure, but these may or may not be the optimal spans. Given certain minimum conditions, people within the organization will ensure the optimal intervals exist between successive horizontal strata in the hierarchy. Conversely, when these natural stratum differences are not present, dysfunctions are manifested in the system: there tends to be bypassing, uncertainty over who is the real boss, perceived long chains of command, or the feeling that one's boss is too close.

That badly configured organizations work at all is a tribute to the patience and ingenuity of the members who diplomatically work around the problems generated by improper stratum differences.

Optimum time span stratum distances have been identified empirically by Dr. Jaques in over 100 studies in England, Australia and the United States. An example of these stratum with their associated time spans appears in figure 1.

SUMMARY OF STRATA AND LEVELS OF ABSTRACTION

Stratum	Time Span	Level of Abstraction	Equitable Pay	Maximum \$ of Employees	Industry & Commerce	Military	Grade Assoc.
VII	20 YRS		\$450,000	150,000	Corporation	Army	GEN
VI	10 YRS	Institution Creating	\$225,000	20,000	Group	Corps	LTG
V	5 YRS	Intuitive Theory	\$120,000	2500		Division	MG
IV	2 YRS	Conceptual Modeling	\$65,000	350	Med. Size Business	Brigade	BG COL
III	1 YR	Imaginal Scanning	\$35,000	50	One Man Business Or Unit	Battalion	LTC MAJ
II	3 MTHS	Imaginal Concrete	\$23,000	1	Section	Company Platoon	CPT LT
I		Perceptual Motor Concrete	\$10,000		Supervisors Shop & Off. Floor	NCO	WO MSG CPL

Figure 1

NOTE: Extracted from A General Theory of Bureaucracy, p. 153 and Talking Paper Implications of Discrete Levels of Human Capacity for Military Organization 8 OPNS, April 82, Jaques, p. 6.

From the research data, it can be asserted that, for example, if the commander of a unit were determined through time span of discretion analysis, to be operating at stratum 4, there would optimally be three organizational stratum below him in the chain of command. If there were more than three stratum below him, these extra levels would be perceived to be an impediment to the smooth flow of work. The optimum stratum distance hypotheses is based on the repeated discovery that not only do positions fall naturally into certain numerical time span values, but that successive levels operate most efficiently and effectively with these time span relationships.

Jaques has theorized, and subsequent evidence supported, that each of the seven currently identified stratum are characterized as requiring the capability in the manager of different levels of abstraction [see figure 1].⁶ That is, for example, stratum 1 with time spans of less than three months involve tasks which are assigned in concrete terms, carried out in direct physical contact with the output of the effort. While stratum 4 with time spans of 2-5 years involves a very different relationship with the output. Here in stratum 4 is a more abstract mode of thought and work,

...the task requires the individual to retain mental contact with what exists, but then at the same time to achieve a detachment from this experience and to work with ideas of things which are different from what exists- which look different, function differently, do different things. The new thing is not a modification or extension of the old; it is a departure from it.⁵

Jaques gives examples of stratum 4 as follows:

In one case a designer was instructed to design a new large scale piece of machinery to do the work of an existing machine but to be based upon different principles so that it would be more versatile and less expensive. He had to analyze the existing mechanism and express it completely in abstract terms of force fields, vectors, power, stresses, direction of movement, degrees of freedom. He then had to detach himself from his picture of the existing machine and immerse himself in the manipulation of his abstractions with a temporary suspension of reference to existing machines while he continued to retain a firm grip somewhere in the back of his mind on the realizable goal of his work, which was to produce a design which could be translated into something concrete which could be constructed.⁶

In each stratum, the increasing or decreasing degree of abstractness and consequent change in time spans managed differentiates the level and set the relationship with adjacent levels. If the interviewed unit commanders are operating in accordance with the theory, it would be expected that the time span of the longest of their tasks would fall within the ranges of figure 1, that is, for stratum II, between 3 months and 1 year; stratum III, between 1 year and 3 years, etc. It should be noted here that the theory addresses the longest time spans observed, not necessarily what is perceived to be the time span of the most important task, or the time spans of the majority of tasks performed.

As alluded to in the introduction not only are there time spans of discretion for levels in the organization but individuals function in the time spans with which they feel most comfortable working. Research by Dr. Jaques indicates that these individual's time spans increase throughout life as the individual matures. Interestingly though, research has shown that an individual expands his time span of discretion, within a specific range, throughout his maturation cycle (See Figure 2).⁷

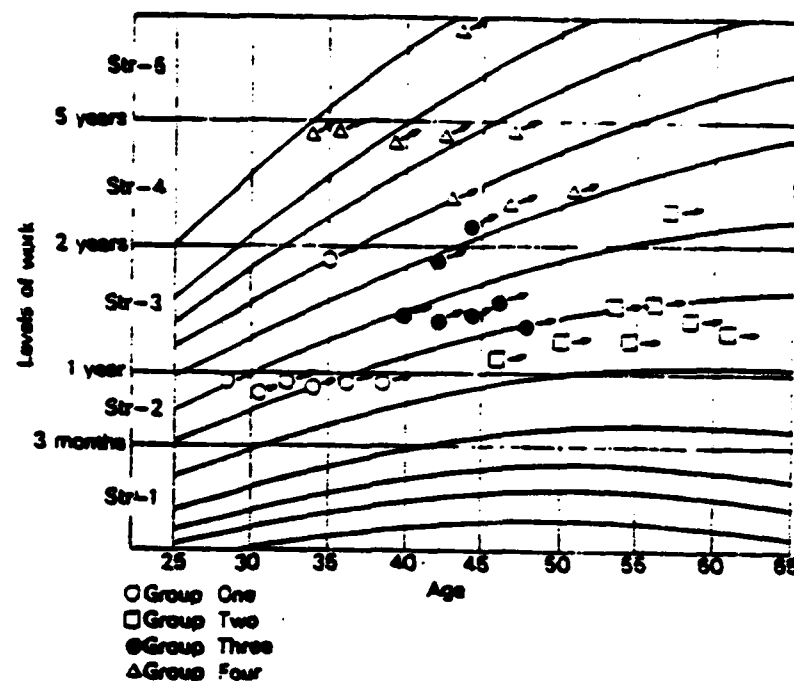


FIG 2

What this data suggest is that it is possible to determine an individual's natural and potential time span of discretion at an early age. Dr. Jaques says:

...the as yet incompletely matured high potential capacity applied to lower levels of work expresses itself in imaginativeness and creativity. The higher level of abstraction is there and can be observed, but it cannot yet be used in a full or reliable way; the judgement is still faulty. Thus, the potential stratum 5 level individual at 25 years of age can be seen to be able to detach himself from the concrete; that is how he achieves his initiative and imaginativeness. The great industrial innovators were never bound down to a perceptual relationship to the concrete, even when employed as youths in starting positions as manual workers or clerks.⁸

If the data are correct, the implications of this in the military may be significant. Simply put, this means that it may be possible to identify at entry those individuals who possess the characteristic of long time span of

discretion, the qualities necessary for functioning capably at the highest levels of organization leadership.

The following vignettes are examples of application of the theory but by no means all inclusive. If these levels of work are properly defined and a qualified individual occupies each level there are no intermediate levels to "muddle" the flow within an organization. Yet if someone at a lower level is performing commendably and we wish to reward him, often the pay increase carries a change in the job title and description. This change in job description may not be a move to the next organizational level, but rather, may create a sub-level or "strawboss" position. The organization now becomes less clear by putting someone in the chain of command who has no real authority. Moreover, if a vacancy is created at a properly defined level and the person selected is uncomfortable to work at that level, the tendency may be for the person to over supervise back to the level from which promoted. This too muddles the flow within the organization. Just as important and probably more difficult to correct, is the manager occupying a position one or more levels below his capability. This manager may do an excellent job but over time will encroach upon his boss' territory. If not corrected, the subordinate becomes disenchanted and finds other employment or may even be fired.

Dr. Jaques believes that these situations exist in the military as well as in civilian organizations. The time spans which equate to industry, commerce, etc., are equivalent to military time spans for peace time activities. Time

spans of discretion during war or the preparation for war will be compressed. That is, projects with expected completion dates of some stipulated time must be reduced to fit the military situation at that time. Figure 1 shows time spans of discretion for organization with which he has worked and peace time military services.⁹

FOOTNOTES

SECTION II (Pages 4-12)

¹Elliott Jaques, A. General Theory of Bureaucracy, [Exeter, NH: Beirmann, 1976], pp. 101-102.

²Ibid., p. 99.

³Ibid., p. 108.

⁴Ibid., p. 100.

⁵Ibid., p. 148.

⁶Ibid., p. 148.

⁷Ibid., p. 167.

⁸Ibid., p. 167.

⁹Ibid., p. 153.

SECTION III

STUDY PLAN

A. Purpose: To investigate whether the principles of time span of discretion apply to the determination of military structure (strata) and organizational managerial and/or leadership positions.

B. Scope: To determine if the military structure (strata) for the positions of brigade, battalion, and company command in the Army and commanding officers of ships and their operational senior and subordinate chain of command in the Coast Guard equate to those hypothesized by Jaques.

C. Limitations: This study is a pilot project and does not intend to provide data that can analytically substantiate a finding, but rather is intended to (1) give observations as a result of interviews and, (2) provide a point of departure for additional research.

Interviews with officers out of command did not allow the conduct of hierarchal interviews i.e., interview of subordinates and supervisor.

The Army units will be limited to combat arms.

Coast Guard units are operational units.

A more detailed approach was not pursued because of manpower, time and funding constraints. A comprehensive treatment of the subject would entail extensive interviewing (representative sample) of various commands worldwide. Each command would be interviewed from company to its highest level. Units would be by category, i.e., combat arms, combat support, and combat service support.

D. Methodology: Conduct survey interviews to compare time spans of discretion at three discrete levels of command (brigade, battalion and company). The interview will follow a systematic format to determine the longest time span of discretion over which the interviewee assigns control to a subordinate, or the longest span of control which he perceives is assigned to him personally.¹ The critical incidence method of data collection will be utilized.² This involves interacting with the person being interviewed as they provide the anecdotal accounts comprising the critical incidents, which, for this study, are the time spans of control assigned to their subordinates to perform various tasks. These time spans will be compared with those shown in figure 1 to determine if the trend is toward or away from the stratus hypothesized. Conclusions will then be drawn as to application, if any, as discussed in the purpose, this section, paragraph A.

E. Procedures: After extensive conversations with Dr. Jaques, reading of background materials and observing the interview technique used by Dr. Jaques, training interviews were conducted with fellow ICAF students. We then began interviewing U.S. Coast Guard and Army personnel. Interviews were conducted with personnel who were previous commanders and current brigade, battalion, and company commanders in the same chain of command.

F. Interview technique: See Appendix.

FOOTNOTES

SECTION III (Pages 14-16)

¹NOTE: See Appendix, Interview Technique.

²Marvin D. Dunnett, Personnel Selection and Placement, [California: Wadsworth Publishing Company, Inc., 1966], pp. 92-94.

SECTION IV

FINDINGS:

The longest time spans of discretion for the various levels of command are shown below.

LENGTH OF TASKS ASSIGNED BY SUPERIOR (All Commanders Interviewed)		
<u>To:</u>	<u>Range</u>	<u>Mode</u>
BDE	1-5 years	2 years
BN	1-5 years	1 year
CO	3 mos-1 year	3 months

The fit on the stratum chart of Dr. Jaques appears below:

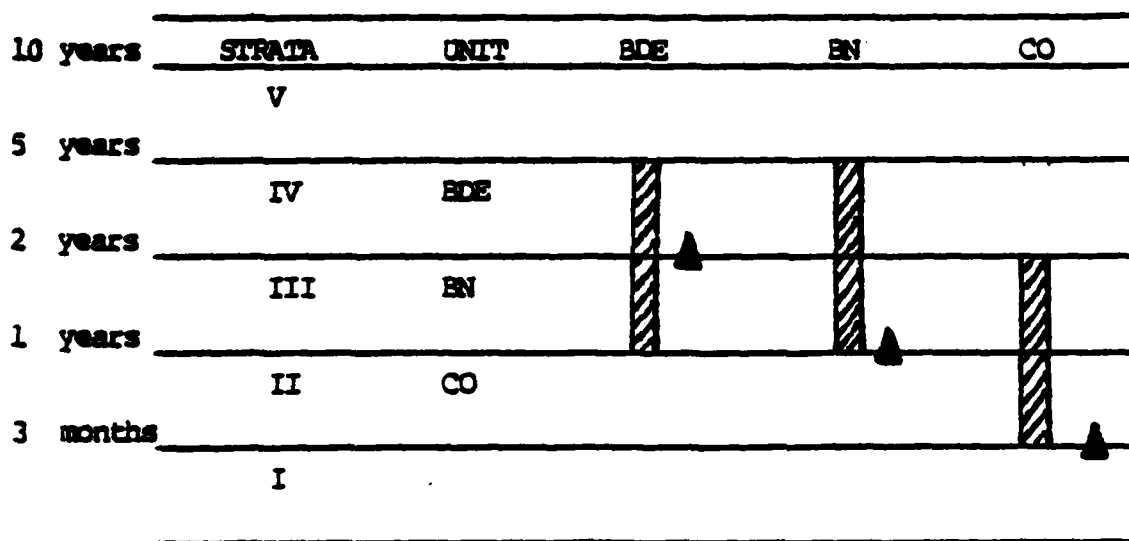


Figure 3

LEGEND: Range  Mode 

NOTE: 1. RANGE: At least one interviewee gave the lower number as his greatest time span of control and at least one interviewee gave the higher number as his greatest time span.

2. The longest time spans of discretion were given by previous commanders. These officers had some difficulty recalling details, as might be expected. Current commanders reported shorter time spans as shown below.

LENGTH OF TASKS ASSIGNED BY SUPERIORS
(Current Commanders)

<u>To:</u>	<u>Range</u>	<u>Mode</u>
BDE	1-2 years	2 years
BN	1-2 years	1 year
CO	3 mos-1 year	3 months

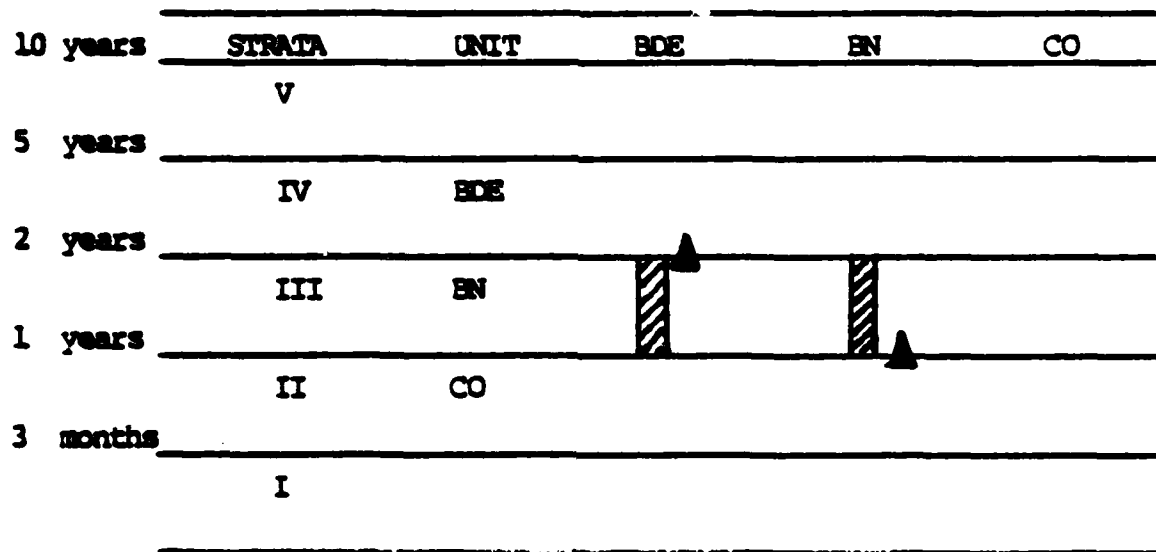


Figure 4

As shown from the modes, most commanders are working within the strata hypothesized, but on the extreme lower end of the stratum.

The tasks which gave these results were, peace time tasks. That is, managing funds, construction programs, implementing changes to organization

and equipment replacement. Further, the longest tasks assigned were not totally at the discretion of the superior assigning that task. The authority and discretion for the task were held at a higher level. For example, the longest task which was most evident at the company level was the quarterly management of the self-service supply funds. All other tasks were 2-3 weeks in duration. Tasks assigned to battalion commanders revolved around several annual directives such as self-service supply funds, annual training calendars, etc.

SECTION V

OBSERVATIONS

Observation: Time spans of control given by superiors were greater than the subordinate perceived.

Discussion: Subordinates felt that their superiors gave them as much latitude as possible but that constraints outside the control of their superiors directed the course of action to be pursued. Therefore, time spans were sometimes incorrectly assigned. Examples: (1) Field training and range time were directed for many activities, such as tank gunnery and small arms proficiency. (2) Other constraints were funding, ammunition, and petroleum, oil, and lubricants (POL) allocation. (3) Type and age of equipment drive maintenance time. Standards for maintenance of equipment are set at Department of Army level and are rigid. (4) State of training proficiency is predicated on the length of time assigned personnel have been together and trained together. Personnel turbulence is difficult to manage and is not a prime consideration of many training events.

Observation: Commanders would like more control of their unit's time.

Discussion: As discussed above, the constraints/variables of the system were numerous and a "survival" technique was adopted. This technique required the management of many tasks on a continuing basis with emphasis on the closest action, suspense or short notice requirements. Reaction to short notice requirements disrupts the commanders' planning and execution of tasks. This reactionary mode lends itself to a stressful environment.

Observation: The tasks which had the longest time spans of discretion did not appear to weigh heaviest on the commander.

Discussion: During the interviews the commanders acknowledged the longer time spans of discretion for peace time activities. These longer time span activities were at times discounted and emphasis continued to be placed on mission related tasks, i.e., the critical importance of tank gunnery, weapons qualification, physical fitness, etc., which honed the unit for combat. That is to say, peace time tasks (building motor pools, managing funds, and other housekeeping chores) were seen as the necessary evils of mission preparedness. Military posts are considered to be temporary locations; staging areas for deployment to the areas of combat once hostilities are imminent.

SECTION VI

CONCLUSIONS

This work constitutes a pilot study only. A more comprehensive survey should be conducted before any application. However, the data collected in this study suggest the peacetime tasks assigned by commanders appear to fall into the strata established by Jäques. As shown by the modes, the various levels operate at the lower end of the spectrum. The study observations reflect that commanders have difficulty in separating time spans of discretion for peacetime (non-compressed) and wartime (compressed). It is as if they are in a time warp. Commanders are operating in two modes simultaneously: peace-time activities and quasi-combat activities. They maintain facilities, manage funds, training ammunition, fuels, administrative personnel actions, etc., so that the units are optimally trained (mentally, physically, and technically) for rapid deployment into a combat environment. That is, they experience real time time spans of discretion for some tasks and compressed time spans of discretion for other tasks. As the nature of the task more closely approximates combat or preparation for combat the greater the compression. Also, as you move from tactical units to the higher headquarters (which makes doctrine, designs organizations, tests and procures equipment, mans and trains the force) organizations more closely approximate the corporate world.

Possible applications are:

Personnel selection. The selection of personnel for certain military occupational specialties or positions such as research and development,

intelligence, long range planning (mobilization and contingency), etc.

Job position identification. All services would have a common base. Joint planning and operations would be facilitated in that the correct players i.e., ranks with equal levels of skills are representative of all services. Decisions should improve in timeliness and quality.

Mobilization. Rapid selection of personnel to fill key positions unique to mobilization requirements has been a tremendous challenge in previous wars. A means to rapidly identify individuals to fill certain select positions would be a tremendous asset to the planning and execution phases.

Training and entry levels of personnel. The way that we train the officer corps could be revolutionized by the selection of personnel who need less formal training. Branch qualification courses could be melded into a short general course with technical courses for required expertise in a field. Selection of entry levels into related field could better be determined. Unique specialty requirements could be entered at grades other than 01 or 02; similar to the medical programs.

Finally the point must be made that this study should be replicated with a much larger sample of personnel to be interviewed. The data trends of this study support and would justify the additional expenditure of resources (trained interviewers, travel to additional military installations etc.) to conclusively validate Jaques' leadership theory. Further, research to investigate the cited applications and their relationship to expected outcomes is warranted.

APPENDIX

INTERVIEW TECHNIQUE

The interview follows a systematic format to determine the longest time span of discretion over which the interviewee assigns control to a subordinate and then to establish the longest time span of control which he perceives is assigned to him personally. The critical incident method was utilized. This involves interacting with the person being interviewed as he provides the anecdotal accounts composing the critical incidents which are the time spans of control assigned. The interviewee was not given the details of the hypothesis prior to the interview. Experience has shown that extensive time is required to explain the theory and that it becomes a distractor. The interview facilitates the explanation and understanding of the theory. Further, the interviewee was told that there is no right answer.

The setting for the interview is a role playing exercise. The interviewee is asked to think of a subordinate member of his organization; the interviewer then assumes the role of that subordinate and begins the questioning.¹ The questions are directed toward the work to be performed by the subordinate and establishing the time span of control which the superior is giving to the subordinate (interviewer). The line of questioning seeks to establish the longest time span of control by successive approximation. The following discussion of successive approximation by Dr. Jaques best describes the technique:

One means of helping a manager to structure his intuitive experience about the work he allocates and to make his standards of quality and pace explicit in quantitative terms, is to approach the analysis by successive approximation. Thus, for example, you ask a manager when he expects a subordinate to have completed the development of a design, he may reply that he could not give any exact date; he expects the subordinate to get on with it as quickly as he can and to get it done along with a number of other tasks that he has been allocated. If you then ask whether it would be all right if the subordinate completed it within the next ten years, the manager will probably laugh and say, "Oh no! He doesn't have that much time." Does he expect it to be completed within the next few hours? No, it would be quite impossible for him to do so; he would need at least some months to do it along with the rest of the work he has to do. You might then ask him if he would allow the subordinate, say, a year to complete it, to which he might reply "No, not that long- possibly something more like six months". You can then refine the questions and help the manager to converge upon the maximum number of months that would constitute the longest target completion time that he would allow the subordinate when he allocated the task. What seems to happen when the method of successive approximation is used, is that the moment the manager has realised that he would not allow, say, ten years for his subordinate to complete the task, he realises that he must have had some target completion time in mind. There begins to form more consciously the longest target completion time that he intuitively assumed when he allocated the task under consideration to this subordinate.²

The role playing by the interviewer is concluded when the longest time span has been determined to his satisfaction. The interviewee is then asked about his perceptions of his span of control as assigned by his superior. Again, the technique of successive approximation is used. Once the longest time span, has been established, the interview is concluded.

FOOTNOTES

APPENDIX (Pages 25-26)

¹NOTE: Subordinates selected for this were to be line as opposed to staff. The same techniques are used for both.

²Elliott Jaques, Time Span Handbook, [London: Heinemann, 1964.], p. 29.

BIBLIOGRAPHY

Books

- Dunnett, Marvin D. Personnel Selection and Placement. California: Wadsworth Publishing Company, Inc., 1966.
- Jaques, Elliott. A General Theory of Bureaucracy. Exeter: Heinemann, 1976.
- Jaques, Elliott. Time-Span Handbook. London: Heinemann Educational Books LTD, 1971.

Articles

- Dowling, William F. "Conversation with Elliott Jaques." Organizational Dynamics, Spring 1977, pp. 24-43.
- Jaques, Elliott. A General System of Organisation for the Armed Services, Brunel Institute of Organisation and Social Studies, Jxbridge, Middlesex; U.K., August 1982.
- Jaques, Elliott. Implications of Discrete Levels of Human Capacity for Military Organisation and Operations, Brunel Institute of Organisation and Social Studies, Jxbridge, Middlesex, U.K., April 1982.
- Jaques, Elliott. "Role of the Group Executive (Operations)." Unpublished Memorandum. Brunel Institute of Organisation and Social Studies, Jxbridge, Middlesex, U.K., undated.
- Kast, Fremont E. and Rosenzweig, James E. "Evolution of Organization and Management Theory." Contingency Views of Organization and Management. Science Research Associates, Inc., 1973.
- U.S. Department of Army. Delta Force -- 10th Meeting, Army Leadership Development. Carlisle Barracks, PA: 1982.

Memoranda

- Jaques, Elliott. Implications of Discrete Levels of Human Capacity for Defense Forces in Readiness and in Combat. Research Proposal. Jxbridge, Middlesex, U.K.: Brunel, April 1982.
- U.S. Department of Army. Establishment of the Headquarters Intergrated Office System. Memorandum of Understanding between Office, Secretary of the Army Director of Management, OCSA and Commander, U.S. Army Research Institute for the Behavioral and Social Sciences; Washington: Undated.

FILME
3-84